



**Lynn Lake Gold Project: Gordon
Mine Pit Dewatering Notice of
Alteration / Notice of Change**

FINAL SUBMISSION DOCUMENT

February 9, 2024

Prepared by:

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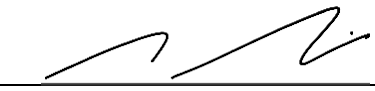
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LYNN LAKE GOLD PROJECT: GORDON MINE PIT DEWATERING NOTICE OF ALTERATION / NOTICE OF CHANGE

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Notice of Alteration Form



File No. : 6074.00	Environment Act Licence No. : 3390
Legal name of the Licencee: Alamos Gold Inc.	
Name of the development: Lynn Lake Gold Project Gordon Gold Mine	
Category and Type of development per Classes of Development Regulation: Mining Mines, other than pits and quarries	
Licencee Contact Person: Ms. Jennifer Abols, Director, Projects Mailing address of the Licencee: Brookfield Place, 181 Bay Street, Suite 3910 City: Toronto Province: Ontario Postal Code: M5J 2T3 Phone Number: Fax: Email: Jabols@alamosgold.com	
Name of proponent contact person for purposes of the environmental assessment (e.g. consultant): Ms. Karen Mathers, Senior Principal, Stantec Consultants Ltd.	
Phone: (204) 799-6159 Fax:	Mailing address: 500-311 Portage Avenue Winnipeg, Manitoba R3B 2B9
Email address: karen.mathers@stantec.com	
Short Description of Alteration (max 90 characters): Change in the discharge location for initial dewatering the existing Wendy and East pits	
Alteration fee attached: Yes: ☐ No: ☒	
If No, please explain: To be paid by credit card - please contact	
Date: 2024-02-09	Signature:  Printed name: Jennifer Abols
A complete Notice of Alteration (NoA) consists of the following components: ☒ Cover letter ☒ Notice of Alteration Form ☒ 1 hard copy and 1 electronic copy of the NoA detailed report (see "Information Bulletin - Alteration to Developments with Environment Act Licences") ☐ \$500 Application fee, if applicable (Cheque, payable to the Minister of Finance)	
Submit the complete NoA to: Director, Environmental Approvals Branch Manitoba Environment and Climate 14 Fultz Blvd Winnipeg, Manitoba R3Y 0L6 EABDirector@gov.mb.ca	
For more information: Phone: (204) 945-8321 Fax: (204) 945-5229 https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/licence/index.html	
Note: Per Section 14(3) of the Environment Act, Major Notices of Alteration must be filed through submission of an Environment Act Proposal Form (see "Information Bulletin – Environment Act Proposal Report Guidelines")	

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1.0 INTRODUCTION

1.1 ALTERATION OVERVIEW

Alamos Gold Inc. (Alamos; 'the proponent') plans to develop and operate the Gordon Gold Mine (hereinafter also referred to as the 'Gordon site' or the 'mine site') along an existing access road off Provincial Road (PR) 391 northeast of the Town of Lynn Lake in northern Manitoba (Map 1-1; Appendix A). The proponent seeks approval to proceed with alteration to the planned infrastructure at the mine site. The proposed alteration is a change to the plan for the initial dewatering the existing historical pits (i.e., Wendy and East Pits) from discharge of pit water to Farley Lake (and into Farley Creek) over several years, to the discharge of pit water to the Hughes River (approximately 8 km south of the mine site) over a period of three months (see Section 2.3). This dewatering alteration only relates to the construction phase for the Gordon Gold Mine and is supported (and preferred) by the local Indigenous Nation (see Section 1.7). The Gordon Gold Mine is regulated under *Environment Act* Licence No. 3390 and the conditions stipulated therein (March 6, 2023) and a Decision Statement issued under the *Canadian Environmental Assessment Act, 2012* as documented by the Impact Assessment Agency of Canada (IAAC), dated March 5, 2023. The Decision Statement outlines conditions in relation to environmental effects that Alamos must comply with.

Provincially, Section 14(1) of *The Environment Act* requires a proponent to notify the Director (for Class 1 and 2 developments) if the proponent intends to alter a licensed development so that it no longer conforms to licence conditions or has the potential to change the environmental effects (Manitoba Environment, Climate and Parks [MECP; now Manitoba Environment and Climate Change or MECC] 2022). The key consideration for assessing a Notice of Alteration (NOA) from what was assessed in the environmental assessment phase is the significance of the environmental effects and human health effects as a result of the alteration and whether there is sufficient detail to allow the Director to determine whether the effects of the alteration are significant, insignificant, or nonexistent (MECP 2022).

Federally, per the following Decision Statement conditions, Alamos is required to prepare and submit a Notice of Change (NOC) to IAAC for the proposed alteration (as a separate parallel filing).

Change to the Designated Project

2.16 If the Proponent is proposing to carry out the Designated Project in a manner other than described in condition 1.8, the Proponent shall notify the Agency in writing in advance of carrying out those proposed activities. As part of the notification, the Proponent shall provide:

- *2.16.1 a description of the proposed change(s) to the Designated Project and the environmental effects that may result from the change(s);*
- *2.16.2 any modified or additional measure to mitigate any environmental effect that may result from the change(s) and any modified or additional follow-up requirement; and*



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- *2.16.3 an explanation of how, taking into account any modified or additional mitigation measure referred to in condition 2.16.2, the environmental effects that may result from the change(s) may differ from the environmental effects of the Designated Project identified during the environmental assessment.*

2.17 The Proponent shall submit to the Agency any additional information required by the Agency about the proposed change(s) referred to in condition 2.16, which may include the results of consultation with Indigenous groups and relevant authorities on the proposed change(s) and environmental effects referred to in condition 2.16.1 and the modified or additional mitigation measures and follow-up requirements referred to in condition 2.16.2.

This NOA/NOC request has been prepared by Stantec Consulting Ltd. (Stantec) on behalf of the proponent and is submitted to both:

- MECC in support of a request for a NOA to Licence No. 3390. The Gordon site is considered a Class 2 Development under the Classes of Development Regulation (MR 164/88); and
- IAAC to notify it of the change and request an amended Decision Statement in relation to the Lynn Lake Gold Project.

The proponent understands that the above-noted approvals are required from both regulatory authorities prior to proceeding.

This report documents the relevant portions of the currently licensed Gordon Gold Mine, the proposed alterations, and the potential environmental effects and planned mitigation measures associated with the proposed alterations. The works proposed would be incremental to the planned construction works and future operation of the mine site.

1.2 THE PROPONENT

For the purposes of development licensing, the proponent is Alamos Gold Inc. (hereafter "Alamos"). For further information regarding the Gordon Gold Mine please contact the following:

Ms. Jennifer Abols
Director, Projects
Alamos Gold Inc.
Brookfield Place, 181 Bay Street, Suite 3910
Toronto, ON M5J 2T3
Email: Jabols@alamosgold.com

This NOA/NOC was prepared by Stantec Consulting Ltd. The local contact is:

Ms. Karen Mathers, M.Sc., P.Geo. FGC, PMP.
Senior Principal, Environmental Services
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500-311 Portage Avenue
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Email: karen.mathers@stantec.com

1.3 LAND OWNERSHIP AND MINERAL RIGHTS

Operation (two-pit open pit gold mining) at the Gordon site, historically referred to as the Farley Lake site, ceased in 1999. The property was purchased by Carlisle Goldfields Limited (Carlisle) in 2011. In 2014, Carlisle and AuRico Gold Inc. formed a joint venture for the potential redevelopment of this mine site. Alamos subsequently inherited the joint venture when it merged with AuRico Gold Inc. in 2015. Alamos then became the holder of the rights to the existing mining claims and mineral leases through the acquisition of Carlisle in 2016. Since approval of the Lynn Lake Gold Project in March 2023, Alamos has transferred further relevant mineral claims to leases at the Gordon site.

1.3.1 Existing Land Use

Construction of the Gordon Gold Mine in relation to *Environment Act* Licence No. 3390 and the federal Decision Statement has not started as an internal (Alamos) construction decision has not been made.

After closure in 1999, the Gordon site underwent a reclamation process and currently continues to consist of a 15-km gravel access road, a bridge across the Hughes River on the access road, two mine rock storage areas and two overburden storage areas that have been capped, and two water-filled open pits. All buildings and above-ground infrastructure have been removed, as shown in a present-day aerial photograph of the Gordon site (Photo 1, Appendix A).

Existing land uses in and around the Gordon site consist of provincial Crown land, Marcel Colomb First Nation located on Black Sturgeon Reserve lands at Hughes Lake (approximately 2.8 km southwest of the nearest point of the access road west of the Gordon site), treaty entitlement sites located at Barrington Lake, Brooks Island, and Melvin Lake, and remote cottages approximately 3 km south and 12 km southwest of the mine site (e.g., cabins at Hughes Lake, Simpson Lake).

Land use at the Gordon site and adjoining land is unoccupied provincial Crown land. The Gordon site is subject to Provincial Land Use Policies under the Provincial Planning Regulation (MR 81/2011). Policy Area 8: Mineral Resources expresses the provincial interest in mineral resources development.

There are numerous provincial Crown land permits and leases in the vicinity of the Gordon site (Map 1-2, Appendix A). These consist of general permits and leases for remote cottages (cabins), and trapper cabins (Crown Lands and Property Agency 2017). There are also additional recreational lot development sites at Hughes Lake.

1.4 PREVIOUS REPORTS/SUPPORTING STUDIES

The Lynn Lake Gold Project (including the MacLellan and Gordon sites) was subject to an environmental assessment prepared under *The Environment Act* (Manitoba) as well as the *Canadian Environmental Assessment Act, 2012*. An Environmental Impact Statement (EIS) for the Lynn Lake Gold Project (Stantec 2020a) and an Environment Act Proposal (EAP) Report for the Gordon site (Stantec 2020b)



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were prepared, proposing that water from the two pits on-site (historical Wendy and East Pits) would be discharged to Farley Lake. The Environmental Approvals Branch of MECC issued a license for the Gordon Gold Mine (Licence No. 3390) on March 6, 2023. A federal Decision Statement was also issued for the Lynn Lake Gold Project (MacLellan and Gordon sites) subject to conditions on March 5, 2023.

In 2022, a mixing trial was conducted at the East Pit to determine the feasibility of pit destratification, aeration, and metal precipitation and to estimate the pit discharge water quality in preparation for pit dewatering (Stantec 2022).

A quantitative assessment was then undertaken to examine the potential effects of discharging the pit water from the Wendy Pit and East Pit at the Gordon site to the Hughes River using a mass-balance model on stream discharge and water quality (Stantec 2023). The assessment model report is the primary supporting document to this NOA/NOC and is presented in Appendix B.

1.5 REGULATORY AND GUIDELINE SETTING

1.5.1 Guideline Criteria

1.5.1.1 Water Quality

Initial discharged pit water will need to comply with Schedule 4 Metal and Diamond Mine Effluent Regulation (MDMER) effluent limits for prescribed substances (i.e., arsenic [As], copper [Cu], cyanide, lead [Pb], nickel [Ni], zinc [Zn], suspended solids [TSS], and un-ionized ammonia [NH₃]), have a pH >6.0 and <9.5, and not be acutely lethal to fish and other aquatic biota. In addition, discharged pit water mixed with Hughes River water must not cause an exceedance of the federal and/or provincial long-term (chronic) water quality guidelines downstream of the provincially regulated mixing zone. The Manitoba Water Quality Standards, Objectives and Guidelines (MWQSOG) do not prescribe mixing zone criteria but suggest several guidelines to protect water uses from being unacceptably impaired. According to the guidelines, the mixing zone should be as small as practicable, allow for an adequate zone of passage for aquatic life (e.g., not more than 25% of the cross-section area or volume of flow), should not interfere with spawning and nursery areas, and not be acutely lethal to aquatic life.

1.5.1.2 Water Quantity

Manitoba does not have provincial instream flow thresholds or guidelines. Therefore, monthly water volumes predicted by the mass-balance model were compared with the recommended guidelines in the federal "Framework for Assessing the Ecological Flow Requirements to Support Fisheries in Canada" (DFO 2013).

1.5.2 IAAC Decision Statement

As per the IAAC Decision Statement, Alamos is required to consider the following conditions with respect to the dewatering of the West and East Pits:



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- Under Condition 3.12.2

The Proponent shall monitor water quality in the East and Wendy pit lakes...and receiving water bodies and watercourses upstream and downstream...including at the edge and downstream of...the Hughes River...for all contaminants that may have adverse effects on fish and fish habitat, including aluminum, antimony, arsenic, calcium, copper, cyanide, fluoride, hexavalent chromium, iron, magnesium, methylmercury, phosphorus, selenium, and total and dissolved cadmium.

Alamos will also consider, as per Condition 3.7, the Canadian Council of Ministers of the Environment's Canadian Water Quality Guidelines of the Protection for Aquatic Life and Environment and Climate Change Canada's Federal Environmental Quality Guidelines (IAAC 2023).

1.6 SCOPE OF THE ASSESSMENT

1.6.1 Spatial and Temporal Boundaries

For the purposes of this environmental assessment, the Project Development Area (PDA) refers to the Gordon Gold Mine (and specifically Wendy and East pits) and the discharge line from the Gordon site to the Hughes River at the access road bridge. The Local Assessment Area (LAA) refers to a 2 km buffer radius around the PDA as established for Noise and Vibration, Land and Resource Use valued components (VCs) (Map 1-3, Appendix A). The Regional Assessment Area (RAA) is consistent with the Surface Water RAA boundaries (Map 1-4, Appendix A) as defined in Stantec 2020a and 2020b.

The temporal boundaries for the assessment are defined as:

- Installation (construction) phase – Mobilization of equipment to the site and assembly and installation of the equipment at the PDA (i.e., aeration system, dewatering system, discharge flex line, pumps, raft system, generators, etc. [two weeks]).
- Operation phase – Period of operation of the aeration and dewatering system (2-3 months).
- Decommissioning phase - Removal of aeration and dewatering system and associated equipment, discharge line, and demobilization from the site [two weeks]).

1.6.2 Assessment Approach

This assessment was completed to meet the requirements of a request for NOA/NOC and includes assessing environmental effects specifically related to the proposed alteration. The assessment focuses on potential environmental effects VCs, which are environmental components of certain value or interest to regulators, Indigenous Nations, and other parties and are identified based on the potentially affected biophysical and socio-economic elements. Related effects on these VCs from the proposed alteration are assessed sequentially in the assessment and described in terms of direction, magnitude, geographic extent, frequency, duration, reversibility, and context according to the terms provided in Stantec 2020a and 2020b. VCs considered in the assessment included:



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• Atmospheric environment	• Noise and vibration	• Groundwater	• Surface water	• Fish and fish habitat
• Vegetation/ wetlands	• Wildlife and wildlife habitat	• Labour and economy	• Human health	• Land and resource use
• Heritage resources	• Current use of lands and resources	• Community services, infrastructure, and well-being	• Indigenous peoples	

1.7 ENGAGEMENT

The site is located on unoccupied Provincial Crown land within an area that is a former mine site. As previously noted, development of the Gordon Gold Mine has not started. In relation to this proposed alteration, it was discussed in the information request responses to Rounds 1 and 2 (posted to the IAAC project registry) as a potential mitigation option being explored.

This NOA/NOC for the Project was discussed at the first and second Environmental Advisory Committee meetings held on October 23, 2023 and January 22, 2024. The first meeting was attended by the Manitoba Métis Federation, Nisichawayasihk Cree Nation, Marcel Colomb First Nation, Mathias Colomb Cree Nation, O-Pipon-Na-Piwin Cree Nation, and Métis Nation – Saskatchewan. The second meeting was attended by the Manitoba Métis Federation, Marcel Colomb First Nation, O-Pipon-Na-Piwin Cree Nation, Peter Ballantyne Cree Nation and Métis Nation – Saskatchewan. The minutes of the Environmental Advisory Committee meetings were (and will continue to be) shared with all 13 Nations involved in the Project even if they do not attend a meeting. Accordingly, all Indigenous Nations involved with the Project have been made aware of the proposed changes.

In addition, Alamos engaged with Marcel Colomb First Nation (MCFN) in 2022 about dewatering both the Wendy and East Pits for development of the new open pit, given their designated status as a 'Most Affected' Indigenous Nation and the proximity of the Black Sturgeon Reserve lands to the Gordon site. Engagement feedback from MCFN indicated a preference to pump pit water from Wendy and East Pits to the Hughes River. Further engagement with MCFN occurred in 2023 on dewatering the pits to the Hughes River as part of Offset engagement activities.

Alamos has ongoing engagement with Marcel Colomb First Nation through the signing of the Impact Benefit Agreement in summer 2023, additional subcommittees were formed for full integration of Indigenous Knowledge throughout all of Alamos' work within Marcel Colomb First Nation's Community Interest Zone. As part of the review of this NOA/NOA, the MCFN expressed concerns regarding the approved discharge of pit lake water outlined in the EIS, prompting Alamos to provide further clarification and review findings and commitments. Emphasizing the importance of integrating Indigenous Knowledge into assessments and monitoring programs, MCFN underscored the need to ensure water quality for future generations to inhabit the land, particularly emphasizing the importance of preventing negative impacts on fish presence and quality, minimizing sediment ingress, and implementing a robust monitoring program. A commitment has been made to share the environmental monitoring program associated with



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this work (which is included in the Surface Water Management and Monitoring Plan and Aquatic Effects Monitoring Plan – both under development) with Marcel Colomb First Nation prior to the work proceeding.

No formal public engagement is planned beyond the placement of the NOA/NOC on the respective MECC and IAAC public registries for public review and comment as required.

1.8 FUNDING

Alamos Gold Inc. will provide funding for all undertakings related to the Gordon Gold Mine development, including the proposed alteration.



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2.0 ALTERATION DESCRIPTION

2.1 PURPOSE AND RATIONALE

The purpose of the proposed alteration is to expedite the dewatering of the Wendy and East Pits to facilitate timely construction at the Gordon site. It serves to eliminate all risks associated with pumping water from the open pits into Farley Lake and out through Farley Creek and the associated potential effects to fish and fish habitat and further addresses noted capacity limitations to accommodate increased flow to these receiving waterbodies.

2.2 EXISTING CONDITIONS

The existing conditions at the mine site and along the access road remain as originally described (Stantec 2020a and 2020b). Conditions specific to the proposed alteration with respect to flow and water quality in the Hughes River are as described in the report in Appendix B (Stantec 2023). The East Pit has an estimated volume of 1,561,931 cubic metres (m³) and Wendy Pit has an estimated volume of 573,930 m³ (Stantec 2023).

Water in both pits is thermally and chemically stratified. Details on pit water quality are summarized in Appendix B, as well as in Stantec 2022. Based on monthly sampling conducted in 2015 and 2016 (Stantec 2018):

- Ammonia-nitrogen (NH₃-N), chloride (Cl), dissolved iron (Fe), and dissolved uranium (U) concentrations are at least five times higher at depths >10 m in East and Wendy Pits than at the surface.
- Sulphate (SO₄), dissolved boron (B), and dissolved sodium (Na) concentrations in Wendy Pit and dissolved manganese (Mn) concentrations in East Pit are similar or higher than concentrations near the surface.
- Fluoride (F), dissolved As, dissolved Fe, and total phosphorus (P) concentrations were higher than the Canadian Water Quality Guidelines for the Protection of Aquatic Life (CWQG-FAL) for F (0.12 milligrams per litre [mg/L]), the CWQG-FAL for total As (0.005 mg/L), the CWQG-FAL for total Fe (0.3 mg/L), and the Manitoba Water Quality Standards, Objectives and Guidelines and Surface Water: Freshwater Aquatic Life (MWQSOG-SWAL) for total P (0.025 mg/L) at depths >10 m in East and Wendy pits.
- Concentrations of cadmium (Cd), Cu, Pb, Ni, and Zn were below the CWQG-FALs and MWQSOGs at all depths in all months in both pits.
- Dissolved oxygen concentrations are consistently below the instantaneous minimum guideline of 3 mg/L (Manitoba Water Stewardship 2011) for mature aquatic life stages of cool water species (e.g., white suckers) in both pits at depths below ~10 m (Stantec 2022).



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The 2022 East Pit Mixing Trial (Stantec 2022) indicated that East Pit could be considered fully mixed after 14 to 16 hours of aeration. Post-mixing samples were collected in October 2021 from depths of 2.5 m, 5 m, 10 m, 15 m, 25 m, and 60 m. Dissolved oxygen concentrations were > 3.6 mg/L throughout the water column after aeration and no parameters exceeded any Schedule 4 MDMER effluent discharge limit. However, aerated and mixed pit water quality exceeded a federal or provincial WQG for total P, total As, total Fe, dissolved Cu, and dissolved Mn.

Hughes River water quantity was logged from May 2018 through May 2019 and June 2022 through September 2022. A modelled flow record was developed for the Hughes River to derive the median, 10th percentile, 90th percentile, minimum and maximum daily-averaged flows for each month of the year (Stantec 2023).

Water quality data collected from six sites between May 2022 and April 2023 on the Hughes River indicated occasional exceedances of WQG for pH, total P, total aluminum (Al), total chromium (Cr), total and dissolved Cu, total Fe, dissolved Pb, and dissolved Zn (Appendix B).

Dissolved Cu concentrations were greater than total Cu concentrations for most data points in the Hughes River existing conditions data set; most total Cu concentrations were lower than the method detection level (MDL) of 0.00025 mg/L, and most dissolved Cu concentrations were higher than total Cu concentrations by an order of magnitude. Similarly, several dissolved Pb concentrations in the Hughes River existing conditions data set were higher than total Pb concentrations. Five data points (out of 72) from the Hughes River exceeded the Canadian and Manitoba Tier III water quality guideline of 0.1 mg/L for the protection of freshwater aquatic life for total aluminum.

2.3 PROPOSED ALTERATION

The presently licensed Gordon Gold Mine development includes a plan to dewater both Wendy Pit and East Pit to Farley Lake located on the Gordon site, using a system of pumps to aerate the pits and a discharge line via Farley Lake to Farley Creek, with ultimate discharging to the Hughes River from the creek. Capacity limitations in Farley Creek meant that dewatering of the pits would require several years to complete. Alamos has re-examined the dewatering plan and now proposes to discharge the water from Wendy Pit and East Pit directly into the Hughes River (approximately 8 km to the south) instead of Farley Lake, using a temporary dewatering system over a shorter time period (approximately two to three months) to occur in conjunction with construction of the Gordon Gold Mine.

With the proposed alteration, water in each pit would be mixed using an aerator system (described in Appendix A) prior to pumping water via a temporary discharge line to the Hughes River. The same isolation of in-water work areas and fish rescues as originally outlined in Stantec 2020a and 2020b will be conducted as part of the dewatering work at Wendy and East pits. Approximately 1,700,000 m³ of water will need to be removed from the two historical pits. The dewatering of the pits (operation phase) is expected to occur over approximately 3 months (actual dewatering over 63 days) from summer until fall once approved.



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Aeration and mixing of Wendy and East pits will encourage precipitation of elements that form oxides (e.g., iron oxide), to break down thermal and chemical stratification, and increase dissolved oxygen concentrations prior to dewatering. The treatment provided by the mixing/aeration system and the subsequent concentrations in the pit discharge is described in Appendix B.

A temporary floating barge, pumps, compressors, and generators will be located within an existing disturbed area, and the pits themselves on the Gordon site. Floating barges, cages, submersible pumps and HL250 diesel driven booster pumps will be utilized as part of the dewatering system. No booster pumps will be required along the discharge line in the road right of way to facilitate pit dewatering to the Hughes River. Mine flex discharge hose will enable long segment lengths along the route and reduce the number of connection points. The hose will be temporarily laid overland from the pit discharge pumps, south along the existing mine access road or road right-of-way to the discharge point. The dewatering discharge point is proposed to be located immediately upstream of the Hughes River bridge (Map 2-1, Appendix A) to facilitate rapid mixing in the fast and turbulent water at, and immediately downstream of, the bridge (Photos 2 and 3; Appendix A). The dewatering line will be installed in such a fashion to limit erosion potential at the discharge location on the Hughes River and serve as mitigation to limit potential for adverse effects on fish and fish habitat.

The dewatering work will be completed by a contractor engaged by Alamos with regular monitoring of the system conducted by the contractor/Alamos over the duration of the dewatering. All necessary equipment and materials will be mobilized to the site over an approximate 2-week period, with pumping started as soon as all permits are in place and conditions are conducive for pumping operations. Other equipment needed for the dewatering system consists of a zoom boom, generators, and light towers. A two person-crew will operate the system on a continuous 24 hour/day basis.

No other changes to the licensed Gordon Gold Mine infrastructure are proposed in relation to the dewatering.

2.3.1 Construction Inputs and Outputs

Expected inputs in relation to the dewatering (incremental to the licensed construction work at the Gordon Gold Mine) include diesel fuel for pumps and equipment vehicles (trucks to transport the crew, pumps, generators, light towers, and equipment to the site). Outputs in relation to the dewatering will include dust, noise and emissions from the equipment vehicles and generators, pumps, and compressors and the discharge of the transferred pit water to the Hughes River. Pumps are expected to run continuously (i.e., day and night shift (24 hours/day) during the operation (approximately 63 days) with refueling conducted as necessary. It is estimated that fuel consumption for the generators and pumps for the dewatering will be approximately 913,500 L (i.e., 14,500 L x 63 days). The contractor or Alamos will be responsible for provision of fuel at the site, stored and transported in accordance with provincial regulations. Diesel fuel will be dispensed to the pumps and generators at the site on shore from truck mounted slip tanks. Once dewatering is complete, the crew, equipment and materials will be demobilized from the Gordon site.



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2.4 ALTERATION SCHEDULE

The proposed dewatering schedule, pending regulatory approval, is as follows:

- Late spring to early summer 2026 mobilization to the site, or whenever ice is off the pits.
- Dewatering to start following mobilization, no later than mid-summer 2026 so that dewatering can be completed by late fall 2026.
- Late fall 2026 or earlier demobilization of dewatering and aeration equipment following dewatering completion.



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Environmental Effects and Mitigation
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3.0 ENVIRONMENTAL EFFECTS AND MITIGATION

3.1 INTERACTIONS AND VALUED COMPONENTS

Biophysical and socio-economic VCs that could be affected through interactions of the environment and the dewatering were identified to scope the assessment. The rationale for selecting each VC is explained and potential general interactions between the proposed dewatering and the VCs are identified in Table 3-1.

Table 3-1 Designation of Valued Components

Valued Component	Potential Interaction	Rationale for Exclusion or Inclusion and Alteration Potential Effect
Atmospheric environment	x	Negligible-low air emissions are anticipated from incremental and temporary construction activities related to the alteration's on-site mobile vehicle and dewatering equipment use and will be reduced using standard mitigation measures (e.g., limiting vehicle idling, dust suppression, proper equipment maintenance). Operational increases in air emissions will be low from dewatering equipment (i.e., generators, pumps, compressors, etc.) operation. The incremental effects of the alteration on air quality/greenhouse gas emissions in relation to those licensed are considered negligible and have been excluded from further assessment of environmental effects.
Noise and vibration	x	During the Gordon Gold Mine construction phase, outdoor noise and vibration effects from the dewatering operational activities such as equipment installation and operation will be incremental, not substantially different than from the licensed development, and not expected to affect sensitive receptors in the LAA. The closest receptors to potential construction and operation activities at the Gordon site and at the Hughes River are far enough away (i.e., over 1 km) that noise and vibration effects would not be expected. Noise and vibration have therefore been excluded from further assessment of environmental effects.
Groundwater	x	Groundwater effects, anticipated to be localized from the dewatering of the pits, are predicted to remain unchanged from the original assessment (Stantec 2020a and 2020b). Therefore, groundwater has been excluded from further assessment of environmental effects.
Surface water	✓	Adding the pit discharge water is expected to increase flows in the Hughes River between 1% and 2%. The quality of the pit discharge water has the potential to change surface water quality and fish habitat in the Hughes River once discharged if not mixed. During all phases of the proposed dewatering, stormwater will continue to be managed by existing surface ditching. There is potential for the discharge line to have potential failure points and to cause localized erosion that could affect quality at the discharge point at the Hughes River. The VC is carried forward for further assessment.



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Table 3-1 Designation of Valued Components

Valued Component	Potential Interaction	Rationale for Exclusion or Inclusion and Alteration Potential Effect
Fish and fish habitat	✓	There is potential for discharge of pit water to the Hughes River to affect fish and fish habitat through changes to flow and/or water quality, and disturbance from discharge infrastructure. The VC is carried forward for further assessment.
Vegetation and wetlands	x	No native vegetation is present at the PDA. The planned location of the dewatering equipment, including temporary pumps and flex hose are within an existing disturbed area and along a developed road right-of-way and will not substantially affect vegetation. Vegetation is therefore excluded from further assessment of environmental effects.
Wildlife and wildlife habitat	x	No substantive wildlife or natural wildlife habitat is present within the PDA and the planned location of the discharge point. Effects of the proposed alteration on wildlife and wildlife habitat are not considered to differ substantially from those of the licensed Gordon Gold Mine, and therefore have been excluded from further assessment.
Labour and economy	x	Incremental benefits related to employment and provincial and federal tax generation in the LAA from construction (installation) and operation of the dewatering system over a 63-day period are expected to be negligible (limited to fuel purchases and sustenance for 2-3 person increase in relation to the Gordon Gold Mine construction workforce for 2-3 months). No incremental adverse effects to labour and economy in the LAA relating to the proposed alteration are anticipated and resultant effects are not considered further.
Community services, infrastructure and well-being	x	No changes in the provision of municipal infrastructure and services to meet demands (i.e., external roads, sewer, water) are anticipated. Construction workers will be housed at the rental locations in the Town of Lynn Lake. Two staff will be temporarily stationed on-site to operate the dewatering system. Limited and manageable effects on traffic are anticipated. Effects on community services and infrastructure and well-being are therefore not considered significant in relation to the licensed mine construction, and not considered further in the assessment.
Land and resource use	x	No residual effects from the proposed alteration on land use, recreation, and resource use, including incremental effects to aesthetics are anticipated (the PDA is already in a disturbed area). The socio-economic context for residual effects includes an alteration footprint and LAA that have historically been affected by mining and other development (i.e., existing road, dike, pits, bridge crossing) and continues to experience disturbance effects. Effects on land and resource use, including visual effects, are not considered further in the assessment.
Heritage resources	x	The PDA is located within an existing mine area and along a road right-of-way that is already disturbed; the proposed alteration does not propose any incremental excavation or earth disturbance in relation to the Gordon Gold Mine construction and operation. Heritage resources are therefore not considered further in the assessment.



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Table 3-1 Designation of Valued Components

Valued Component	Potential Interaction	Rationale for Exclusion or Inclusion and Alteration Potential Effect
Current use of lands and resources for traditional purposes	x	As the proposed alteration is within a disturbed context on unoccupied Crown land, and the LAA includes existing roads and former mine site, no residual effects from the alteration are anticipated to traditional land use. The anticipated change in flow in the Hughes River is expected to be below the 10% threshold level to have a detectable impact on the aquatic ecosystem and there is no risk of flows in the Hughes River decreasing below 30% of the mean annual discharge from the proposed alteration. Effects on Current Use of Lands and Resources for Traditional Purposes are not considered further in the assessment. Effects on fish and fish habitat, per above, is assessed further.
Human health	x	Contractors engaged in the construction phase of the dewatering will be subject to site specific health and safety plans and worker protection standards and procedures under <i>The Workplace Safety and Health Act</i> (Manitoba). Worker health and safety programs will be maintained as part of the construction and operation at the PDA. The requested alteration is not anticipated to change the risks for worker/public health. Human Health is therefore excluded from further assessment of environmental effects.
Indigenous peoples	x	The site and access road have been previously disturbed by previous development. Any anticipated change to disturbance effects to Indigenous peoples on access to and availability and current use of lands and resources is unlikely to be significantly different from the licensed Gordon Mine development. Effects on Indigenous peoples are not considered further in the assessment.
Notes: PDA – Project Footprint (Mine Property and access road) LAA – Local Assessment Area (including the PDA)		

Once interactions that are likely to have effects were identified and the VCs determined, an analytical framework was used to evaluate and characterize the potential effects of the proposed alteration according to a set of standardized criteria to facilitate assessment of residual effects (see Section 3.1.2).

3.2 RESIDUAL EFFECTS CRITERIA

Terms used to characterize the residual environmental effects are summarized in Table 3-2.



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Table 3-2 Definition of Terms Used to Characterize Residual Environmental Effects

Characterization	Description	Quantitative Measure or Qualitative Categories
Direction	The long-term trend of the residual effect	Positive — an improvement in the VC compared with existing conditions and trends Adverse — a decline in the VC compared with existing conditions and trends Neutral — no change in the VC from existing conditions and trends
Magnitude	The amount of change in the VC relative to existing conditions	Negligible — no measurable change Low — a change that falls within the level of natural variability Moderate — a measurable change which is unlikely to affect the VC High — a measurable change which is likely to affect the VC
Geographic Extent	The geographic area in which an environmental effect occurs	PDA — residual effects are restricted to the PDA LAA — residual effects extend into the LAA RAA — residual effects extend to other adjacent areas of the property into the RAA
Frequency	When the residual effect occurs and how often	Single event — residual effect occurs once throughout the life of the dewatering work Multiple irregular event — residual effect occurs sporadically and intermittently (no set schedule) throughout Multiple regular event — residual effect occurs repeatedly and regularly throughout Continuous — residual effect occurs continuously throughout the life of the dewatering work
Duration	The period of time required until VC returns to existing condition, or the effect can no longer be measured or otherwise perceived	Short-term — residual effect restricted to a duration of 2 weeks Medium-term — residual effect extends to 1 year Long-term — residual effect extends for longer than 1 year
Reversibility	Whether the VC can return to existing condition after the proposed alteration activity ceases	Reversible — the effect is likely to be reversed after activity completion and decommissioning Irreversible — the effect is unlikely to be reversed even after decommissioning
Ecological and Socio-economic Context	Existing condition and trends in the area where environmental effects occur	Undisturbed — area is relatively undisturbed or not adversely affected by human activity Disturbed — area has been substantially previously disturbed by human development or human development is still present



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3.3 ASSESSMENT OF ENVIRONMENTAL EFFECTS

This section outlines the assessment of environmental effects for the VCs identified in Table 3-1 as having potential interaction with the proposed alteration. Namely, surface water quantity and quality and fish and fish habitat. This assessment is based on the Assessment Modelling Report (Stantec 2023) prepared for the dewatering the historical Wendy and East pits to the Hughes River (Appendix B).

3.3.1 Surface Water

The potential environmental effects of the dewatering on surface water, prior to mitigation, include change in surface water quantity and change in surface water quality.

During construction, no incremental alteration-related changes to water quality at the Gordon site are anticipated. During operation, effects on surface water quantity and flow will be from the temporary changes in flows and quality to downstream waterbodies (i.e., Hughes River) as a result of continuous dewatering during the operation phase. Changes to surface water quantity and quality will cease once dewatering of the pits is complete and the dewatering infrastructure is decommissioned.

Given the volume of water in Wendy and East Pits, and the nearly constant temperatures of the water below 10 m deep (i.e., 4°C), discharge of the pit water into a receiving waterbody during operation may alter water temperature in the river, and depending on the time of year, affect the health, growth, and survival of fish and other aquatic biota upon which fish depend on for food. The effects of potential changes to water temperature are assessed in Section 3.3.2.

3.3.1.1 Summary of Mitigation Measures

Proposed mitigation measures incorporated as part of this NOA/NOC include those standard practices and procedures identified in the previous submission (Stantec 2020a and 2020b) as well as other general mitigation measures that are typically applied during construction and operation, as the dewatering is an increment to the proposed work that would be conducted during construction of the Gordon Gold Mine.

Based on the assessment report (Appendix B), aeration and mixing of the water in the pits prior to discharge to the Hughes River will be conducted, as would have been done for the licensed Gordon Gold Mine, to mix the discharge water so that discharge (now proposed to be the Hughes River) would not create significant adverse water quality in the receiving stream. It is recommended that dewatering the Wendy and East pits occur during the months of May to October when Hughes River flows are highest, and, therefore, mixed concentrations would be lowest.

3.3.1.2 Residual Effects

An assumed base-case dewatering pumping rate of 0.39 m³/s would increase median monthly flows in the Hughes River between 1% and 2% (Stantec 2023). The assumed pumping rate would increase monthly flows in the Hughes River by up to 3% for the “minimum Hughes River flow scenario” and by <1% for the “maximum Hughes River flow scenario”. If the pumping rate was doubled (to 0.78 m³/s),



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median monthly flows in the Hughes River are predicted to increase between 2% and 5% (Stantec 2023). The doubled pumping rate would increase monthly flows in the Hughes River by as high as 5% for the “minimum Hughes River flow scenario” and as little as 1% for the “maximum Hughes River flow scenario”. Both scenarios are below the 10% ecological flow threshold for determining a low probability of detectable impacts to aquatic ecosystems. While it is understood that the predicted changes in monthly flow may not accurately represent the maximum instantaneous flow change, the comparison to the DFO threshold is only provided to show that predicted flow increases are small and within the same order of magnitude as it is expected that this change will be of low risk to fish and other aquatic habitat in the Hughes River. The proposed alteration will add water to the Hughes River thereby increasing its flows over the operation phase of the dewatering work. As adding water to the Hughes River will increase flows, there is no risk of the proposed alteration causing flows in the Hughes River to decrease below 30% of the mean annual discharge (MAD) in any month (Stantec 2023).

Several water quality parameters exceeded federal and/or provincial WQG in the Hughes River under existing conditions (Appendix B), and several parameters from the aerated pit waters similarly exceeded water quality criteria prior to mixing.

A summary of water quality results for different modelling scenarios is presented in the modelling assessment report (Stantec 2023). Several water quality data points were collected for existing conditions in the Hughes River. Concentrations of total aluminum, dissolved lead, and dissolved zinc exceeded water quality guidelines in some months, in some locations, in the Hughes River. However, surface water quality at the potential point of discharge at the Hughes River (once mixed) is predicted to be below the applicable water quality guidelines for aluminum, dissolved lead, and dissolved zinc concentrations, as well as total and dissolved manganese and total arsenic concentrations (Stantec 2023). It is noted that total iron concentrations exceeded the total iron water quality guideline in aerated pit waters and in many samples collected from the Hughes River; however, total iron concentrations are naturally elevated in the Hughes River in some months (Stantec 2023).

Total copper concentrations from the Hughes River were not identified as a parameter of potential concern; however dissolved copper concentrations from sample data for the Hughes River and aerated pits were greater than total copper concentrations and are suspect. It is recommended that additional samples of Hughes River water quality be collected and analyzed prior to discharging pit water to verify whether dissolved copper concentrations in the Hughes River should be considered a parameter of potential concern. Total phosphorus concentrations in the aerated pit and at all sampling locations from the Hughes River did not exceed the water quality guideline of 0.05 mg/L for streams and was not predicted to exceed that level at any location for any mixing scenario (Stantec 2023).

Flow and water quality modelling suggest that pumping water from the Wendy and East pits to the Hughes River would have negligible effects on stream flow and water quality. The Hughes River volume is two orders of magnitude greater than pit dewatering flows, and as such, Hughes River water flows and quality dominate the predicted mixed flows and concentrations. The potential effects of the dewatering on surface water quantity and quality are negligible in magnitude, limited to the PDA and LAA, medium-term



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in duration, continuous to regular in frequency, reversible upon decommissioning, and occur within a disturbed context.

3.3.2 Fish and Fish Habitat

The potential environmental effects of the dewatering on fish and fish habitat, prior to mitigation, include changes in fish habitat and fish health, growth, or survival.

In the LAA, during the construction phase (i.e., installing the dewatering equipment, discharge line), effects on fish and fish habitat include changes in physical habitat due to dewatering infrastructure (i.e., discharge line to the Hughes River). During operation of the dewatering equipment and discharge line, changes in fish habitat will result from flow and quality changes in the Hughes River from discharge of pit water.

At the Gordon site, changes to fish health, growth, and survival will result from dewatering of the Wendy Pit and East Pit during the construction and operation phase, however these effects were already considered in the assessment for the Gordon site and approved in the licence. The proposed alteration's incremental change relative to the licensed mine development is primarily limited to the installation of the longer discharge line and discharge of pit water to the Hughes River. Changes in water quality, including temperature, associated with the discharge of pit water to the aquatic environment have the potential to affect fish health, growth, and survival. Changes to fish and fish habitat will cease once dewatering of the pits is complete and dewatering infrastructure is decommissioned.

3.3.2.1 Summary of Mitigation Measures

Proposed mitigation measures incorporated as part of this NOA/NOC include those standard practices and procedures identified in the previous submission (Stantec 2020a and 2020b) as well as other general mitigation measures that are typically applied. The mitigation measures to address water quality will similarly mitigate effects to fish and fish habitat from the proposed alteration on the Hughes River. Additional proposed mitigation measures include:

- Installing screens on the water intakes that are sized using DFO's Interim Code of Practice: End of Pipe Fish Protection Screens for Small Water Intakes in Freshwater (DFO 2020a).
- Aerate the Wendy and East Pits to breakdown the thermal and chemical stratification prior to dewatering.
- Using a heat exchanger, when required, to heat or cool water from Wendy and East Pits prior to discharge during construction.
- Implementing runoff, erosion, and sediment control measures to reduce the amount of water available to become sediment laden, the amount of sediment that is mobilized through erosion, and the amount of sediment that is conveyed to waterbodies.



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- Requiring heavy machinery working near water to be kept in good working condition, to be re-fueled no closer than 50 m from any waterbody or watercourse, and to use biodegradable hydraulic fluids.
- Limiting in-water works to outside of the northern Manitoba Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat (DFO 2020b) as practical (limited to July 16 to August 31).
- Pit water will be discharged onto a non-erodible surface (e.g., boulders) to prevent bank and bottom erosion and potential for increasing TSS concentrations downstream.

3.3.2.2 Residual Effects

DFO considers the pits as fish habitat, although the fish are isolated from other populations. Alamos confirmed in discussions with DFO that the pits are considered fish habitat and they will be included in offsetting plans requiring *Fisheries Act* Authorization. Dewatering of Wendy and East pits at the Gordon site will result in a harmful alteration, disruption, or destruction of fish habitat due to the presence of fish.

Potential residual effects to fish habitat in the pits remain high, but the predicted change is temporary and limited to the construction (installation) phase and pit dewatering system operation.

During the operation (i.e., pit dewatering), it is predicted that flow changes in the Hughes River with the addition of water from the two open pits are well below the 10% change threshold suggested by DFO and the minimum change necessary to have a detectable impact on the aquatic ecosystem that support commercial, recreational, or Indigenous fisheries in Canada (Stantec 2023). Modelling results suggest that, even with a doubled pumping rate increasing flows in the Hughes River between 1% and 5%, pit dewatering would be unlikely to result in detectable impacts (negligible effects) on the aquatic ecosystem in the Hughes River (see Section 3.1.1.2).

The volume of cold water (i.e., <4°C) below 10 m depth in Wendy and East Pits is relatively large in comparison to the volume of water in Farley Lake. Water temperatures in the Hughes River vary with the seasons, from a low near 0°C to a high of 20°C (Stantec 2023). Given that the Hughes River volume is two orders of magnitude greater than what pit dewatering flows, the overall effect of dewatering the open pits on fish health, growth, and survival with mitigation is anticipated to be negligible. Implementation of mitigation measures and the monitoring of discharge water temperature will serve to reduce potential for changes to health, growth, or survival of fish and other aquatic biota. Pumping the pit water to the Hughes River eliminates the risks to fish and fish habitat associated with pumping the water into Farley Lake and out through Farley Creek.

Surface water quality was evaluated from six sites in the Hughes River. Although several data points of water quality for existing conditions exceeded the WQG for total Al, dissolved Pb, and dissolved Zn (Stantec 2023), predicted total Al, dissolved Pb, and dissolved Zn concentrations did not exceed any of the WQG for any mixed modeling scenario at any location in the Hughes River downstream of the discharge location (Stantec 2023). Total P concentrations at all sampling locations on the Hughes River never exceeded the WQG of 0.05 mg/L for streams. Similarly, total P concentrations were not predicted to exceed the WQG at any location in the Hughes River for any mixing scenario. Therefore, adverse



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residual effects on fish health, growth, or survival would not be expected at the concentration levels predicted by the surface water model for the Hughes River.

Potential effects on fish and fish habitat are limited to the LAA, considered negligible, medium-term in duration (and limited to the Hughes River), continuous to regular in frequency, reversible upon decommissioning, and occur within a disturbed context.



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Conclusion
February 9, 2024

4.0 CONCLUSION

Stantec has prepared this environmental assessment report on behalf of Alamos Gold Inc. in support of the NOA/NOC application for modification to the approved Gordon Gold Mine development (Licence No. 3390 and federal Decision Statement for the Lynn Lake Gold Project). The NOA/NOC application is filed in accordance with Section 14(1) of *The Environment Act*, which requires a proponent to notify the Director (for Class 1 and 2 developments) if the proponent intends to alter a licensed development (MECP 2022) and the federal Decision Statement conditions 2.16 and 2.17, which require notification of IAAC if the proponent is proposing to carry out the Designated Project in a manner other than described in the Decision Statement.

Potential interactions of the proposed alteration and the environment were evaluated with likely interactions examined to assess residual effects on the assumption of typical mitigation measures representative of best practices and previous construction methods employed at the site. Based on information available to date and as presented in this report, adverse effects of the proposed modifications to the biophysical and socio-economic environment are expected to be not significant. The proposed alteration will expedite the dewatering of the Wendy and East Pits to facilitate timely construction at the Gordon site. It further serves to eliminate risks associated with pumping water into Farley Lake and out through Farley Creek and the associated potential effects to fish and fish habitat that were previously assessed with the existing capacity limitations of these receiving waterbodies. The shorter time frame of the alteration for the initial pit dewatering will reduce nuisance noise, dust, as well as diesel consumption compared with the original plan.

The proposed alteration is not expected to produce significant adverse environmental effects beyond those assessed and licensed, it is anticipated it will be considered as a minor alteration to the licensed development, with new conditions as appropriate.



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References
February 9, 2024

5.0 REFERENCES

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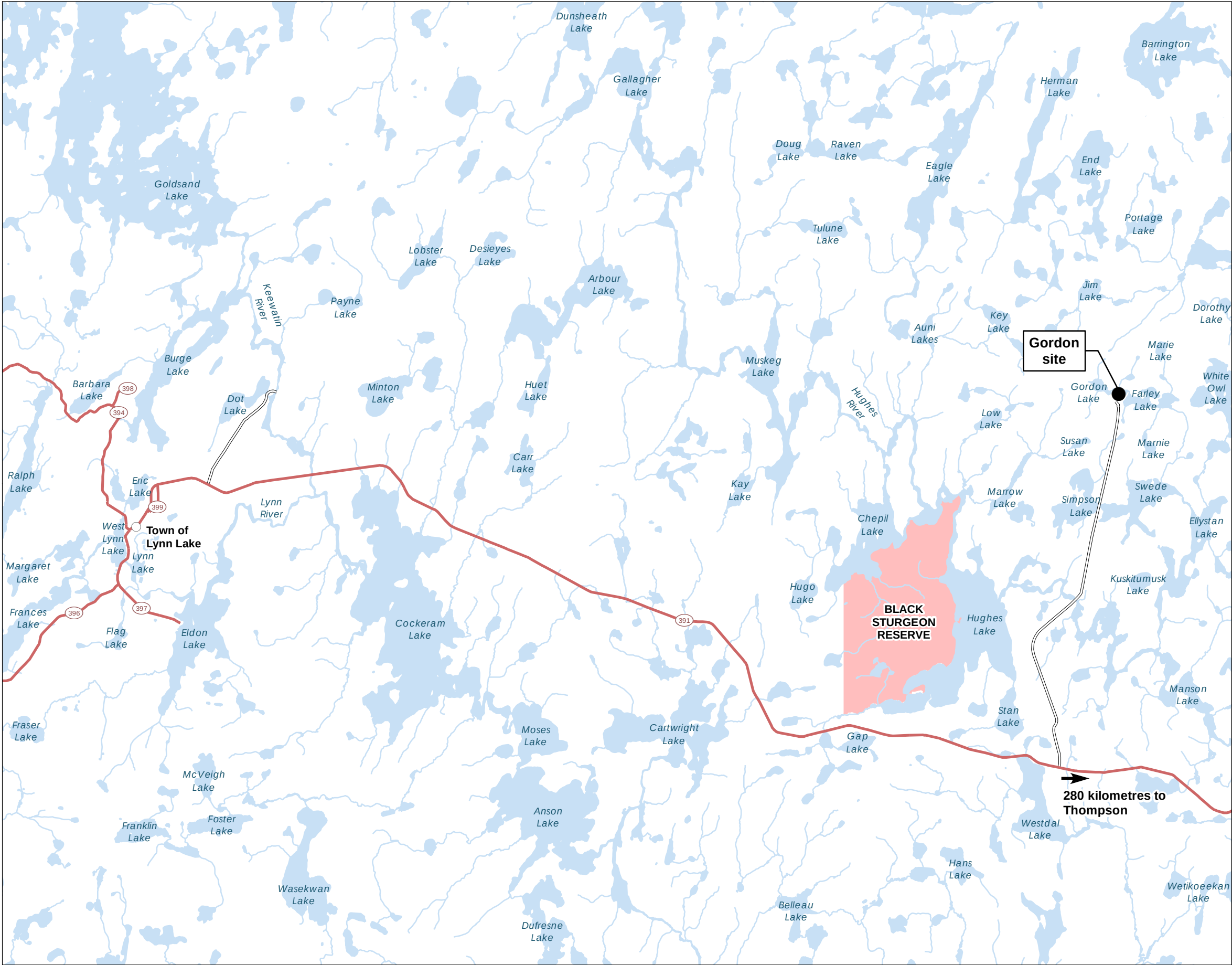
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Appendix A Maps, Photos, Drawings
February 9, 2024

Appendix A MAPS, PHOTOS, DRAWINGS



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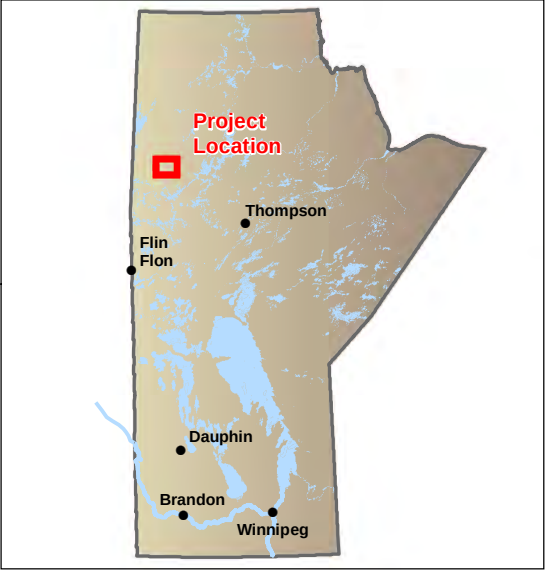


- Landbase**
- Site Location
 - ══ Existing Access Road
 - ══ Highway
 - ══ Watercourse
 - Waterbody
 - First Nation Reserve



0 2.5 5 Kilometres
(At original document size of 11x17)
1:150,000

Notes
1. Coordinate System: NAD 1983 UTM Zone 14N
2. Base Data Sources: Government of Manitoba and Government of Canada



Project Location
Lynn Lake, Manitoba

Prepared by ACampigotto on 2023-10-05
Technical Review by BKrawchuk on 2023-10-05

Client/Project
ALAMOS GOLD INC.
Lynn Lake Gold Project

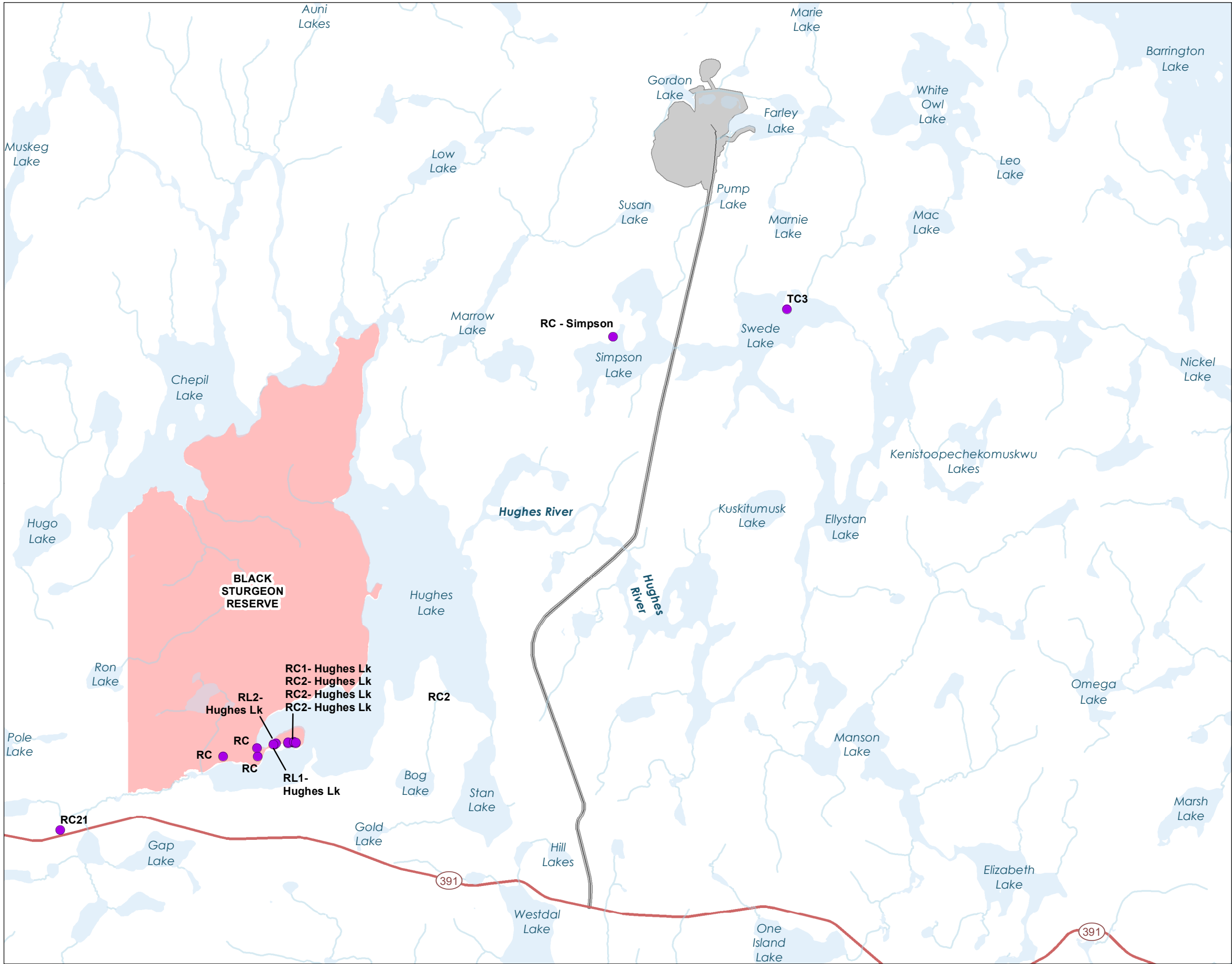
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Map No.
1-1

Title

Project Location

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Reviewed: 2023-10-05 By: ACompagnolo



Project Infrastructure

NOA Project Development Area (PDA)

Land Use

Permit or Lease Site
RC - Remote Cabin
RL - Recreation Lot
TC - Trapper Cabin

Landbase

Existing Access
Highway
Watercourse
Waterbody
First Nation Reserve



0 1 2 Kilometres
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Notes
1. Coordinate System: NAD 1983 UTM Zone 14N
2. Base Data Sources: Government of Manitoba and Government of Canada.

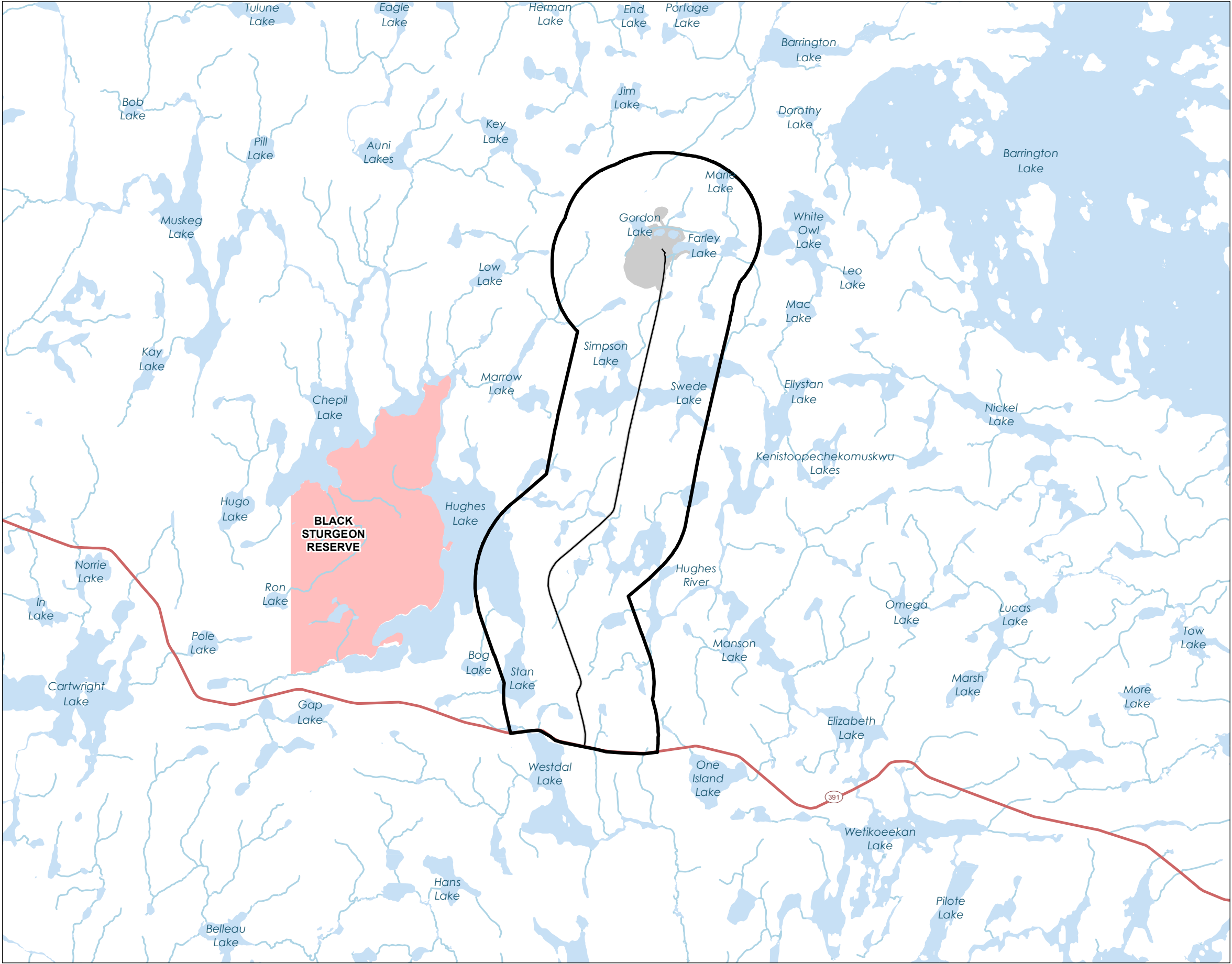
Project Location
Lynn Lake, Manitoba
Prepared by JHiebert on 2023-10-05
Technical Review by BKrawchuk on 2023-10-05

Client/Project
ALAMOS GOLD INC.
Lynn Lake Gold Project
111473054

Map No.
1-2

Title
Crown Land Permits and Leases

GA, GS, Project, Folder\1114730508, LGP, EA\RA\Hughes River, NOA\Map-13, LAA, GordonPillDevateringNOA, 2023\012.mxd Revised: 2023-10-12 by: ACampigotto



Project Infrastructure

 NOA Project Development Area (PDA)

Study Area

 Local Assessment Area (LAA)

Landbase

 Existing Access Road

 Highway

 Watercourse

 Waterbody

 First Nation Reserve



0 2 4 Kilometres
(At original document size of 11x17)
1:110,000

Notes

1. Coordinate System: NAD 1983 UTM Zone 14N

2. Base Data Sources: Government of Manitoba and Government of Canada.

Project Location

Lynn Lake,
Manitoba

Prepared by ACampigotto on 2023-10-12
Technical Review by BKrawchuk on 2023-10-12

Client/Project

ALAMOS GOLD INC.
Lynn Lake Gold Project

111473054

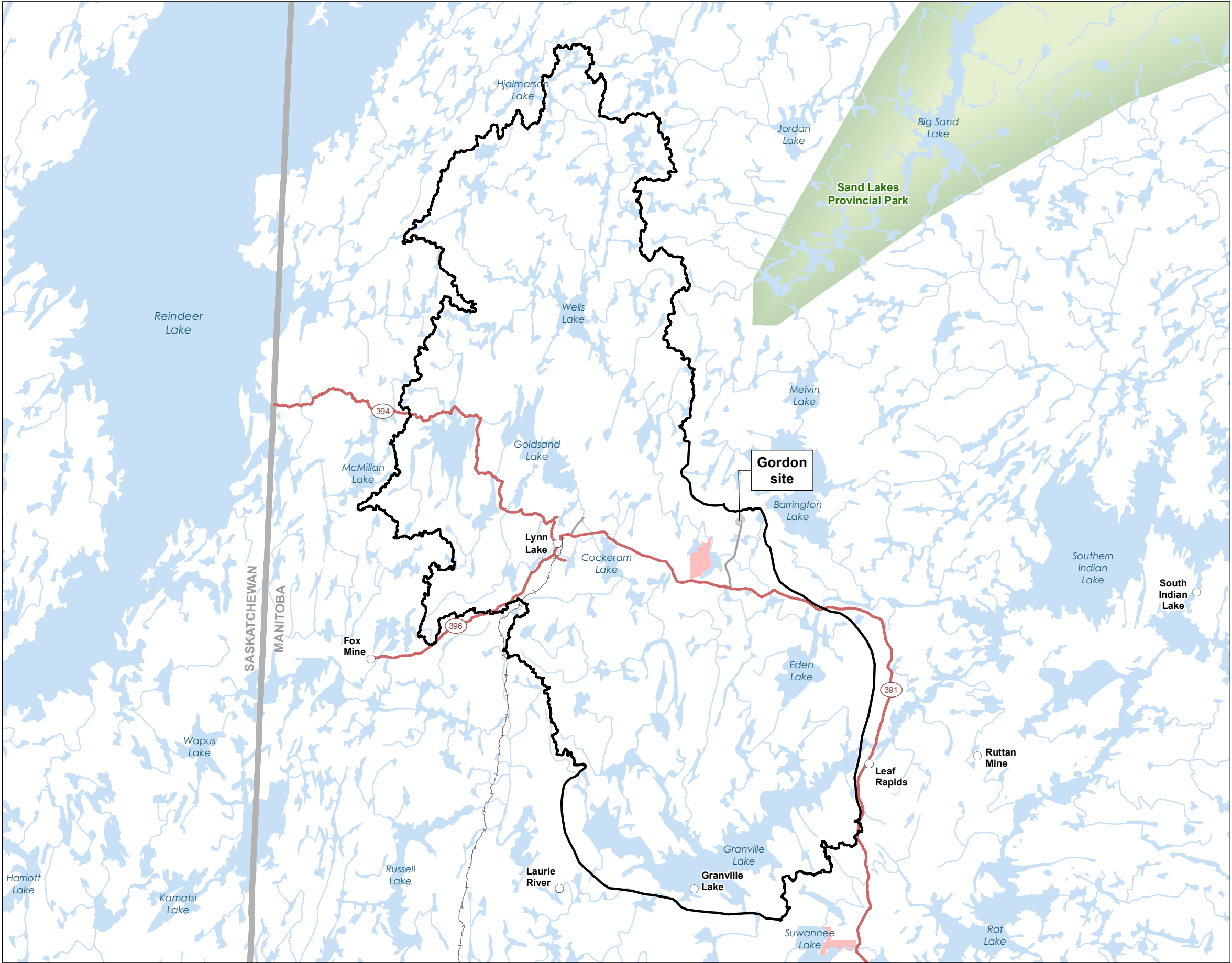
Map No.

1-3

Title

Local Assessment Area (LAA)

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Project Infrastructure

NOA Project Development Area (PDA)

Study Area

Regional Assessment Area (RAA)

Landbase

- Community
- Highway
- Access Road
- Rail
- Watercourse
- Waterbody
- First Nation Reserve
- Provincial Park
- Provincial Border



0 10 20 Kilometres
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1:800,000

Notes
1. Coordinate System: NAD 1983 UTM Zone 14N
2. Base Data Sources: Government of Manitoba and Government of Canada

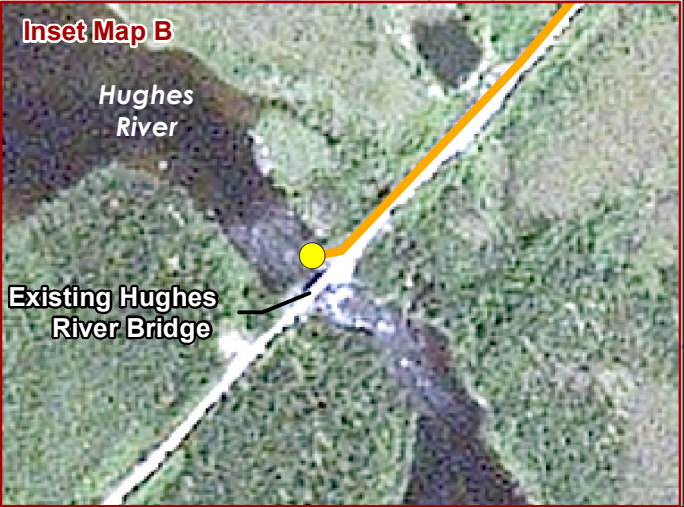
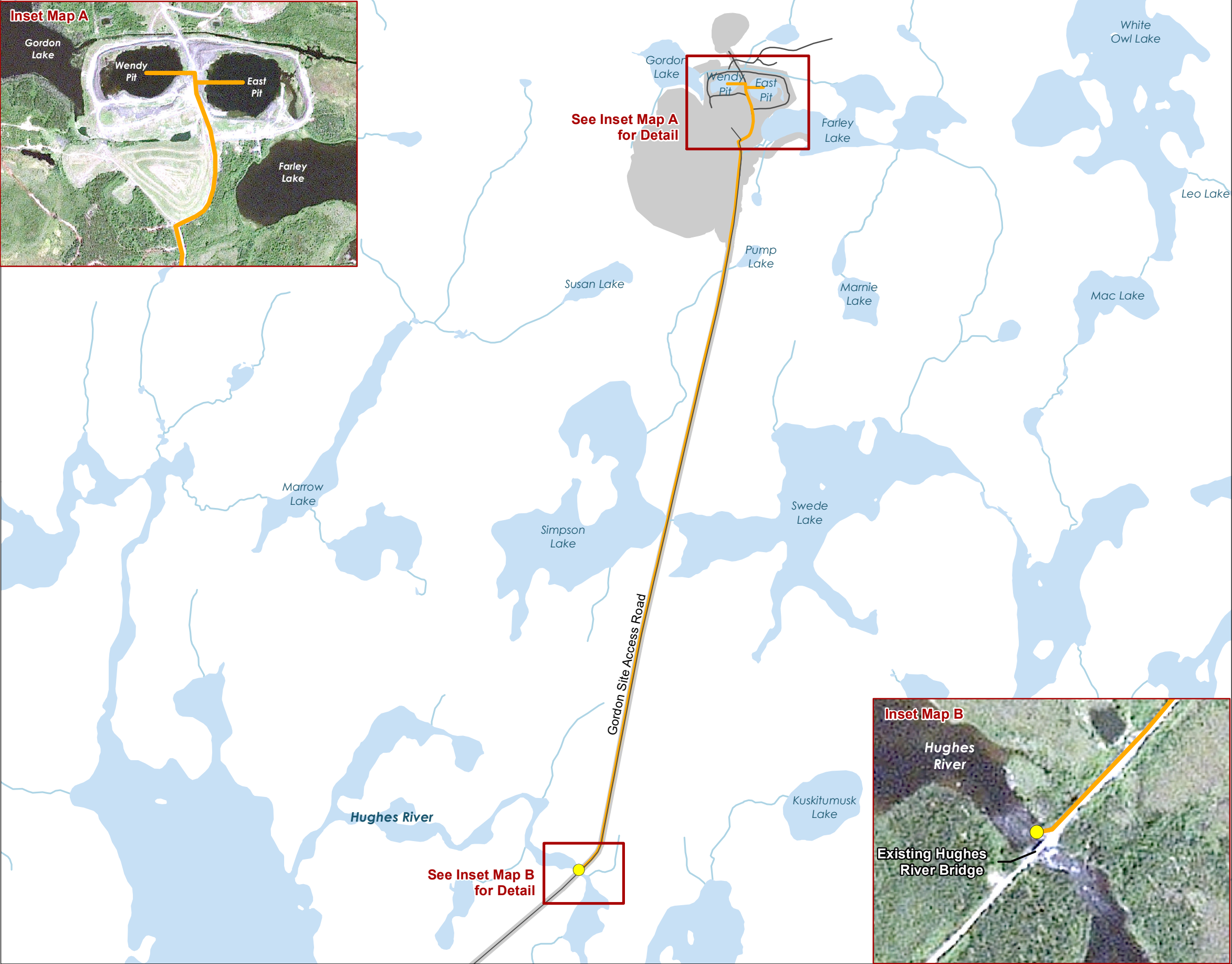
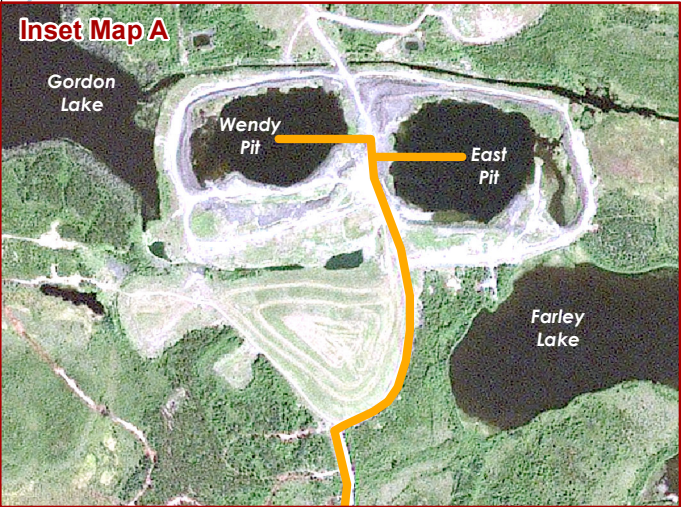
Project Location
Lynn Lake, Manitoba
Prepared by ACampigotto on 2023-10-12
Technical Review by BKrawchuk on 2023-10-12

Client/Project
ALAMOS GOLD INC.
Lynn Lake Gold Project
111473054

Map No.
1-4

Title
Regional Assessment Area (RAA)

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Project Infrastructure (NOA)

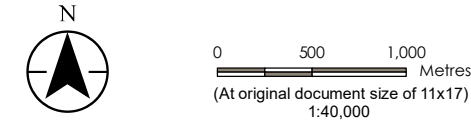
NOA Project Development Area (PDA)

Proposed Infrastructure

Discharge Point
Discharge Line

Landbase

Gordon Site Accesss Road
Watercourse
Waterbody



Notes
1. Coordinate System: NAD 1983 UTM Zone 14N
2. Base Data Sources: Government of Manitoba and Government of Canada.
3. NOA Project Infrastructure features provided by Worley via Alamos.

Project Location
Lynn Lake, Manitoba
Prepared by ACampigotto on 2024-02-02
Technical Review by KMathers on 2024-02-02

Client/Project
ALAMOS GOLD INC.
Lynn Lake Gold Project
111473054

Map No.
2-1

Title
PD Dewatering Route

APPENDIX A: PHOTO LOG



Photo 1: Aerial Photograph of the Gordon Site



Photo 2: Hughes River Bridge crossing

APPENDIX A: PHOTO LOG



Photo 3: Hughes River Bridge crossing – side view



Photo 4: Hughes River Bridge crossing – looking upstream

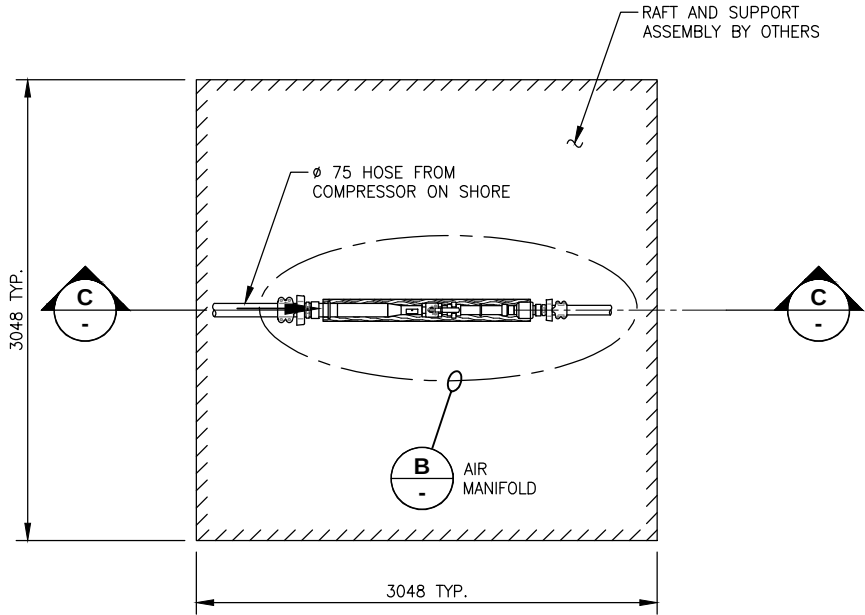
APPENDIX A: PHOTO LOG



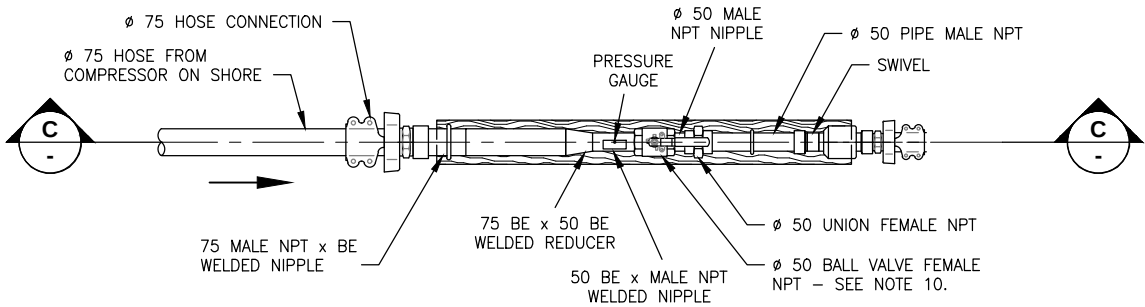
Photo 5: Hughes River Bridge crossing – looking downstream

Filename: \\mainfile-van\Projects\Proposals\PO3006856 Stantec Pit Lake Diffuser Design\96 CAD\02_Production\000_Set\3006586-01-FF-SET-AERATOR-ROB.dwg, 04-Aug-21 1:53:38 PM

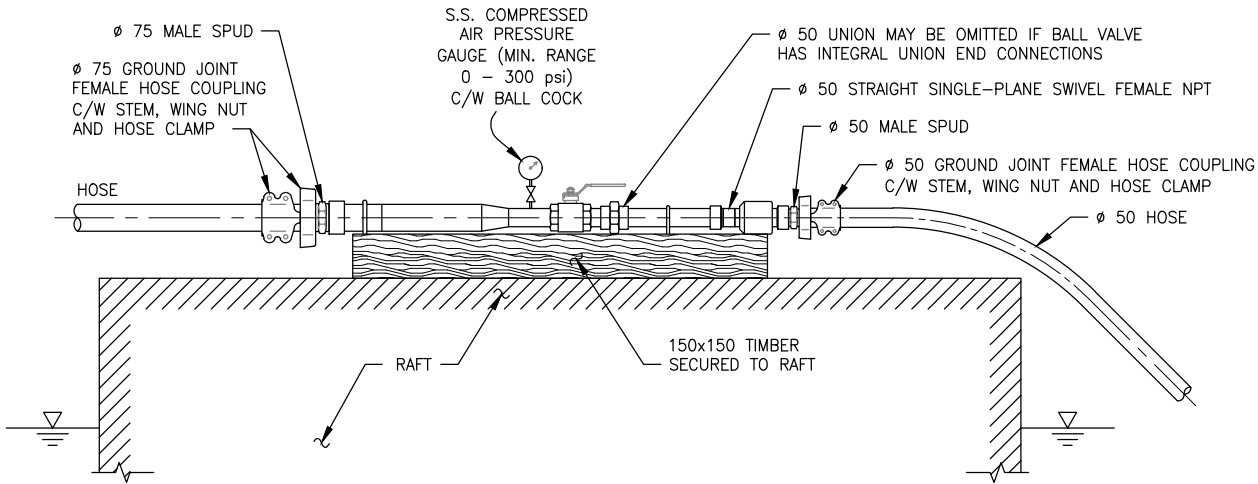
- NOTES:**
1. DIMENSIONS ARE GIVEN IN MILLIMETRES, UNLESS NOTED OTHERWISE.
 2. ELEVATIONS ARE GIVEN IN METRES.
 3. CONSTRUCTION TOLERANCES ± 3 mm.
 4. ALL ABOVE-WATER PIPING SHALL BE GALVANIZED SCHED. 40 STEEL. TOUCH UP PIPING WITH GALVACON WHERE COATING IS DAMAGED IN THE FIELD.
MIN. WORKING PRESSURE = 200 psig.
 5. THE AIR MANIFOLD ASSEMBLY MUST BE PRESSURE TESTED PRIOR TO USE.
 6. ALL BOLTS, NUTS AND U-BOLTS SHALL BE STAINLESS STEEL (S.S.).
 7. ALL ABOVE-WATER HOSE COUPLINGS SHALL BE COATED FOR CORROSION RESISTANCE.
 8. ALL ABOVE-WATER HOSE CONNECTIONS SHALL INCORPORATE SUITABLE SAFETY CABLES TO PREVENT HOSE WHIP UPON ACCIDENTAL DISCONNECTION (NOT SHOWN).
 9. ALL STRUCTURAL MEMBERS SHALL BE FABRICATED FROM STRUCTURAL GRADE ALUMINUM (6061).
 10. BALL VALVES SHALL BE FULL-PORT BRONZE WITH REINFORCED TEFLON SEAT.



A PLAN - DIFFUSER RAFT
SCALE 1:50



B PLAN - AIR MANIFOLD
SCALE 1:25



C SECTION
SCALE 1:25

STANTEC CONSULTING LTD.



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REVISIONS

DRAWING INFORMATION

DATE	4 AUG 2021
DESIGNED BY	KIA
DRAWN BY	JS / CSM
CHECKED BY	BMC
SHEET SIZE	B (11" x 17")

LYNN LAKE GOLD PROJECT
EAST LAKE AERATOR DESIGN

AERATOR
DIFFUSER RAFT AND
AIR MANIFOLD ASSEMBLY

PROJECT NUMBER 3006856

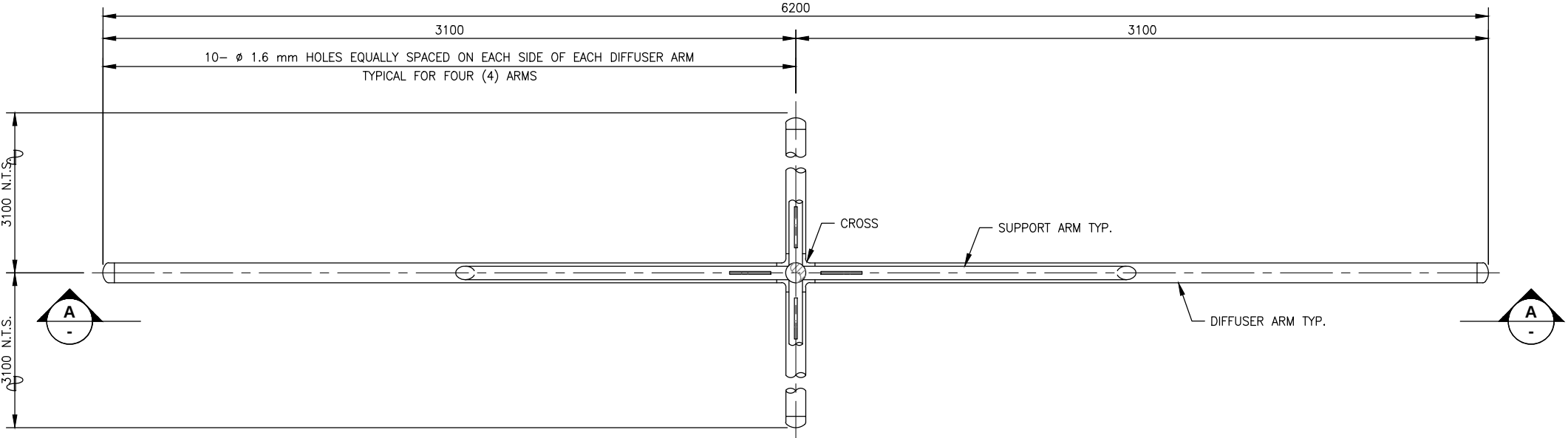
DRAWING NUMBER 3006856-1

SHEET NUMBER

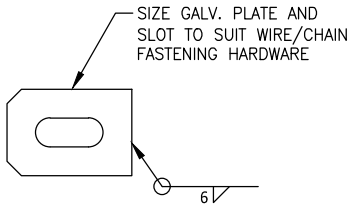
2

REVISION

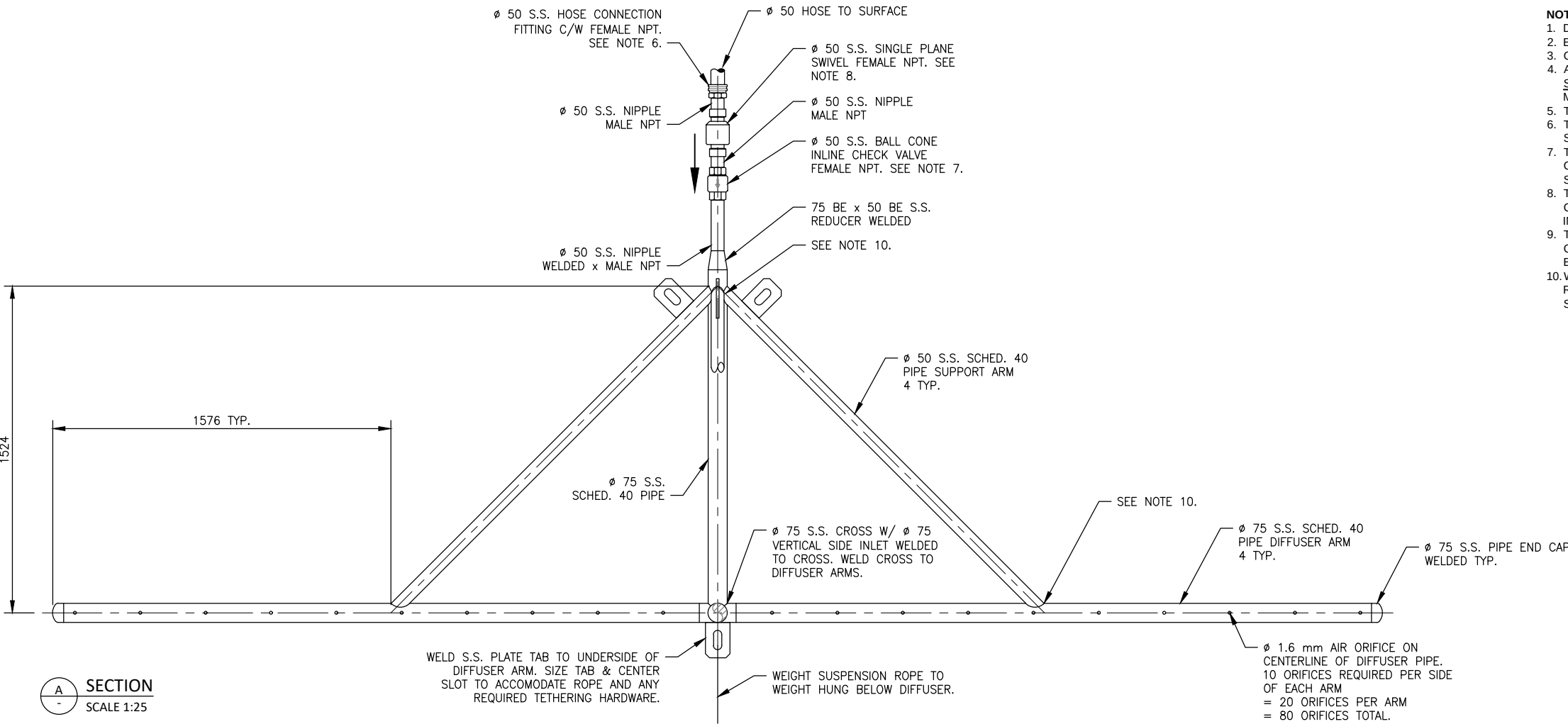
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1 PLAN
SCALE 1:25



2 WELDED TAB (5 REQ'D)
SCALE 1:10



A SECTION
SCALE 1:25

- NOTES:**
1. DIMENSIONS ARE GIVEN IN MILLIMETRES, UNLESS NOTED OTHERWISE.
 2. ELEVATIONS ARE GIVEN IN METRES.
 3. CONSTRUCTION TOLERANCES ± 3 mm.
 4. ALL PIPING, FITTINGS, VALVES AND RELATED COMPONENTS SHALL BE STRUCTURAL GRADE STAINLESS STEEL (S.S.). MIN. WORKING PRESSURE = 200 psig.
 5. THE DIFFUSER ASSEMBLY MUST BE PRESSURE TESTED PRIOR TO USE.
 6. THE HOSE CONNECTION FITTING MUST BE SUITABLE FOR COMPRESSED AIR SERVICE IN SUBSEA CONDITIONS. ENSURE CONNECTION IS LEAK-FREE.
 7. THE CHECK VALVE MUST BE SUITABLE FOR COMPRESSED AIR SERVICE IN SUBSEA CONDITIONS. VALVE MAY BE OMITTED IF HOSE CONNECTION FITTING INCLUDES SUITABLE BACKFLOW-PREVENTION VALVE.
 8. THE SWIVEL MUST BE SUITABLE FOR COMPRESSED AIR SERVICE IN SUBSEA CONDITIONS. IT MAY BE OMITTED IF HOSE CONNECTION FITTING INCLUDES INTEGRAL SWIVEL.
 9. THE BALL VALVE MUST BE SUITABLE FOR COMPRESSED AIR SERVICE IN SUBSEA CONDITIONS. VALVE SHALL BE FULL-PORT WITH REINFORCED TEFLON SEAT, S.S. BALL AND S.S. HANDLE.
 10. WELD THE FOUR (4) SUPPORT ARMS TO THE $\varnothing 75$ DIFFUSER PIPING WITHOUT REMOVING THE DIFFUSER'S PIPE WALL. AIR IS NOT INTENDED TO FLOW INTO THE SUPPORTS.

STANTEC CONSULTING LTD.



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REVISIONS

DRAWING INFORMATION

DATE	4 AUG 2021
DESIGNED BY	KIA
DRAWN BY	JS / CSM
CHECKED BY	BMC
SHEET SIZE	B (11" x 17")

LYNN LAKE GOLD PROJECT
EAST LAKE AERATOR DESIGN

AERATOR
PERFORATED PIPE AIR DIFFUSER
PLAN AND SECTION

PROJECT NUMBER 3006856

DRAWING NUMBER 3006856-1

SHEET NUMBER

3

REVISION

**LYNN LAKE GOLD PROJECT: GORDON MINE PIT DEWATERING NOTICE OF ALTERATION /
NOTICE OF CHANGE**

Appendix B Assessment Model Report
February 9, 2024

Appendix B ASSESSMENT MODEL REPORT





**Lynn Lake Gold Project:
Assessment Modelling for
Dewatering Wendy Pit and East Pit
to Hughes River**

Final Report

August 29, 2023

Prepared for:
Alamos Gold Inc.
Brookfield Place, 181 Bay Street,
Suite 3910
Toronto, Ontario M5J 2T3

Prepared by:
Stantec Consulting Ltd.

Project Number:
111473054

Limitations and Sign-off

The conclusions in the Report titled Lynn Lake Gold Project: Assessment Modelling for Dewatering Wendy Pit and East Pit to Hughes River are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from Alamos Gold Inc. (the "Client") and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided by the Client to applicable authorities having jurisdiction and to other third parties in connection with the project, Stantec disclaims any legal duty based upon warranty, reliance or any other theory to any third party, and will not be liable to such third party for any damages or losses of any kind that may result.

Prepared by: ORIGINAL SIGNED
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Signature
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Printed Name

Approved by: ORIGINAL SIGNED
Signature
Karen Mathers, B.Sc., M.Sc., P.Geo. FGC, PMP



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Executive Summary

A spreadsheet-based mixing model was used to predict the potential change in flow and water quality in the Hughes River if aerated water from East Pit and Wendy Pit at the Gordon site were pumped to the Hughes River upstream of the existing bridge crossing. This modelling was conducted to support the Notice of Alteration (NOA) application that Alamos Gold Inc. (Alamos) intends to submit to the Impact Assessment Agency of Canada (IAAC) and the Province of Manitoba indicating that pit water would be pumped to the Hughes River instead of Farley Lake as currently described in the Environmental Impact Statement (EIS) and the Environmental Assessment Report (IAAC 2023).

Model inputs included a synthetic flow record for the Hughes River, monthly water quality data collected from five locations in the Hughes River between May 2022 and April 2023, pit water quality obtained from a 2021 program that sampled the East Pit water at multiple depths approximately 36 hours after aeration, a dewatering rate estimated from the dewatering contractor, and the water volumes of the East and Wendy pits as determined from bathymetry surveys conducted for the feasibility study. Twenty-seven modelling scenarios were conducted based on median, 10th percentile, and 90th percentile Hughes River flows, median, 10th percentile, and 90th percentile Hughes River water quality, single and double pumping rates, and a 25% mixing zone in the Hughes River. For all scenarios, it was assumed that pit water mixed instantaneously with water in the Hughes River. This is a reasonable assumption given that the discharge location is likely to be positioned immediately upstream of the Hughes River bridge where the river is constricted, creating high water velocities and turbulent conditions.

Results were screened against provincial and federal water quality guidelines (WQG) for the protection of freshwater aquatic life including Schedule 4 Metal and Diamond Mining Effluent Regulations (MDMER) effluent limits, long-term and short-term Canadian Water Quality Guidelines for the Protection of Aquatic Life (CWQG-FAL), and long-term and short-term Tier II and Tier III Manitoba Water Quality Standards, Objectives and Guidelines (MWQG) for aquatic life and freshwater aquatic life. Parameters of potential concern (PoPC) were identified in the model results as parameters that exceeded both a WQG and the existing concentrations within the Hughes River.

Modelling predicted that discharged water from Wendy and East Pits would increase monthly flows in the Hughes River by <3% for a median flow scenario and <5% for a double pumping scenario. These flow changes are small enough that no detectable impacts to fish or aquatic resources in the Hughes River downstream of the discharge location would be expected.

Several parameters from the Hughes River water quality input and aerated pit data sets exceeded one or more WQG. Total iron and dissolved copper were identified as PoPC in several scenarios. Reported dissolved copper concentrations were greater than total copper concentrations; the reported values in the laboratory results were verified, however a number of field blanks had reported dissolved copper concentrations greater than the detection limit. As such, the dissolved copper concentrations are suspect. Copper concentrations in the Hughes River and aerated pit water should be verified prior to dewatering.

Stantec Consulting Ltd. recommends dewatering the Wendy and East Pits during the months of May through October when Hughes River flows are highest, and modelled mixed concentrations are lowest.



Acronyms / Abbreviations

Al	Aluminum
Alamos	Alamos Gold Inc.
As	Arsenic
B	Boron
CaCO ₃	Calcium carbonate
Cd	Cadmium
Cl	Chloride
Cr	Chromium
Cr IV	Chromium IV
Cu	Copper
CWQG-FAL	Canadian Water Quality Guidelines for the Protection of Aquatic Life
DFO	Fisheries and Oceans Canada
DOC	Dissolved organic carbon
EIS	Environmental Impact Statement
F	Fluoride
Fe	Iron
h	Hours
IAAC	Impact Assessment Agency of Canada
LLGP	Lynn Lake Gold Project
L/s	Litres per second
m ³ /s	Cubic metres per second
mg/L	Milligrams per litre
MDMER	Metal and Diamond Mining Effluent Regulation
Mn	Manganese



Lynn Lake Gold Project: Assessment Modelling for Dewatering Wendy Pit and East Pit to Hughes River
Acronyms / Abbreviations
August 29, 2023

MWQSOG	Manitoba Water Quality Standards, Objectives and Guidelines
MWQSOG-SWAL	Manitoba Water Quality Standards, Objectives and Guidelines, Tier II and Tier III for Surface Water: Aquatic Life/Freshwater Aquatic Life and Wildlife
Na	Sodium
NH ₃	Unionized ammonia
NH ₃ + NH ₄ ⁺ as N	Ammonia-nitrogen
Ni	Nickel
NOA	Notice of Alteration
P	Phosphorus
Pb	Lead
PoPC	Parameter of potential concern
SO ₄	Sulphate
Stantec	Stantec Consulting Ltd.
TSS	Total suspended solids
U	Uranium
WQG	Water quality guideline
WSC	Water Survey of Canada
Zn	Zinc
°C	Degrees Celsius



1 Introduction

The Lynn Lake Gold Project (LLGP; or “the Project”) consists of two historical deposit sites located near Lynn Lake, Manitoba: the ‘Gordon’ site and the ‘MacLellan’ site. Alamos Gold Inc. (Alamos) intends to redevelop, operate, and eventually close/reclaim open pit gold mines at these historical mine sites.

The Gordon site is located approximately 40 kilometres (km) east of Lynn Lake and historically was referred to as the Farley Lake site. This site was formerly operated as a two-pit, open-pit gold mine by Black Hawk Mining Inc. from 1996 to 1999. After closure in 1999, the site underwent a reclamation process and the Wendy and East pits passively filled with water, forming pit lakes. The Wendy and East pits are approximately 60 metres (m) and 75 m deep, respectively. Wendy and East pits must be dewatered to enable Alamos to mine at the Gordon site. The Environmental Impact Statement (EIS) indicated that the Wendy and East pits would be aerated and dewatered to Farley Lake (Stantec, 2020a).

The Impact Assessment Agency of Canada (IAAC) conducted an environmental assessment of the Project and prepared an Environmental Assessment Report (IAAC 2023). The Decision Statement for the Project was issued on March 5, 2023 with the determination that the Project is not likely to cause significant adverse environmental effects. IAAC’s Environmental Assessment Report includes Farley Lake as the receiving environment for the water from Wendy and East pits.

1.1 Proposed Alteration

Alamos intends to submit an application to amend the Decision Statement to IAAC (amendment application) and a Notice of Alteration (NOA) to the Province of Manitoba that proposes dewatering East Pit and Wendy Pit to the Hughes River, instead of Farley Lake, during construction of the Gordon site.

Water in the Wendy and East pits would be mixed with an aerator prior to pumping water via an approximately 8-km long pipeline to the Hughes River, a fish-bearing river. The pipeline would be located adjacent to the Gordon site access road. The dewatering discharge is proposed to be located immediately upstream of the Hughes River bridge (Figure 1 and Figure 2) to facilitate rapid mixing in the fast and turbulent water under and immediately downstream of the bridge.

As part of the NOA and amendment application, a quantitative assessment of the potential effects of discharging pit water on stream discharge and water quality in the Hughes River is required.



1.2 Purpose

Stantec Consulting Ltd. (Stantec) was retained to conduct flow and water quality modelling and compare modelling results to federal and provincial water quality guidelines (WQGs) and federal and provincial instream flow thresholds. This report provides the methods, results and comparison to WQG and instream flow thresholds from a spreadsheet-based flow and mass-balance model to predict the change in flow volumes and concentrations of water quality parameters in the Hughes River as a result of dewatering the Wendy and East pits.



Figure 1 Map of water quality sample sites. The proposed discharge location is between AQF41 and AQF40 near the mine access road.

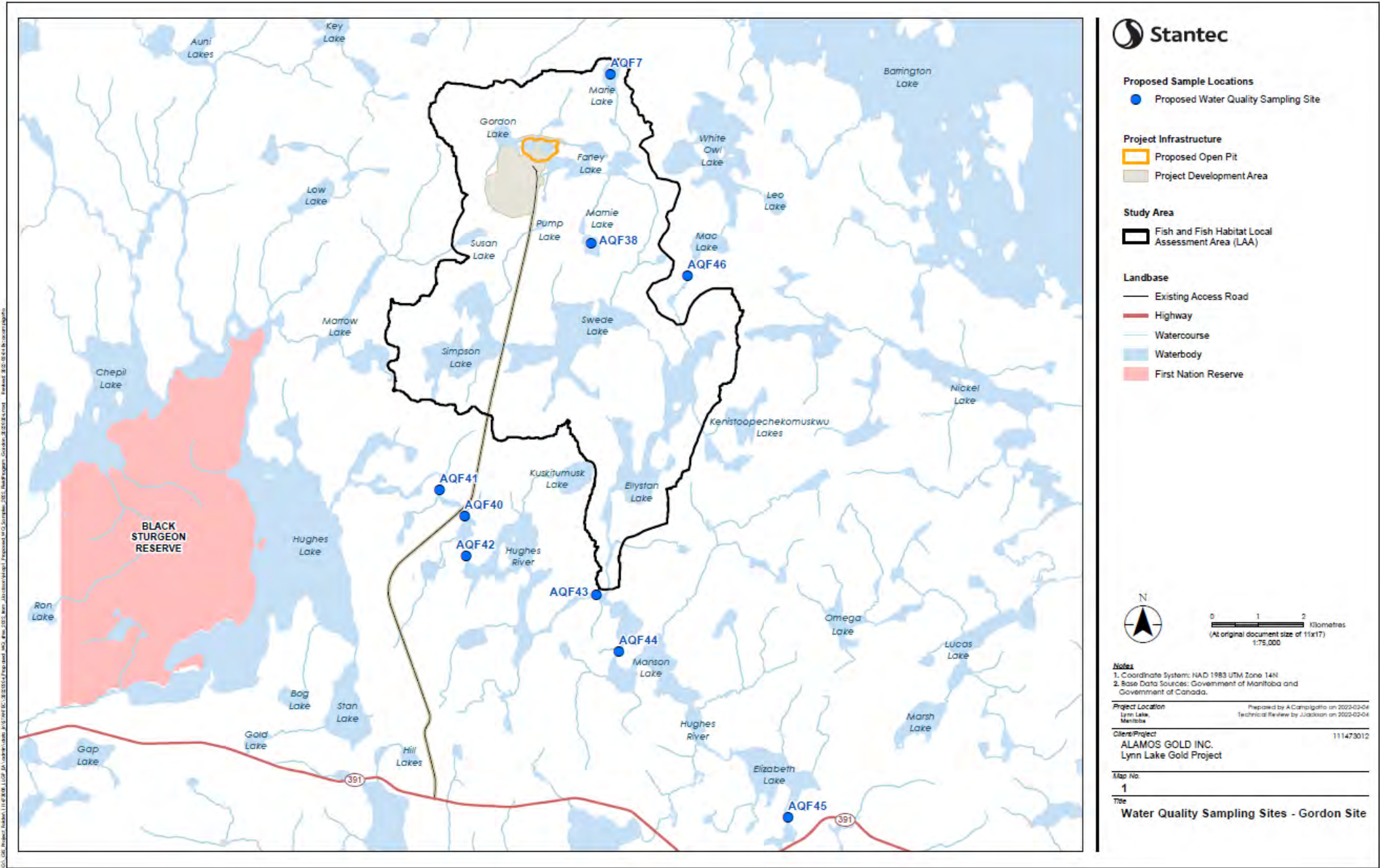


Figure 2 Proposed discharge location is located immediately upstream of the Hughes River bridge. Photo on the left is looking upstream from the north abutment of the Hughes River bridge, near the proposed discharge location. Photo on the right is looking downstream from the north abutment of the bridge, immediately downstream of the proposed discharge location.



2 Screening Criteria

2.1 Water Quality

Discharged pit water will need to comply with Schedule 4 Metal and Diamond Mine Effluent Regulation (MDMER) effluent limits for prescribed substances (i.e., arsenic (As), copper (Cu), cyanide, lead (Pb), nickel (Ni), zinc (Zn), suspended solids (TSS), and un-ionized ammonia (NH_3)), have a pH >6.0 and <9.5 , and not be acutely lethal to fish and other aquatic biota. In addition, discharged pit water mixed with Hughes River water must not cause an exceedance of the federal and/or provincial long-term (chronic) water quality guidelines downstream of the provincially regulated mixing zone. The Manitoba Water Quality Standards, Objectives and Guidelines (MWQSOG) do not prescribe mixing zone criteria but suggest several guidelines to protect water uses from being unacceptably impaired. According to the guidelines, the mixing zone should be as small as practicable, allow for an adequate zone of passage for aquatic life (e.g., not more than 25% of the cross-section area or volume of flow), should not interfere with spawning and nursery areas, and not be acutely lethal to aquatic life.



Hughes River water quality, aerated pit water quality, and model results were screened against the following criteria:

- Schedule 4 MDMER effluent limits;
- Canadian Water Quality Guidelines for the Protection of Aquatic Life – Freshwater (CWQG-FAL), for short-term exposure and long-term exposure;
- MWQSOG (Manitoba Water Stewardship, 2011) Tier II for Surface Water: Aquatic Life and Wildlife; and Tier III Surface Water: Freshwater Aquatic Life collectively referred to as MWQSOG-SWAL.

2.2 Water Quantity

Manitoba does not have provincial instream flow thresholds or guidelines. Therefore, monthly water volumes predicted by the mass-balance model were compared to the recommended guidelines in the federal “Framework for Assessing the Ecological Flow Requirements to Support Fisheries in Canada” (DFO 2013).

3 Existing Conditions

3.1 Pit Water Quantity and Quality

East Pit has an estimated volume of 1,561,931 cubic metres (m³) and Wendy Pit has an estimated volume of 573,930 m³ (Stantec, 2020b). Water in both pits is thermally and chemically stratified. Based on monthly sampling conducted in 2015 and 2016 (Stantec 2018):

- Ammonia-nitrogen (NH₃-N), chloride (Cl), dissolved iron (Fe), and dissolved uranium (U) concentrations are at least five times higher at depths >10 m in East and Wendy Pits than at the surface;
- Sulphate (SO₄), dissolved boron (B), and dissolved sodium (Na) concentrations in Wendy Pit and dissolved manganese (Mn) concentrations in East Pit are similar or higher than concentrations near the surface;
- Fluoride (F), dissolved As, dissolved Fe, and total phosphorus (P) concentrations were higher than the CWQG-FAL for F (0.12 milligrams per litre [mg/L]), the CWQG-FAL for total As (0.005 mg/L), the CWQG-FAL for total Fe (0.3 mg/L), and the MWQSOG-SWAL for total P (0.025 mg/L) at depths >10 m in East and Wendy pits;
- Concentrations of cadmium (Cd), Cu, Pb, Ni, and Zn were below the CWQG-FALs and MWQSOGs at all depths in all months in both pits;and



- Dissolved oxygen concentrations are consistently below the instantaneous minimum guideline of 3 mg/L (Manitoba Water Stewardship 2011) for mature aquatic life stages of cool water species (e.g., white suckers) in both pits at depths below ~10 m (Stantec, 2022).

The 2022 East Pit Mixing Trial (Stantec, 2022) indicated that East Pit was fully mixed between 14 and 16 hours of aeration. Water quality data collected 36 hours (h) after aeration were used for the model input. Samples were collected in October 2021 from depths of 2.5 m, 5 m, 10 m, 15 m, 25 m, and 60 m. The median, 10th percentile and 90th percentile concentrations of the samples were identified for the model scenarios. Dissolved oxygen concentrations were > 3.6 mg/L throughout the water column after aeration and no parameters exceeded any Schedule 4 MDMER effluent discharge limit. However, aerated pit water quality exceeded a federal or provincial WQG for total P, total As, total Fe, dissolved Cu, and dissolved Mn.

Water quality data from East Pit 36 h after aeration (i.e., the data used in the mass balance model) are provided in Appendix A, Table A-1.

3.2 Hughes River Water Quantity

Stantec installed a pressure transducer data logger approximately 95 m upstream of the Hughes River bridge, which recorded water surface elevation (stage) data from May 2018 through May 2019 and June 2022 through September 2022. Manual discharge measurements were taken over a range of flows during these time periods. The concurrent stage and discharge measurements were used to develop a rating curve for the Hughes River at the pressure transducer location, which allowed conversion of stage to discharge. This resulted in approximately 489 daily-averaged discharge values for the Hughes River.

A synthetic data set was developed using a ranked regression approach and one of the regional Water Survey of Canada (WSC) hydrometric stations (Table 1). Observed daily averaged discharge values for the Hughes River were ranked by discharge magnitude and compared to a ranked dataset for a concurrent period of record from the Sapochi (05TG006), Taylor (05TG002), Gauer (06FA001), and Footprint (05TF002) river stations. A ranked regression was carried out using each of these stations and the coefficient of determination (r^2) value between the observed Hughes River data and Sapochi River hydrometric station was found to be the highest ($r^2=0.97$).

Table 1 Hydrometric stations used in the Study

Station ID	Station Name	Operator	Period of Record	Drainage Area (km ²)
QF11	Hughes River	Alamos	2018, 2019, 2022 (partial)	3,160
05TF002	Footprint River	WSC	1977 – present	643
05TG002	Taylor near Thompson	WSC	1970 – present	886
05TG006	Sapochi River	WSC	1993 - present	391
06FA001	Gauer River	WSC	1979 - present	5,970



The resultant regression equation was applied to the daily-averaged streamflow data from the Sapochi River for the period May 1, 1993 to September 24, 2022 (a period of approximately 28 years) to produce a synthetic dataset for the Hughes River. From this synthetic dataset the median, 10th percentile, 90th percentile, minimum and maximum daily-averaged flows for each month of the year in the Hughes River were calculated (Table 2).

Table 2 Synthetic flow record by month for the Hughes River

Month	Median	10 th Percentile	90 th Percentile	Minimum	Maximum
	m ³ /s	m ³ /s	m ³ /s	m ³ /s	m ³ /s
1	17.180	16.087	18.561	15.176	20.426
2	16.642	15.996	17.595	15.176	18.805
3	16.459	15.800	17.395	15.176	22.617
4	17.507	15.957	27.529	15.176	139.798
5	37.248	19.316	100.343	15.176	215.119
6	27.091	17.467	69.544	15.185	164.905
7	22.024	16.436	51.504	15.181	169.470
8	22.298	16.217	51.892	15.204	148.471
9	21.932	16.363	47.893	15.852	97.801
10	22.982	17.928	40.868	15.838	87.302
11	20.243	18.399	26.821	16.167	41.835
12	18.367	16.929	20.892	15.961	26.452

Note:

m³/s = cubic metres per second

3.3 Hughes River Water Quality

Hughes River water quality data collected monthly between May 2022 and April 2023 (Stantec 2020c) were considered to represent existing water quality conditions. Water quality data from six sites in the Hughes River were evaluated (Figure 1):

- Site AQF41: upstream of Hughes River bridge;
- Site AQF40: immediately downstream of the Hughes River bridge;
- Site AQF42: downstream of AQF40;
- Site AQF43: upstream of the Ellystan Lake outlet confluence;
- Site AQF44: downstream of the Ellystan Lake outlet confluence; and
- Site AQF45: downstream of Elizabeth Lake/upstream of Hwy 391 crossing.



Surface water was sampled from each of these sites monthly for standard *in situ* parameters, including dissolved oxygen, oxidation reduction potential (ORP), specific conductance, total dissolved solids (TDS), temperature, turbidity, and pH. Laboratory analyses were performed by ALS Environmental (Winnipeg, Manitoba) for general chemistry [alkalinity, conductivity, dissolved organic carbon (DOC), water hardness, TDS, total Kjeldahl nitrogen (TKN), total organic carbon (TOC), TSS, turbidity, acidity], major anions and nutrients, total and dissolved metals, and cyanides. A quality assurance and quality control (QA/QC) evaluation for the complete May 2022 to April 2023 surface water sampling program (which included sampling at multiple near-field and far-field stations of the MacLellan and Gordon sites, including East Pit and Hughes River) is provided in Appendix C. For water quality parameters that were below the method detection limit (MDL), a value of half the corresponding detection limit was assigned. When duplicate samples were collected at a site, the duplicates were averaged.

Water quality data from these sites indicated occasional exceedances of WQG for pH, total P, total aluminum (Al), total chromium (Cr), total and dissolved Cu, total Fe, dissolved Pb, and dissolved Zn (Table 3).

Dissolved Cu concentrations were greater than total Cu concentrations for most data points in the Hughes River existing conditions data set; most total Cu concentrations were lower than the MDL of 0.00025 mg/L, and most dissolved Cu concentration were higher than total Cu concentrations by an order of magnitude. Similarly, several dissolved Pb concentrations in the Hughes River existing conditions data set were higher than total Pb concentrations. A review of the Laboratory Certificates of Analyses indicated that the results were consistent with the reports from the analytical laboratory. However, concentrations of Cu and Pb in field blanks were greater than the detection limit for several sampling events, suggesting suspect concentrations. Five data points from the Hughes River exceeded the CWQG-FAL and MWQSOG-SWAL of 0.1 mg/L for total Al.



Table 3 Input concentrations of selected parameters and identification of input datapoints that exceed WQG

Site ID	Sample Month	Depth	pH (field)	Total Suspend ed Solids	Phosphor us (total)	Aluminum (total)	Arsenic (total)	Chromium (total)	Copper (total)	Iron (total)	Lead (total)	Zinc (total)	Arsenic (dissolve d)	Copper (dissolved)	Iron (dissolved)	Lead (dissolved)	Manganese (dissolved)	Zinc (dissolved)
		m	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Aerated Pit Stations																		
AQF6_2.5	10	2.5	7.3	-	0.023	0.007	0.0055	<0.00010	<0.00050	1.00	<0.000050	<0.0030	0.005	0.0006	0.98	<0.000050	0.85	0.0011
AQF6_5	10	5	7.3	-	0.027	0.007	0.0056	0.00012	<0.00050	1.00	<0.000050	<0.0030	0.004	0.0024	0.17	<0.000050	0.85	0.0019
AQF6_10	10	10	7.3	-	0.038	0.008	0.0056	0.00014	<0.00050	1.00	<0.000050	<0.0030	0.005	0.0005	0.98	0.00010	0.86	<0.0010
AQF6_15	10	15	7.3	-	0.020	0.007	0.0056	0.00011	<0.00050	0.99	<0.000050	<0.0030	0.004	0.0029	0.17	0.00010	0.84	0.0024
AQF6_25	10	25	7.3	-	0.018	0.009	0.0056	<0.00010	<0.00050	1.03	<0.000050	<0.0030	0.004	0.0010	0.28	<0.000050	0.85	0.0017
AQF6_60	10	60	7.3	-	0.018	0.008	0.0057	<0.00010	<0.00050	0.99	<0.000050	<0.0030	0.004	0.0023	0.15	<0.000050	0.84	0.0014
Median	10	-	7.3	-	0.022	0.007	0.0056	0.00008	0.00025	1.00	<0.000050	<0.0030	0.004	0.0017	0.23	0.00003	0.85	0.0016
10th percentile	10	-	7.3	-	0.018	0.007	0.0055	0.00005	0.00025	0.99	<0.000050	<0.0030	0.004	0.0005	0.16	0.00003	0.84	0.0008
90th percentile	10	-	7.3	-	0.033	0.008	0.0057	0.00013	0.00025	1.02	<0.000050	<0.0030	0.005	0.0026	0.98	0.00010	0.86	0.0022
Hughes River Stations																		
AQF40	1	surface	6.0	<1	<0.05	0.038	0.00021	<0.0005	0.00064	0.28	0.00008	0.0054	0.00016	0.0028	0.16	0.00013	0.006	0.0046
AQF40	2	surface	6.3	0.5	0.02	0.037	0.00020	0.00025	0.00045	0.28	0.00005	0.0058	0.00017	0.0020	0.18	0.00009	0.007	0.0032
AQF40	3	surface	6.5	<1	0.02	0.035	0.00019	<0.0005	<0.0005	0.29	<0.00005	0.0062	0.00017	0.0012	0.19	0.00005	0.008	0.0018
AQF40	4	surface	6.6	<1	<0.05	0.034	0.00023	<0.0005	<0.0005	0.27	<0.00005	<0.003	0.00017	0.0021	0.18	0.00011	0.010	0.0028
AQF40	5	surface	6.7	1.8	0.02	0.055	0.00020	0.00022	<0.0005	0.31	<0.00005	<0.003	0.00015	0.0006	0.21	<0.00005	0.026	0.0030
AQF40	6	surface	7.1	4.2	<0.03	0.063	0.00017	0.00020	<0.0005	0.34	0.00006	0.0049	0.00017	0.0003	0.18	<0.00005	0.003	0.0064
AQF40	7	surface	6.5	1.8	0.01	0.049	0.00018	0.00016	<0.0005	0.20	0.00015	<0.003	0.00019	0.0003	0.11	0.00007	0.005	0.0038
AQF40	8	surface	7.3	1.1	<0.03	0.034	0.00019	0.00014	<0.0005	0.21	<0.00005	0.0044	0.00017	0.0003	0.15	<0.00005	0.005	0.0033
AQF40	9	surface	7.2	<1	0.01	0.046	0.00020	0.00013	<0.0005	0.19	<0.00005	<0.003	0.00019	0.0026	0.13	0.00015	0.006	0.0048
AQF40	10	surface	6.8	3.1	0.02	0.054	0.00018	0.00025	<0.0005	0.26	0.00004	<0.003	0.00017	0.0016	0.14	0.00007	0.004	0.0021
AQF40	11	surface	7.1	2.7	0.02	0.082	0.00019	0.00030	0.00067	0.30	0.00010	0.0046	0.00016	0.0050	0.14	0.00018	0.004	0.0103
AQF40	12	surface	6.6	1.6	0.02	0.060	0.00020	0.00028	0.00066	0.29	0.00009	0.0050	0.00016	0.0039	0.15	0.00016	0.005	0.0075
AQF41	1	surface	5.7	<1	<0.05	0.040	0.00020	0.0011	0.00094	0.29	0.00006	0.0113	0.00024	0.0039	0.17	0.00016	0.007	0.0052
AQF41	2	surface	6.0	2.2	0.03	0.066	0.00023	0.00065	0.00060	0.42	0.00007	0.0078	0.00025	0.0021	0.19	0.00009	0.008	0.0035



Site ID	Sample Month	Depth	pH (field)	Total Suspend ed Solids	Phosphor us (total)	Aluminum (total)	Arsenic (total)	Chromium (total)	Copper (total)	Iron (total)	Lead (total)	Zinc (total)	Arsenic (dissolve d)	Copper (dissolved)	Iron (dissolved)	Lead (dissolved)	Manganese (dissolved)	Zinc (dissolved)
		m	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
AQF41	3	surface	6.3	4.0	<0.05	0.093	0.00025	<0.0005	<0.0005	0.55	0.00008	0.0043	0.00026	0.0004	0.20	<0.00005	0.009	0.0019
AQF41	4	surface	6.5	<1	0.01	0.033	0.00022	<0.0005	<0.0005	0.28	<0.00005	<0.003	0.00015	0.0017	0.19	0.00008	0.011	0.0022
AQF41	5	surface	6.7	3.2	<0.03	0.054	0.00019	0.00018	0.00091	0.38	0.00006	<0.003	0.00013	0.0017	0.22	<0.00005	0.019	0.0256
AQF41	6	surface	7.0	7.3	0.02	0.095	0.00016	0.00030	0.00066	0.49	0.00009	0.0071	0.00015	0.0006	0.18	<0.00005	0.004	0.0023
AQF41	7	surface	6.7	1.7	0.01	0.042	0.00016	0.00015	<0.0005	0.23	<0.00005	<0.003	0.00015	0.0002	0.15	<0.00005	0.004	0.0032
AQF41	8	surface	7.3	1.2	0.02	0.036	0.00020	0.00027	<0.0005	0.21	<0.00005	0.0053	0.00016	0.0003	0.15	<0.00005	0.006	0.0018
AQF41	9	surface	6.8	1.5	<0.03	0.057	0.00018	0.00017	<0.0005	0.21	<0.00005	0.0051	0.00016	0.0004	0.12	<0.00005	0.004	<0.001
AQF41	10	surface	6.9	<1	0.02	0.039	0.00019	0.00017	<0.0005	0.23	<0.00005	0.0046	0.00015	0.0003	0.12	<0.00005	0.003	<0.001
AQF41	11	surface	7.1	<1	0.03	0.037	0.00018	0.00014	<0.0005	0.19	<0.00005	<0.003	0.00015	0.0041	0.12	0.00015	0.003	0.0043
AQF41	12	surface	6.4	0.5	0.03	0.038	0.00019	0.00060	0.00060	0.24	0.00004	0.0064	0.00020	0.0040	0.15	0.00015	0.005	0.0048
AQF42	1	surface	6.7	1.1	<0.05	0.052	0.00021	<0.0005	<0.0005	0.32	<0.00005	0.0040	0.00018	0.0032	0.18	0.00015	0.008	0.0047
AQF42	2	surface	6.6	<1	<0.05	0.068	0.00023	<0.0005	0.00099	0.35	0.00008	0.0256	0.00019	0.0020	0.20	0.00008	0.014	0.0049
AQF42	3	surface	6.7	3.1	0.03	0.125	0.00021	0.00051	0.00454	0.59	0.00009	0.0054	0.00021	0.0004	0.22	<0.00005	0.011	0.0012
AQF42	4	surface	6.2	2.7	0.03	0.038	0.00024	<0.0005	0.00093	0.29	0.00007	0.0032	0.00018	0.0025	0.19	0.00009	0.012	0.0052
AQF42	5	surface	6.1	1.6	<0.03	0.054	0.00023	0.00017	<0.0005	0.49	<0.00005	<0.003	0.00016	0.0007	0.30	<0.00005	0.044	0.0012
AQF42	6	surface	7.4	<1	0.02	0.059	0.00016	0.00024	<0.0005	0.36	0.00006	<0.003	0.00016	0.0003	0.18	<0.00005	0.002	<0.001
AQF42	7	surface	6.5	2.2	<0.03	0.048	0.00017	0.0013	0.00062	0.25	<0.00005	0.0060	0.00014	0.0002	0.15	<0.00005	0.005	0.0090
AQF42	8	surface	7.1	4.0	0.01	0.037	0.00021	0.00015	<0.0005	0.22	<0.00005	<0.003	0.00016	0.0004	0.15	0.00012	0.006	0.0030
AQF42	9	surface	7.2	<1	<0.03	0.040	0.00020	0.00014	<0.0005	0.17	<0.00005	0.0031	0.00017	0.0002	0.12	<0.00005	0.004	<0.001
AQF42	10	surface	6.4	3.2	<0.03	0.042	0.00019	0.00014	<0.0005	0.23	<0.00005	<0.003	0.00016	0.0005	0.12	<0.00005	0.004	0.0011
AQF42	11	surface	7.1	7.3	<0.03	0.158	0.00021	0.00076	0.00091	0.42	0.00014	0.0044	0.00015	0.0015	0.19	0.00007	0.020	0.0033
AQF42	12	surface	6.9	1.7	0.02	0.105	0.00021	0.00051	0.00058	0.37	0.00008	0.0042	0.00017	0.0024	0.19	0.00011	0.014	0.0040
Cont'd																		
AQF43	1	surface	6.7	1.5	<0.05	0.039	0.00017	<0.0005	<0.0005	0.27	<0.00005	<0.003	0.00015	0.0004	0.16	<0.00005	0.005	0.0011
AQF43	2	surface	6.6	2.5	0.02	0.038	0.00017	0.00025	0.00025	0.28	0.00003	0.0020	0.00016	0.0007	0.18	0.00003	0.006	0.0013
AQF43	3	surface	6.5	5.5	0.02	0.036	0.00018	<0.0005	<0.0005	0.29	<0.00005	0.0025	0.00017	0.0010	0.19	0.00004	0.007	0.0015
AQF43	4	surface	6.7	<1	0.01	0.037	0.00023	<0.0005	<0.0005	0.28	<0.00005	<0.003	0.00015	0.0019	0.19	0.00007	0.011	0.0023
AQF43	5	surface	7.1	1.9	0.03	0.061	0.00023	0.00018	<0.0005	0.35	0.00007	0.0047	0.00015	0.0005	0.21	<0.00005	0.019	0.0015
AQF43	6	surface	7.1	2.0	<0.03	0.068	0.00016	0.00026	<0.0005	0.31	<0.00005	<0.003	0.00017	0.0002	0.17	<0.00005	0.003	0.0045
AQF43	7	surface	6.4	1.3	0.02	0.058	0.00019	0.00015	<0.0005	0.25	<0.00005	<0.003	0.00016	0.0002	0.16	<0.00005	0.004	0.0013
AQF43	8	surface	7.4	<1	0.02	0.047	0.00023	0.00025	<0.0005	0.21	<0.00005	0.0049	0.00015	0.0003	0.14	<0.00005	0.006	<0.001
AQF43	9	surface	7.1	1.2	<0.03	0.049	0.00019	0.00017	<0.0005	0.20	<0.00005	<0.003	0.00019	0.0004	0.12	<0.00005	0.006	<0.001
AQF43	10	surface	6.5	<1	0.01	0.067	0.00019	0.00023	<0.0005	0.26	<0.00005	<0.003	0.00018	0.0037	0.13	0.00015	0.004	0.0022
AQF43	11	surface	6.8	35.3	0.02	0.040	0.00016	0.00016	<0.0005	0.21	<0.00005	<0.003	0.00015	0.0051	0.11	0.00626	0.002	0.0048



Site ID	Sample Month	Depth	pH (field)	Total Suspend ed Solids	Phosphor us (total)	Aluminum (total)	Arsenic (total)	Chromium (total)	Copper (total)	Iron (total)	Lead (total)	Zinc (total)	Arsenic (dissolve d)	Copper (dissolved)	Iron (dissolved)	Lead (dissolved)	Manganese (dissolved)	Zinc (dissolved)
		m	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
AQF43	12	surface	6.8	18.4	0.02	0.040	0.00017	0.00021	0.00025	0.24	0.00003	0.0015	0.00015	0.0027	0.13	0.00314	0.004	0.0030
AQF44	1	surface	6.7	<1	<0.05	0.040	0.00018	<0.0005	0.00051	0.28	0.00005	0.0039	0.00018	0.0037	0.17	0.00016	0.006	0.0039
AQF44	2	surface	6.7	0.5	0.02	0.039	0.00018	0.00025	0.00038	0.29	0.00004	0.0044	0.00018	0.0030	0.18	0.00010	0.006	0.0031
AQF44	3	surface	6.6	<1	<0.02	0.038	0.00019	<0.0005	<0.0005	0.30	<0.00005	0.0049	0.00019	0.0023	0.19	0.00004	0.007	0.0024
AQF44	4	surface	6.7	<1	<0.05	0.037	0.00021	<0.0005	<0.0005	0.27	<0.00005	<0.003	0.00017	0.0018	0.18	0.00007	0.010	0.0028
AQF44	5	surface	6.9	2.2	0.02	0.057	0.00022	0.00016	<0.0005	0.36	<0.00005	<0.003	0.00015	0.0004	0.22	<0.00005	0.019	<0.001
AQF44	6	surface	7.0	2.0	<0.03	0.066	0.00017	0.00023	<0.0005	0.32	<0.00005	0.0123	0.00016	0.0014	0.17	<0.00005	0.003	0.0033
AQF44	7	surface	6.3	1.4	<0.03	0.064	0.00016	0.00016	<0.0005	0.27	<0.00005	<0.003	0.00015	0.0003	0.16	<0.00005	0.005	<0.001
AQF44	8	surface	7.2	<1	0.02	0.052	0.00023	0.00024	<0.0005	0.22	<0.00005	0.0049	0.00015	0.0003	0.13	0.00012	0.006	0.0026
AQF44	9	surface	7.2	1.3	<0.03	0.054	0.00021	0.00016	<0.0005	0.21	<0.00005	<0.003	0.00019	0.0003	0.12	<0.00005	0.005	<0.001
AQF44	10	surface	6.8	1.3	<0.03	0.109	0.00020	0.00033	<0.0005	0.35	<0.00005	<0.003	0.00017	0.0003	0.13	<0.00005	0.004	<0.001
AQF44	11	surface	7.0	1.1	<0.03	0.084	0.00020	0.00028	<0.0005	0.27	<0.00005	<0.003	0.00016	0.0046	0.14	0.00017	0.005	0.0050
AQF44	12	surface	6.8	0.8	0.02	0.062	0.00019	0.00027	0.00038	0.27	0.00004	0.0027	0.00017	0.0042	0.15	0.00016	0.006	0.0045
AQF45	1	surface	6.7	<1	<0.02	0.045	0.00018	<0.0005	<0.0005	0.28	<0.00005	<0.003	0.00016	0.0029	0.15	0.00009	0.006	0.0023
AQF45	2	surface	6.5	0.5	0.01	0.047	0.00018	0.00025	0.00025	0.29	0.00003	0.0022	0.00017	0.0016	0.17	0.00006	0.006	0.0019
AQF45	3	surface	6.3	<1	<0.02	0.049	0.00018	<0.0005	<0.0005	0.30	<0.00005	0.0029	0.00018	0.0004	0.19	<0.00005	0.007	0.0015
AQF45	4	surface	6.7	<1	0.01	0.043	0.00021	<0.0005	0.00088	0.27	<0.00005	<0.003	0.00015	0.0026	0.18	0.00008	0.014	0.0016
AQF45	5	surface	6.9	2.2	0.02	0.070	0.00018	0.00019	<0.0005	0.36	<0.00005	<0.003	0.00016	0.0004	0.22	<0.00005	0.013	0.0013
AQF45	6	surface	7.1	2.1	0.01	0.078	0.00016	0.00024	<0.0005	0.33	0.00005	<0.003	0.00014	0.0003	0.18	<0.00005	0.002	0.0011
AQF45	7	surface	9.9	1.6	0.02	0.073	0.00018	0.00019	<0.0005	0.27	<0.00005	<0.003	0.00014	0.0004	0.16	<0.00005	0.004	0.0021
AQF45	8	surface	7.1	1.1	0.02	0.112	0.00023	0.00074	<0.0005	0.31	0.00007	0.0039	0.00016	0.0007	0.15	<0.00005	0.012	0.0012
AQF45	9	surface	7.2	1.5	0.01	0.075	0.00020	0.00020	<0.0005	0.22	<0.00005	<0.003	0.00020	0.0003	0.16	<0.00005	0.015	<0.001
AQF45	10	surface	5.9	1.5	0.01	0.065	0.00020	0.00023	<0.0005	0.23	<0.00005	<0.003	0.00017	0.0025	0.12	0.00006	0.004	0.0016
AQF45	11	surface	7.0	1.9	0.01	0.047	0.00019	0.00017	<0.0005	0.21	<0.00005	<0.003	0.00015	0.0042	0.11	0.00016	0.003	0.0060
AQF45	12	surface	5.6	1.2	0.01	0.059	0.00026	0.00022	<0.0005	0.26	0.00006	<0.003	0.00014	0.0002	0.13	<0.00005	0.004	<0.001



4 Methods

4.1 Mixing Model

Modelling was conducted using a spread-sheet flow and mass-balance model for 27 scenarios (Appendix B). The base-case dewatering pumping rate of 0.39 m³/s (392 L/s) was estimated from the Contractor proposal (Canadian Dewatering, 2022) that suggested 63 days of pump operation would be required to dewater the total volumes of the Wendy and East Pits (Stantec, 2020b).

Pit water chemistry was obtained from the vertical profile at station AQF6 in the East pit 36 hours after aeration (Figure 3; Stantec 2022) with samples at depths of 2.5 m, 5 m, 10 m, 15 m, 25 m and 60 m. The median, 10th percentile and 90th percentile concentrations from the sample depths were used as inputs for the pit dewatering component. Pit water quality measured 36 h after aeration and the summary statistics used in the mixing model is provided in Table A.1 in Appendix A.

Hughes River flows were obtained from the synthetic flow record (Table 2). Hughes River water quality inputs were obtained from monthly sampling conducted at the five Hughes River sampling stations (Table A.1 in Appendix A).

The proposed discharge location for pit dewatering was assumed to be immediately upstream of the Hughes River Bridge, approximately 50 m upstream from site AQF40 and downstream from site AQF41 (Figure 1, Figure 2). As such, mixing scenarios were modelled for stations AQF40, AQF42, AQF43, AQF44 and AQF45; mixing was not modelled for AQF41 because it is located upstream of the proposed discharge location.

The mixing calculation assumed instantaneous mixing of pit water and Hughes River water and was based on a proportional contribution based on concentrations and mass loads using the formula:

$$\text{Instantaneous mixed concentration at Hughes River stations} = \frac{([concentration\ in\ aerated\ pit] \times [pit\ dewatering\ rate]) + ([concentration\ at\ river\ station] \times [flow\ of\ river])}{([pit\ dewatering\ rate] + [river\ flow])}$$

Modelled conditions included:

- Median, 10th percentile, and 90th percentile Hughes River monthly flows;
- Median, 10th percentile, and 90th percentile aerated pit water quality concentrations;
- A doubled pumping rate as an upper-bound condition; and
- 25% of Hughes River monthly flows as a mixing zone.

A complete list of the 27 scenarios that were modelled is included in Appendix B. All scenarios were applied to Hughes River stations AQF40, AQF42, AQF43, AQF44 and AQF45.

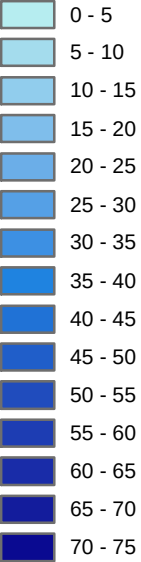


G:\1_GIS_Projects\Folder1\111473008_LGPF_EA\RA\Pictures\Map1_EastPitBathymetry_20211206.mxd Revised: 2021-12-06 By: acampigotto



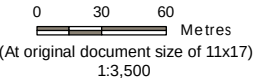
Bathymetry Survey

Water Depth (m)



Landbase

Existing Access Road



- Notes**
1. Coordinate System: NAD 1983 UTM Zone 14N
 2. Base Data Sources: Government of Manitoba and Government of Canada.
 3. Imagery: SPOT-7 imagery, BlackBridge Gemoatics Corp. July 2015.
 4. Bathymetry data courtesy of Stantec, 2015.

Project Location
Lynn Lake,
Manitoba

Prepared by ACampigotto on 2021-12-06
Technical Review by NSidenko on 2021-12-06

Client/Project
ALAMOS GOLD INC.
Lynn Lake Gold Project

111473012

Map No.
3

Title
**East Pit Bathymetry Survey and
monitoring locations**

4.2 Screening Against Water Quality Guidelines

Existing and predicted water quality results in the Hughes River for each model scenario were screened against CWQG-FAL and MWQG. Although MDMER are currently not enforced within the study area as there are no Project-related discharges into the aquatic receiving environment, surface water quality was also screened against the MDMER for reference purposes. Water quality guidelines that are dependent on water hardness (as calcium carbonate, CaCO_3), pH, and/or DOC were calculated for each sampling site and date.

Existing conditions at Hughes River Stations are provided in Appendix A. Identified WQG exceedances are provided Table 3. The PoPCs from mixing model results were defined as parameters with concentrations that exceeded both the existing conditions and one or more WQG.

4.3 Comparison to Federal Ecological Flow Thresholds

Predicted change in monthly flows in the Hughes River with the addition of pumped water from the two open pits were compared to the two criteria identified in the “Framework for Assessing the Ecological Flow Requirements to Support Fisheries in Canada” (DFO 2013) (the framework) for determining whether the likelihood of increased risk of impacts to fisheries would increase due to water diversion or withdrawals:

- Cumulative flow alterations <10% in amplitude of instantaneous flow relative to the “natural flow regime” (i.e., existing condition) have a low probability of detectable impacts to aquatic ecosystems that support commercial, recreational, or Indigenous fisheries in Canada
- Cumulative flow alterations that result in instantaneous flows <30% of mean annual discharge (MAD) have a heightened risk of impacts to fisheries.

While this framework is more typically used to assess risks due to water withdrawals from streams and not water additions such as being proposed by Alamos Gold, these criteria will be used to determine whether the predicted increase in percent monthly flow in the Hughes River due to pit dewatering is within the same orders of magnitude as suggested by the framework for potential decreases in flow.

5 Results and Discussion

5.1 Existing Conditions

Several water quality parameters exceeded federal and/or provincial WQG in the Hughes River under existing conditions (Table 3, Section 3.33.2), and several parameters from the aerated pit waters exceeded water quality criteria prior to mixing (Table 3, Section 3.1).



The dissolved Cu concentrations remain suspect, and water samples of the Hughes River at the planned point of discharge (near AQF40) should be collected and analysed to confirm total and dissolved Cu concentrations prior to dewatering and discharging Wendy and East Pit waters.

A statistical summary of screening results for the Hughes River Stations is provided in Appendix D

5.2 Mixing Model Results - Water Quantity

The assumed base-case dewatering pumping rate of 0.39 m³/s would increase median monthly flows in the Hughes River between 1% and 2% (Table 4). The assumed pumping rate would increase monthly flows in the Hughes River by as high as 3% for the “minimum Hughes River flow scenario” and as little as <1% for the “maximum Hughes River flow scenario”. The predicted flow changes in the Hughes River with the addition of water from the two open pits are well below the 10% change threshold suggested by DFO and the minimum change necessary to have a detectable impact on the aquatic ecosystem that support commercial, recreational, or Indigenous fisheries in Canada. Because adding water to the Hughes River would increase flows, there is no risk of flows in the Hughes River decreasing below 30% of MAD in any month due to dewatering of the pits.

Table 4 Percentage increase in Hughes River flow with dewatering from the Wendy and East Pits at the estimated pumping rate

Month	Median Hughes River Flow ¹	10 th Percentile Hughes River Flow	90 th Percentile Hughes River Flow	Minimum Hughes River Flow	Maximum Hughes River Flow
January	2%	2%	2%	3%	2%
February	2%	2%	2%	3%	2%
March	2%	2%	2%	3%	2%
April	2%	2%	1%	3%	0.3%
May	1%	2%	0.4%	3%	0.2%
June	1%	2%	1%	3%	0.2%
July	2%	2%	1%	3%	0.2%
August	2%	2%	1%	3%	0.3%
September	2%	2%	1%	2%	0.4%
October	2%	2%	1%	2%	0.4%
November	2%	2%	1%	2%	1%
December	2%	2%	2%	2%	1%

Note:

1. Assuming base-case dewatering pumping rate of 0.39 m³/s



If the pumping rate was doubled (to 0.78 m³/s), median monthly flows in the Hughes River are predicted to increase between 2% and 5% (Table 5). The doubled pumping rate would increase monthly flows in the Hughes River by as high as 5% for the “minimum Hughes River flow scenario” and as little as 1% for the “maximum Hughes River flow scenario”. These results suggest that, even with a doubled pumping rate, pit dewatering would be unlikely to result in detectable impacts on the aquatic ecosystem in the Hughes River.

Table 5 Percentage increase in Hughes River flow with dewatering from the Wendy and East Pits at the double the estimated pumping rate

Month	Median Hughes River Flow ¹	10 th Percentile Hughes River Flow	90 th Percentile Hughes River Flow	Minimum Hughes River Flow	Maximum Hughes River Flow
January	5%	5%	4%	5%	4%
February	5%	5%	4%	5%	4%
March	5%	5%	5%	5%	3%
April	4%	5%	3%	5%	1%
May	2%	4%	1%	5%	0.4%
June	3%	4%	1%	5%	0.5%
July	4%	5%	2%	5%	0.5%
August	4%	5%	2%	5%	1%
September	4%	5%	2%	5%	1%
October	3%	4%	2%	5%	1%
November	4%	4%	3%	5%	2%
December	4%	5%	4%	5%	3%
Note:					
1. Assuming doubling of pumping rate to 0.78 m ³ /s					

5.3 Mixing Model Results – Water Quality

A summary of water quality results for the different modeling scenarios is provided in Table 6. A summary of the median, 10th percentile and 90th percentile mixed concentrations for May through October, inclusive, for all water quality parameters and all model scenarios is provided in Appendix E. The full model results are provided in Appendix F.

Although several data points of the water quality input data for existing conditions from the Hughes River exceeded WQG for total Al, dissolved Pb, and dissolved Zn (Table 3), predicted total Al, dissolved Pb, and dissolved Zn concentrations did not exceed any of WQG for any mixed modeling scenario at any location in the Hughes River downstream of the discharge location (Appendix F).



Total and dissolved manganese (Mn) and total arsenic (As) concentrations exceeded their respective WQGs in the aerated open pits. However, their predicted concentrations did not exceed the WQGs once mixed in the Hughes River for all mixing scenarios.



Table 6 A summary of mixing results for selected parameters and model scenarios for pit dewatering occurring in May though October, inclusive. Model results are based on the estimated pumping rate.

Scenario	Statistic	Site	Sample Month	Phosphorus (total) mg/L	Aluminum (total) mg/L	Arsenic (total) mg/L	Chromium (total) mg/L	Copper (total) mg/L	Iron (total) mg/L	Lead (total) mg/L	Manganese (total) mg/L	Zinc (total) mg/L	Aluminum (dissolved) mg/L	Arsenic (dissolved) mg/L	Chromium (dissolved) mg/L	Copper (dissolved) mg/L	Iron (dissolved) mg/L	Lead (dissolved) mg/L	Manganese (dissolved) mg/L	Zinc (dissolved) mg/L
Median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.015	0.057	0.00028	0.00019	0.00025	0.27	<0.00006	0.032	0.0015	0.029	0.00023	0.00012	0.00036	0.15	<0.00006	0.020	0.0014
	90P	Downstream Stations	May - Oct	0.020	0.074	0.00031	0.00026	0.00025	0.37	0.00006	0.041	0.0048	0.036	0.00026	0.00014	0.00167	0.21	0.00012	0.028	0.0045
	10P	Downstream Stations	May - Oct	0.013	0.041	0.00024	0.00014	0.00025	0.21	<0.00006	0.028	0.0015	0.021	0.00020	0.00008	0.00025	0.12	<0.00006	0.015	0.0005
10P Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.015	0.056	0.00032	0.00019	0.00025	0.28	<0.00006	0.038	0.0015	0.029	0.00025	0.00012	0.00037	0.15	<0.00006	0.025	0.0014
	90P	Downstream Stations	May - Oct	0.020	0.074	0.00034	0.00026	0.00025	0.37	0.00006	0.046	0.0048	0.036	0.00028	0.00014	0.00167	0.21	0.00012	0.036	0.0045
	10P	Downstream Stations	May - Oct	0.013	0.041	0.00029	0.00014	0.00025	0.22	<0.00006	0.032	0.0015	0.021	0.00023	0.00008	0.00026	0.12	<0.00006	0.021	0.0005
90P Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.015	0.057	0.00024	0.00019	0.00025	0.27	<0.00006	0.025	0.0015	0.029	0.00019	0.00012	0.00035	0.15	<0.00006	0.012	0.0014
	90P	Downstream Stations	May - Oct	0.020	0.075	0.00026	0.00027	0.00025	0.36	0.00006	0.033	0.0049	0.037	0.00022	0.00014	0.00167	0.21	0.00012	0.022	0.0045
	10P	Downstream Stations	May - Oct	0.013	0.041	0.00020	0.00014	0.00025	0.20	<0.00006	0.020	0.0015	0.021	0.00017	0.00008	0.00024	0.12	<0.00006	0.008	0.0005
Median Hughes monthly flow rate, 10P mixed pit concentrations	median	Downstream Stations	May - Oct	0.015	0.057	0.00028	0.00019	0.00025	0.27	<0.00006	0.032	0.0015	0.029	0.00022	0.00012	0.00034	0.15	<0.00006	0.019	0.0014
	90P	Downstream Stations	May - Oct	0.020	0.074	0.00031	0.00026	0.00025	0.37	0.00006	0.041	0.0048	0.036	0.00026	0.00014	0.00165	0.21	0.00012	0.028	0.0045
	10P	Downstream Stations	May - Oct	0.013	0.041	0.00024	0.00014	0.00025	0.21	<0.00006	0.027	0.0015	0.021	0.00019	0.00008	0.00023	0.12	<0.00006	0.015	0.0005



Scenario	Statistic	Site	Sample Month	Phosphorus (total) mg/L	Aluminum (total) mg/L	Arsenic (total) mg/L	Chromium (total) mg/L	Copper (total) mg/L	Iron (total) mg/L	Lead (total) mg/L	Manganese (total) mg/L	Zinc (total) mg/L	Aluminum (dissolved) mg/L	Arsenic (dissolved) mg/L	Chromium (dissolved) mg/L	Copper (dissolved) mg/L	Iron (dissolved) mg/L	Lead (dissolved) mg/L	Manganese (dissolved) mg/L	Zinc (dissolved) mg/L
10P Hughes monthly flow rate, 10P mixed pit concentrations	median	Downstream Stations	May - Oct	0.015	0.056	0.00031	0.00019	0.00025	0.28	<0.00006	0.037	0.0015	0.029	0.00025	0.00012	0.00034	0.15	<0.00006	0.024	0.0014
	90P	Downstream Stations	May - Oct	0.020	0.074	0.00034	0.00026	0.00025	0.37	0.00006	0.046	0.0048	0.036	0.00028	0.00014	0.00165	0.21	0.00012	0.035	0.0044
	10P	Downstream Stations	May - Oct	0.013	0.041	0.00028	0.00014	0.00025	0.22	<0.00006	0.032	0.0015	0.021	0.00022	0.00008	0.00024	0.12	<0.00006	0.021	0.0005
90P Hughes monthly flow rate, 10P mixed pit concentrations	median	Downstream Stations	May - Oct	0.015	0.057	0.00024	0.00019	0.00025	0.27	<0.00006	0.025	0.0015	0.029	0.00019	0.00012	0.00034	0.15	<0.00006	0.012	0.0014
	90P	Downstream Stations	May - Oct	0.020	0.075	0.00025	0.00027	0.00025	0.36	0.00006	0.033	0.0049	0.037	0.00022	0.00014	0.00166	0.21	0.00012	0.022	0.0045
	10P	Downstream Stations	May - Oct	0.013	0.041	0.00020	0.00014	0.00025	0.20	<0.00006	0.020	0.0015	0.021	0.00016	0.00008	0.00023	0.12	<0.00006	0.007	0.0005
Median Hughes monthly flow rate, 90P mixed pit concentrations	median	Downstream Stations	May - Oct	0.015	0.057	0.00024	0.00019	0.00025	0.27	<0.00006	0.025	0.0015	0.029	0.00020	0.00012	0.00036	0.16	<0.00006	0.012	0.0014
	90P	Downstream Stations	May - Oct	0.020	0.075	0.00026	0.00027	0.00025	0.36	0.00006	0.033	0.0049	0.037	0.00023	0.00014	0.00168	0.21	0.00012	0.022	0.0045
	10P	Downstream Stations	May - Oct	0.013	0.041	0.00020	0.00014	0.00025	0.21	<0.00006	0.020	0.0015	0.021	0.00017	0.00008	0.00025	0.13	<0.00006	0.008	0.0005
10P Hughes monthly flow rate, 90P mixed pit concentrations	median	Downstream Stations	May - Oct	0.015	0.057	0.00024	0.00019	0.00025	0.268	<0.00006	0.025	0.0015	0.029	0.00020	0.00012	0.00036	0.159	<0.00006	0.012	0.001404
	90P	Downstream Stations	May - Oct	0.020	0.075	0.00026	0.00027	0.00025	0.363	0.00006	0.033	0.004875	0.037	0.00023	0.00014	0.00168	0.213	0.00012	0.022	0.004516
	10P	Downstream Stations	May - Oct	0.013	0.041	0.00020	0.00014	0.00025	0.205	<0.00006	0.020	0.0015	0.021	0.00017	0.00008	0.00025	0.126	<0.00006	0.008	0.000512



Scenario	Statistic	Site	Sample Month	Phosphorus (total) mg/L	Aluminum (total) mg/L	Arsenic (total) mg/L	Chromium (total) mg/L	Copper (total) mg/L	Iron (total) mg/L	Lead (total) mg/L	Manganese (total) mg/L	Zinc (total) mg/L	Aluminum (dissolved) mg/L	Arsenic (dissolved) mg/L	Chromium (dissolved) mg/L	Copper (dissolved) mg/L	Iron (dissolved) mg/L	Lead (dissolved) mg/L	Manganese (dissolved) mg/L	Zinc (dissolved) mg/L
90P Hughes monthly flow rate, 90P mixed pit concentrations	median	Downstream Stations	May - Oct	0.015	0.057	0.00024	0.00019	0.00025	0.268	<0.00006	0.025	0.0015	0.029	0.00020	0.00012	0.00036	0.159	<0.00006	0.012	0.001404
	90P	Downstream Stations	May - Oct	0.020	0.075	0.00026	0.00027	0.00025	0.363	0.00006	0.033	0.004875	0.037	0.00023	0.00014	0.00168	0.213	0.00012	0.022	0.004516
	10P	Downstream Stations	May - Oct	0.013	0.041	0.00020	0.00014	0.00025	0.205	<0.00006	0.020	0.0015	0.021	0.00017	0.00008	0.00025	0.126	<0.00006	0.008	0.000512

Notes:
Pink shaded cell indicates parameter of potential concern (PoPC), identified when mixed concentration exceeded both the existing conditions and a WQGL
90P denotes 90th percentile
10P denotes 10th percentile



The 90th percentile concentration of dissolved Fe in the aerated pits exceeded the WQG. However, dissolved Fe was not identified as PoPC once mixed with water in the Hughes River for any mixing scenario. In contrast, total Fe was identified as a PoPC in some months in all modelled scenarios (Appendix E). This is because total Fe concentrations exceeded the total Fe WQG in the aerated pit waters and in many of the samples collected from the Hughes River (Table 6; Table 7; total Fe concentrations are naturally elevated in the Hughes River in some months).

With respect to dissolved Cu concentrations:

- Dissolved Cu concentrations were identified as PoPCs in the Hughes River, in some months, in scenarios where the median and 90th percentile aerated pit water dissolved Cu concentrations are used.
- Dissolved Cu was not identified as a PoPC in scenarios where the 10th percentile aerated pit water dissolved Cu concentration was used (Table 7; Appendix F).
- In the scenarios where median aerated pit water dissolved Cu concentrations were applied, dissolved Cu was typically a PoPC in November through February, months when flows in the Hughes River are lowest.
- Dissolved Cu was identified as a PoPC in June at station AQF44.

As noted in Sections 3.1 and 3.3, the dissolved Cu concentrations in the input data for the Hughes River and aerated pits were typically greater than total Cu concentrations by an order of magnitude or more, and field blanks suggested measurable concentrations of dissolved Cu. Additional samples of the Hughes River water quality at station AQF40 should be collected and analysed prior to discharging pit water to verify dissolved Cu concentrations in the Hughes River so that the identification of dissolved Cu as a PoPC under existing conditions can be confirmed.

Total P concentrations in the aerated pit water and at all sampling locations the Hughes River never exceeded the WQG of 0.05 mg/L for streams. Similarly, total P concentrations were never predicted to exceed the 0.05 mg/L WQG at any location in the Hughes River for any mixing scenario.



Table 7 **Modelled scenarios indicating total iron (Fe) and/or dissolved copper (Cu) as parameters of potential concern (PoPC). Pink cells indicate PoPC. Summary for results from May to October.**

River flow and pit concentration scenarios	Modelled Concentration Statistic from all Downstream Stations	PoPC: Total Iron (Fe)	PoPC: Dissolved Copper (Cu)
Median Hughes monthly flow rate, median mixed pit concentrations	Median	Mixing zone	
	90th percentile	Base Case Mixing zone	Base Case, 2x pumping rate, Mixing zone
	10th percentile		
0th percentile Hughes monthly flow rate, median mixed pit concentrations	Median		
	90th percentile	Base Case Mixing zone	Base Case, 2x pumping rate, Mixing zone
	10th percentile		
90th percentile Hughes monthly flow rate, median mixed pit concentrations	Median		
	90th percentile	Base Case Mixing zone	Base Case, 2x pumping rate, Mixing zone
	10th percentile		
Median Hughes monthly flow rate, 10th percentile mixed pit concentrations	Median	Mixing zone	
	90th percentile	Base Case Mixing zone	
	10th percentile		
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	Median		
	90th percentile	Base Case Mixing zone	
	10th percentile		
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	Median		
	90th percentile	Base Case Mixing zone	
	10th percentile		
Median Hughes monthly flow rate, 90th percentile mixed pit concentrations	Median		
	90th percentile	Base Case Mixing zone	Base Case Mixing zone
	10th percentile		
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	Median		
	90th percentile	Base Case Mixing zone	Base Case Mixing zone
	10th percentile		
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	Median		
	90th percentile	Base Case Mixing zone	Base Case Mixing zone
	10th percentile		



6 Conclusions

The flow and water quality modelling results suggest that pumping water from the Wendy and East pits to the Hughes River would have negligible effects on stream flows and water quality for all modelled scenarios. The Hughes River volume is two orders of magnitude greater than pit dewatering flows, and as such, Hughes River water flows and quality dominate the predicted mixed flows and concentrations.

Stantec recommends dewatering the Wendy and East Pits during the months of May to October when Hughes River flows are highest, and, therefore, mixed concentrations would be lowest



7 References

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- Stantec Consulting Ltd. 2020b. Lynn Lake Gold Project Hydrology Water Balance and Water Quality Impact Assessment: Gordon Site – Technical Modelling Report. Prepared for Alamos Gold Inc. April 30, 2020.
- Stantec Consulting Ltd. 2020c. Lynn Lake Gold Project (LLGP): Water Quality Baseline Technical Data Validation Report. Prepared for Alamos Gold Inc. March 20, 2020.
- Stantec Consulting Ltd. 2022. East Pit Mixing Trial: Final Report. Prepared for Alamos Gold Inc. April 30, 2020.



Appendices



Appendix A



A.1 Input water quality data for the Hughes River and aerated Wendy and East Pits mixing model scenarios



Site ID	Sample Month	Depth (m)	Condition		Dissolved Oxygen (field) mg/L	Dissolved Oxygen (field) %	ORP (field) mV	pH (field) pH	Conductivity (field) uS/cm	TDS (field) mg/L	Temp (field) C	Turbidity NTU	Total Suspended Solids mg/L	Acidity (as CaCO3) mg/L	Alkalinity (CaCO3) bicarbonate mg/L	Alkalinity (CaCO3) carbonate mg/L	Alkalinity (CaCO3) hydroxide mg/L	Alkalinity (CaCO3) phenol mg/L	Alkalinity(CaC O3) (total) mg/L
Aerated Pit Stations																			
AQF6_2.5	10	2.5	36 h after aeration	10/08/2021	4.4	34		7.3	429		4.6								180.0
AQF6_5	10	5	36 h after aeration	10/08/2021	4.4	34		7.3	429		4.6								181.0
AQF6_10	10	10	36 h after aeration	10/08/2021	4.4	34		7.3	428		4.6								180.0
AQF6_15	10	15	36 h after aeration	10/08/2021	4.3	33		7.3	428		4.5								183.0
AQF6_25	10	25	36 h after aeration	10/08/2021	3.8	30		7.3	430		4.5								183.0
AQF6_60	10	60	36 h after aeration	10/08/2021	3.6	28		7.3	431		4.4								182.0
Median	10		36 h after aeration	10/08/2021	4.3	34		7.3	429		4.6								181.5
10th percentile	10		36 h after aeration	10/08/2021	3.7	29		7.3	428		4.5								180.0
90th percentile	10		36 h after aeration	10/08/2021	4.4	34		7.3	430		4.6								183.0
AQF40	1	surface	field		10.1	69	217	6.0	35	23		1.1	0.50	3.9	8.2	1.0	1.0	1.0	8.2
AQF40	2	surface	field		11.0	75	202	6.3	28	18		0.8	0.50	3.2	7.8	0.9	0.9		7.8
AQF40	3	surface	field		11.9	82	187	6.5	20	13	0.1	0.42	0.50	2.5	7	0.8	0.8		7.5
AQF40	4	surface	field		20.4	142	203	6.6	30	20	0.5	0.38	0.50	1.0	12	0.5	0.5	0.5	11.7
AQF40	5	surface	field		12.5	95	41	6.7	35	16	3.9	1.15	1.80	2.1					10.4
AQF40	6	surface	field		9.1	91	30	7.1	20	13	15.5	0.70	4.20	1.0					8.5
AQF40	7	surface	field		6.8	73	157	6.5	23	14	18.9	1.12	1.75	1.0					9.3
AQF40	8	surface	field		6.1	67	153	7.3	23	15	20.1	0.66	1.10	1.0					10.1
AQF40	9	surface	field		8.0	80	153	7.2	21	14	13.8	1.85	0.50	1.0					10.2
AQF40	10	surface	field		12.1	91	201	6.8	27	18	3.6	1.84	3.05	2.7					10.7
AQF40	11	surface	field		10.5	72	196	7.1	27	18	0.2	2.67	2.70	3.1					11.0
AQF40	12	surface	field		10.3	71	207	6.6	31	20	0.1	1.90	1.60	3.5					9.6
AQF41	1	surface	field		12.8	88	215	5.7	36	23	0.2	0.26	0.50	4.2	10	1.0	1.0	1.0	10.2
AQF41	2	surface	field		12.7	87	188	6.0	28	19	0.2	0.71	2.23	2.6	11	0.9	0.9		10.7
AQF41	3	surface	field		12.5	85	161	6.3	21	14	0.1	1.16	3.95	1.0	11	0.8	0.8		11.2
AQF41	4	surface	field		20.5	144	209	6.5	30	20	0.6	0.26	0.50	2.7	12	0.5	0.5	0.5	11.6
AQF41	5	surface	field		14.1	108	14	6.7	25	16	3.9	0.64	3.20	2.4					9.7
AQF41	6	surface	field		8.4	86	27	7.0	20	13	16.6	1.22	7.30	1.0					7.3
AQF41	7	surface	field		7.4	78	103	6.7	23	14	19.2	0.59	1.70	1.0					8.2
AQF41	8	surface	field		6.2	68	143	7.3	23	15	20.4	0.72	1.20	1.0					10.0
AQF41	9	surface	field		7.0	67	102	6.8	28	18	13.6	0.24	1.50	1.0					10.3
AQF41	10	surface	field		11.6	89	135	6.9	27	17	4.3	0.59	0.50	2.3					10.2
AQF41	11	surface	field		12.6	87	198	7.1	27	18	0.3	0.62	0.50	3.1					11.4
AQF41	12	surface	field		12.7	88	207	6.4	32	21	0.3	0.44	0.50	3.7					10.8
AQF42	1	surface	field		10.6	73	2	6.7	31	20	0.1	0.93	1.50	3.8	10	1.0	1.0	1.0	10.1
AQF42	2	surface	field		12.3	83	175	6.6	25	17	0.1	0.96	2.50	1.0	6	1.0	1.0		6.0
AQF42	3	surface	field		10.7	73	174	6.7	26	17	0.1	1.02	5.50	4.5	14	0.5	0.5		13.7
AQF42	4	surface	field		15.8	109	210	6.2	57	37	0.1	0.63	0.50	1.0	12	0.5	0.5	0.5	11.7
AQF42	5	surface	field		13.8	134	134	6.1	25	25	4.4	0.80	1.90	2.3					9.3
AQF42	6	surface	field		10.4	104	126	7.4	19	12	15.4	0.69	2.00	1.0					8.1
AQF42	7	surface	field		8.0	88	192	6.5	23	14	19.1	0.40	1.30	1.0					9.7
AQF42	8	surface	field		8.0	86	166	7.1	23	15	18.7	1.00	0.50	1.0					10.1
AQF42	9	surface	field		8.6	83	112	7.2	21	14	14.2	0.66	1.20	1.0					9.7

Site ID	Sample Month	Depth (m)	Condition		Dissolved Oxygen (field) mg/L	Dissolved Oxygen (field) %	ORP (field) mV	pH (field) pH	Conductivity (field) uS/cm	TDS (field) mg/L	Temp (field) C	Turbidity NTU	Total Suspended Solids mg/L	Acidity (as CaCO3) mg/L	Alkalinity (CaCO3) bicarbonate mg/L	Alkalinity (CaCO3) carbonate mg/L	Alkalinity (CaCO3) hydroxide mg/L	Alkalinity (CaCO3) phenol mg/L	Alkalinity(CaC O3) (total) mg/L
AQF42	10	surface	field		11.5	97	168	6.4	27	18	3.7	0.82	0.50	3.8					10.3
AQF42	11	surface	field		11.8	81	196	7.1	29	29	0.2	1.97	35.30	3.3					11.5
AQF42	12	surface	field		11.2	77	99	6.9	30	24	0.2	1.45	18.40	3.6					10.8
AQF43	1	surface	field		13.5	93	207	6.7	26	18		0.29	0.50	3.3	11	1.0	1.0	1.0	10.7
AQF43	2	surface	field		13.7	94	156	6.6	18	12		0.31	0.50	2.9	11	0.9	0.9		10.5
AQF43	3	surface	field		13.9	95	105	6.5	11	7	0.1	0.33	0.50	2.4	10	0.8	0.8		10.3
AQF43	4	surface	field		17.2	118	198	6.7	30	20	0.2	0.13	0.50	2.3	12	0.5	0.5	0.5	11.8
AQF43	5	surface	field		17.0	138	36	7.1	26	16	5.9	0.76	2.20	2.2					11.5
AQF43	6	surface	field		10.4	105	1	7.1	20	13	15.8	1.33	2.00	1.0					8.5
AQF43	7	surface	field		8.2	90	180	6.4	23	14	19.6	0.46	1.40	1.0					8.1
AQF43	8	surface	field		8.2	90	162	7.4	24	16	19.7	0.90	0.50	1.0					11.1
AQF43	9	surface	field		9.1	86	158	7.1	22	14	13.1	0.83	1.30	1.0					10.6
AQF43	10	surface	field		12.9	96	166	6.5	28	18	3.0	0.88	1.30	2.3					10.1
AQF43	11	surface	field		14.5	99	153	6.8	28	18		0.36	1.10	3.5					11.1
AQF43	12	surface	field		14.0	96	180	6.8	27	18		0.32	0.80	3.4					10.9
AQF44	1	surface	field		11.4	78	205	6.7	31	20	0.1	0.68	0.50	3.6	8	1.0	1.0	1.0	8.4
AQF44	2	surface	field		12.6	86	188	6.7	24	16	0.1	0.45	0.50	2.9	12	0.9	0.9	1.0	12.0
AQF44	3	surface	field		13.8	93	171	6.6	17	11	0.1	0.22	0.50	2.2	16	0.8	0.8		15.5
AQF44	4	surface	field		19.6	135	199	6.7	32	21	0.1	0.61	0.50	2.3	12	0.5	0.5	0.5	12.3
AQF44	5	surface	field		14.3	133	22	6.9	26	17	6.2	0.94	2.20	2.1					10.2
AQF44	6	surface	field		10.6	106	6	7.0	20	14	15.7	1.08	2.10	1.0					8.5
AQF44	7	surface	field		8.6	95	192	6.3	23	15	19.9	1.54	1.60	1.0					8.3
AQF44	8	surface	field		8.2	90	168	7.2	24	16	19.4	1.36	1.10	1.0					11.0
AQF44	9	surface	field		9.2	85	16	7.2	23	15	11.9	0.28	1.50	1.0					11.4
AQF44	10	surface	field		12.3	91	156	6.8	29	19	2.6	0.96	1.50	2.2					10.9
AQF44	11	surface	field		12.6	87	141	7.0	30	19	0.1	2.54	1.90	2.7					13.2
AQF44	12	surface	field		12.0	82	173	6.8	30	20	0.1	1.61	1.20	3.2					10.8
AQF45	1	surface	field		13.1	89	213	6.7	38	25		0.53	0.50	3.1	12	1.0	1.0	1.0	11.7
AQF45	2	surface	field		13.4	92	193	6.5	32	21		0.54	1.15	2.8	11	0.9	0.9		10.8
AQF45	3	surface	field		13.8	94	172	6.3	25	17	0.1	0.54	1.80	2.4	10	0.8	0.8		10.0
AQF45	4	surface	field		19.2	137	198	6.7	34	22	0.4	0.57	0.50	1.0	13	0.5	0.5	0.5	13.1
AQF45	5	surface	field		14.4	117	104	6.9	27	18	7.8	1.49	0.50	3.1					10.1
AQF45	6	surface	field		9.7	98	10	7.1	20	14	15.1	2.40	2.80	2.2					8.5
AQF45	7	surface	field		6.9	75	133	9.9	36	15	19.0	1.55	2.20	1.0					8.9
AQF45	8	surface	field		7.7	83	151	7.1	25	16	19.0	2.61	1.90	2.6					11.3
AQF45	9	surface	field		8.7	84	109	7.2	24	16	13.8	1.71	1.40	1.0					11.4
AQF45	10	surface	field		13.0	92	239	5.9	30	20	1.2	1.02	1.20	2.9					11.2
AQF45	11	surface	field		13.2	90	201	7.0	31	20	0.1	0.52	1.50	3.2					12.9
AQF45	12	surface	field		14.2	97	250	5.6	33	21		0.30	1.40	1.0					11.9

Site ID	Sample Month	Carbonate (CO ₃ ²⁻) mg/L	Bicarbonate (HCO ₃ ⁻) mg/L	Hydroxide (OH ⁻) mg/L	Conductivity µS/cm	Dissolved Organic Carbon mg/L	Hardness (CaCO3) (dissolved) mg/L	Hardness (CaCO3) (total) mg/L	pH pH	TDS (total) mg/L	TKN_T mg/L	Total Kjeldahl Nitrogen mg/L	Total Organic Carbon mg/L	Turb NTU (field) NTU	Ammonia-N mg/L	Nitrate-N mg/L	Nitrite-N mg/L	(Nitrite + Nitrate)-N mg/L
Aerated Pit Stations																		
AQF6_2.5	10	0.3	219	0.17	429.2								6.11		0.192	0.055	0.005	0.035
AQF6_5	10	0.3	221	0.17	428.8								5.60		0.159	0.057	0.005	0.035
AQF6_10	10	0.3	219	0.17	427.9								5.87		0.199	0.055	0.005	0.035
AQF6_15	10	0.3	223	0.17	428.3								5.53		0.251	0.056	0.005	0.035
AQF6_25	10	0.3	223	0.17	429.5								5.50		0.181	0.055	0.005	0.035
AQF6_60	10	0.3	221	0.17	430.9								5.53		0.222	0.057	0.005	0.035
Median	10	0.3	221	0.17	429								5.57		0.1955	0.0555	0.005	0.035
10th percentile	10	0.3	219	0.17	428.1								5.52		0.17	0.055	0.005	0.035
90th percentile	10	0.3	223	0.17	430.2								5.99		0.2365	0.057	0.005	0.035
AQF40	1					8.68	11.6				0.43	0.43	10.2		0.093	0.072	0.005	0.072
AQF40	2					9.35					0.35	0.35	9.95		0.0573	0.0893	0.005	
AQF40	3	0.5	13.8	0.5		10.0		12.7			0.28	0.28	9.69		0.0215	0.107	0.005	
AQF40	4	0.4	13.3	0.34	30.3	10.0	11.5	12.2	6.99	32.2	0.24	0.24	9.17	1.22	0.005	0.0992	0.0005	
AQF40	5	0.3	12.7	0.17		9.0		11.7				0.32	8.74		0.005	0.0381	0.0005	0.044
AQF40	6	0.3	10.4	0.17		9.8		10.1				0.36	9.9		0.005	0.01	0.005	0.035
AQF40	7	0.3	11.3	0.17		9.0		10.5				0.29	8.81		0.011	0.0025	0.0005	0.221
AQF40	8	0.3	12.3	0.17		9.6		9.8				0.23	9.27		0.019	0.0025	0.0005	0.003
AQF40	9	0.3	12.4	0.17		9.7		10.0				0.45	8.98		0.022	0.0025	0.0005	0.003
AQF40	10	0.3	13	0.17		8.7		11.0				0.19	8.85		0.014	0.0258	0.0005	0.038
AQF40	11	0.3	13.4	0.17		9.1		10.5				0.23	10.2		0.013	0.0243	0.0005	0.024
AQF40	12					8.9							10.2		0.053	0.0482	0.00275	0.048
AQF41	1					8.8	11.5				0.33	0.33	10.3		0.043	0.066	0.005	0.066
AQF41	2					9.5					0.30	0.30	10.3		0.0345	0.092	0.005	
AQF41	3	0.5	13.9	0.5		10.1		12.3			0.28	0.28	10.2		0.026	0.118	0.005	
AQF41	4	0.4	12.9	0.335	30.1	9.7	11.3	11.5	6.97	30	0.25	0.25	9.54	0.85	0.005	0.1	0.0005	
AQF41	5	0.3	11.8	0.17		8.9		10.7				0.26	8.75		0.005	0.0386	0.0005	0.039
AQF41	6	0.3	8.9	0.17		9.5		9.9				0.40	8.94		0.005	0.01	0.005	0.035
AQF41	7	0.3	10	0.17		8.9		9.4				0.10	9.29		0.037	0.0025	0.0005	0.003
AQF41	8	0.3	12.2	0.17		9.9		9.5				0.21	9.3		0.012	0.0025	0.0005	0.003
AQF41	9	0.3	12.6	0.17		11.4		10.4				0.23	9.01		0.012	0.0025	0.0005	0.003
AQF41	10	0.3	12.4	0.17		9.2		10.7				0.26	9.32		0.005	0.0189	0.0005	0.019
AQF41	11	0.3	13.9	0.17		8.9		10.3				0.22	9.15		0.005	0.0324	0.0005	0.032
AQF41	12					8.9							9.73		0.024	0.0492	0.00275	0.049
AQF42	1					8.7	11.7				0.39	0.39	9.94		0.048	0.068	0.005	0.068
AQF42	2					9.5		13.2			0.39	0.39	10.1		0.033	0.121	0.005	
AQF42	3	0.5	16.7	0.5		11.1		12.9			0.45	0.45	10.4		0.053	0.112	0.005	
AQF42	4	0.4	14	0.335	29.9	9.8	11.7	11.8	6.98	28.2	0.35	0.35	9.66	0.9	0.012	0.0962	0.0005	
AQF42	5	0.3	11.3	0.17		12.3		10.7				0.22	9.58		0.005	0.0387	0.0005	0.039
AQF42	6	0.3	9.9	0.17		10.0		9.4				0.35	9.47		0.005	0.01	0.005	0.035
AQF42	7	0.3	11.8	0.17		9.1		9.5				0.10	9.16		0.022	0.0025	0.0005	0.003
AQF42	8	0.3	12.3	0.17		10.7		9.8				0.10	9.34		0.043	0.0025	0.0005	0.003
AQF42	9	0.3	11.8	0.17		11.2		10.6				0.25	9.1		0.005	0.0065	0.0005	0.007

Site ID	Sample Month	Carbonate (CO ₃ ²⁻) mg/L	Bicarbonate (HCO ₃ ⁻) mg/L	Hydroxide (OH ⁻) mg/L	Conductivity µS/cm	Dissolved Organic Carbon mg/L	Hardness (CaCO3) (dissolved) mg/L	Hardness (CaCO3) (total) mg/L	pH pH	TDS (total) mg/L	TKN_T mg/L	Total Kjeldahl Nitrogen mg/L	Total Organic Carbon mg/L	Turb NTU (field) NTU	Ammonia-N mg/L	Nitrate-N mg/L	Nitrite-N mg/L	(Nitrite + Nitrate)-N mg/L
AQF42	10	0.3	12.6	0.17		9.1		10.8				0.26	9.99		0.005	0.0186	0.0005	0.019
AQF42	11	0.3	14	0.17		9.4		11.2				0.28	9.59		0.019	0.0248	0.0005	0.025
AQF42	12					9.0							9.77		0.0335	0.0464	0.00275	0.046
AQF43	1					11.1	11.5				0.27	0.27	10.1		0.021	0.065	0.005	0.065
AQF43	2					10.2					0.25	0.25	9.64		0.0145	0.089	0.005	
AQF43	3	0.5	13.8	0.5		9.3		12.5			0.23	0.23	9.19		0.008	0.113	0.005	
AQF43	4	0.4	13.9	0.335	30.1	9.6	11.5	12.2	7.01	33.4	0.25	0.25	9.16	0.92	0.005	0.0975	0.0005	
AQF43	5	0.3	14	0.17		11.1		11.8				0.48	9.95		0.005	0.0317	0.0005	0.032
AQF43	6	0.3	10.4	0.17		9.5		10.6				0.10	8.84		0.005	0.01	0.005	0.035
AQF43	7	0.3	9.9	0.17		10.0		9.8				0.10	9.2		0.03	0.0025	0.0005	0.003
AQF43	8	0.3	13.5	0.17		11.2		10.5				0.10	9.27		0.014	0.0086	0.0005	0.009
AQF43	9	0.3	12.9	0.17		11.4		10.4				0.96	9.11		0.025	0.0025	0.0005	0.003
AQF43	10	0.3	12.3	0.17		8.9		10.8				0.10	9.37		0.005	0.0196	0.0005	0.020
AQF43	11	0.3	13.5	0.17		9.7		10.8				0.10	9.94		0.031	0.0268	0.0005	0.027
AQF43	12					10.4		10.8			0.27	0.27	10		0.026	0.0459	0.00275	0.046
AQF44	1					9.4	12.6				0.41	0.41	10.2		0.14	0.074	0.005	0.074
AQF44	2					9.6					0.33	0.33	9.89		0.0768	0.092	0.005	
AQF44	3	0.5	22.1	0.5		9.7		13.2			0.24	0.24	9.57		0.0135	0.11	0.005	
AQF44	4	0.4	17.3	0.34	31.7	9.8	12.7	12.4	7.01	31.4	0.28	0.28	9.54	0.85	0.005	0.0989	0.0005	
AQF44	5	0.3	12.4	0.17		10.7		11.5				0.28	8.85		0.005	0.032	0.0005	0.032
AQF44	6	0.3	10.4	0.17		9.9		9.8				0.33	8.39		0.005	0.01	0.005	0.035
AQF44	7	0.3	10.1	0.17		9.3		9.7				0.10	9.15		0.015	0.0025	0.0005	0.003
AQF44	8	0.3	13.4	0.17		10.4		10.6				0.26	9.23		0.024	0.0025	0.0005	0.003
AQF44	9	0.3	13.9	0.17		11.5		12.2				7.36	10.1		5.83	0.0025	0.0005	0.003
AQF44	10	0.3	13.3	0.17		9.0		11.6				0.10	9.17		0.005	0.0191	0.0005	0.019
AQF44	11	0.3	16.1	0.17		10.1		12.2				0.25	9.92		0.005	0.0285	0.0005	0.029
AQF44	12					9.8							10.1		0.0725	0.0513	0.00275	0.051
AQF45	1					9.2	13.3				0.30	0.30	10.2		0.026	0.073	0.005	0.073
AQF45	2					9.4					0.27	0.27	10.2		0.0288	0.0898	0.005	
AQF45	3	0.5	14.9	0.5		9.6		14.9			0.24	0.24	10.3		0.0315	0.107	0.005	
AQF45	4	0.4	13.6	0.34	35.2	9.7	13.3	13.4	7.05	31.2	0.27	0.27	9.55	1.04	0.005	0.098	0.0005	
AQF45	5	0.3	12.3	0.17		10.7		12.0				0.29	9.49		0.005	0.0255	0.0005	0.026
AQF45	6	0.3	10.4	0.17		9.6		10.2				0.37	8.5		0.005	0.01	0.005	0.035
AQF45	7	0.3	10.9	0.17		9.6		10.2				0.10	9.13		0.018	0.0025	0.0005	0.003
AQF45	8	0.3	13.8	0.17		10.9		11.1				0.23	9.31		0.041	0.0025	0.0005	0.003
AQF45	9	0.3	13.9	0.17		12.0		12.2				0.25	9.34		0.015	0.0053	0.0005	0.005
AQF45	10	0.3	13.7	0.17		9.3		12.0				0.26	9.26		0.005	0.0183	0.0005	0.018
AQF45	11	0.3	15.7	0.17		9.8		12.5				0.10	9.92		0.005	0.0296	0.0005	0.030
AQF45	12	0.3	14.5	0.17		9.8		13.5				0.31	9.52		0.015	0.0409	0.0005	0.041

Site ID	Sample Month	Nitrogen (TKN) mg/L	Phosphorus (dissolved) mg/L	Phosphorus (total) mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	Aluminum (total) mg/L	Antimony (total) mg/L	Arsenic (total) mg/L	Barium (total) mg/L	Beryllium (total) mg/L	Bismuth (total) mg/L	Boron (total) mg/L	Cadmium (total) mg/L	Calcium (total) mg/L	Cesium (total) mg/L	Chromium (total) mg/L
Aerated Pit Stations																			
AQF6_2.5	10			0.023	0.05	4.94	0.114	190	0.0071	0.00005	0.00551	0.0314	0.00005	0.000025	0.048	0.0000025	90.6	0.000256	0.00005
AQF6_5	10			0.027	0.05	4.91	0.112	189	0.0068	0.00005	0.00561	0.0309	0.00005	0.000025	0.046	0.0000025	90.3	0.000267	0.00012
AQF6_10	10			0.038	0.05	4.89	0.113	190	0.0081	0.00005	0.00557	0.0311	0.00005	0.000025	0.046	0.0000025	90.4	0.000276	0.00014
AQF6_15	10			0.020	0.05	4.87	0.113	190	0.0070	0.00005	0.00559	0.0324	0.00005	0.000025	0.047	0.0000025	89.6	0.000272	0.00011
AQF6_25	10			0.0179	0.05	4.89	0.114	191	0.0085	0.00005	0.00563	0.0323	0.00005	0.000025	0.048	0.0000025	94.1	0.000270	0.00005
AQF6_60	10			0.0175	0.05	4.96	0.113	189	0.0077	0.00005	0.00567	0.0315	0.00005	0.000025	0.045	0.0000120	89.6	0.000258	0.00005
Median	10			0.0215	0.05	4.9	0.113	190	0.0074	0.00005	0.0056	0.03145	0.00005	0.000025	0.0465	0.0000025	90.35	0.0002685	0.00008
10th percentile	10			0.0177	0.05	4.88	0.113	189	0.0069	0.00005	0.00554	0.031	0.00005	0.000025	0.0455	0.0000025	89.6	0.000257	0.00005
90th percentile	10			0.0325	0.05	4.95	0.114	190.5	0.0083	0.00005	0.00565	0.03235	0.00005	0.000025	0.048	0.00000725	92.35	0.000274	0.00013
AQF40	1		0.025	0.025	0.05	1.51	0.069	1.37	0.0384	0.00011	0.00021	0.0068	0.00001	0.000025	0.005	0.0000084	3.16	0.000005	0.00025
AQF40	2		0.025	0.0213	0.05	0.995	0.0715	2.87	0.0367	0.00012	0.00020	0.0069	0.00001	0.000025	0.005	0.00000545	3.32	0.000005	0.00025
AQF40	3		0.025	0.0175	0.05	0.48	0.074	4.37	0.0349	0.00013	0.00019	0.0070	0.00001	0.000025	0.005	0.0000025	3.47	0.000005	0.00025
AQF40	4		0.025	0.025	0.005	0.26	0.077	0.66	0.0342	0.00005	0.00023	0.0066	0.00001	0.000025	0.005	0.0000087	3.13	0.000005	0.00025
AQF40	5	0.32	0.02	0.0227	0.05	0.255	0.064	0.655	0.055	0.00005	0.00020	0.0060	0.00005	0.000025	0.005	0.0000025	3.18	0.000005	0.00022
AQF40	6	0.36	0.015	0.015	0.05	0.25	0.056	0.41	0.063	0.00005	0.00017	0.0060	0.00005	0.000025	0.005	0.0000052	3	0.000005	0.0002
AQF40	7	0.285	0.02	0.0116	0.05	0.215	0.0625	0.515	0.049	0.00005	0.00018	0.0062	0.00005	0.000025	0.005	0.0000025	2.93	0.000005	0.00016
AQF40	8	0.23	0.015	0.015	0.05	0.17	0.065	0.45	0.034	0.00005	0.00019	0.0052	0.00005	0.000025	0.005	0.0000025	2.62	0.000005	0.00014
AQF40	9	0.45	0.015	0.0116	0.05	0.2	0.063	0.71	0.046	0.00005	0.00020	0.0061	0.00005	0.000025	0.005	0.0000025	3.02	0.000005	0.00013
AQF40	10	0.185	0.02	0.02	0.05	0.23	0.064	0.61	0.054	0.00005	0.00018	0.0052	0.00005	0.000025	0.005	0.0000025	3.03	0.000005	0.00025
AQF40	11	0.23	0.015	0.0192	0.05	0.21	0.061	0.5	0.082	0.00005	0.00019	0.0083	0.00005	0.000025	0.005	0.0000124	3.12	0.000005	0.0003
AQF40	12		0.02	0.0221	0.05	0.86	0.065	0.935	0.060	0.00008	0.00020	0.0075	0.00003	0.000025	0.005	0.0000104	3.14	0.000005	0.000275
AQF41	1		0.025	0.025	0.05	0.25	0.069	0.9	0.040	0.00005	0.00020	0.0072	0.00001	0.000025	0.005	0.0000182	3.39	0.000005	0.00105
AQF41	2		0.025	0.025	0.05	0.258	0.072	0.883	0.066	0.0000675	0.00023	0.0078	0.00001	0.000025	0.005	0.0000125	3.35	0.0000065	0.00065
AQF41	3		0.025	0.025	0.05	0.265	0.075	0.865	0.093	0.000085	0.00025	0.0085	0.00001	0.000025	0.005	0.0000068	3.31	0.000008	0.00025
AQF41	4		0.025	0.0117	0.005	0.24	0.076	0.66	0.033	0.00005	0.00022	0.0067	0.00001	0.000025	0.005	0.0000025	3.21	0.000005	0.00025
AQF41	5	0.26	0.015	0.015	0.05	0.31	0.06	0.56	0.054	0.00005	0.00019	0.0059	0.00005	0.000025	0.005	0.0000025	2.98	0.000005	0.00018
AQF41	6	0.4	0.015	0.0206	0.05	0.72	0.056	0.46	0.095	0.00005	0.00016	0.0100	0.00005	0.000025	0.005	0.0000089	3.26	0.000005	0.0003
AQF41	7	0.1	0.015	0.0133	0.05	0.18	0.061	0.44	0.042	0.00005	0.00016	0.0055	0.00005	0.000025	0.005	0.0000025	2.69	0.000005	0.00015
AQF41	8	0.21	0.015	0.0151	0.05	0.21	0.064	0.52	0.036	0.00005	0.00020	0.0054	0.00005	0.000025	0.005	0.0000025	2.55	0.000005	0.00027
AQF41	9	0.23	0.015	0.015	0.05	0.19	0.063	0.63	0.057	0.00005	0.00018	0.0064	0.00005	0.000025	0.005	0.0000025	3.18	0.000005	0.00017
AQF41	10	0.26	0.015	0.0153	0.05	0.2	0.062	0.46	0.039	0.00005	0.00019	0.0055	0.00005	0.000025	0.005	0.0000025	3.08	0.000005	0.00017
AQF41	11	0.22	0.015	0.031	0.05	0.24	0.061	0.55	0.037	0.00005	0.00018	0.0052	0.00005	0.000025	0.005	0.0000025	3.08	0.000005	0.00014
AQF41	12		0.02	0.028	0.05	0.245	0.065	0.725	0.038	0.00005	0.00019	0.0062	0.00003	0.000025	0.005	0.0000104	3.24	0.000005	0.000595
AQF42	1		0.025	0.025	0.05	0.6	0.072	1.2	0.052	0.00023	0.00021	0.0077	0.00001	0.000025	0.005	0.0000025	3.49	0.000005	0.00025
AQF42	2		0.025	0.025	0.05	0.56	0.071	9.6	0.068	0.00029	0.00023	0.0083	0.00001	0.000025	0.005	0.0000107	3.62	0.000005	0.00025
AQF42	3		0.025	0.025	0.05	0.43	0.074	0.71	0.125	0.00005	0.00021	0.0090	0.00001	0.000025	0.005	0.0000025	3.48	0.000018	0.00051
AQF42	4		0.025	0.0303	0.005	0.26	0.073	0.64	0.038	0.00005	0.00024	0.0075	0.00001	0.000025	0.005	0.0000103	3.28	0.000005	0.00025
AQF42	5	0.22	0.015	0.015	0.05	0.27	0.063	0.55	0.054	0.00005	0.00023	0.0059	0.00005	0.000025	0.005	0.0000025	2.84	0.000005	0.00017
AQF42	6	0.35	0.015	0.0156	0.05	0.25	0.056	0.42	0.059	0.00005	0.00016	0.0060	0.00005	0.000025	0.005	0.0000025	2.85	0.000005	0.00024
AQF42	7	0.1	0.015	0.015	0.05	0.31	0.06	0.49	0.048	0.00005	0.00017	0.0057	0.00005	0.000025	0.005	0.0000068	2.56	0.000005	0.00127
AQF42	8	0.1	0.015	0.0139	0.05	0.17	0.064	0.47	0.037	0.00005	0.00021	0.0055	0.00005	0.000025	0.005	0.0000025	2.84	0.000005	0.00015
AQF42	9	0.25	0.015	0.015	0.05	0.28	0.063	0.51	0.040	0.00005	0.00020	0.0060	0.00005	0.000025	0.005	0.0000025	3.04	0.000005	0.00014

Site ID	Sample Month	Nitrogen (TKN) mg/L	Phosphorus (dissolved) mg/L	Phosphorus (total) mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	Aluminum (total) mg/L	Antimony (total) mg/L	Arsenic (total) mg/L	Barium (total) mg/L	Beryllium (total) mg/L	Bismuth (total) mg/L	Boron (total) mg/L	Cadmium (total) mg/L	Calcium (total) mg/L	Cesium (total) mg/L	Chromium (total) mg/L
AQF42	10	0.26	0.015	0.015	0.05	0.21	0.062	0.47	0.042	0.00005	0.00019	0.0054	0.00005	0.000025	0.005	0.0000025	3.05	0.000005	0.00014
AQF42	11	0.28	0.015	0.015	0.05	0.28	0.061	0.71	0.158	0.00013	0.00021	0.0144	0.00005	0.000025	0.005	0.0000306	3.3	0.000019	0.00076
AQF42	12		0.02	0.02	0.05	0.44	0.0665	0.955	0.105	0.00018	0.00021	0.0110	0.00003	0.000025	0.005	0.0000166	3.4	0.000012	0.000505
AQF43	1		0.025	0.025	0.05	0.25	0.07	0.59	0.039	0.00005	0.00017	0.0065	0.00001	0.000025	0.005	0.0000025	3.33	0.000005	0.00025
AQF43	2		0.025	0.0213	0.05	0.248	0.0718	0.988	0.038	0.00005	0.00017	0.0067	0.00001	0.000025	0.005	0.0000025	3.36	0.000005	0.00025
AQF43	3		0.025	0.0175	0.05	0.245	0.0735	1.39	0.036	0.00005	0.00018	0.0068	0.00001	0.000025	0.005	0.0000025	3.4	0.000005	0.00025
AQF43	4		0.025	0.0123	0.005	0.24	0.076	0.65	0.037	0.00005	0.00023	0.0067	0.00001	0.000025	0.005	0.0000081	3.26	0.000005	0.00025
AQF43	5	0.48	0.015	0.031	0.05	0.32	0.063	0.6	0.061	0.00005	0.00023	0.0060	0.00005	0.000025	0.005	0.0000025	3.21	0.000005	0.00018
AQF43	6	0.1	0.015	0.015	0.05	0.25	0.057	0.51	0.068	0.00005	0.00016	0.0060	0.00005	0.000025	0.005	0.0000025	2.91	0.000005	0.00026
AQF43	7	0.1	0.015	0.0151	0.05	0.17	0.061	0.44	0.058	0.00005	0.00019	0.0057	0.00005	0.000025	0.005	0.0000025	2.68	0.000005	0.00015
AQF43	8	0.1	0.015	0.0161	0.05	0.18	0.066	0.49	0.047	0.00005	0.00023	0.0055	0.00005	0.000025	0.005	0.0000025	3.05	0.000005	0.00025
AQF43	9	0.96	0.015	0.015	0.05	0.19	0.063	0.46	0.049	0.00005	0.00019	0.0061	0.00005	0.000025	0.005	0.0000025	3.05	0.000005	0.00017
AQF43	10	0.1	0.015	0.0145	0.05	0.2	0.063	0.46	0.067	0.00005	0.00019	0.0054	0.00005	0.000025	0.005	0.0000025	3.13	0.000005	0.00023
AQF43	11	0.1	0.015	0.0151	0.05	0.21	0.062	0.51	0.040	0.00005	0.00016	0.0053	0.00005	0.000025	0.005	0.0000025	3.13	0.000005	0.00016
AQF43	12		0.02	0.0201	0.05	0.23	0.066	0.55	0.040	0.00005	0.00017	0.0059	0.00003	0.000025	0.005	0.0000025	3.23	0.000005	0.000205
AQF44	1		0.025	0.025	0.05	1.71	0.068	1.64	0.040	0.00005	0.00018	0.0068	0.00001	0.000025	0.005	0.000019	3.5	0.000005	0.00025
AQF44	2		0.025	0.0175	0.05	1.72	0.0703	3.05	0.039	0.00005	0.00018	0.0068	0.00001	0.000025	0.005	0.0000108	3.55	0.000005	0.00025
AQF44	3		0.025	0.01	0.05	1.74	0.0725	4.47	0.038	0.00005	0.00019	0.0069	0.00001	0.000025	0.005	0.0000025	3.6	0.000005	0.00025
AQF44	4		0.025	0.025	0.005	0.26	0.075	0.73	0.037	0.00005	0.00021	0.0070	0.00001	0.000025	0.005	0.0000025	3.4	0.000005	0.00025
AQF44	5	0.28	0.015	0.0178	0.05	0.26	0.063	0.61	0.057	0.00005	0.00022	0.0060	0.00005	0.000025	0.005	0.0000025	3	0.000005	0.00016
AQF44	6	0.33	0.015	0.015	0.05	0.25	0.057	0.48	0.066	0.00005	0.00017	0.0061	0.00005	0.000025	0.005	0.0000025	2.95	0.000005	0.00023
AQF44	7	0.1	0.015	0.015	0.05	0.16	0.062	0.44	0.064	0.00005	0.00016	0.0059	0.00005	0.000025	0.005	0.0000025	2.72	0.000005	0.00016
AQF44	8	0.26	0.015	0.0151	0.05	0.19	0.066	0.54	0.052	0.00005	0.00023	0.0057	0.00005	0.000025	0.005	0.0000025	3.06	0.000005	0.00024
AQF44	9	7.36	0.015	0.015	0.05	0.24	0.061	0.47	0.054	0.00005	0.00021	0.0059	0.00005	0.000025	0.005	0.0000025	3.44	0.000005	0.00016
AQF44	10	0.1	0.015	0.015	0.05	0.2	0.063	0.52	0.109	0.00005	0.00020	0.0065	0.00005	0.000025	0.005	0.0000025	3.44	0.000013	0.00033
AQF44	11	0.25	0.015	0.015	0.05	0.23	0.062	0.59	0.084	0.00005	0.00020	0.0058	0.00005	0.000025	0.005	0.0000106	3.42	0.000005	0.00028
AQF44	12		0.02	0.02	0.05	0.97	0.065	1.12	0.062	0.00005	0.00019	0.0063	0.00003	0.000025	0.005	0.0000148	3.46	0.000005	0.000265
AQF45	1		0.025	0.01	0.05	0.25	0.07	0.68	0.045	0.00005	0.00018	0.0068	0.00001	0.000025	0.005	0.0000025	3.65	0.000005	0.00025
AQF45	2		0.025	0.01	0.05	1.15	0.0715	2.16	0.047	0.00005	0.00018	0.0069	0.00001	0.000025	0.005	0.0000025	3.88	0.000005	0.00025
AQF45	3		0.025	0.01	0.05	2.06	0.073	3.65	0.049	0.00005	0.00018	0.0071	0.00001	0.000025	0.005	0.0000025	4.12	0.000005	0.00025
AQF45	4		0.025	0.0134	0.005	0.46	0.076	1.01	0.043	0.00005	0.00021	0.0070	0.00001	0.000025	0.005	0.0000059	3.68	0.000005	0.00025
AQF45	5	0.29	0.015	0.0201	0.05	0.28	0.064	0.62	0.070	0.00005	0.00018	0.0058	0.00005	0.000025	0.005	0.0000025	3.05	0.000005	0.00019
AQF45	6	0.37	0.015	0.0148	0.05	0.25	0.056	0.54	0.078	0.00005	0.00016	0.0061	0.00005	0.000025	0.005	0.0000025	3.05	0.000005	0.00024
AQF45	7	0.1	0.015	0.0175	0.05	0.39	0.062	0.59	0.073	0.00005	0.00018	0.0061	0.00005	0.000025	0.005	0.0000025	2.84	0.000005	0.00019
AQF45	8	0.23	0.015	0.0175	0.05	0.19	0.066	0.54	0.112	0.00005	0.00023	0.0065	0.00005	0.000025	0.005	0.0000025	3.19	0.000014	0.00074
AQF45	9	0.25	0.015	0.0126	0.05	0.23	0.065	0.56	0.075	0.00005	0.00020	0.0065	0.00005	0.000025	0.005	0.0000025	3.42	0.000005	0.0002
AQF45	10	0.26	0.015	0.0128	0.05	0.27	0.059	0.55	0.065	0.00005	0.00020	0.0054	0.00005	0.000025	0.005	0.0000025	3.39	0.000005	0.00023
AQF45	11	0.1	0.015	0.0134	0.05	0.25	0.063	0.63	0.047	0.00005	0.00019	0.0055	0.00005	0.000025	0.005	0.0000025	3.55	0.000005	0.00017
AQF45	12	0.31	0.015	0.013	0.05	0.28	0.07	0.68	0.059	0.00005	0.00026	0.0082	0.00005	0.000025	0.005	0.0000025	4.54	0.000005	0.00022

Site ID	Sample Month	ChromiumVI (total) mg/L	Cobalt (total) mg/L	Copper (total) mg/L	Iron (total) mg/L	Lead (total) mg/L	Lithium (total) mg/L	Magnesium (total) mg/L	Manganese (total) mg/L	Mercury (total) mg/L	Molybdenum (total) mg/L	Nickel (total) mg/L	Potassium (total) mg/L	Rubidium (total) mg/L	Selenium (total) mg/L	Silicon (total) mg/L	Silver (total) mg/L	Sodium (total) mg/L	Strontium (total) mg/L
Aerated Pit Stations																			
AQF6_2.5	10		0.00021	0.00025	0.998	0.000025	0.0057	24.9	0.850	0.0000025	0.00061	0.00025	7.20	0.00542	0.000025	5.29	0.000005	19.5	0.272
AQF6_5	10		0.00020	0.00025	1.00	0.000025	0.0056	25.0	0.838	0.0000025	0.00060	0.00025	7.18	0.00552	0.000060	5.60	0.000005	19.3	0.272
AQF6_10	10		0.00021	0.00025	1.00	0.000025	0.0057	25.4	0.858	0.0000025	0.00059	0.00051	7.34	0.00534	0.000052	5.31	0.000005	19.2	0.278
AQF6_15	10		0.00022	0.00025	0.991	0.000025	0.0057	24.7	0.870	0.0000025	0.00055	0.00025	7.27	0.00536	0.000025	5.51	0.000005	19.2	0.284
AQF6_25	10		0.00023	0.00025	1.03	0.000025	0.0058	24.7	0.853	0.0000025	0.00063	0.00025	7.28	0.00514	0.000071	5.22	0.000005	19.2	0.284
AQF6_60	10		0.00023	0.00025	0.992	0.000025	0.0056	25.0	0.850	0.0000025	0.00056	0.00051	7.36	0.00533	0.000058	5.30	0.000005	19.0	0.274
Median	10		0.000215	0.00025	0.999	0.000025	0.0057	24.95	0.8515	0.0000025	0.00059	0.00025	7.275	0.00535	0.000055	5.305	0.000005	19.2	0.276
10th percentile	10		0.000205	0.00025	0.9915	0.000025	0.0056	24.7	0.844	0.0000025	0.00056	0.00025	7.19	0.005235	2.5E-05	5.255	0.000005	19.1	0.272
90th percentile	10		0.00023	0.00025	1.015	0.000025	0.00575	25.2	0.864	0.0000025	0.00062	0.00051	7.35	0.00547	0.0000655	5.555	0.000005	19.4	0.284
AQF40	1	0.00025	0.00005	0.00064	0.275	0.000075	0.0011	0.948	0.0103	0.0000025	0.00012	0.00025	0.576	0.0011	0.000066	3.14	0.000005	1.33	0.0142
AQF40	2	0.00025	0.00005	0.000445	0.281	0.00005	0.00118	0.964	0.0105	0.00000209	0.00009	0.00025	0.595	0.0011	0.0000455	3.29	0.000005	1.33	0.0144
AQF40	3	0.00025	0.00005	0.00025	0.286	0.000025	0.00125	0.98	0.0108	0.00000168	0.00005	0.00025	0.614	0.0011	0.000025	3.44	0.000005	1.34	0.0146
AQF40	4	0.00025	0.00005	0.00025	0.274	0.000025	0.0011	0.936	0.0124	0.00000186	0.00006	0.00025	0.595	0.00111	0.000132	3.09	0.000005	1.25	0.0145
AQF40	5	0.000375	0.00005	0.00025	0.311	0.000025	0.00085	0.95	0.0359	0.00000205	0.00006	0.00025	0.609	0.00109	0.000025	2.39	0.000005	1.17	0.0136
AQF40	6	0.00052	0.00005	0.00025	0.342	0.000061	0.0015	0.801	0.0229	0.00000223	0.000076	0.00025	0.535	0.00098	0.000025	1.98	0.000005	0.981	0.0106
AQF40	7	0.00025	0.00005	0.00025	0.199	0.000149	0.0008	0.863	0.0195	0.00000131	0.0000995	0.00025	0.566	0.00117	0.000025	2.12	0.000005	1.08	0.013
AQF40	8	0.00025	0.00005	0.00025	0.208	0.000025	0.0005	0.758	0.0141	0.00000191	0.000063	0.00025	0.485	0.00107	0.000025	2.07	0.000005	1.19	0.0118
AQF40	9	0.00025	0.00005	0.00025	0.185	0.000025	0.0011	0.876	0.0108	0.0000025	0.000109	0.00025	0.515	0.00107	0.000025	2.33	0.000005	1.1	0.0132
AQF40	10	0.00025	0.00005	0.00025	0.262	0.0000445	0.00115	0.899	0.0174	0.00000115	0.000116	0.000535	0.524	0.00106	0.000025	2.39	0.000005	1.15	0.0128
AQF40	11	0.00025	0.00005	0.00067	0.299	0.000098	0.0005	0.932	0.0203	0.0000025	0.000102	0.00025	0.547	0.00116	0.000025	2.78	0.000005	1.09	0.013
AQF40	12	0.00025	0.00005	0.000655	0.287	0.0000865	0.0008	0.94	0.0153	0.0000025	0.00011	0.00025	0.562	0.00113	0.0000455	2.96	0.000005	1.21	0.0136
AQF41	1	0.00025	0.00005	0.00094	0.29	0.000062	0.0012	0.943	0.0106	0.0000025	0.00008	0.00025	0.577	0.00101	0.000054	3.24	0.000005	1.35	0.0138
AQF41	2	0.000348	0.00005	0.000595	0.422	0.0000698	0.00123	0.966	0.0363	0.00000217	0.00007	0.00025	0.61	0.00113	0.0000395	3.35	0.000005	1.34	0.0142
AQF41	3	0.000445	0.00005	0.00025	0.553	0.0000775	0.00125	0.989	0.062	0.00000183	0.00006	0.00025	0.643	0.00125	0.000025	3.46	0.000005	1.32	0.0146
AQF41	4	0.00025	0.00005	0.00025	0.279	0.000025	0.0011	0.95	0.0132	0.00000217	0.000051	0.00025	0.587	0.00108	0.000157	3.12	0.000005	1.26	0.0142
AQF41	5	0.00025	0.00005	0.00091	0.381	0.000057	0.0005	0.859	0.0326	0.0000025	0.000083	0.00025	0.561	0.00093	0.000025	2.37	0.000005	0.875	0.0127
AQF41	6	0.00025	0.00005	0.00066	0.488	0.000092	0.0015	0.814	0.0631	0.00000362	0.000071	0.00025	0.573	0.00108	0.000025	2.05	0.000005	0.974	0.0127
AQF41	7	0.00025	0.00005	0.00025	0.227	0.000025	0.0005	0.799	0.0142	0.00000152	0.000061	0.00025	0.484	0.00094	0.000025	2.09	0.000005	0.991	0.0118
AQF41	8	0.00025	0.00005	0.00025	0.208	0.000025	0.0005	0.739	0.014	0.00000201	0.000062	0.00025	0.482	0.00109	0.000051	2.07	0.000005	1.22	0.0121
AQF41	9	0.00025	0.00005	0.00025	0.212	0.000025	0.0013	0.909	0.012	0.0000025	0.000114	0.00025	0.532	0.00115	0.000025	2.49	0.000005	1.16	0.0117
AQF41	10	0.00025	0.00005	0.00025	0.232	0.000025	0.0012	0.856	0.0148	0.00000108	0.000093	0.00025	0.478	0.00099	0.000025	2.44	0.000005	1.1	0.0117
AQF41	11	0.00025	0.00005	0.00025	0.194	0.000025	0.0005	0.87	0.00927	0.0000025	0.000084	0.00025	0.506	0.00101	0.000025	2.6	0.000005	1.06	0.0126
AQF41	12	0.00025	0.00005	0.000595	0.242	0.0000435	0.00085	0.907	0.00994	0.0000025	0.000082	0.00025	0.542	0.00101	0.0000395	2.92	0.000005	1.21	0.0132
AQF42	1	0.00025	0.00005	0.00025	0.319	0.000025	0.0012	1.01	0.014	0.0000025	0.000092	0.00025	0.583	0.00116	0.00006	3.32	0.000005	1.39	0.0145
AQF42	2	0.00025	0.00005	0.00099	0.353	0.000082	0.0012	1	0.0206	0.00000101	0.00007	0.00025	0.716	0.00117	0.000025	3.44	0.000005	1.4	0.0151
AQF42	3	0.00025	0.00012	0.00454	0.586	0.000087	0.0013	1.02	0.05	0.0000025	0.00007	0.0008	0.636	0.00132	0.000025	3.64	0.000005	1.34	0.0148
AQF42	4	0.00025	0.00005	0.00093	0.287	0.000072	0.0011	0.969	0.0149	0.0000025	0.000084	0.00025	0.607	0.00108	0.000132	2.96	0.000005	1.27	0.0145
AQF42	5	0.00025	0.00005	0.00025	0.485	0.000025	0.0011	0.839	0.066	0.0000025	0.000089	0.00025	0.531	0.00094	0.000025	2.27	0.000005	1.06	0.0122
AQF42	6	0.00025	0.00005	0.00025	0.361	0.000057	0.0015	0.761	0.0158	0.00000203	0.000201	0.00025	0.515	0.00097	0.000025	2.07	0.000005	0.981	0.0109
AQF42	7	0.00025	0.00005	0.00062	0.247	0.000025	0.0005	0.793	0.0178	0.00000184	0.000082	0.00025	0.489	0.00106	0.000025	2.1	0.000005	1.02	0.0113
AQF42	8	0.00025	0.00005	0.00025	0.217	0.000025	0.0005	0.841	0.0165	0.00000217	0.000072	0.00025	0.513	0.00109	0.000051	2.33	0.000005	1.07	0.013
AQF42	9	0.00025	0.00005	0.00025	0.172	0.000025	0.0005	0.877	0.0105	0.0000025	0.000093	0.00025	0.517	0.00102	0.000025	2.28	0.000005	1.11	0.013

Site ID	Sample Month	ChromiumVI (total) mg/L	Cobalt (total) mg/L	Copper (total) mg/L	Iron (total) mg/L	Lead (total) mg/L	Lithium (total) mg/L	Magnesium (total) mg/L	Manganese (total) mg/L	Mercury (total) mg/L	Molybdenum (total) mg/L	Nickel (total) mg/L	Potassium (total) mg/L	Rubidium (total) mg/L	Selenium (total) mg/L	Silicon (total) mg/L	Silver (total) mg/L	Sodium (total) mg/L	Strontium (total) mg/L
AQF42	10	0.00058	0.00005	0.00025	0.234	0.000025	0.0011	0.908	0.0146	0.00000112	0.000107	0.00025	0.517	0.00102	0.000025	2.61	0.000005	1.08	0.0125
AQF42	11	0.00025	0.00012	0.00091	0.421	0.000142	0.0011	0.992	0.0742	0.0000025	0.000138	0.00025	0.578	0.00127	0.000025	2.75	0.000005	1.1	0.014
AQF42	12	0.00025	0.000085	0.00058	0.37	0.0000835	0.00115	1	0.0441	0.0000025	0.000115	0.00025	0.581	0.00122	0.0000425	3.04	0.000005	1.25	0.0143
AQF43	1	0.00156	0.00005	0.00025	0.272	0.000025	0.0012	0.982	0.0098	0.0000025	0.000066	0.00025	0.547	0.00103	0.000025	3.31	0.000005	1.32	0.0146
AQF43	2	0.000905	0.00005	0.00025	0.282	0.000025	0.0012	0.978	0.0102	0.00000208	0.0000525	0.00025	0.563	0.00106	0.000025	3.36	0.000005	1.32	0.0145
AQF43	3	0.00025	0.00005	0.00025	0.292	0.000025	0.0012	0.974	0.0107	0.00000166	0.000039	0.00025	0.58	0.00109	0.000025	3.41	0.000005	1.33	0.0144
AQF43	4	0.00025	0.00005	0.00025	0.277	0.000025	0.0011	0.959	0.014	0.00000208	0.000069	0.00025	0.586	0.00112	0.000092	2.99	0.000005	1.21	0.0142
AQF43	5	0.00025	0.00005	0.00025	0.354	0.000069	0.0015	0.896	0.0285	0.0000025	0.000109	0.00025	0.541	0.00102	0.000025	2.3	0.000005	1.07	0.0133
AQF43	6	0.0018	0.00005	0.00025	0.314	0.000025	0.0015	0.847	0.0167	0.00000176	0.000051	0.00058	0.537	0.001	0.000025	2.13	0.000005	1.08	0.0118
AQF43	7	0.00025	0.00005	0.00025	0.25	0.000025	0.0005	0.837	0.0221	0.00000136	0.000076	0.00025	0.505	0.00108	0.000057	2.16	0.000005	1.02	0.0113
AQF43	8	0.00025	0.00005	0.00025	0.211	0.000025	0.0005	0.886	0.0206	0.00000193	0.000102	0.00067	0.526	0.00109	0.000025	2.28	0.000005	1.1	0.0134
AQF43	9	0.00025	0.00005	0.00025	0.197	0.000025	0.0011	0.89	0.0142	0.0000025	0.000107	0.00025	0.5	0.00109	0.000119	2.41	0.000005	1.08	0.013
AQF43	10	0.00025	0.00005	0.00025	0.259	0.000025	0.0011	0.948	0.0156	0.00000109	0.00014	0.00025	0.538	0.0011	0.000057	2.67	0.000005	1.14	0.0129
AQF43	11	0.00025	0.00005	0.00025	0.206	0.000025	0.0005	0.944	0.0102	0.0000025	0.000094	0.00025	0.536	0.00099	0.000053	2.83	0.000005	1.12	0.0135
AQF43	12	0.000905	0.00005	0.00025	0.239	0.000025	0.00085	0.963	0.01	0.0000025	0.00008	0.00025	0.542	0.00101	0.000039	3.07	0.000005	1.22	0.0141
AQF44	1	0.00025	0.00005	0.00051	0.276	0.000052	0.0012	1.02	0.00959	0.0000025	0.000094	0.00025	0.56	0.00105	0.000025	3.13	0.000005	1.36	0.0144
AQF44	2	0.00025	0.00005	0.00038	0.287	0.0000385	0.00123	1.02	0.01	0.00000207	0.00008	0.00025	0.589	0.0011	0.000025	3.27	0.000005	1.37	0.0147
AQF44	3	0.00025	0.00005	0.00025	0.299	0.000025	0.00125	1.03	0.0105	0.00000163	0.000066	0.00025	0.618	0.00114	0.000025	3.41	0.000005	1.38	0.015
AQF44	4	0.00025	0.00005	0.00025	0.271	0.000025	0.0011	1.01	0.0133	0.00000137	0.000076	0.00025	0.584	0.00106	0.000067	2.96	0.000005	1.29	0.0145
AQF44	5	0.00053	0.00005	0.00025	0.36	0.000025	0.0011	0.904	0.029	0.00000111	0.000085	0.00025	0.535	0.00094	0.000025	2.25	0.000005	1.08	0.0126
AQF44	6	0.00025	0.00005	0.00025	0.321	0.000025	0.0015	0.828	0.0173	0.00000187	0.000025	0.00025	0.562	0.00098	0.000025	2.17	0.000005	1.1	0.0118
AQF44	7	0.00025	0.00005	0.00025	0.265	0.000025	0.0005	0.833	0.023	0.00000128	0.000074	0.00025	0.498	0.00112	0.000025	2.22	0.000005	0.995	0.0121
AQF44	8	0.00025	0.00005	0.00025	0.223	0.000025	0.0011	0.895	0.0209	0.00000189	0.000093	0.00025	0.517	0.0012	0.000079	2.27	0.000005	1.09	0.0134
AQF44	9	0.00025	0.00005	0.00025	0.207	0.000025	0.0013	0.993	0.0145	0.0000025	0.000253	0.00025	0.562	0.00106	0.000065	2.39	0.000005	1.21	0.0137
AQF44	10	0.00025	0.00005	0.00025	0.354	0.000025	0.0012	1.01	0.0248	0.00000109	0.000113	0.00025	0.544	0.0012	0.000025	2.69	0.000005	1.16	0.0129
AQF44	11	0.00051	0.00005	0.00025	0.265	0.000025	0.0005	1.08	0.0152	0.0000025	0.000098	0.00025	0.567	0.00101	0.000025	2.97	0.000005	1.16	0.014
AQF44	12	0.00038	0.00005	0.00038	0.271	0.0000385	0.00085	1.05	0.0124	0.0000025	0.000096	0.00025	0.564	0.00103	0.000025	3.05	0.000005	1.26	0.0142
AQF45	1	0.00025	0.00005	0.00025	0.276	0.000025	0.0011	1.09	0.0105	0.0000025	0.000084	0.00025	0.569	0.00108	0.000074	3.23	0.000005	1.36	0.0151
AQF45	2	0.000815	0.00005	0.00025	0.29	0.000025	0.00115	1.1	0.0109	0.00000212	0.0000773	0.00025	0.59	0.0011	0.0000495	3.32	0.000005	1.67	0.0152
AQF45	3	0.00138	0.00005	0.00025	0.304	0.000025	0.0012	1.12	0.0114	0.00000175	0.0000705	0.00025	0.611	0.00111	0.000025	3.42	0.000005	1.97	0.0154
AQF45	4	0.00025	0.00005	0.00088	0.273	0.000025	0.0011	1.08	0.0168	0.00000212	0.000063	0.00106	0.642	0.00106	0.000104	3.1	0.000005	1.41	0.015
AQF45	5	0.00025	0.00005	0.00025	0.363	0.000025	0.0012	0.916	0.0235	0.0000025	0.000081	0.00025	0.526	0.001	0.000025	2.16	0.000005	1.05	0.0131
AQF45	6	0.00051	0.00005	0.00025	0.325	0.000053	0.0015	0.825	0.0168	0.00000176	0.000078	0.00025	0.511	0.00099	0.000025	2.03	0.000005	0.986	0.0112
AQF45	7	0.00025	0.00005	0.00025	0.266	0.000025	0.0005	0.871	0.0266	0.00000156	0.000074	0.00025	0.487	0.00103	0.000025	2.1	0.000005	0.991	0.0119
AQF45	8	0.00025	0.00005	0.00025	0.305	0.000066	0.0012	0.98	0.0317	0.00000203	0.000092	0.00087	0.539	0.0013	0.000025	2.49	0.000005	1.14	0.0138
AQF45	9	0.00025	0.00005	0.00025	0.224	0.000025	0.0011	1.01	0.0184	0.0000025	0.000096	0.00025	0.536	0.0011	0.000025	2.36	0.000005	1.15	0.0132
AQF45	10	0.00025	0.00005	0.00025	0.234	0.000025	0.0011	1.01	0.0119	0.00000113	0.000112	0.00025	0.508	0.00093	0.000025	2.48	0.000005	1.19	0.0129
AQF45	11	0.00052	0.00005	0.00025	0.207	0.000025	0.0005	1.06	0.0108	0.0000025	0.000103	0.00025	0.558	0.00095	0.000025	2.65	0.000005	1.16	0.0146
AQF45	12	0.00025	0.00005	0.00025	0.262	0.00006	0.0014	1.36	0.0113	0.0000025	0.000084	0.00025	0.684	0.00131	0.000062	3.43	0.000005	1.63	0.0179

Site ID	Sample Month	Sulfur (total) mg/L	Tellurium (total) mg/L	Thallium (total) mg/L	Thorium (total) mg/L	Tin (total) mg/L	Titanium (total) mg/L	Tungsten (total) mg/L	Uranium (total) mg/L	Vanadium (total) mg/L	Zinc (total) mg/L	Zirconium (total) mg/L	Aluminum (dissolved) mg/L	Antimony (dissolved) mg/L	Arsenic (dissolved) mg/L	Barium (dissolved) mg/L	Beryllium (dissolved) mg/L	Bismuth (dissolved) mg/L
Aerated Pit Stations																		
AQF6_2.5	10	63.1	0.0001	0.000005	0.00005	0.00090	0.00059	0.00014	0.00367	0.00025	0.0015	0.0001	0.0046	0.00005	0.00539	0.0323	0.00005	0.000025
AQF6_5	10	65.5	0.0001	0.000005	0.00005	0.00131	0.00044	0.00014	0.00363	0.00025	0.0015	0.0001	0.0017	0.00005	0.00405	0.0315	0.00005	0.000025
AQF6_10	10	63.6	0.0001	0.000005	0.00005	0.00074	0.00039	0.00015	0.00368	0.00025	0.0015	0.0001	0.0047	0.00005	0.00525	0.0314	0.00005	0.000025
AQF6_15	10	65.4	0.0001	0.000005	0.00005	0.00077	0.00040	0.00013	0.00373	0.00025	0.0015	0.0001	0.0017	0.00005	0.00393	0.0310	0.00005	0.000025
AQF6_25	10	62.4	0.0001	0.000005	0.00005	0.00041	0.00047	0.00013	0.00374	0.00025	0.0015	0.0001	0.0022	0.00005	0.00423	0.0350	0.00005	0.000025
AQF6_60	10	62.3	0.0001	0.000005	0.00005	0.00048	0.00044	0.00013	0.00364	0.00025	0.0015	0.0001	0.0013	0.00005	0.00390	0.0302	0.00005	0.000025
Median	10	63.35	0.0001	0.000005	0.00005	0.000755	0.00044	0.000135	0.003675	0.00025	0.0015	0.0001	0.00195	0.00005	0.00414	0.03145	0.00005	2.5E-05
10th percentile	10	62.35	0.0001	0.000005	0.00005	0.000445	0.000395	0.00013	0.003635	0.00025	0.0015	0.0001	0.0015	0.00005	0.003915	0.0306	0.00005	2.5E-05
90th percentile	10	65.45	0.0001	0.000005	0.00005	0.001105	0.00053	0.000145	0.003735	0.00025	0.0015	0.0001	0.00465	0.00005	0.00532	0.03365	0.00005	2.5E-05
AQF40	1	0.25	0.0001	0.000005	0.00005	0.00036	0.00121	0.00005	0.000026	0.00025	0.0054	0.0001	0.0205	0.00005	0.00016	0.0126	0.00001	0.000025
AQF40	2	0.675	0.0001	0.000005	0.00005	0.00033	0.00103	0.00005	0.0000245	0.00025	0.00578	0.000155	0.021	0.00005	0.00017	0.0131	0.00001	0.000025
AQF40	3	1.1	0.0001	0.000005	0.00005	0.0003	0.000855	0.00005	0.000023	0.00025	0.00615	0.00021	0.0216	0.00005	0.00017	0.0136	0.00001	0.000025
AQF40	4	0.25	0.0001	0.000005	0.00005	0.00005	0.00079	0.00005	0.000023	0.00025	0.0015	0.0001	0.0206	0.00005	0.00017	0.0195	0.00001	0.000025
AQF40	5	0.25	0.0001	0.000005	0.00005	0.000095	0.00158	0.00005	0.000028	0.00025	0.0015	0.000142	0.0367	0.00005	0.00015	0.00629	0.00005	0.000025
AQF40	6	0.25	0.0001	0.000005	0.00005	0.00024	0.00153	0.00005	0.000023	0.00025	0.0049	0.0001	0.0359	0.00005	0.00017	0.00533	0.00005	0.000025
AQF40	7	0.25	0.0001	0.000005	0.00005	0.00005	0.00137	0.00005	0.0000315	0.00025	0.0015	0.000093	0.0268	0.00005	0.00019	0.0053	0.00005	0.000025
AQF40	8	0.25	0.0001	0.000005	0.00005	0.00005	0.00089	0.00005	0.000021	0.00025	0.0044	0.0001	0.0204	0.00005	0.00017	0.0047	0.00005	0.000025
AQF40	9	0.25	0.0001	0.000005	0.00005	0.00013	0.00101	0.00005	0.000027	0.00025	0.0015	0.0001	0.0318	0.00005	0.00019	0.00584	0.00005	0.000025
AQF40	10	0.25	0.0001	0.000005	0.00005	0.00005	0.00173	0.00005	0.000032	0.00025	0.0015	0.000092	0.023	0.00005	0.00017	0.0081	0.00005	0.000025
AQF40	11	0.25	0.0001	0.000005	0.00005	0.00005	0.00394	0.00005	0.000041	0.00025	0.0046	0.0001	0.0223	0.00005	0.00016	0.00471	0.00005	0.000025
AQF40	12	0.25	0.0001	0.000005	0.00005	0.000205	0.00258	0.00005	0.0000335	0.00025	0.005	0.0001	0.0214	0.00005	0.00016	0.00866	0.00003	0.000025
AQF41	1	0.25	0.0001	0.000005	0.00005	0.0016	0.00099	0.00005	0.000026	0.00025	0.0113	0.0001	0.0208	0.00005	0.00024	0.0134	0.00001	0.000025
AQF41	2	0.25	0.0001	0.000005	0.00005	0.000825	0.00244	0.00005	0.0000298	0.00025	0.00778	0.0001	0.0212	0.00005	0.00025	0.0103	0.00001	0.000025
AQF41	3	0.25	0.0001	0.000005	0.00005	0.00005	0.00389	0.00005	0.0000335	0.00025	0.00425	0.0001	0.0215	0.00005	0.00026	0.00722	0.00001	0.000025
AQF41	4	0.25	0.0001	0.000005	0.00005	0.00005	0.00077	0.00005	0.000025	0.00025	0.0015	0.0001	0.0204	0.00005	0.00015	0.0199	0.00001	0.000025
AQF41	5	0.25	0.0001	0.000005	0.00005	0.00005	0.00164	0.00005	0.000027	0.00025	0.0015	0.0001	0.03	0.00005	0.00013	0.00649	0.00005	0.000025
AQF41	6	0.25	0.0001	0.000005	0.00005	0.00016	0.00342	0.00005	0.000029	0.00025	0.0071	0.0001	0.0334	0.00005	0.00015	0.0095	0.00005	0.000025
AQF41	7	0.25	0.0001	0.000005	0.00005	0.00014	0.00086	0.00005	0.000024	0.00025	0.0015	0.0001	0.0261	0.00005	0.00015	0.00525	0.00005	0.000025
AQF41	8	0.25	0.0001	0.000005	0.00005	0.00005	0.0008	0.00005	0.00002	0.00025	0.0053	0.0001	0.0232	0.00005	0.00016	0.00474	0.00005	0.000025
AQF41	9	0.25	0.0001	0.000005	0.00005	0.00005	0.00167	0.00005	0.000029	0.00025	0.0051	0.0001	0.0237	0.00005	0.00016	0.00565	0.00005	0.000025
AQF41	10	0.25	0.0001	0.000005	0.00005	0.00005	0.00108	0.00005	0.000024	0.00025	0.0046	0.0001	0.019	0.00005	0.00015	0.00459	0.00005	0.000025
AQF41	11	0.25	0.0001	0.000005	0.00005	0.00005	0.00091	0.00005	0.000025	0.00025	0.0015	0.0001	0.0192	0.00005	0.00015	0.00468	0.00005	0.000025
AQF41	12	0.25	0.0001	0.000005	0.00005	0.000825	0.00095	0.00005	0.0000255	0.00025	0.0064	0.0001	0.02	0.00005	0.00020	0.00904	0.00003	0.000025
AQF42	1	0.53	0.0001	0.000005	0.00005	0.00054	0.00176	0.00005	0.000076	0.00025	0.004	0.0001	0.0207	0.00005	0.00018	0.0132	0.00001	0.000025
AQF42	2	8.56	0.0001	0.000005	0.00005	0.00209	0.00229	0.00005	0.000044	0.00025	0.0256	0.0001	0.0241	0.00005	0.00019	0.0204	0.00001	0.000025
AQF42	3	0.25	0.0001	0.000005	0.00005	0.00005	0.00597	0.00005	0.000044	0.00025	0.0054	0.0001	0.036	0.00005	0.00021	0.00808	0.00001	0.000025
AQF42	4	0.25	0.0001	0.000005	0.00005	0.00005	0.00126	0.00005	0.000056	0.00025	0.0032	0.0001	0.024	0.00005	0.00018	0.0191	0.00001	0.000025
AQF42	5	0.25	0.0001	0.000005	0.00005	0.00026	0.00153	0.00005	0.000026	0.00025	0.0015	0.0001	0.0333	0.00005	0.00016	0.00559	0.00005	0.000025
AQF42	6	0.25	0.0001	0.000005	0.00005	0.00028	0.00171	0.00005	0.000024	0.00025	0.0015	0.0001	0.0341	0.00005	0.00016	0.00552	0.00005	0.000025
AQF42	7	0.25	0.0001	0.000005	0.00005	0.00041	0.00124	0.00005	0.000022	0.00025	0.006	0.0001	0.0255	0.00005	0.00014	0.00541	0.00005	0.000025
AQF42	8	0.25	0.0001	0.000005	0.00005	0.00005	0.00099	0.00005	0.000026	0.00025	0.0015	0.0001	0.0216	0.00005	0.00016	0.00504	0.00005	0.000025
AQF42	9	0.25	0.0001	0.000005	0.00005	0.00005	0.00076	0.00005	0.000024	0.00025	0.0031	0.0001	0.0247	0.00005	0.00017	0.00555	0.00005	0.000025

Site ID	Sample Month	Sulfur (total) mg/L	Tellurium (total) mg/L	Thallium (total) mg/L	Thorium (total) mg/L	Tin (total) mg/L	Titanium (total) mg/L	Tungsten (total) mg/L	Uranium (total) mg/L	Vanadium (total) mg/L	Zinc (total) mg/L	Zirconium (total) mg/L	Aluminum (dissolved) mg/L	Antimony (dissolved) mg/L	Arsenic (dissolved) mg/L	Barium (dissolved) mg/L	Beryllium (dissolved) mg/L	Bismuth (dissolved) mg/L
AQF42	10	0.25	0.0001	0.000005	0.00005	0.00005	0.0011	0.00005	0.000037	0.00025	0.0015	0.0001	0.0192	0.00005	0.00016	0.00472	0.00005	0.000025
AQF42	11	0.25	0.0001	0.000005	0.00005	0.00017	0.00788	0.00005	0.000089	0.00025	0.0044	0.0001	0.0319	0.00005	0.00015	0.0149	0.00005	0.000025
AQF42	12	0.39	0.0001	0.000005	0.00005	0.000355	0.00482	0.00005	0.0000825	0.00025	0.0042	0.0001	0.0263	0.00005	0.00017	0.0141	0.00003	0.000025
AQF43	1	0.25	0.0001	0.000005	0.00005	0.00005	0.00088	0.00005	0.000028	0.00025	0.0015	0.0001	0.0212	0.00005	0.00015	0.00627	0.00001	0.000025
AQF43	2	0.25	0.0001	0.000005	0.00005	0.00005	0.000888	0.00005	0.0000263	0.00025	0.00198	0.0001	0.0208	0.00005	0.00016	0.00951	0.00001	0.000025
AQF43	3	0.25	0.0001	0.000005	0.00005	0.00005	0.000895	0.00005	0.0000245	0.00025	0.00245	0.0001	0.0203	0.00005	0.00017	0.0128	0.00001	0.000025
AQF43	4	0.25	0.0001	0.000005	0.00005	0.00005	0.00109	0.00005	0.000027	0.00025	0.0015	0.0001	0.0198	0.00005	0.00015	0.0202	0.00001	0.000025
AQF43	5	0.25	0.0001	0.000005	0.00005	0.00005	0.00178	0.00005	0.000027	0.00025	0.0047	0.0001	0.03	0.00005	0.00015	0.0053	0.00005	0.000025
AQF43	6	0.25	0.0001	0.000005	0.00005	0.00005	0.00184	0.00005	0.000023	0.00088	0.0015	0.00026	0.0311	0.00005	0.00017	0.00534	0.00005	0.000025
AQF43	7	0.25	0.0001	0.000005	0.00005	0.00005	0.00141	0.00005	0.000022	0.00025	0.0015	0.0001	0.0292	0.00005	0.00016	0.00533	0.00005	0.000025
AQF43	8	0.25	0.0001	0.000005	0.00005	0.00005	0.00148	0.00005	0.000025	0.00025	0.0049	0.0001	0.023	0.00005	0.00015	0.00471	0.00005	0.000025
AQF43	9	0.25	0.0003	0.000005	0.00005	0.00005	0.00127	0.00005	0.000027	0.00025	0.0015	0.0001	0.0271	0.00005	0.00019	0.00582	0.00005	0.000025
AQF43	10	0.25	0.0001	0.000005	0.00005	0.00005	0.00226	0.00005	0.000035	0.00025	0.0015	0.0001	0.0215	0.00005	0.00018	0.0109	0.00005	0.000025
AQF43	11	0.25	0.0001	0.000005	0.00005	0.00005	0.00098	0.00005	0.000025	0.00025	0.0015	0.0001	0.0181	0.00005	0.00015	0.00476	0.00005	0.000025
AQF43	12	0.25	0.0001	0.000005	0.00005	0.00005	0.00093	0.00005	0.0000265	0.00025	0.0015	0.0001	0.0197	0.00005	0.00015	0.00552	0.00003	0.000025
AQF44	1	0.25	0.0001	0.000005	0.00005	0.00005	0.00116	0.00005	0.00003	0.00025	0.0039	0.0001	0.0213	0.00005	0.00018	0.0134	0.00001	0.000025
AQF44	2	1.3	0.0001	0.000005	0.00005	0.000328	0.00107	0.00005	0.000028	0.00025	0.0044	0.0001	0.021	0.00005	0.00018	0.016	0.00001	0.000025
AQF44	3	2.34	0.0001	0.000005	0.00005	0.000605	0.00097	0.00005	0.000026	0.00025	0.0049	0.0001	0.0206	0.00005	0.00019	0.0186	0.00001	0.000025
AQF44	4	0.25	0.0001	0.000005	0.00005	0.00005	0.00096	0.00005	0.000027	0.00025	0.0015	0.0001	0.0198	0.00005	0.00017	0.0184	0.00001	0.000025
AQF44	5	0.25	0.0001	0.000005	0.00005	0.00005	0.00164	0.00005	0.000026	0.00025	0.0015	0.0001	0.0323	0.00005	0.00015	0.00542	0.00005	0.000025
AQF44	6	0.25	0.0001	0.000005	0.00005	0.00031	0.00178	0.00005	0.00002	0.00086	0.0123	0.0001	0.0334	0.00005	0.00016	0.0253	0.00005	0.000025
AQF44	7	0.25	0.0001	0.000005	0.00005	0.00005	0.00178	0.00005	0.000026	0.00025	0.0015	0.0001	0.0294	0.00005	0.00015	0.00537	0.00005	0.000025
AQF44	8	0.25	0.0001	0.000005	0.00005	0.00005	0.00154	0.00005	0.000027	0.00025	0.0049	0.0001	0.0218	0.00005	0.00015	0.00479	0.00005	0.000025
AQF44	9	0.25	0.0001	0.000005	0.00005	0.00005	0.0018	0.00005	0.00003	0.00025	0.0015	0.0001	0.0294	0.00005	0.00019	0.00655	0.00005	0.000025
AQF44	10	0.25	0.0001	0.000005	0.00005	0.00005	0.00502	0.00005	0.000038	0.00025	0.0015	0.0001	0.0237	0.00005	0.00017	0.00532	0.00005	0.000025
AQF44	11	0.25	0.0001	0.000005	0.00005	0.00005	0.00267	0.00005	0.00003	0.00025	0.0015	0.0001	0.0334	0.00005	0.00016	0.00509	0.00005	0.000025
AQF44	12	0.25	0.0001	0.000005	0.00005	0.00005	0.00192	0.00005	0.00003	0.00025	0.0027	0.0001	0.0274	0.00005	0.00017	0.00925	0.00003	0.000025
AQF45	1	0.25	0.0001	0.000005	0.00005	0.00005	0.00124	0.00005	0.000029	0.00025	0.0015	0.0001	0.0204	0.00005	0.00016	0.0135	0.00001	0.000025
AQF45	2	0.393	0.0001	0.000005	0.00005	0.000065	0.00133	0.00005	0.0000285	0.00025	0.0022	0.0001	0.0207	0.00005	0.00017	0.0102	0.00001	0.000025
AQF45	3	0.535	0.0001	0.000005	0.00005	0.00008	0.00142	0.00005	0.000028	0.00025	0.0029	0.0001	0.021	0.00005	0.00018	0.00692	0.00001	0.000025
AQF45	4	0.25	0.0001	0.000005	0.00005	0.00005	0.0013	0.00005	0.00003	0.00025	0.0015	0.0001	0.0185	0.00005	0.00015	0.0135	0.00001	0.000025
AQF45	5	0.25	0.0001	0.000005	0.00005	0.00005	0.00236	0.00005	0.00003	0.00025	0.0015	0.0001	0.0401	0.00005	0.00016	0.00539	0.00005	0.000025
AQF45	6	0.25	0.0001	0.000005	0.00005	0.00005	0.00251	0.00005	0.000028	0.00025	0.0015	0.0001	0.0343	0.00005	0.00014	0.00558	0.00005	0.000025
AQF45	7	0.25	0.0001	0.000005	0.00005	0.00005	0.00276	0.00005	0.00003	0.00025	0.0015	0.0001	0.0337	0.00005	0.00014	0.00528	0.00005	0.000025
AQF45	8	0.25	0.0001	0.000005	0.00005	0.00005	0.00438	0.00005	0.000037	0.00025	0.0039	0.00024	0.0378	0.00005	0.00016	0.00518	0.00005	0.000025
AQF45	9	0.25	0.0001	0.000005	0.00005	0.00005	0.00242	0.00005	0.00003	0.00025	0.0015	0.0001	0.0437	0.00005	0.00020	0.00621	0.00005	0.000025
AQF45	10	0.25	0.0001	0.000005	0.00005	0.00005	0.00234	0.00005	0.00003	0.00025	0.0015	0.0001	0.0207	0.00005	0.00017	0.0113	0.00005	0.000025
AQF45	11	0.25	0.0001	0.000005	0.00005	0.00005	0.00128	0.00005	0.000028	0.00025	0.0015	0.0001	0.0197	0.00005	0.00015	0.00486	0.00005	0.000025
AQF45	12	0.25	0.0001	0.000005	0.00005	0.00005	0.00168	0.00005	0.000042	0.00025	0.0015	0.0001	0.0197	0.00005	0.00014	0.00573	0.00005	0.000025

Site ID	Sample Month	Boron (dissolved) mg/L	Cadmium (dissolved) mg/L	Calcium (dissolved) mg/L	Cesium (dissolved) mg/L	Chromium (dissolved) mg/L	Cobalt (dissolved) mg/L	Copper (dissolved) mg/L	Iron (dissolved) mg/L	Lead (dissolved) mg/L	Lithium (dissolved) mg/L	Magnesium (dissolved) mg/L	Manganese (dissolved) mg/L	Mercury (dissolved) mg/L	Molybdenum (dissolved) mg/L	Nickel (dissolved) mg/L	Potassium (dissolved) mg/L
Aerated Pit Stations																	
AQF6_2.5	10	0.050	0.0000054	88.5	0.000261	0.00005	0.00023	0.00058	0.978	0.000025	0.0056	26.6	0.854	0.0000025	0.000502	0.00025	7.27
AQF6_5	10	0.050	0.0000025	88.2	0.000267	0.00005	0.00022	0.00241	0.171	0.000025	0.0056	26.2	0.849	0.0000025	0.000545	0.00025	7.32
AQF6_10	10	0.050	0.0000055	89.2	0.000256	0.00005	0.00023	0.00050	0.982	0.000097	0.0055	26.5	0.858	0.0000025	0.000557	0.00025	7.11
AQF6_15	10	0.050	0.0000025	88.0	0.000268	0.00005	0.00022	0.00286	0.167	0.000102	0.0056	26.0	0.837	0.0000025	0.000514	0.00070	7.23
AQF6_25	10	0.050	0.0000025	87.9	0.000276	0.00005	0.00022	0.00103	0.281	0.000025	0.0056	27.1	0.853	0.0000057	0.000596	0.00025	7.51
AQF6_60	10	0.050	0.0000025	85.1	0.000259	0.00005	0.00022	0.00232	0.151	0.000025	0.0053	25.6	0.840	0.0000025	0.000538	0.00025	7.23
Median	10	0.05	2.5E-06	88.1	0.000264	0.00005	0.00022	0.001675	0.226	0.000025	0.0056	26.35	0.851	0.0000025	0.0005415	0.00025	7.25
10th percentile	10	0.05	2.5E-06	86.5	0.0002575	0.00005	0.00022	0.00054	0.159	0.000025	0.0054	25.8	0.8385	0.0000025	0.000508	0.00025	7.17
90th percentile	10	0.05	5.5E-06	88.85	0.000272	0.00005	0.00023	0.002635	0.98	0.0000995	0.0056	26.85	0.856	0.0000041	0.0005765	0.000475	7.415
AQF40	1	0.005	0.0000025	3.14	0.000005	0.00025	0.00005	0.00278	0.16	0.000131	0.0012	0.922	0.00635		0.00008	0.00025	0.588
AQF40	2	0.005	0.0000025	3.18	0.000005	0.00025	0.00005	0.00199	0.175	0.0000898	0.00105	0.925	0.00693		0.0000935	0.00025	0.579
AQF40	3	0.005	0.0000025	3.22	0.000005	0.00025	0.00005	0.0012	0.19	0.0000485	0.0009	0.929	0.00751	0.00000094	0.000107	0.00025	0.569
AQF40	4	0.005	0.0000105	3.09	0.000005	0.00025	0.00005	0.00205	0.181	0.000106	0.0011	0.914	0.00971	0.00000142	0.000057	0.00025	0.677
AQF40	5	0.005	0.0000025	3.17	0.000005	0.000105	0.00005	0.00056	0.21	0.000025	0.0011	0.92	0.0257	0.0000019	0.000133	0.00025	0.591
AQF40	6	0.005	0.0000025	2.77	0.000005	0.00013	0.00005	0.00032	0.18	0.000025	0.0005	0.779	0.00348	0.00000177	0.000077	0.00025	0.532
AQF40	7	0.005	0.0000052	2.88	0.000005	0.00011	0.00005	0.00031	0.11	0.00007	0.00085	0.811	0.0051	0.00000119	0.000103	0.00025	0.55
AQF40	8	0.005	0.0000025	2.62	0.000005	0.00012	0.00005	0.0003	0.148	0.000025	0.0005	0.778	0.00511		0.000093	0.00025	0.503
AQF40	9	0.005	0.0000025	2.73	0.000005	0.00022	0.00005	0.00264	0.13	0.000148	0.0005	0.765	0.00603		0.00014	0.00025	0.494
AQF40	10	0.005	0.0000025	2.95	0.000005	0.00008	0.00005	0.00158	0.136	0.000072	0.0008	0.871	0.0035	0.00000103	0.000101	0.00025	0.5
AQF40	11	0.005	0.0000025	2.87	0.000005	0.00015	0.00005	0.00504	0.138	0.00018	0.0005	0.815	0.00449		0.00009	0.00025	0.525
AQF40	12	0.005	0.0000025	3.01	0.000005	0.0002	0.00005	0.00391	0.149	0.000156	0.00085	0.869	0.00542		0.000085	0.00025	0.557
AQF41	1	0.005	0.0000146	3.13	0.000005	0.00025	0.00005	0.00388	0.171	0.000162	0.0011	0.905	0.0066		0.000071	0.00053	0.589
AQF41	2	0.005	0.00000855	3.22	0.000005	0.00025	0.00005	0.00212	0.187	0.0000935	0.000975	0.922	0.00793		0.000063	0.00039	0.587
AQF41	3	0.005	0.0000025	3.31	0.000005	0.00025	0.00005	0.00035	0.202	0.000025	0.00085	0.939	0.00926	0.00000113	0.000055	0.00025	0.584
AQF41	4	0.005	0.0000025	3.03	0.000005	0.00025	0.00005	0.00174	0.192	0.000082	0.0011	0.904	0.0107	0.00000182	0.000067	0.00025	0.576
AQF41	5	0.005	0.0000025	2.91	0.000005	0.00012	0.00005	0.00166	0.218	0.000025	0.0005	0.839	0.0188	0.0000025	0.000121	0.00025	0.573
AQF41	6	0.005	0.0000025	2.73	0.000005	0.00013	0.00005	0.00062	0.177	0.000025	0.0005	0.748	0.00415	0.00000216	0.000068	0.00025	0.506
AQF41	7	0.005	0.0000025	2.59	0.000005	0.00012	0.00005	0.00021	0.147	0.000025	0.0005	0.712	0.00399	0.00000093	0.000076	0.00025	0.472
AQF41	8	0.005	0.0000025	2.54	0.000005	0.00012	0.00005	0.00028	0.153	0.000025	0.0005	0.762	0.00552		0.000076	0.00025	0.468
AQF41	9	0.005	0.0000025	2.84	0.000005	0.00005	0.00005	0.00042	0.115	0.000025	0.0011	0.801	0.00444		0.000102	0.00025	0.478
AQF41	10	0.005	0.0000025	2.88	0.000005	0.00012	0.00005	0.00031	0.119	0.000025	0.0005	0.841	0.00263	0.00000096	0.000129	0.00025	0.462
AQF41	11	0.005	0.0000025	2.79	0.000005	0.00005	0.00005	0.0041	0.12	0.000146	0.0005	0.81	0.00266		0.000076	0.00025	0.484
AQF41	12	0.005	0.00000855	2.96	0.000005	0.00015	0.00005	0.00399	0.146	0.000154	0.0008	0.858	0.00463		0.0000735	0.00039	0.537
AQF42	1	0.005	0.0000025	3.12	0.000005	0.00025	0.00005	0.00323	0.177	0.000154	0.0012	0.95	0.00766		0.000105	0.00025	0.58
AQF42	2	0.005	0.0000025	3.36	0.000005	0.00025	0.00005	0.00197	0.2	0.000077	0.0005	1.01	0.0143	0.00000025	0.000074	0.00025	0.752
AQF42	3	0.005	0.0000025	3.32	0.000005	0.00025	0.00005	0.00038	0.219	0.000025	0.0013	0.93	0.0109		0.000066	0.00025	0.558
AQF42	4	0.005	0.000012	3.16	0.000005	0.00025	0.00005	0.00253	0.19	0.000089	0.0012	0.924	0.0124		0.000077	0.00025	0.616
AQF42	5	0.005	0.0000025	2.87	0.000005	0.00014	0.00005	0.00069	0.302	0.000025	0.0005	0.859	0.0444	0.00000155	0.000092	0.00025	0.549
AQF42	6	0.005	0.0000025	2.57	0.000005	0.00013	0.00005	0.00033	0.183	0.000025	0.0005	0.716	0.00212	0.00000164	0.000078	0.00025	0.552
AQF42	7	0.005	0.0000025	2.59	0.000005	0.00005	0.00005	0.00021	0.153	0.000025	0.0005	0.73	0.00461	0.00000146	0.000084	0.00025	0.487
AQF42	8	0.005	0.0000025	2.66	0.000005	0.00011	0.00005	0.00042	0.145	0.000121	0.0005	0.771	0.00551		0.000096	0.00025	0.488
AQF42	9	0.005	0.0000025	2.91	0.000005	0.00012	0.00005	0.00021	0.119	0.000025	0.0005	0.814	0.00402		0.000083	0.00025	0.503

Site ID	Sample Month	Boron (dissolved) mg/L	Cadmium (dissolved) mg/L	Calcium (dissolved) mg/L	Cesium (dissolved) mg/L	Chromium (dissolved) mg/L	Cobalt (dissolved) mg/L	Copper (dissolved) mg/L	Iron (dissolved) mg/L	Lead (dissolved) mg/L	Lithium (dissolved) mg/L	Magnesium (dissolved) mg/L	Manganese (dissolved) mg/L	Mercury (dissolved) mg/L	Molybdenum (dissolved) mg/L	Nickel (dissolved) mg/L	Potassium (dissolved) mg/L
AQF42	10	0.005	0.0000025	2.92	0.000005	0.00005	0.00005	0.00045	0.122	0.000025	0.0005	0.86	0.00369	0.00000081	0.000101	0.00025	0.457
AQF42	11	0.005	0.0000025	3.04	0.000005	0.00078	0.00005	0.00152	0.193	0.000066	0.0005	0.866	0.02		0.000903	0.00025	0.512
AQF42	12	0.005	0.0000025	3.08	0.000005	0.000515	0.00005	0.00238	0.185	0.00011	0.00085	0.908	0.0138		0.000504	0.00025	0.546
AQF43	1	0.005	0.0000025	3.09	0.000005	0.00025	0.00005	0.00038	0.161	0.000025	0.0011	0.93	0.00503		0.000062	0.00025	0.542
AQF43	2	0.005	0.0000025	3.15	0.000005	0.00025	0.00005	0.00069	0.176	0.0000345	0.000975	0.923	0.00603		0.0000538	0.00025	0.546
AQF43	3	0.005	0.0000025	3.21	0.000005	0.00025	0.00005	0.001	0.191	0.000044	0.00085	0.916	0.00702	0.00000098	0.0000455	0.00025	0.55
AQF43	4	0.005	0.0000025	3.12	0.000005	0.00025	0.00005	0.00193	0.185	0.000066	0.0011	0.895	0.0109	0.00000174	0.000058	0.00025	0.564
AQF43	5	0.005	0.0000025	3.23	0.000045	0.00012	0.00005	0.00048	0.205	0.000025	0.0005	0.917	0.0193	0.0000025	0.000095	0.00025	0.563
AQF43	6	0.005	0.0000025	2.92	0.000005	0.00012	0.00005	0.00022	0.168	0.000025	0.0005	0.814	0.00276	0.00000175	0.000081	0.00025	0.668
AQF43	7	0.005	0.0000025	2.61	0.000005	0.00011	0.00005	0.00023	0.163	0.000025	0.0005	0.786	0.00425	0.0000015	0.000059	0.00025	0.507
AQF43	8	0.005	0.0000025	2.88	0.000005	0.00005	0.00005	0.00033	0.135	0.000025	0.0005	0.804	0.00578		0.000098	0.00025	0.548
AQF43	9	0.005	0.0000025	2.86	0.000005	0.00012	0.00005	0.00036	0.124	0.000025	0.0005	0.796	0.00576		0.000089	0.00025	0.488
AQF43	10	0.005	0.0000025	2.93	0.000005	0.00013	0.00005	0.0037	0.127	0.00015	0.0005	0.839	0.00393	0.00000081	0.000134	0.00025	0.483
AQF43	11	0.005	0.0000025	2.94	0.000005	0.00011	0.00005	0.00509	0.105	0.00626	0.0005	0.848	0.00224		0.000087	0.00025	0.49
AQF43	12	0.005	0.0000025	3.02	0.000005	0.00018	0.00005	0.00274	0.133	0.00314	0.0008	0.889	0.00364		0.0000745	0.00025	0.516
AQF44	1	0.005	0.0000118	3.44	0.000005	0.00025	0.00005	0.00373	0.168	0.000158	0.0012	0.984	0.00575		0.000078	0.00025	0.561
AQF44	2	0.005	0.00000715	3.42	0.000005	0.00025	0.00005	0.00299	0.178	0.0000993	0.00103	0.979	0.00639		0.0000713	0.00025	0.574
AQF44	3	0.005	0.0000025	3.39	0.000005	0.00025	0.00005	0.00225	0.187	0.0000405	0.00085	0.974	0.00703	0.00000089	0.0000645	0.00025	0.587
AQF44	4	0.005	0.0000025	3.46	0.000005	0.00025	0.00005	0.00179	0.183	0.000072	0.0012	0.982	0.0104	0.00000089	0.000072	0.00025	0.597
AQF44	5	0.005	0.0000025	3.15	0.000005	0.00012	0.00005	0.00042	0.218	0.000025	0.0011	0.89	0.0191	0.00000089	0.000084	0.00025	0.552
AQF44	6	0.005	0.0000025	2.68	0.000005	0.00013	0.00005	0.00136	0.174	0.000025	0.0005	0.759	0.00264	0.00000168	0.000181	0.00025	0.628
AQF44	7	0.005	0.0000025	2.66	0.000005	0.00011	0.00005	0.0003	0.158	0.000025	0.0005	0.741	0.00457	0.00000159	0.000092	0.00025	0.503
AQF44	8	0.005	0.0000025	2.91	0.000005	0.00012	0.00005	0.00029	0.133	0.000124	0.0005	0.822	0.00604		0.000147	0.00025	0.544
AQF44	9	0.005	0.0000025	3.35	0.000005	0.00012	0.00005	0.00031	0.117	0.000025	0.0011	0.936	0.00498		0.00007	0.00025	0.545
AQF44	10	0.005	0.0000025	3.14	0.000005	0.00013	0.00005	0.00025	0.127	0.000025	0.0005	0.913	0.00387	0.00000103	0.000078	0.00025	0.497
AQF44	11	0.005	0.0000025	3.3	0.000005	0.00013	0.00005	0.00457	0.135	0.000167	0.0011	0.964	0.00534		0.000092	0.00025	0.506
AQF44	12	0.005	0.00000715	3.37	0.000005	0.00019	0.00005	0.00415	0.152	0.000163	0.00115	0.974	0.00555		0.000085	0.00025	0.534
AQF45	1	0.005	0.0000025	3.62	0.000005	0.00025	0.00005	0.00292	0.151	0.000087	0.0012	1.04	0.00556		0.000087	0.00025	0.575
AQF45	2	0.005	0.0000025	3.65	0.000005	0.00025	0.00005	0.00164	0.168	0.000056	0.00103	1.04	0.00612		0.0000765	0.00025	0.573
AQF45	3	0.005	0.0000025	3.68	0.000005	0.00025	0.00005	0.000365	0.185	0.000025	0.00085	1.04	0.00668	0.00000082	0.000066	0.00025	0.571
AQF45	4	0.005	0.0000025	3.58	0.000005	0.00025	0.00005	0.0026	0.18	0.000084	0.0012	1.05	0.014	0.00000079	0.000081	0.00115	0.639
AQF45	5	0.005	0.0000025	3.25	0.000005	0.00012	0.00005	0.00039	0.215	0.000025	0.0005	0.942	0.0125	0.00000076	0.000081	0.00025	0.572
AQF45	6	0.005	0.0000025	2.78	0.000005	0.00012	0.00005	0.00031	0.176	0.000025	0.0005	0.786	0.00238	0.00000204	0.000102	0.00025	0.489
AQF45	7	0.005	0.0000025	2.8	0.000005	0.00013	0.00005	0.00035	0.156	0.000025	0.0005	0.784	0.00399	0.00000173	0.000089	0.00025	0.48
AQF45	8	0.005	0.0000025	2.99	0.000005	0.00014	0.00005	0.00068	0.153	0.000025	0.0005	0.887	0.0119		0.000115	0.00025	0.496
AQF45	9	0.005	0.0000025	3.34	0.000005	0.00014	0.00005	0.00028	0.16	0.000025	0.0005	0.941	0.0146		0.000098	0.00025	0.49
AQF45	10	0.005	0.0000025	3.26	0.000005	0.00011	0.00005	0.00252	0.116	0.000059	0.0005	0.945	0.00353	0.0000009	0.000096	0.00025	0.463
AQF45	11	0.005	0.0000025	3.39	0.000005	0.00005	0.00005	0.00418	0.114	0.000159	0.0005	0.969	0.00279		0.00015	0.00025	0.522
AQF45	12	0.005	0.0000025	3.66	0.00003	0.00005	0.00005	0.00022	0.126	0.000025	0.0018	1.05	0.00366		0.000082	0.00025	0.565

Site ID	Sample Month	Rubidium (dissolved) mg/L	Selenium (dissolved) mg/L	Silicon (dissolved) mg/L	Silver (dissolved) mg/L	Sodium (dissolved) mg/L	Strontium (dissolved) mg/L	Sulfur (dissolved) mg/L	Tellurium (dissolved) mg/L	Thallium (dissolved) mg/L	Thorium (dissolved) mg/L	Tin (dissolved) mg/L	Titanium (dissolved) mg/L	Tungsten (dissolved) mg/L	Uranium (dissolved) mg/L	Vanadium (dissolved) mg/L	Zinc (dissolved) mg/L
Aerated Pit Stations																	
AQF6_2.5	10	0.00535	0.000025	5.40	0.000005	20.9	0.269	63.8	0.0001	0.000005	0.00005	0.00140	0.00015	0.00014	0.00413	0.00025	0.0011
AQF6_5	10	0.00530	0.000025	5.47	0.000005	21.6	0.274	64.9	0.0001	0.000005	0.00005	0.00104	0.00015	0.00013	0.00419	0.00025	0.0019
AQF6_10	10	0.00534	0.000025	5.31	0.000005	20.8	0.265	63.0	0.0001	0.000005	0.00005	0.00023	0.00015	0.00014	0.00406	0.00025	0.0005
AQF6_15	10	0.00521	0.000025	5.39	0.000005	20.5	0.273	65.5	0.0001	0.000005	0.00005	0.00074	0.00015	0.00014	0.00420	0.00025	0.0024
AQF6_25	10	0.00560	0.000025	5.32	0.000005	22.4	0.279	63.1	0.0001	0.000005	0.00005	0.00040	0.00015	0.00014	0.00406	0.00025	0.0017
AQF6_60	10	0.00528	0.000025	5.39	0.000005	21.0	0.271	66.2	0.0001	0.000005	0.00005	0.00056	0.00015	0.00014	0.00411	0.00025	0.0014
Median	10	0.00532	0.000025	5.39	0.000005	20.95	0.272	64.35	0.0001	0.000005	0.00005	0.00065	0.00015	0.00014	0.00412	0.00025	0.00155
10th percentile	10	0.005245	0.000025	5.315	0.000005	20.65	0.267	63.05	0.0001	0.000005	0.00005	0.000315	0.00015	0.000135	0.00406	0.00025	0.0008
90th percentile	10	0.005475	0.000025	5.435	0.000005	22	0.2765	65.85	0.0001	0.000005	0.00005	0.00122	0.00015	0.00014	0.004195	0.00025	0.00215
AQF40	1	0.00103	0.000025	3.09	0.000005	1.3	0.0146	0.25	0.0001	0.000005	0.00005	0.00005	0.00015	0.00005	0.00002	0.00025	0.0046
AQF40	2	0.00103	0.0000333	3.1	0.000005	1.3	0.0144	0.34	0.0001	0.000005	0.00005	0.000075	0.00015	0.00005	0.0000208	0.00025	0.0032
AQF40	3	0.00104	0.0000415	3.11	0.000005	1.31	0.0141	0.43	0.0001	0.000005	0.00005	0.0001	0.00015	0.00005	0.0000215	0.00025	0.0018
AQF40	4	0.00115	0.000025	3.02	0.000005	1.28	0.014	0.25	0.0001	0.000005	0.00005	0.00014	0.00015	0.00005	0.000022	0.00025	0.0028
AQF40	5	0.00099	0.000025	2.42	0.000005	1.04	0.013	0.25	0.0001	0.000005	0.00005	0.000125	0.000715	0.00005	0.000022	0.00025	0.003
AQF40	6	0.00091	0.000025	1.97	0.000005	0.95	0.0107	0.25	0.0001	0.000005	0.00005	0.00019	0.00051	0.00005	0.000021	0.00025	0.0064
AQF40	7	0.00107	0.000025	1.89	0.000005	1.02	0.0125	0.405	0.0001	0.000005	0.00005	0.000105	0.00041	0.00005	0.0000285	0.00025	0.00375
AQF40	8	0.00099	0.000052	2.05	0.000005	1.04	0.0132	0.25	0.0001	0.000005	0.00005	0.00024	0.00037	0.00005	0.000023	0.00025	0.0033
AQF40	9	0.00109	0.000052	2.22	0.000005	1.01	0.0122	0.25	0.0001	0.000005	0.00005	0.00005	0.00055	0.00005	0.000023	0.00025	0.0048
AQF40	10	0.00098	0.0000425	2.29	0.000005	1.12	0.0123	0.455	0.0001	0.000005	0.00005	0.00005	0.000275	0.00005	0.000028	0.00025	0.0021
AQF40	11	0.00095	0.000025	2.41	0.000005	1	0.0128	0.25	0.0001	0.000005	0.00005	0.00005	0.00034	0.00005	0.000018	0.00025	0.0103
AQF40	12	0.00099	0.000025	2.75	0.000005	1.15	0.0137	0.25	0.0001	0.000005	0.00005	0.00005	0.000245	0.00005	0.000019	0.00025	0.00745
AQF41	1	0.00109	0.000025	3.07	0.000005	1.35	0.0139	0.25	0.0001	0.000005	0.00005	0.00005	0.00015	0.00005	0.000021	0.00025	0.0052
AQF41	2	0.00107	0.000025	3.1	0.000005	1.33	0.0142	0.25	0.0001	0.000005	0.00005	0.00005	0.000203	0.00005	0.000022	0.00025	0.00353
AQF41	3	0.00105	0.000025	3.14	0.000005	1.31	0.0145	0.25	0.0001	0.000005	0.00005	0.00005	0.000255	0.00005	0.000023	0.00025	0.00185
AQF41	4	0.00109	0.000025	3.02	0.000005	1.21	0.014	0.25	0.0001	0.000005	0.00005	0.00012	0.00036	0.00005	0.000022	0.00025	0.0022
AQF41	5	0.00088	0.000025	2.37	0.000005	0.909	0.0121	0.25	0.0001	0.000005	0.00005	0.00005	0.00044	0.00005	0.000021	0.00025	0.0256
AQF41	6	0.00094	0.000025	1.89	0.000005	0.934	0.0103	0.25	0.0001	0.000005	0.00005	0.00005	0.00052	0.00005	0.000022	0.00025	0.0023
AQF41	7	0.00092	0.000025	2.06	0.000005	0.873	0.0111	0.25	0.0001	0.000005	0.00005	0.00005	0.00036	0.00005	0.000021	0.00025	0.0032
AQF41	8	0.00106	0.000025	2.1	0.000005	0.958	0.0125	0.25	0.0001	0.000005	0.00005	0.00047	0.00039	0.00005	0.000024	0.00025	0.0018
AQF41	9	0.00098	0.000025	2.11	0.000005	1.02	0.0125	0.75	0.0001	0.000005	0.00005	0.00056	0.00034	0.00005	0.000019	0.00025	0.0005
AQF41	10	0.00087	0.000025	2.3	0.000005	1.03	0.0109	0.25	0.0001	0.000005	0.00005	0.00005	0.00015	0.00005	0.000021	0.00025	0.0005
AQF41	11	0.00096	0.000025	2.39	0.000005	0.979	0.0121	0.25	0.0001	0.000005	0.00005	0.00005	0.00015	0.00005	0.000015	0.00025	0.0043
AQF41	12	0.00103	0.000025	2.73	0.000005	1.16	0.013	0.25	0.0001	0.000005	0.00005	0.00005	0.00015	0.00005	0.000018	0.00025	0.00475
AQF42	1	0.0011	0.000025	3.06	0.000005	1.32	0.0147	0.25	0.0001	0.000005	0.00005	0.00018	0.00015	0.00005	0.000062	0.00025	0.0047
AQF42	2	0.00112	0.000025	3.26	0.000005	1.4	0.0151	0.55	0.0001	0.000005	0.00005	0.00018	0.00041	0.00005	0.000031	0.00025	0.0049
AQF42	3	0.00108	0.000064	3.17	0.000005	1.3	0.014	0.25	0.0001	0.000005	0.00005	0.00005	0.00041	0.00005	0.000027	0.00025	0.0012
AQF42	4	0.00102	0.000025	2.95	0.000005	5.15	0.0138	0.75	0.0001	0.000005	0.00005	0.00015	0.00035	0.00005	0.000052	0.00025	0.0052
AQF42	5	0.00096	0.000025	2.43	0.000005	0.902	0.0122	0.25	0.0001	0.000005	0.00005	0.00005	0.00051	0.00005	0.000022	0.00025	0.0012
AQF42	6	0.0009	0.000025	1.98	0.000005	0.93	0.0105	0.25	0.0001	0.000005	0.00005	0.0003	0.00046	0.00005	0.000019	0.00025	0.0005
AQF42	7	0.00095	0.000025	1.95	0.000005	0.888	0.0112	0.56	0.0001	0.000005	0.00005	0.00069	0.00044	0.00005	0.000025	0.00025	0.009
AQF42	8	0.00108	0.000025	2.02	0.000005	0.963	0.0119	0.25	0.0001	0.000005	0.00005	0.00005	0.00046	0.00005	0.000021	0.00025	0.003
AQF42	9	0.00096	0.000061	2.14	0.000005	1.05	0.0121	0.25	0.0001	0.000005	0.00005	0.00005	0.00032	0.00005	0.000021	0.00025	0.0005

Site ID	Sample Month	Rubidium (dissolved) mg/L	Selenium (dissolved) mg/L	Silicon (dissolved) mg/L	Silver (dissolved) mg/L	Sodium (dissolved) mg/L	Strontium (dissolved) mg/L	Sulfur (dissolved) mg/L	Tellurium (dissolved) mg/L	Thallium (dissolved) mg/L	Thorium (dissolved) mg/L	Tin (dissolved) mg/L	Titanium (dissolved) mg/L	Tungsten (dissolved) mg/L	Uranium (dissolved) mg/L	Vanadium (dissolved) mg/L	Zinc (dissolved) mg/L
AQF42	10	0.0009	0.000025	2.31	0.000005	1.03	0.0111	0.25	0.0001	0.000005	0.00005	0.00005	0.00015	0.00005	0.000024	0.00025	0.0011
AQF42	11	0.00098	0.000025	2.28	0.000005	1	0.013	0.25	0.0001	0.000005	0.00005	0.00005	0.00102	0.00092	0.000059	0.00025	0.0033
AQF42	12	0.00104	0.000025	2.67	0.000005	1.16	0.0139	0.25	0.0001	0.000005	0.00005	0.000115	0.000585	0.000485	0.0000605	0.00025	0.004
AQF43	1	0.00099	0.000025	3.04	0.000005	1.28	0.0144	0.25	0.0001	0.000005	0.00005	0.00005	0.00031	0.00005	0.000023	0.00025	0.0011
AQF43	2	0.001	0.0000343	3.1	0.000005	1.29	0.0144	0.25	0.0001	0.000005	0.00005	0.0000675	0.00023	0.00005	0.0000228	0.00025	0.0013
AQF43	3	0.00101	0.0000435	3.15	0.000005	1.29	0.0144	0.25	0.0001	0.000005	0.00005	0.000085	0.00015	0.00005	0.0000225	0.00025	0.0015
AQF43	4	0.001	0.000025	2.94	0.000005	1.23	0.0143	0.25	0.0001	0.000005	0.00005	0.00013	0.00031	0.00005	0.00002	0.00025	0.0023
AQF43	5	0.00086	0.000025	2.28	0.000005	0.93	0.0126	0.6	0.0001	0.000005	0.00005	0.00005	0.00044	0.00005	0.000023	0.00025	0.0015
AQF43	6	0.00091	0.000025	1.92	0.000005	0.954	0.0106	0.25	0.0001	0.000005	0.00005	0.00005	0.00037	0.00005	0.000019	0.00025	0.0045
AQF43	7	0.00102	0.000025	2.18	0.000005	1.06	0.0122	0.25	0.0001	0.000005	0.00005	0.00005	0.00045	0.00005	0.000021	0.00025	0.0013
AQF43	8	0.001	0.000025	2.02	0.000005	0.986	0.0121	0.25	0.0001	0.000005	0.00005	0.00005	0.00058	0.00005	0.000022	0.00025	0.0005
AQF43	9	0.00101	0.000025	2.2	0.000005	0.975	0.0125	0.25	0.0001	0.000005	0.00005	0.00005	0.00041	0.00005	0.00002	0.00025	0.0005
AQF43	10	0.00092	0.000025	2.35	0.000005	1.03	0.0124	0.25	0.0001	0.000005	0.00005	0.00005	0.00041	0.00005	0.000025	0.00025	0.0022
AQF43	11	0.00088	0.000025	2.41	0.000005	1	0.0133	0.25	0.0001	0.000005	0.00005	0.00005	0.00031	0.00005	0.000017	0.00025	0.0048
AQF43	12	0.000935	0.000025	2.73	0.000005	1.14	0.0139	0.25	0.0001	0.000005	0.00005	0.00005	0.00031	0.00005	0.00002	0.00025	0.00295
AQF44	1	0.00099	0.000025	3.02	0.000005	1.32	0.0146	0.25	0.0001	0.000005	0.00005	0.00005	0.00032	0.00005	0.000022	0.00025	0.0039
AQF44	2	0.00104	0.000025	3.08	0.000005	1.32	0.0146	0.25	0.0001	0.000005	0.00005	0.0000825	0.000235	0.00005	0.000022	0.00025	0.00313
AQF44	3	0.00109	0.000025	3.14	0.000005	1.32	0.0146	0.25	0.0001	0.000005	0.00005	0.000115	0.00015	0.00005	0.000022	0.00025	0.00235
AQF44	4	0.00106	0.000025	2.94	0.000005	1.71	0.0146	0.25	0.0001	0.000005	0.00005	0.00012	0.00015	0.00005	0.000022	0.00025	0.0028
AQF44	5	0.00086	0.000025	2.36	0.000005	0.894	0.0124	0.25	0.0001	0.000005	0.00005	0.00005	0.00047	0.00005	0.000023	0.00025	0.0005
AQF44	6	0.00094	0.000025	1.99	0.000005	0.962	0.0104	0.25	0.0001	0.000005	0.00005	0.00019	0.00041	0.00005	0.000019	0.00025	0.0033
AQF44	7	0.00101	0.000025	1.99	0.000005	0.87	0.0111	0.25	0.0001	0.000005	0.00005	0.00005	0.00049	0.00005	0.000024	0.00025	0.0005
AQF44	8	0.00099	0.000025	2.05	0.000005	0.989	0.0123	0.25	0.0001	0.000005	0.00005	0.00005	0.00045	0.00005	0.000022	0.00025	0.0026
AQF44	9	0.00096	0.000025	2.01	0.000005	1.09	0.0113	0.67	0.0001	0.000005	0.00005	0.00005	0.0004	0.00005	0.000024	0.00025	0.0005
AQF44	10	0.00095	0.000025	2.3	0.000005	1.06	0.013	0.25	0.0001	0.000005	0.00005	0.00005	0.00015	0.00005	0.000022	0.00025	0.0005
AQF44	11	0.00098	0.000025	2.47	0.000005	1.03	0.0131	0.25	0.0001	0.000005	0.00005	0.00005	0.0005	0.00005	0.000018	0.00025	0.005
AQF44	12	0.000985	0.000025	2.75	0.000005	1.18	0.0139	0.25	0.0001	0.000005	0.00005	0.00005	0.00041	0.00005	0.00002	0.00025	0.00445
AQF45	1	0.00101	0.000025	3.03	0.000005	1.35	0.0149	0.25	0.0001	0.000005	0.00005	0.00011	0.00015	0.00005	0.000024	0.00025	0.0023
AQF45	2	0.00101	0.0000343	3.05	0.000005	1.35	0.015	0.663	0.0001	0.000005	0.00005	0.000113	0.00015	0.00005	0.0000243	0.00025	0.00188
AQF45	3	0.00101	0.0000435	3.07	0.000005	1.35	0.0151	1.08	0.0001	0.000005	0.00005	0.000115	0.00015	0.00005	0.0000245	0.00025	0.00145
AQF45	4	0.00104	0.000025	2.99	0.000005	1.4	0.0152	0.25	0.0001	0.000005	0.00005	0.00005	0.00015	0.00005	0.000024	0.00025	0.0016
AQF45	5	0.00084	0.000025	2.26	0.000005	0.905	0.0125	0.25	0.0001	0.000005	0.00005	0.00005	0.00068	0.00005	0.000026	0.00025	0.0013
AQF45	6	0.00094	0.000073	1.9	0.000005	0.911	0.0106	0.25	0.00023	0.000005	0.00005	0.00005	0.00056	0.00005	0.000021	0.00025	0.0011
AQF45	7	0.00104	0.000025	2.06	0.000005	0.894	0.0113	0.25	0.0001	0.000005	0.00005	0.00005	0.00065	0.00005	0.000025	0.00025	0.0021
AQF45	8	0.00116	0.000025	2.06	0.000005	0.99	0.0129	0.25	0.0001	0.000005	0.00005	0.00005	0.00119	0.00005	0.000028	0.00025	0.0012
AQF45	9	0.00092	0.000025	2.21	0.000005	1.13	0.0131	0.25	0.0001	0.000005	0.00005	0.00005	0.00117	0.00005	0.000025	0.00025	0.0005
AQF45	10	0.00082	0.000025	2.28	0.000005	1.08	0.0115	0.25	0.0001	0.000005	0.00005	0.00005	0.0004	0.00005	0.000023	0.00025	0.0016
AQF45	11	0.00089	0.000025	2.4	0.000005	1.05	0.0137	0.25	0.0001	0.000005	0.00005	0.00005	0.00015	0.00005	0.000019	0.00025	0.006
AQF45	12	0.00102	0.000025	2.61	0.000005	1.22	0.0148	0.25	0.0001	0.000005	0.00005	0.00005	0.00034	0.00005	0.000023	0.00025	0.0005

Site ID	Sample Month	Zirconium (dissolved) mg/L	cyanide free mg/L	cyanide SAD (total) mg/L	cyanide_WAD mg/L	Methylmercury (dissolved) mg/L	Methylmercury (total) mg/L
Aerated Pit Stations							
AQF6_2.5	10	0.0001					
AQF6_5	10	0.0001					
AQF6_10	10	0.0001					
AQF6_15	10	0.0001					
AQF6_25	10	0.0001					
AQF6_60	10	0.0001					
Median	10	0.0001					
10th percentile	10	0.0001					
90th percentile	10	0.0001					
AQF40	1	0.00015	0.0025	0.0025	0.0025		
AQF40	2	0.00015	0.0025	0.0025	0.0025		
AQF40	3	0.00015	0.0025	0.0025	0.0025	0.000022000	0.000000035
AQF40	4	0.00015	0.0005	0.0005	0.0005		0.000000042
AQF40	5	0.000099	0.0005	0.0005			0.000000048
AQF40	6	0.0001	0.0005	0.0005		0.00000015	0.000000399
AQF40	7	0.0000965	0.0005	0.0005		0.00000016	0.000000033
AQF40	8	0.0001	0.0005	0.0005			
AQF40	9	0.0001	0.0005	0.0005			
AQF40	10	0.000106	0.0005	0.0005			0.000000037
AQF40	11	0.0001	0.0005	0.0005			
AQF40	12	0.000125	0.0015	0.0015			
AQF41	1	0.00015	0.0025	0.0025	0.0025		
AQF41	2	0.00015	0.0025	0.0025	0.0025		
AQF41	3	0.00015	0.0025	0.0025	0.0025	0.00003600	0.000000064
AQF41	4	0.00015	0.0005	0.0005	0.0005		0.000000053
AQF41	5	0.0001	0.0005	0.0005			0.000000041
AQF41	6	0.0001	0.0005	0.0005		0.00000009	0.000000061
AQF41	7	0.0001	0.0005	0.0005		0.00000015	0.000000034
AQF41	8	0.00026	0.0005	0.0005			
AQF41	9	0.0001	0.0005	0.0005			
AQF41	10	0.0001	0.0005	0.0005			0.000000154
AQF41	11	0.0001	0.0005	0.0005			
AQF41	12	0.000125	0.0015	0.0015			
AQF42	1	0.00015	0.0025	0.0025	0.0025		
AQF42	2	0.00015	0.0025	0.0025	0.0025	0.00004000	0.000000029
AQF42	3	0.00015	0.0025	0.0025	0.0025		
AQF42	4	0.00015	0.0005	0.0005	0.0005		
AQF42	5	0.0001	0.0005	0.0005			0.000000048
AQF42	6	0.0001	0.0005	0.0005		0.00000015	0.000000056
AQF42	7	0.0001	0.0005	0.0005		0.00000010	0.000000055
AQF42	8	0.0001	0.0005	0.0005			
AQF42	9	0.0001	0.0005	0.0005			

Site ID	Sample Month	Zirconium (dissolved) mg/L	cyanide free mg/L	cyanide SAD (total) mg/L	cyanide_WAD mg/L	Methylmercury (dissolved) mg/L	Methylmercury (total) mg/L
AQF42	10	0.0001	0.0005	0.0005			0.000000046
AQF42	11	0.0001	0.0005	0.0005			
AQF42	12	0.000125	0.0015	0.0015			
AQF43	1	0.00015	0.0025	0.0025	0.0025		
AQF43	2	0.00015	0.0025	0.0025	0.0025		
AQF43	3	0.00015	0.0025	0.0025	0.0025	0.00006600	0.000000035
AQF43	4	0.00015	0.0005	0.0005	0.0005		0.000000039
AQF43	5	0.0001	0.0005	0.0005			0.000000042
AQF43	6	0.0001	0.0005	0.0005		0.00000018	0.000000056
AQF43	7	0.0001	0.0005	0.0005		0.00000015	0.000000050
AQF43	8	0.0001	0.0005	0.0005			
AQF43	9	0.0001	0.0005	0.0005			
AQF43	10	0.0001	0.0005	0.0005			0.000000046
AQF43	11	0.0001	0.0005	0.0005			
AQF43	12	0.000125	0.0015	0.0015			
AQF44	1	0.00015	0.0025	0.0025	0.0025		
AQF44	2	0.00015	0.0025	0.0025	0.0025		
AQF44	3	0.00015	0.0025	0.0025	0.0025	0.00002900	0.000000038
AQF44	4	0.00015	0.0005	0.0005	0.0005		0.000000039
AQF44	5	0.0001	0.0005	0.0005			0.000000039
AQF44	6	0.0001	0.0005	0.0005		0.00000006	0.000000062
AQF44	7	0.0001	0.0005	0.0005		0.00000007	0.000000090
AQF44	8	0.0001	0.0005	0.0005			
AQF44	9	0.0001	0.0005	0.0018			
AQF44	10	0.0001	0.0005	0.0005			0.000000135
AQF44	11	0.0001	0.0005	0.0005			
AQF44	12	0.000125	0.0015	0.0015			
AQF45	1	0.00015	0.0025	0.0025	0.0025		
AQF45	2	0.00015	0.0025	0.0025	0.0025		
AQF45	3	0.00015	0.0025	0.0025	0.0025	0.00005100	0.000000039
AQF45	4	0.00015	0.0005	0.0005	0.0005		0.000000035
AQF45	5	0.0001	0.0005	0.0005			0.000000031
AQF45	6	0.0001	0.0005	0.0005		0.00000010	0.000000064
AQF45	7	0.0001	0.0005	0.0005		0.00000017	0.000000052
AQF45	8	0.0001	0.0005	0.0005			
AQF45	9	0.0001	0.0005	0.0005			
AQF45	10	0.0001	0.0005	0.0005			0.000000035
AQF45	11	0.0001	0.0005	0.0005			
AQF45	12	0.0001	0.0005	0.0005			

NOTES
Grey shaded cells indicate lab-reported value was less than the method detection limit; value in table is one half the method detection limit

Appendix B



B.1 Modelling scenarios

Scenarios	Hughes River Monthly Flow	Pit dewatering rate	Hughes River water chemistry	Pit chemistry: East Pit Aerated data set
Base case	Median of May-October	Proposed	Monthly as-measured concentrations	Median
	Monthly 10 th percentile	Proposed	Monthly as-measured concentrations	Median
	Monthly 90 th percentile	Proposed	Monthly as-measured concentrations	Median
	Monthly Median	Proposed	Monthly as-measured concentrations	10 th percentile
	Monthly 10 th percentile	Proposed	Monthly as-measured concentrations	10 th percentile
	Monthly 90 th percentile	Proposed	Monthly as-measured concentrations	10 th percentile
	Monthly Median	Proposed	Monthly as-measured concentrations	90 th percentile
	Monthly 10 th percentile	Proposed	Monthly as-measured concentrations	90 th percentile
	Monthly 90 th percentile	Proposed	Monthly as-measured concentrations	90 th percentile
	Monthly Median	Double proposed	Monthly as-measured concentrations	Median
Double pumping rate	Monthly 10 th percentile	Double proposed	Monthly as-measured concentrations	Median
	Monthly 90 th percentile	Double proposed	Monthly as-measured concentrations	Median
	Monthly Median	Double proposed	Monthly as-measured concentrations	10 th percentile
	Monthly 10 th percentile	Double proposed	Monthly as-measured concentrations	10 th percentile
	Monthly 90 th percentile	Double proposed	Monthly as-measured concentrations	10 th percentile
	Monthly Median	Double proposed	Monthly as-measured concentrations	90 th percentile
	Monthly 10 th percentile	Double proposed	Monthly as-measured concentrations	90 th percentile
	Monthly 90 th percentile	Double proposed	Monthly as-measured concentrations	90 th percentile
Mixing zone	25% of Monthly Median	Proposed	Monthly as-measured concentrations	Median
	25% of Monthly 10 th percentile	Proposed	Monthly as-measured concentrations	Median



Scenarios	Hughes River Monthly Flow	Pit dewatering rate	Hughes River water chemistry	Pit chemistry: East Pit Aerated data set
Mixing zone (cont'd.)	25% of Monthly 90 th percentile	Proposed	Monthly as-measured concentrations	Median
	25% of Monthly Median	Proposed	Monthly as-measured concentrations	10 th percentile
	25% of Monthly 10 th percentile	Proposed	Monthly as-measured concentrations	10 th percentile
	25% of Monthly 90 th percentile	Proposed	Monthly as-measured concentrations	10 th percentile
	25% of Monthly Median	Proposed	Monthly as-measured concentrations	90 th percentile
	25% of Monthly 10 th percentile	Proposed	Monthly as-measured concentrations	90 th percentile
	25% of Monthly 90 th percentile	Proposed	Monthly as-measured concentrations	90 th percentile



Appendix C



C.1 QA/QC Evaluation – Certificate of Analyses (COAs)



Attachment C.1

Laboratory Certificates of Analysis:
May 2022 to April 2023 Surface Water
Sampling Program

The certificates of analysis (COAs) included in this attachment (Attachment G-1) correspond to the sampling months and years provided in Table G-1.1. These COAs are the analytical laboratory results of the complete surface water sampling program at the MacLellan and Gordon sites of the Lynn Lake Gold Project from May 2022 to April 2023.

Table C.1: List of Certificates of Analysis Provided in Attachment C.1

ALS Certificate of Analysis Number	Sampling Month and Year
L2711813	May 2022
L2711833	May 2022
L2719501	June 2022
L2725589	July 2022
L2730355	August 2022
L2733754	September 2022
L2735222	September 2022
L2738661	October 2022
L2740826	November 2022
L2743404	December 2022
WP2301173	January 2023
WP2302565	February 2023
WP2303966	March 2023
WP2305502	April 2023



Alamos Gold Inc.
ATTN: KAREN MATHERS
C/O Stantec Consulting
500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Date Received: 02-JUN-22
Report Date: 25-JUL-22 10:02 (MT)
Version: FINAL

Client Phone: 204-924-5735

Certificate of Analysis

Lab Work Order #: L2711813
Project P.O. #: NOT SUBMITTED
Job Reference: ALAMOS
C of C Numbers:
Legal Site Desc:



Hua Wo
Chemistry Laboratory Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711813-1 W 28-MAY-22 09:21 AQM74	L2711813-2 W 28-MAY-22 10:30 AQM73	L2711813-3 W 28-MAY-22 11:36 AQM71	L2711813-4 W 28-MAY-22 12:16 AQM72	L2711813-5 W 28-MAY-22 12:44 QC-01
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	14.3	10.8	30.4	4.46	14.7
	Total Suspended Solids (mg/L)	2.0	<1.0	5.8	3.6	3.4
Anions and Nutrients	Acidity (as CaCO ₃) (mg/L)	4.1	4.3	2.4	49.4	4.2
	Alkalinity, Total (as CaCO ₃) (mg/L)	9.7	5.8	21.6	1.0	10.7
	Ammonia, Total (as N) (mg/L)	0.016	<0.010	0.013	0.015	0.017
	Bicarbonate (HCO ₃) (mg/L)	11.8	7.1	26.4	1.2	13.1
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.22	<0.10	0.51	<0.10	0.21
	Fluoride (F) (mg/L)	0.042	0.033	0.030	0.035	0.037
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.0051	<0.0051	0.0089	<0.0051	<0.0051
	Nitrate (as N) (mg/L)	<0.0050	<0.0050	0.0089	<0.0050	<0.0050
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.58	0.44	0.42	0.46	0.54
	Phosphorus (P)-Total (mg/L)	0.0285	0.0222	0.0190	0.0230	0.0405
	Sulfate (SO ₄) (mg/L)	0.32	<0.30	8.60 ^{PEHR}	<0.30	0.32
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010 ^{PEHR}	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010 ^{PEHR}	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010 ^{PEHR}	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	20.6	20.9	15.6	23.7	20.0
	Total Organic Carbon (mg/L)	20.3	20.8	15.6	23.5	22.2
Total Metals	Aluminum (Al)-Total (mg/L)	0.192	0.0667	0.108	0.145	0.192
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00024	0.00032	0.00021	0.00028	0.00023
	Barium (Ba)-Total (mg/L)	0.00775	0.00327	0.00791	0.00434	0.00748
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000056	0.0000054	<0.0000050	0.0000091	<0.0000050
	Calcium (Ca)-Total (mg/L)	4.54	3.41	11.2	1.12	4.43
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	0.000012	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00027	0.00017	0.00022	0.00030	0.00027
	Cobalt (Co)-Total (mg/L)	0.00024	<0.00010	<0.00010 ^{RRV}	0.00021	0.00022
	Copper (Cu)-Total (mg/L)	0.00061	<0.00050	0.00056	0.00344	0.00060

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711813-6 W 28-MAY-22 TRIP BLANK	L2711813-7 W 29-MAY-22 09:42 AQF41	L2711813-8 W 29-MAY-22 10:13 AQF46	L2711813-9 W 29-MAY-22 11:13 AQF7S	L2711813-10 W 29-MAY-22 11:33 AQF7D
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	<0.20	10.7	18.9	16.6	16.1
	Total Suspended Solids (mg/L)	<1.0	3.2	4.2	1.9	1.5
Anions and Nutrients	Acidity (as CaCO ₃) (mg/L)	<2.0	2.4	2.2	2.0	<2.0
	Alkalinity, Total (as CaCO ₃) (mg/L)	1.0	9.7	20.5	15.0	15.1
	Ammonia, Total (as N) (mg/L)	<0.010	<0.010	0.012	<0.010	0.012
	Bicarbonate (HCO ₃) (mg/L)	1.2	11.8	25.0	18.3	18.4
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	<0.10	0.31	0.16	0.10	0.11
	Fluoride (F) (mg/L)	<0.020	0.060	0.028	0.036	0.040
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.0051	0.0386	<0.0051	0.0404	0.0452
	Nitrate (as N) (mg/L)	<0.0050	0.0386	<0.0050	0.0404	0.0452
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	<0.20	0.26	0.43	0.30	0.28
	Phosphorus (P)-Total (mg/L)	<0.0010	0.0192	0.0278	0.0148	0.0082
		<0.0030				
	Sulfate (SO ₄) (mg/L)	<0.30	0.56	0.32	0.60	0.76
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	<0.50	8.93	9.45	9.66	8.51
	Total Organic Carbon (mg/L)	<0.50	8.75	9.45	8.23	8.15
Total Metals	Aluminum (Al)-Total (mg/L)	<0.0030	0.0542	0.0848	0.0276	0.0303
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	<0.00010	0.00019	0.00020	0.00023	0.00029
	Barium (Ba)-Total (mg/L)	<0.00010	0.00587	0.00766	0.00939	0.00967
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)	<0.050	2.98	5.98	4.28	4.45
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	<0.00010	0.00018	0.00018	0.00015	0.00011
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050	0.00091	<0.00050	<0.00050	<0.00050
						RRV

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711813-11 W 29-MAY-22 12:51 AQF38	L2711813-12 W 29-MAY-22 14:49 AQF43	L2711813-13 W 29-MAY-22 15:22 AQF44	L2711813-14 W 30-MAY-22 16:07 AQF42	L2711813-15 W 30-MAY-22 16:51 AQF40
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	21.3	11.8	11.5	10.7	11.6
	Total Suspended Solids (mg/L)	2.1	2.2	2.2	1.9	2.6
Anions and Nutrients	Acidity (as CaCO ₃) (mg/L)	<2.0	2.2	2.1	2.3	2.1
	Alkalinity, Total (as CaCO ₃) (mg/L)	21.7	11.5	10.2	9.3	10.1
	Ammonia, Total (as N) (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Bicarbonate (HCO ₃) (mg/L)	26.5	14.0	12.4	11.3	12.3
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.16	0.32	0.26	0.27	0.26
	Fluoride (F) (mg/L)	0.068	0.063	0.063	0.063	0.059
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	0.0209	0.0317	0.0320	0.0387	0.0381
	Nitrate (as N) (mg/L)	0.0209	0.0317	0.0320	0.0387	0.0381
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.33	0.48	0.28	0.22	0.39
	Phosphorus (P)-Total (mg/L)	0.0138	0.0100	0.0178	0.0188	0.0203
	Sulfate (SO ₄) (mg/L)	<0.30	0.60	0.61	0.55	0.48
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010 ^{PEHT}	<0.0010 ^{PEHT}
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010 ^{PEHT}	<0.0010 ^{PEHT}
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010 ^{PEHT}	<0.0010 ^{PEHT}
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	10.9	11.1	10.7	12.3	9.70
	Total Organic Carbon (mg/L)	9.52	9.95	8.85	9.58 ^{RRV}	9.24
Total Metals	Aluminum (Al)-Total (mg/L)	0.0361	0.0606	0.0567	0.0540	0.0667
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00025	0.00023	0.00022	0.00023	0.00018
	Barium (Ba)-Total (mg/L)	0.00770	0.00595	0.00602	0.00585	0.00607
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)	5.98	3.21	3.00	2.84	3.03
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00013	0.00018	0.00016	0.00017	0.00018
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711813-16 W 31-MAY-22 13:10 AQM28	L2711813-17 W 31-MAY-22 14:09 AQM29C	L2711813-18 W 31-MAY-22 15:29 FIELD BLANK	L2711813-19 W 31-MAY-22 08:44 AQF45S	
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	23.2	9.56	<0.20	12.0	
	Total Suspended Solids (mg/L)	5.5	19.1	<1.0	<1.0	
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	2.6	3.4	2.3	3.1	
	Alkalinity, Total (as CaCO3) (mg/L)	7.7	6.9	<1.0	10.1	
	Ammonia, Total (as N) (mg/L)	0.021	0.055	<0.010	<0.010	
	Bicarbonate (HCO3) (mg/L)	9.4	8.4	<1.2	12.3	
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	
	Chloride (Cl) (mg/L)	0.86	0.35	<0.10	0.28	
	Fluoride (F) (mg/L)	0.049	0.050	<0.020	0.064	
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	
	Nitrate and Nitrite as N (mg/L)	0.0265	0.0099	<0.0051	0.0255	
	Nitrate (as N) (mg/L)	0.0265	0.0099	<0.0050	0.0255	
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Total Kjeldahl Nitrogen (mg/L)	0.48	0.36	<0.20	0.29	
	Phosphorus (P)-Total (mg/L)	0.0212	0.0265	0.0010	0.0201	
				<0.0030		
	Sulfate (SO4) (mg/L)	14.4	2.62	<0.30	0.62	
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	10.2	8.51	<0.50	10.7	
	Total Organic Carbon (mg/L)	11.3	8.16	<0.50	9.49	
Total Metals	Aluminum (Al)-Total (mg/L)	0.336	0.113	<0.0030	0.0701	
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Total (mg/L)	0.00026	0.00017	<0.00010	0.00018	
	Barium (Ba)-Total (mg/L)	0.00800	0.00588	<0.00010	0.00582	
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Total (mg/L)	0.0000813	0.0000108	<0.0000050	<0.0000050	
	Calcium (Ca)-Total (mg/L)	6.53	2.63	<0.050	3.05	
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Total (mg/L)	0.00057	0.00046	0.00013	0.00019	
	Cobalt (Co)-Total (mg/L)	0.00270	0.00038	<0.00010	<0.00010	
	Copper (Cu)-Total (mg/L)	0.0124	0.00204 ^{RRV}	<0.00050	<0.00050	

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711813-1 W 28-MAY-22 09:21 AQM74	L2711813-2 W 28-MAY-22 10:30 AQM73	L2711813-3 W 28-MAY-22 11:36 AQM71	L2711813-4 W 28-MAY-22 12:16 AQM72	L2711813-5 W 28-MAY-22 12:44 QC-01
Grouping	Analyte					
WATER						
Total Metals	Iron (Fe)-Total (mg/L)	0.627	0.470	0.194	1.75	0.593
	Lead (Pb)-Total (mg/L)	0.000095	<0.000050	<0.000050	0.000168	0.000086
	Lithium (Li)-Total (mg/L)	0.0010	0.0011	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Total (mg/L)	0.945	0.598	1.17	0.340	0.929
	Manganese (Mn)-Total (mg/L)	0.0607	0.0105	0.00886	0.0217	0.0539
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Mercury (Hg)-Total (ug/L)	0.00277	0.00346	0.00187	0.00487	0.00344
	Molybdenum (Mo)-Total (mg/L)	0.000384	<0.000050	0.000088 ^{RRV}	0.000124	0.000373
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	<0.00050	0.00063	<0.00050
	Phosphorus (P)-Total (mg/L)	0.040	0.036	<0.030	0.032	<0.030
	Potassium (K)-Total (mg/L)	0.545	0.471	0.942	0.545	0.540
	Rubidium (Rb)-Total (mg/L)	0.00086	0.00064	0.00119	0.00130	0.00083
	Selenium (Se)-Total (mg/L)	0.000053	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Total (mg/L)	1.81	2.85	2.39	2.75	1.77
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	0.803	0.641	0.851	0.492	0.788
	Strontium (Sr)-Total (mg/L)	0.0112	0.00708	0.0158	0.00520	0.0114
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	3.06	<0.50	<0.50
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	0.00015	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00297	0.00082	0.00418	0.00338	0.00310
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.000032	<0.000010	0.000019	<0.000010	0.000029
	Vanadium (V)-Total (mg/L)	0.00057	<0.00050	<0.00050	0.00068	0.00058
	Zinc (Zn)-Total (mg/L)	0.0177	<0.0030	<0.0030	0.0042	<0.0030
	Zirconium (Zr)-Total (mg/L)	0.00024	<0.00020	<0.00020	<0.00020	0.00027
Dissolved Metals	Dissolved Mercury Filtration Location	LAB	FIELD	LAB	FIELD	LAB
		FIELD	LAB	FIELD	LAB	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.163	0.0701	0.0393	0.135	0.181
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00023	0.00028	0.00018	0.00028	0.00021
	Barium (Ba)-Dissolved (mg/L)	0.00707	0.00325	0.00758	0.00463	0.00719
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711813-6 W 28-MAY-22 TRIP BLANK	L2711813-7 W 29-MAY-22 09:42 AQF41	L2711813-8 W 29-MAY-22 10:13 AQF46	L2711813-9 W 29-MAY-22 11:13 AQF7S	L2711813-10 W 29-MAY-22 11:33 AQF7D
Grouping	Analyte					
WATER						
Total Metals	Iron (Fe)-Total (mg/L)	<0.010	0.381	0.139	0.215	0.222
	Lead (Pb)-Total (mg/L)	<0.000050	0.000057	0.000070	<0.000050	<0.000050 ^{RRV}
	Lithium (Li)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Total (mg/L)	<0.0050	0.859	1.21	1.40	1.42
	Manganese (Mn)-Total (mg/L)	<0.00010	0.0326	0.0250	0.0680	0.0805
	Mercury (Hg)-Total (mg/L)		<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Mercury (Hg)-Total (ug/L)		0.00114	0.00105	0.00079	0.00079
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000083	0.000066 ^{RRV}	0.000069	0.000069
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	0.034	<0.030	<0.030
	Potassium (K)-Total (mg/L)	<0.050	0.561	0.590	0.501	0.500
	Rubidium (Rb)-Total (mg/L)	<0.00020	0.00093	0.00067	0.00092	0.00098
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	<0.000050	0.000051	0.000051
	Silicon (Si)-Total (mg/L)	<0.10	2.37	0.65	1.08	1.10
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	<0.050	0.875	0.619	0.810	0.815
	Strontium (Sr)-Total (mg/L)	<0.00020	0.0127	0.00975	0.0121	0.0123
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00192
	Titanium (Ti)-Total (mg/L)	<0.00030	0.00164	0.00283	0.00043	0.00043
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	<0.000010	0.000027	0.000014	<0.000010	0.000011
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals	Dissolved Mercury Filtration Location		FIELD	LAB	LAB	FIELD
			LAB	FIELD	FIELD	LAB
	Dissolved Metals Filtration Location	LAB	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	<0.0010	0.0300	0.0266	0.0226	0.0225
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	<0.00010	0.00013	0.00017	0.00018	0.00025
	Barium (Ba)-Dissolved (mg/L)	<0.00010	0.00649	0.00660	0.00886	0.00944
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2711813-11	L2711813-12	L2711813-13	L2711813-14	L2711813-15
		Description	W	W	W	W	W
		Sampled Date	29-MAY-22	29-MAY-22	29-MAY-22	30-MAY-22	30-MAY-22
		Sampled Time	12:51	14:49	15:22	16:07	16:51
		Client ID	AQF38	AQF43	AQF44	AQF42	AQF40
Grouping	Analyte						
WATER							
Total Metals	Iron (Fe)-Total (mg/L)		0.313	0.354	0.360	0.485	0.452
	Lead (Pb)-Total (mg/L)		<0.000050	0.000069	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Total (mg/L)		0.0011	0.0015	0.0011	0.0011	0.0010
	Magnesium (Mg)-Total (mg/L)		1.44	0.896	0.904	0.839	0.913
	Manganese (Mn)-Total (mg/L)		0.0338	0.0285	0.0290	0.0660	0.0542
	Mercury (Hg)-Total (mg/L)		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Mercury (Hg)-Total (ug/L)		0.00068	0.00110	0.00111	0.00118	0.00127
	Molybdenum (Mo)-Total (mg/L)		0.00133	0.000109	0.000085	0.000089	0.000100
	Nickel (Ni)-Total (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Total (mg/L)		<0.030	0.031	<0.030	<0.030	<0.030
	Potassium (K)-Total (mg/L)		0.508	0.541	0.535	0.531	0.540
	Rubidium (Rb)-Total (mg/L)		0.00079	0.00102	0.00094	0.00094	0.00101
	Selenium (Se)-Total (mg/L)		0.000061	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Total (mg/L)		1.22	2.30	2.25	2.27	2.27
	Silver (Ag)-Total (mg/L)		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)		0.988	1.07	1.08	1.06	1.05
	Strontium (Sr)-Total (mg/L)		0.0151	0.0133	0.0126	0.0122	0.0130
	Sulfur (S)-Total (mg/L)		<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Total (mg/L)		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)		<0.00010	<0.00010	<0.00010	0.00026	0.00014
	Titanium (Ti)-Total (mg/L)		0.00087	0.00178	0.00164	0.00153	0.00213
	Tungsten (W)-Total (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)		0.000013	0.000027	0.000026	0.000026	0.000031
	Vanadium (V)-Total (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)		<0.0030	0.0047	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)		<0.00020	<0.00020	<0.00020	<0.00020	0.00021
Dissolved Metals	Dissolved Mercury Filtration Location		LAB	LAB	LAB	LAB	LAB
			FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location		FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)		0.0244	0.0300	0.0323	0.0333	0.0391
	Antimony (Sb)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)		0.00014	0.00015	0.00015	0.00016	0.00015
	Barium (Ba)-Dissolved (mg/L)		0.00755	0.00530	0.00542	0.00559	0.00691
	Beryllium (Be)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2711813-16 W 31-MAY-22 13:10 AQM28	L2711813-17 W 31-MAY-22 14:09 AQM29C	L2711813-18 W 31-MAY-22 15:29 FIELD BLANK	L2711813-19 W 31-MAY-22 08:44 AQF45S	
Grouping	Analyte						
WATER							
Total Metals	Iron (Fe)-Total (mg/L)	1.09	0.420	0.033	0.363		
	Lead (Pb)-Total (mg/L)	0.000195	0.000053	<0.000050	<0.000050		
	Lithium (Li)-Total (mg/L)	0.0012	<0.0010	<0.0010	0.0012		
	Magnesium (Mg)-Total (mg/L)	1.51	0.728	<0.0050	0.916		
	Manganese (Mn)-Total (mg/L)	0.0841	0.0232	0.00024	0.0235		
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050		
	Mercury (Hg)-Total (ug/L)	0.00135	0.00091	<0.00050	0.00122		
	Molybdenum (Mo)-Total (mg/L)	0.000060	<0.000050	<0.000050	0.000081		
	Nickel (Ni)-Total (mg/L)	0.106	0.0150	<0.00050	<0.00050		
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030		
	Potassium (K)-Total (mg/L)	0.992	0.507	<0.050	0.526		
	Rubidium (Rb)-Total (mg/L)	0.00133	0.00090	<0.00020	0.00100		
	Selenium (Se)-Total (mg/L)	0.000052	0.000055	<0.000050	<0.000050		
	Silicon (Si)-Total (mg/L)	2.55	2.06	<0.10	2.16		
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010		
	Sodium (Na)-Total (mg/L)	1.89	0.935	0.257	1.05		
	Strontium (Sr)-Total (mg/L)	0.0198	0.0114	<0.00020	0.0131		
	Sulfur (S)-Total (mg/L)	4.54	0.97	<0.50	<0.50		
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020		
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010		
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Tin (Sn)-Total (mg/L)	0.00031	<0.00010	<0.00010	<0.00010		
	Titanium (Ti)-Total (mg/L)	0.00236	0.00298	<0.00030	0.00236		
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Uranium (U)-Total (mg/L)	0.000045	0.000030	<0.000010	0.000030		
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050		
	Zinc (Zn)-Total (mg/L)	0.0342	0.0040	<0.0030	<0.0030		
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020		
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	LAB	LAB	FIELD		
		LAB	FIELD	FIELD	LAB		
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD		
	Aluminum (Al)-Dissolved (mg/L)	0.179	0.0476	<0.0010	0.0401		
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Arsenic (As)-Dissolved (mg/L)	0.00019	0.00014	<0.00010	0.00016		
	Barium (Ba)-Dissolved (mg/L)	0.00731	0.00556	<0.00010	0.00539		
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711813-1 W 28-MAY-22 09:21 AQM74	L2711813-2 W 28-MAY-22 10:30 AQM73	L2711813-3 W 28-MAY-22 11:36 AQM71	L2711813-4 W 28-MAY-22 12:16 AQM72	L2711813-5 W 28-MAY-22 12:44 QC-01
Grouping	Analyte					
WATER						
Dissolved Metals	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.0000059	0.0000101	<0.0000050	0.0000107	0.0000055
	Calcium (Ca)-Dissolved (mg/L)	4.27	3.33	10.4	1.19	4.29
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	0.000011	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	0.00025	0.00018	0.00012	0.00026	0.00027
	Cobalt (Co)-Dissolved (mg/L)	0.00021	<0.00010	<0.00010	0.00022	0.00021
	Copper (Cu)-Dissolved (mg/L)	0.00152	0.00048	0.00166 ^{RRV}	0.00083	0.00068
	Iron (Fe)-Dissolved (mg/L)	0.545	0.477	0.116	1.77	0.515
	Lead (Pb)-Dissolved (mg/L)	0.000107	<0.000050	0.000052	0.000069	0.000071
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	0.888	0.615	1.08	0.359	0.954
	Manganese (Mn)-Dissolved (mg/L)	0.0490	0.00929	0.00654	0.0253	0.0522
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Mercury (Hg)-Dissolved (ug/L)	0.00263	0.00299	0.00161 ^{RRV}	0.00351	0.00252
	Molybdenum (Mo)-Dissolved (mg/L)	0.000468	<0.000050	0.000197 ^{RRV}	<0.000050	0.000352
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	0.00063	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.538	0.445	0.903	0.561	0.555
	Rubidium (Rb)-Dissolved (mg/L)	0.00082	0.00067	0.00093	0.00139	0.00083
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	0.000054
	Silicon (Si)-Dissolved (mg/L)	1.56	2.61	2.08	2.47	1.77
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	0.791	0.641	0.831	0.483	0.824
	Strontium (Sr)-Dissolved (mg/L)	0.0108	0.00709	0.0152	0.00543	0.0108
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	2.95	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00248	0.00079	0.00059	0.00306	0.00231
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000027	<0.000010	0.000012	<0.000010	0.000028
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	0.00065	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0020	0.0025	0.0019	0.0022	0.0015
	Zirconium (Zr)-Dissolved (mg/L)	0.00028	<0.00020	<0.00020	0.00021	0.00030
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	0.68
	Methylmercury (as MeHg)-Total (ug/L)	0.000253	0.000093	0.000100	0.000099	0.000188

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711813-6 W 28-MAY-22 TRIP BLANK	L2711813-7 W 29-MAY-22 09:42 AQF41	L2711813-8 W 29-MAY-22 10:13 AQF46	L2711813-9 W 29-MAY-22 11:13 AQF7S	L2711813-10 W 29-MAY-22 11:33 AQF7D
Grouping	Analyte					
WATER						
Dissolved Metals	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Dissolved (mg/L)	<0.050	2.91	5.63	4.33	4.16
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	0.00012	<0.00010	0.00010	0.00011
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	<0.00020	0.00166	0.00111	0.00028	0.00949 ^{RRV}
	Iron (Fe)-Dissolved (mg/L)	<0.010	0.218	0.057	0.114	0.129 ^{RRV}
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	0.000425 ^{RRV}
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	<0.0050	0.839	1.18	1.41	1.40
	Manganese (Mn)-Dissolved (mg/L)	<0.00010	0.0188	0.00969	0.00704	0.00255
	Mercury (Hg)-Dissolved (mg/L)		<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Mercury (Hg)-Dissolved (ug/L)		0.00098	0.00089 ^{RRV}	0.00068	0.00066
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	0.000121	0.000306 ^{RRV}	0.000108	0.000097
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00052
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	<0.050	0.573	0.567	0.515	0.508
	Rubidium (Rb)-Dissolved (mg/L)	<0.00020	0.00088	0.00061	0.00086	0.00089
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	<0.050	2.37	0.508	1.07	1.11
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	<0.050	0.909	0.591	0.832	0.822
	Strontium (Sr)-Dissolved (mg/L)	<0.00010	0.0121	0.00918	0.0119	0.0119
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00140
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	0.00044	0.00060	0.00033	<0.00030
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.000021	<0.000010	<0.000010	<0.000010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050 ^{RRV}	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0256 ^{RRV}	0.0068	0.0010	0.0061
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Methylmercury (as MeHg)-Total (ug/L)		0.000041	0.000069	0.000055	0.000092

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711813-11 W 29-MAY-22 12:51 AQF38	L2711813-12 W 29-MAY-22 14:49 AQF43	L2711813-13 W 29-MAY-22 15:22 AQF44	L2711813-14 W 30-MAY-22 16:07 AQF42	L2711813-15 W 30-MAY-22 16:51 AQF40
Grouping	Analyte					
WATER						
Dissolved Metals	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Dissolved (mg/L)	6.12	3.23	3.15	2.87	3.15
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	0.000045	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	0.00012	0.00012	0.00014	0.00016
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00060	0.00048	0.00042	0.00069	0.00085
	Iron (Fe)-Dissolved (mg/L)	0.198	0.205	0.218	0.302	0.275
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	0.0011	<0.0010	0.0011
	Magnesium (Mg)-Dissolved (mg/L)	1.45	0.917	0.890	0.859	0.899
	Manganese (Mn)-Dissolved (mg/L)	0.0144	0.0193	0.0191	0.0444	0.0352
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Mercury (Hg)-Dissolved (ug/L)	0.00057	0.00107	0.00089	0.00155	0.00080
	Molybdenum (Mo)-Dissolved (mg/L)	0.00129	0.000095	0.000084	0.000092	0.000155
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.512	0.563	0.552	0.549	0.557
	Rubidium (Rb)-Dissolved (mg/L)	0.00088	0.00086	0.00086	0.00096	0.00088
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	1.26	2.28	2.36	2.43	2.39
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	0.804	0.930	0.894	0.902	0.888
	Strontium (Sr)-Dissolved (mg/L)	0.0140	0.0126	0.0124	0.0122	0.0125
	Sulfur (S)-Dissolved (mg/L)	<0.50	0.60	<0.50	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00020
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	0.00044	0.00047	0.00051	0.00073
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.000023	0.000023	0.000022	0.000024
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0015	<0.0010	0.0012	0.0055
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	0.53	<0.50	<0.50
	Methylmercury (as MeHg)-Total (ug/L)	<0.000020	0.000042	0.000039	0.000048	0.000048

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711813-16 W 31-MAY-22 13:10 AQM28	L2711813-17 W 31-MAY-22 14:09 AQM29C	L2711813-18 W 31-MAY-22 15:29 FIELD BLANK	L2711813-19 W 31-MAY-22 08:44 AQF45S	
Grouping	Analyte					
WATER						
Dissolved Metals	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	0.0000289	0.0000065	<0.0000050	<0.0000050	
	Calcium (Ca)-Dissolved (mg/L)	6.83	2.67	<0.050	3.25	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Dissolved (mg/L)	0.00017	0.00015	<0.00010	0.00012	
	Cobalt (Co)-Dissolved (mg/L)	0.00191	0.00026	<0.00010	<0.00010	
	Copper (Cu)-Dissolved (mg/L)	0.00802	0.00382	0.00062	0.00039	
	Iron (Fe)-Dissolved (mg/L)	0.583	0.213	<0.010	0.215	
	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000063	<0.000050	<0.000050	
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Magnesium (Mg)-Dissolved (mg/L)	1.49	0.698	<0.0050	0.942	
	Manganese (Mn)-Dissolved (mg/L)	0.0620	0.0126	<0.00010	0.0125	
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Mercury (Hg)-Dissolved (ug/L)	0.00077	0.00059	<0.00050	0.00076	
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	0.000091	<0.000050	0.000081	
	Nickel (Ni)-Dissolved (mg/L)	0.0977	0.0136	<0.00050	<0.00050	
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Dissolved (mg/L)	0.845	0.522	<0.050	0.572	
	Rubidium (Rb)-Dissolved (mg/L)	0.00104	0.00083	<0.00020	0.00084	
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Silicon (Si)-Dissolved (mg/L)	2.71	2.15	<0.050	2.26	
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Dissolved (mg/L)	1.11	0.780	0.233	0.905	
	Strontium (Sr)-Dissolved (mg/L)	0.0186	0.0105	0.00012	0.0125	
	Sulfur (S)-Dissolved (mg/L)	4.83	0.91	<0.50	<0.50	
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Dissolved (mg/L)	0.00063	0.00036	<0.00030	0.00068	
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Dissolved (mg/L)	0.000036	0.000020	<0.000010	0.000026	
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Dissolved (mg/L)	0.0165	0.0038	0.0011	0.0013	
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	
	Methylmercury (as MeHg)-Total (ug/L)	0.000053	0.000031	<0.000020	0.000031	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Methylmercury (as MeHg)-Total	B	L2711813-1
Laboratory Control Sample	Sodium (Na)-Total	MES	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Dissolved Organic Carbon	MS-B	L2711813-1, -10, -11, -13, -15, -16, -17, -18, -19, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Dissolved Organic Carbon	MS-B	L2711813-12, -14
Matrix Spike	Total Organic Carbon	MS-B	L2711813-1, -10, -11, -13, -15, -16, -17, -18, -2, -3, -4, -6, -7, -8, -9
Matrix Spike	Total Organic Carbon	MS-B	L2711813-12, -14, -19, -5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2711813-1, -2, -3, -4
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2711813-1, -2, -3, -4
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2711813-10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2711813-1, -2, -3, -4
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2711813-10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2711813-1, -2, -3, -4
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2711813-1, -2, -3, -4
Matrix Spike	Antimony (Sb)-Total	MS-B	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Arsenic (As)-Total	MS-B	L2711813-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Arsenic (As)-Total	MS-B	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Barium (Ba)-Total	MS-B	L2711813-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Calcium (Ca)-Total	MS-B	L2711813-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2711813-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Manganese (Mn)-Total	MS-B	L2711813-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Potassium (K)-Total	MS-B	L2711813-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Total	MS-B	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Sodium (Na)-Total	MS-B	L2711813-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Strontium (Sr)-Total	MS-B	L2711813-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Sulfur (S)-Total	MS-B	L2711813-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sulfur (S)-Total	MS-B	L2711813-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Phosphorus (P)-Total	MS-B	L2711813-6
Matrix Spike	Sulfate (SO4)	MS-B	L2711813-15, -18, -2, -3, -4, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PEHR	Parameter Exceeded Recommended Holding Time On Receipt: Proceed With Analysis As Requested.
PEHT	Parameter Exceeded Recommended Holding Time Prior to Analysis
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

ACY-TITR-TB Water Acidity APHA 2310 B modified

This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified

Reference Information

endpoint.

ALK-CO3CO3-CALC-WP Water Alkalinity, Carbonate CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO₃²⁻/L.

ALK-HCO3HCO3-CALC-WP Water Alkalinity, Bicarbonate CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO₃⁻/L.

ALK-OH-OH-CALC-WP Water Alkalinity, Hydroxide CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH⁻/L.

ALK-TITR-WP Water Alkalinity, Total (as CaCO₃) APHA 2320B

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO₃⁻ and H₂CO₃ endpoints indicated electrometrically.

BR-IC-N-WP Water Bromide in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

C-DOC-HTC-WP Water Dissolved Organic Carbon by Combustion APHA 5310 B-WP

Filtered (0.45 µm) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

C-TOC-HTC-WP Water Total Organic Carbon by Combustion APHA 5310 B-WP

Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

CL-L-IC-N-WP Water Chloride in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

CN-FREE-L-CFA-WT Water Low Level Free Cyanide in water by CFA ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-T-L-CFA-WT Water Low Level Total Cyanide in water by CFA ISO 14403-2:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, however it would be less than 1% and could be as low as zero.

CN-WAD-L-CFA-WT Water Low level WAD Cyanide in water by CFA APHA 4500CN I-Weak acid Dist Colorimet

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

CR-CR6-PWQO-IC-WT Water Chromium +6 EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-SCREEN-WP Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc

Reference Information

F-IC-N-WP	Water	Fluoride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
HARDNESS-CALC-WP	Water	Hardness Calculated	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
HG-D-CVAA-WP	Water	Mercury Dissolved	APHA 3030B/EPA 1631E (mod)
Water samples are filtered (0.45 µm), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.			
HG-D-U-CVAF-VA	Water	Diss. Mercury in Water by CVAFS (Ultra)	APHA 3030 B / EPA 1631 REV. E
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure may involve preliminary sample treatment by filtration (APHA 3030B) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.			
HG-T-CVAA-WP	Water	Mercury Total	EPA 1631E (mod)
Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.			
HG-T-U-CVAF-VA	Water	Total Mercury in Water by CVAFS (Ultra)	EPA 1631 REV. E
This analysis is carried out using procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.			
MEHG-T-GCAF-VA	Water	Total Methylmercury in Water by GCAFS	EPA 1630 (mod)
This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".			
MET-D-CCMS-WP	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020B (mod)
Water samples are filtered (0.45 µm), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
MET-T-CCMS-WP	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020B (mod.)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	APHA 4500 NorgD (modified)
Aqueous samples are digested in a block digester with sulfuric acid and copper sulfate as a catalyst. Total Kjeldahl Nitrogen is then analyzed using a discrete analyzer with colorimetric detection.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH ₃ F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-N-WP	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-L-IC-N-WP	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.			
P-T-L-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically			

Reference Information

after persulphate digestion of the sample.

SO4-IC-N-WP	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
SOLIDS-TOTSUS-LR-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 105°C.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L2711813

Report Date: 25-JUL-22

Page 1 of 31

Client: Alamos Gold Inc.
C/O Stantec Consulting 500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Contact: KAREN MATHERS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-TITR-TB								
Water								
Batch	R5796718							
WG3736562-2	LCS							
Acidity (as CaCO3)			114.0		%		85-115	10-JUN-22
WG3736562-1	MB							
Acidity (as CaCO3)			<2.0		mg/L		3	10-JUN-22
Batch	R5803740							
WG3736973-3	DUP	L2711813-17						
Acidity (as CaCO3)		3.4	3.2		mg/L	8.5	20	16-JUN-22
WG3736973-2	LCS							
Acidity (as CaCO3)			102.7		%		85-115	16-JUN-22
WG3736973-1	MB							
Acidity (as CaCO3)			<2.0		mg/L		3	16-JUN-22
ALK-TITR-WP								
Water								
Batch	R5793756							
WG3735149-24	LCS							
Alkalinity, Total (as CaCO3)			104.9		%		85-115	02-JUN-22
WG3735149-21	MB							
Alkalinity, Total (as CaCO3)			<1.0		mg/L		1	02-JUN-22
Batch	R5794537							
WG3735861-4	LCS							
Alkalinity, Total (as CaCO3)			103.2		%		85-115	03-JUN-22
WG3735861-1	MB							
Alkalinity, Total (as CaCO3)			<1.0		mg/L		1	03-JUN-22
BR-IC-N-WP								
Water								
Batch	R5794276							
WG3734788-14	LCS							
Bromide (Br)			102.4		%		85-115	02-JUN-22
WG3734788-13	MB							
Bromide (Br)			<0.10		mg/L		0.1	02-JUN-22
Batch	R5797901							
WG3735270-7	DUP	L2711813-2						
Bromide (Br)		<0.10	<0.10	RPD-NA	mg/L	N/A	20	03-JUN-22
WG3735270-2	LCS							
Bromide (Br)			99.9		%		85-115	03-JUN-22
WG3735270-6	LCS							
Bromide (Br)			98.6		%		85-115	03-JUN-22
WG3735270-1	MB							
Bromide (Br)			<0.10		mg/L		0.1	03-JUN-22
WG3735270-5	MB							



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BR-IC-N-WP								
Batch R5797901								
WG3735270-5 MB								
Bromide (Br)			<0.10		mg/L		0.1	03-JUN-22
WG3735270-8 MS		L2711813-2						
Bromide (Br)			104.6		%		75-125	03-JUN-22
C-DOC-HTC-WP								
Batch R5802397								
WG3740365-3 DUP		L2711813-18						
Dissolved Organic Carbon		<0.50	<0.50	RPD-NA	mg/L	N/A	20	15-JUN-22
WG3740365-2 LCS								
Dissolved Organic Carbon			96.3		%		80-120	15-JUN-22
WG3740365-1 MB								
Dissolved Organic Carbon			<0.50		mg/L		0.5	15-JUN-22
WG3740365-4 MS		L2711813-19						
Dissolved Organic Carbon			N/A	MS-B	%		-	15-JUN-22
Batch R5804813								
WG3741508-2 LCS								
Dissolved Organic Carbon			107.3		%		80-120	17-JUN-22
WG3741508-1 MB								
Dissolved Organic Carbon			<0.50		mg/L		0.5	17-JUN-22
C-TOC-HTC-WP								
Batch R5802398								
WG3740387-3 DUP		L2711813-1						
Total Organic Carbon		20.3	20.2		mg/L	0.1	20	15-JUN-22
WG3740387-2 LCS								
Total Organic Carbon			95.7		%		80-120	15-JUN-22
WG3740387-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	15-JUN-22
WG3740387-4 MS		L2711813-2						
Total Organic Carbon			N/A	MS-B	%		-	15-JUN-22
Batch R5804812								
WG3741547-2 LCS								
Total Organic Carbon			106.2		%		80-120	17-JUN-22
WG3741547-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	17-JUN-22
CL-L-IC-N-WP								
Water								



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-L-CFA-WT								
Batch R5798205								
WG3738910-6 MB								
Cyanide, Free			<0.0010		mg/L		0.001	13-JUN-22
WG3738910-10 MS		L2711813-19						
Cyanide, Free			101.7		%		75-125	13-JUN-22
Batch R5802816								
WG3740378-2 LCS								
Cyanide, Free			90.0		%		80-120	16-JUN-22
WG3740378-1 MB								
Cyanide, Free			<0.0010		mg/L		0.001	16-JUN-22
Batch R5808490								
WG3744270-24 DUP		L2711813-3						
Cyanide, Free		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	27-JUN-22
WG3744270-22 LCS								
Cyanide, Free			101.4		%		80-120	27-JUN-22
WG3744270-21 MB								
Cyanide, Free			<0.0010		mg/L		0.001	27-JUN-22
WG3744270-25 MS		L2711813-3						
Cyanide, Free			102.3		%		75-125	27-JUN-22
CN-T-L-CFA-WT								
Batch R5796119								
WG3737706-12 LCS								
Cyanide, Total			97.2		%		80-120	09-JUN-22
WG3737706-11 MB								
Cyanide, Total			<0.0010		mg/L		0.001	09-JUN-22
Batch R5797737								
WG3738104-6 LCS								
Cyanide, Total			103.6		%		80-120	10-JUN-22
WG3738104-5 MB								
Cyanide, Total			<0.0010		mg/L		0.001	10-JUN-22
Batch R5798205								
WG3738910-9 DUP		L2711813-19						
Cyanide, Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	13-JUN-22
WG3738910-2 LCS								
Cyanide, Total			95.4		%		80-120	13-JUN-22
WG3738910-7 LCS								
Cyanide, Total			94.9		%		80-120	13-JUN-22
WG3738910-1 MB								
Cyanide, Total			<0.0010		mg/L		0.001	13-JUN-22



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CN-T-L-CFA-WT		Water						
Batch	R5798205							
WG3738910-6 MB								
Cyanide, Total			<0.0010		mg/L		0.001	13-JUN-22
WG3738910-10 MS		L2711813-19						
Cyanide, Total			95.3		%		70-130	13-JUN-22
Batch	R5802816							
WG3740378-2 LCS								
Cyanide, Total			91.9		%		80-120	16-JUN-22
WG3740378-1 MB								
Cyanide, Total			<0.0010		mg/L		0.001	16-JUN-22
Batch	R5808490							
WG3744270-24 DUP		L2711813-3						
Cyanide, Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	27-JUN-22
WG3744270-22 LCS								
Cyanide, Total			100.9		%		80-120	27-JUN-22
WG3744270-21 MB								
Cyanide, Total			<0.0010		mg/L		0.001	27-JUN-22
WG3744270-25 MS		L2711813-3						
Cyanide, Total			102.7		%		70-130	27-JUN-22
CN-WAD-L-CFA-WT		Water						
Batch	R5796119							
WG3737706-12 LCS								
Cyanide, Weak Acid Diss			111.8		%		80-120	09-JUN-22
WG3737706-11 MB								
Cyanide, Weak Acid Diss			<0.0010		mg/L		0.001	09-JUN-22
Batch	R5797737							
WG3738104-6 LCS								
Cyanide, Weak Acid Diss			110.4		%		80-120	10-JUN-22
WG3738104-5 MB								
Cyanide, Weak Acid Diss			<0.0010		mg/L		0.001	10-JUN-22
Batch	R5798205							
WG3738910-9 DUP		L2711813-19						
Cyanide, Weak Acid Diss		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	13-JUN-22
WG3738910-2 LCS								
Cyanide, Weak Acid Diss			101.7		%		80-120	13-JUN-22
WG3738910-7 LCS								
Cyanide, Weak Acid Diss			98.6		%		80-120	13-JUN-22
WG3738910-1 MB								
Cyanide, Weak Acid Diss			<0.0010		mg/L		0.001	13-JUN-22



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HG-D-U-CVAF-VA		Water						
Batch	R5812236							
WG3745834-3	DUP	L2711813-1						
Mercury (Hg)-Dissolved		0.00263	0.00258		ug/L	2.0	20	02-JUL-22
WG3745834-2	LCS							
Mercury (Hg)-Dissolved			110.2		%		80-120	02-JUL-22
WG3745834-1	MB	NP						
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	02-JUL-22
Batch	R5812239							
WG3745863-2	LCS							
Mercury (Hg)-Dissolved			112.2		%		80-120	02-JUL-22
WG3745863-1	MB							
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	02-JUL-22
WG3745834-4	MS	L2711813-16						
Mercury (Hg)-Dissolved			93.9		%		70-130	02-JUL-22
HG-T-CVAA-WP		Water						
Batch	R5805714							
WG3742623-2	LCS							
Mercury (Hg)-Total			98.4		%		80-120	21-JUN-22
WG3742623-1	MB							
Mercury (Hg)-Total			<0.0000050		mg/L		0.000005	21-JUN-22
Batch	R5806557							
WG3743525-3	DUP	L2711813-15						
Mercury (Hg)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	24-JUN-22
WG3743525-2	LCS							
Mercury (Hg)-Total			98.8		%		80-120	24-JUN-22
WG3743525-1	MB							
Mercury (Hg)-Total			<0.0000050		mg/L		0.000005	24-JUN-22
WG3743525-4	MS	L2711813-16						
Mercury (Hg)-Total			98.2		%		70-130	24-JUN-22
HG-T-U-CVAF-VA		Water						
Batch	R5812236							
WG3745864-7	DUP	L2711813-2						
Mercury (Hg)-Total		0.00346	0.00329		ug/L	5.2	20	02-JUL-22
WG3745864-2	LCS							
Mercury (Hg)-Total			105.9		%		80-120	02-JUL-22
WG3745864-1	MB							
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	02-JUL-22
WG3745864-8	MS	L2711813-19						
Mercury (Hg)-Total			105.5		%		70-130	02-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MEHG-T-GCAF-VA		Water						
Batch	R5813123							
WG3746284-2	DUP	L2711813-19						
Methylmercury (as MeHg)-Total		0.000031	0.000034		ug/L	9.3	20	04-JUL-22
WG3745895-3	LCS							
Methylmercury (as MeHg)-Total			92.0		%		70-130	02-JUL-22
WG3746284-3	LCS							
Methylmercury (as MeHg)-Total			96.2		%		70-130	04-JUL-22
WG3746285-3	LCS							
Methylmercury (as MeHg)-Total			81.8		%		70-130	04-JUL-22
WG3745895-1	MB							
Methylmercury (as MeHg)-Total			<0.000020		ug/L		0.00002	02-JUL-22
WG3746284-1	MB							
Methylmercury (as MeHg)-Total			<0.000020		ug/L		0.00002	04-JUL-22
WG3746285-1	MB							
Methylmercury (as MeHg)-Total			0.000033	B	ug/L		0.00002	04-JUL-22
WG3745895-5	MS	L2711813-3						
Methylmercury (as MeHg)-Total			82.6		%		70-130	02-JUL-22
WG3746284-4	MS	L2711813-11						
Methylmercury (as MeHg)-Total			86.6		%		70-130	04-JUL-22
MET-D-CCMS-WP		Water						
Batch	R5795695							
WG3736314-4	DUP	L2711813-5						
Aluminum (Al)-Dissolved		0.181	0.178		mg/L	1.8	20	07-JUN-22
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	07-JUN-22
Arsenic (As)-Dissolved		0.00021	0.00021		mg/L	0.9	20	07-JUN-22
Barium (Ba)-Dissolved		0.00719	0.00722		mg/L	0.5	20	07-JUN-22
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	07-JUN-22
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	07-JUN-22
Boron (B)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	07-JUN-22
Cadmium (Cd)-Dissolved		0.0000055	<0.0000050	RPD-NA	mg/L	N/A	20	07-JUN-22
Calcium (Ca)-Dissolved		4.29	4.34		mg/L	1.1	20	07-JUN-22
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	07-JUN-22
Chromium (Cr)-Dissolved		0.00027	0.00026		mg/L	3.3	20	07-JUN-22
Cobalt (Co)-Dissolved		0.00021	0.00020		mg/L	5.0	20	07-JUN-22
Copper (Cu)-Dissolved		0.00068	0.00069		mg/L	2.2	20	07-JUN-22
Iron (Fe)-Dissolved		0.515	0.517		mg/L	0.4	20	07-JUN-22
Lead (Pb)-Dissolved		0.000071	0.000073		mg/L	3.3	20	07-JUN-22
Magnesium (Mg)-Dissolved		0.954	0.940		mg/L	1.5	20	07-JUN-22



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MET-D-CCMS-WP		Water						
Batch	R5795695							
WG3736314-4	DUP	L2711813-5						
Manganese (Mn)-Dissolved		0.0522	0.0514		mg/L	1.5	20	07-JUN-22
Molybdenum (Mo)-Dissolved		0.000352	0.000359		mg/L	2.0	20	07-JUN-22
Nickel (Ni)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	07-JUN-22
Phosphorus (P)-Dissolved		<0.030	<0.030	RPD-NA	mg/L	N/A	20	07-JUN-22
Potassium (K)-Dissolved		0.555	0.547		mg/L	1.5	20	07-JUN-22
Rubidium (Rb)-Dissolved		0.00083	0.00079		mg/L	4.7	20	07-JUN-22
Selenium (Se)-Dissolved		0.000054	<0.000050	RPD-NA	mg/L	N/A	20	07-JUN-22
Silicon (Si)-Dissolved		1.77	1.74		mg/L	1.4	20	07-JUN-22
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	07-JUN-22
Sodium (Na)-Dissolved		0.824	0.815		mg/L	1.2	20	07-JUN-22
Strontium (Sr)-Dissolved		0.0108	0.0109		mg/L	0.8	20	07-JUN-22
Sulfur (S)-Dissolved		<0.50	<0.50	RPD-NA	mg/L	N/A	20	07-JUN-22
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	07-JUN-22
Thallium (Tl)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	07-JUN-22
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	07-JUN-22
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	07-JUN-22
Titanium (Ti)-Dissolved		0.00231	0.00242		mg/L	4.7	20	07-JUN-22
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	07-JUN-22
Uranium (U)-Dissolved		0.000028	0.000028		mg/L	2.4	20	07-JUN-22
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	07-JUN-22
Zinc (Zn)-Dissolved		0.0015	0.0017		mg/L	16	20	07-JUN-22
Zirconium (Zr)-Dissolved		0.00030	0.00030		mg/L	0.3	20	07-JUN-22
WG3736313-2	LCS							
Aluminum (Al)-Dissolved			101.9		%		80-120	07-JUN-22
Antimony (Sb)-Dissolved			104.2		%		80-120	07-JUN-22
Arsenic (As)-Dissolved			100.9		%		80-120	07-JUN-22
Barium (Ba)-Dissolved			98.2		%		80-120	07-JUN-22
Beryllium (Be)-Dissolved			100.7		%		80-120	07-JUN-22
Bismuth (Bi)-Dissolved			104.2		%		80-120	07-JUN-22
Boron (B)-Dissolved			93.0		%		80-120	07-JUN-22
Cadmium (Cd)-Dissolved			102.1		%		80-120	07-JUN-22
Calcium (Ca)-Dissolved			100.4		%		80-120	07-JUN-22
Cesium (Cs)-Dissolved			98.2		%		80-120	07-JUN-22
Chromium (Cr)-Dissolved			100.9		%		80-120	07-JUN-22



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MET-D-CCMS-WP		Water						
Batch	R5795695							
WG3736313-2	LCS							
Cobalt (Co)-Dissolved			103.0		%		80-120	07-JUN-22
Copper (Cu)-Dissolved			101.1		%		80-120	07-JUN-22
Iron (Fe)-Dissolved			98.2		%		80-120	07-JUN-22
Lead (Pb)-Dissolved			101.4		%		80-120	07-JUN-22
Lithium (Li)-Dissolved			91.4		%		80-120	07-JUN-22
Magnesium (Mg)-Dissolved			102.0		%		80-120	07-JUN-22
Manganese (Mn)-Dissolved			100.7		%		80-120	07-JUN-22
Molybdenum (Mo)-Dissolved			101.2		%		80-120	07-JUN-22
Nickel (Ni)-Dissolved			100.5		%		80-120	07-JUN-22
Phosphorus (P)-Dissolved			107.6		%		80-120	07-JUN-22
Potassium (K)-Dissolved			101.4		%		80-120	07-JUN-22
Rubidium (Rb)-Dissolved			99.6		%		80-120	07-JUN-22
Selenium (Se)-Dissolved			102.8		%		80-120	07-JUN-22
Silicon (Si)-Dissolved			103.3		%		80-120	07-JUN-22
Silver (Ag)-Dissolved			101.7		%		80-120	07-JUN-22
Sodium (Na)-Dissolved			105.5		%		80-120	07-JUN-22
Strontium (Sr)-Dissolved			100.8		%		80-120	07-JUN-22
Sulfur (S)-Dissolved			106.1		%		80-120	07-JUN-22
Tellurium (Te)-Dissolved			98.1		%		80-120	07-JUN-22
Thallium (Tl)-Dissolved			101.7		%		80-120	07-JUN-22
Thorium (Th)-Dissolved			98.4		%		80-120	07-JUN-22
Tin (Sn)-Dissolved			99.3		%		80-120	07-JUN-22
Titanium (Ti)-Dissolved			99.6		%		80-120	07-JUN-22
Tungsten (W)-Dissolved			94.5		%		80-120	07-JUN-22
Uranium (U)-Dissolved			97.0		%		80-120	07-JUN-22
Vanadium (V)-Dissolved			101.8		%		80-120	07-JUN-22
Zinc (Zn)-Dissolved			104.3		%		80-120	07-JUN-22
Zirconium (Zr)-Dissolved			96.8		%		80-120	07-JUN-22
WG3736314-2	LCS							
Aluminum (Al)-Dissolved			113.8		%		80-120	07-JUN-22
Antimony (Sb)-Dissolved			99.5		%		80-120	07-JUN-22
Arsenic (As)-Dissolved			101.5		%		80-120	07-JUN-22
Barium (Ba)-Dissolved			106.4		%		80-120	07-JUN-22
Beryllium (Be)-Dissolved			118.5		%		80-120	07-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5795695							
WG3736314-2		LCS						
Bismuth (Bi)-Dissolved			104.2		%		80-120	07-JUN-22
Boron (B)-Dissolved			114.4		%		80-120	07-JUN-22
Cadmium (Cd)-Dissolved			102.0		%		80-120	07-JUN-22
Calcium (Ca)-Dissolved			107.5		%		80-120	07-JUN-22
Cesium (Cs)-Dissolved			99.8		%		80-120	07-JUN-22
Chromium (Cr)-Dissolved			104.7		%		80-120	07-JUN-22
Cobalt (Co)-Dissolved			104.4		%		80-120	07-JUN-22
Copper (Cu)-Dissolved			102.7		%		80-120	07-JUN-22
Iron (Fe)-Dissolved			98.6		%		80-120	07-JUN-22
Lead (Pb)-Dissolved			100.9		%		80-120	07-JUN-22
Lithium (Li)-Dissolved			117.8		%		80-120	07-JUN-22
Magnesium (Mg)-Dissolved			107.4		%		80-120	07-JUN-22
Manganese (Mn)-Dissolved			104.1		%		80-120	07-JUN-22
Molybdenum (Mo)-Dissolved			104.8		%		80-120	07-JUN-22
Nickel (Ni)-Dissolved			101.8		%		80-120	07-JUN-22
Phosphorus (P)-Dissolved			115.9		%		80-120	07-JUN-22
Potassium (K)-Dissolved			105.8		%		80-120	07-JUN-22
Rubidium (Rb)-Dissolved			104.1		%		80-120	07-JUN-22
Selenium (Se)-Dissolved			97.1		%		80-120	07-JUN-22
Silicon (Si)-Dissolved			111.6		%		80-120	07-JUN-22
Silver (Ag)-Dissolved			103.4		%		80-120	07-JUN-22
Sodium (Na)-Dissolved			109.9		%		80-120	07-JUN-22
Strontium (Sr)-Dissolved			101.6		%		80-120	07-JUN-22
Sulfur (S)-Dissolved			109.6		%		80-120	07-JUN-22
Tellurium (Te)-Dissolved			102.0		%		80-120	07-JUN-22
Thallium (Tl)-Dissolved			103.1		%		80-120	07-JUN-22
Thorium (Th)-Dissolved			101.6		%		80-120	07-JUN-22
Tin (Sn)-Dissolved			100.9		%		80-120	07-JUN-22
Titanium (Ti)-Dissolved			104.9		%		80-120	07-JUN-22
Tungsten (W)-Dissolved			98.2		%		80-120	07-JUN-22
Uranium (U)-Dissolved			103.0		%		80-120	07-JUN-22
Vanadium (V)-Dissolved			104.2		%		80-120	07-JUN-22
Zinc (Zn)-Dissolved			104.4		%		80-120	07-JUN-22
Zirconium (Zr)-Dissolved			99.5		%		80-120	07-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5795695							
WG3736313-1 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	07-JUN-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	07-JUN-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	07-JUN-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	07-JUN-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	07-JUN-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	07-JUN-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	07-JUN-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	07-JUN-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	07-JUN-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	07-JUN-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5795695							
WG3736313-1 MB								
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	07-JUN-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	07-JUN-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
WG3736314-1 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	07-JUN-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	07-JUN-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	07-JUN-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	07-JUN-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	07-JUN-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	07-JUN-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	07-JUN-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	07-JUN-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP								
Water								
Batch	R5795695							
WG3736314-1 MB								
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	07-JUN-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	07-JUN-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	07-JUN-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	07-JUN-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
WG3736314-5 MS		L2711813-5						
Aluminum (Al)-Dissolved			94.8		%		70-130	07-JUN-22
Antimony (Sb)-Dissolved			90.5		%		70-130	07-JUN-22
Arsenic (As)-Dissolved			94.0		%		70-130	07-JUN-22
Barium (Ba)-Dissolved			94.1		%		70-130	07-JUN-22
Beryllium (Be)-Dissolved			101.0		%		70-130	07-JUN-22
Bismuth (Bi)-Dissolved			88.8		%		70-130	07-JUN-22
Boron (B)-Dissolved			95.3		%		70-130	07-JUN-22
Cadmium (Cd)-Dissolved			93.2		%		70-130	07-JUN-22
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	07-JUN-22
Cesium (Cs)-Dissolved			92.8		%		70-130	07-JUN-22
Chromium (Cr)-Dissolved			94.6		%		70-130	07-JUN-22
Cobalt (Co)-Dissolved			94.9		%		70-130	07-JUN-22
Copper (Cu)-Dissolved			93.0		%		70-130	07-JUN-22
Iron (Fe)-Dissolved			90.5		%		70-130	07-JUN-22
Lead (Pb)-Dissolved			90.0		%		70-130	07-JUN-22
Magnesium (Mg)-Dissolved			93.1		%		70-130	07-JUN-22
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	07-JUN-22
Molybdenum (Mo)-Dissolved			95.0		%		70-130	07-JUN-22
Nickel (Ni)-Dissolved			93.4		%		70-130	07-JUN-22
Phosphorus (P)-Dissolved			99.1		%		70-130	07-JUN-22
Potassium (K)-Dissolved			96.8		%		70-130	07-JUN-22
Rubidium (Rb)-Dissolved			94.7		%		70-130	07-JUN-22



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MET-D-CCMS-WP								
Water								
Batch	R5795695							
WG3736314-5	MS	L2711813-5						
Selenium (Se)-Dissolved			90.5		%		70-130	07-JUN-22
Silicon (Si)-Dissolved			94.1		%		70-130	07-JUN-22
Silver (Ag)-Dissolved			94.2		%		70-130	07-JUN-22
Sodium (Na)-Dissolved			105.5		%		70-130	07-JUN-22
Strontium (Sr)-Dissolved			99.9		%		70-130	07-JUN-22
Sulfur (S)-Dissolved			97.1		%		70-130	07-JUN-22
Tellurium (Te)-Dissolved			95.1		%		70-130	07-JUN-22
Thallium (Tl)-Dissolved			88.5		%		70-130	07-JUN-22
Thorium (Th)-Dissolved			96.4		%		70-130	07-JUN-22
Tin (Sn)-Dissolved			90.7		%		70-130	07-JUN-22
Titanium (Ti)-Dissolved			94.9		%		70-130	07-JUN-22
Tungsten (W)-Dissolved			86.8		%		70-130	07-JUN-22
Uranium (U)-Dissolved			90.9		%		70-130	07-JUN-22
Vanadium (V)-Dissolved			95.3		%		70-130	07-JUN-22
Zinc (Zn)-Dissolved			95.5		%		70-130	07-JUN-22
Zirconium (Zr)-Dissolved			95.8		%		70-130	07-JUN-22
MET-T-CCMS-WP								
Water								
Batch	R5795695							
WG3736307-2	LCS							
Aluminum (Al)-Total			104.3		%		80-120	07-JUN-22
Aluminum (Al)-Total			104.3		%		80-120	07-JUN-22
Antimony (Sb)-Total			104.7		%		80-120	07-JUN-22
Antimony (Sb)-Total			104.7		%		80-120	07-JUN-22
Arsenic (As)-Total			100.3		%		80-120	07-JUN-22
Arsenic (As)-Total			100.3		%		80-120	07-JUN-22
Barium (Ba)-Total			101.1		%		80-120	07-JUN-22
Barium (Ba)-Total			101.1		%		80-120	07-JUN-22
Beryllium (Be)-Total			96.7		%		80-120	07-JUN-22
Beryllium (Be)-Total			96.7		%		80-120	07-JUN-22
Bismuth (Bi)-Total			101.3		%		80-120	07-JUN-22
Bismuth (Bi)-Total			101.3		%		80-120	07-JUN-22
Boron (B)-Total			87.8		%		80-120	07-JUN-22
Boron (B)-Total			87.8		%		80-120	07-JUN-22
Cadmium (Cd)-Total			103.1		%		80-120	07-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5795695							
WG3736307-2	LCS							
Cadmium (Cd)-Total			103.1		%		80-120	07-JUN-22
Calcium (Ca)-Total			97.9		%		80-120	07-JUN-22
Calcium (Ca)-Total			97.9		%		80-120	07-JUN-22
Cesium (Cs)-Total			96.7		%		80-120	07-JUN-22
Cesium (Cs)-Total			96.7		%		80-120	07-JUN-22
Chromium (Cr)-Total			101.7		%		80-120	07-JUN-22
Chromium (Cr)-Total			101.7		%		80-120	07-JUN-22
Cobalt (Co)-Total			103.7		%		80-120	07-JUN-22
Cobalt (Co)-Total			103.7		%		80-120	07-JUN-22
Copper (Cu)-Total			101.0		%		80-120	07-JUN-22
Copper (Cu)-Total			101.0		%		80-120	07-JUN-22
Iron (Fe)-Total			99.9		%		80-120	07-JUN-22
Iron (Fe)-Total			99.9		%		80-120	07-JUN-22
Lead (Pb)-Total			102.9		%		80-120	07-JUN-22
Lead (Pb)-Total			102.9		%		80-120	07-JUN-22
Lithium (Li)-Total			86.5		%		80-120	07-JUN-22
Lithium (Li)-Total			86.5		%		80-120	07-JUN-22
Magnesium (Mg)-Total			102.9		%		80-120	07-JUN-22
Magnesium (Mg)-Total			102.9		%		80-120	07-JUN-22
Manganese (Mn)-Total			97.3		%		80-120	07-JUN-22
Manganese (Mn)-Total			97.3		%		80-120	07-JUN-22
Molybdenum (Mo)-Total			102.2		%		80-120	07-JUN-22
Molybdenum (Mo)-Total			102.2		%		80-120	07-JUN-22
Nickel (Ni)-Total			101.5		%		80-120	07-JUN-22
Nickel (Ni)-Total			101.5		%		80-120	07-JUN-22
Potassium (K)-Total			100.6		%		80-120	07-JUN-22
Potassium (K)-Total			100.6		%		80-120	07-JUN-22
Phosphorus (P)-Total			98.5		%		80-120	07-JUN-22
Phosphorus (P)-Total			98.5		%		80-120	07-JUN-22
Rubidium (Rb)-Total			102.5		%		80-120	07-JUN-22
Rubidium (Rb)-Total			102.5		%		80-120	07-JUN-22
Selenium (Se)-Total			102.9		%		80-120	07-JUN-22
Selenium (Se)-Total			102.9		%		80-120	07-JUN-22
Silicon (Si)-Total			98.0		%		80-120	07-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5795695							
WG3736307-2	LCS							
Silicon (Si)-Total			98.0		%		80-120	07-JUN-22
Silver (Ag)-Total			101.3		%		80-120	07-JUN-22
Silver (Ag)-Total			101.3		%		80-120	07-JUN-22
Sodium (Na)-Total			107.2		%		80-120	07-JUN-22
Sodium (Na)-Total			107.2		%		80-120	07-JUN-22
Strontium (Sr)-Total			100.2		%		80-120	07-JUN-22
Strontium (Sr)-Total			100.2		%		80-120	07-JUN-22
Sulfur (S)-Total			107.4		%		80-120	07-JUN-22
Sulfur (S)-Total			107.4		%		80-120	07-JUN-22
Tellurium (Te)-Total			100.0		%		80-120	07-JUN-22
Tellurium (Te)-Total			100.0		%		80-120	07-JUN-22
Thallium (Tl)-Total			103.2		%		80-120	07-JUN-22
Thallium (Tl)-Total			103.2		%		80-120	07-JUN-22
Thorium (Th)-Total			100.2		%		80-120	07-JUN-22
Thorium (Th)-Total			100.2		%		80-120	07-JUN-22
Tin (Sn)-Total			100.8		%		80-120	07-JUN-22
Tin (Sn)-Total			100.8		%		80-120	07-JUN-22
Titanium (Ti)-Total			97.3		%		80-120	07-JUN-22
Titanium (Ti)-Total			97.3		%		80-120	07-JUN-22
Tungsten (W)-Total			95.9		%		80-120	07-JUN-22
Tungsten (W)-Total			95.9		%		80-120	07-JUN-22
Uranium (U)-Total			97.7		%		80-120	07-JUN-22
Uranium (U)-Total			97.7		%		80-120	07-JUN-22
Vanadium (V)-Total			102.2		%		80-120	07-JUN-22
Vanadium (V)-Total			102.2		%		80-120	07-JUN-22
Zinc (Zn)-Total			99.6		%		80-120	07-JUN-22
Zinc (Zn)-Total			99.6		%		80-120	07-JUN-22
Zirconium (Zr)-Total			95.1		%		80-120	07-JUN-22
Zirconium (Zr)-Total			95.1		%		80-120	07-JUN-22
WG3736309-2	LCS							
Aluminum (Al)-Total			98.2		%		80-120	07-JUN-22
Antimony (Sb)-Total			106.3		%		80-120	07-JUN-22
Arsenic (As)-Total			99.0		%		80-120	07-JUN-22
Barium (Ba)-Total			101.8		%		80-120	07-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	Water							
Batch	R5795695							
WG3736309-2	LCS							
Beryllium (Be)-Total			91.6		%		80-120	07-JUN-22
Bismuth (Bi)-Total			100.1		%		80-120	07-JUN-22
Boron (B)-Total			90.2		%		80-120	07-JUN-22
Cadmium (Cd)-Total			102.4		%		80-120	07-JUN-22
Calcium (Ca)-Total			96.6		%		80-120	07-JUN-22
Cesium (Cs)-Total			99.6		%		80-120	07-JUN-22
Chromium (Cr)-Total			99.1		%		80-120	07-JUN-22
Cobalt (Co)-Total			101.0		%		80-120	07-JUN-22
Copper (Cu)-Total			100.5		%		80-120	07-JUN-22
Iron (Fe)-Total			97.5		%		80-120	07-JUN-22
Lead (Pb)-Total			99.4		%		80-120	07-JUN-22
Lithium (Li)-Total			89.0		%		80-120	07-JUN-22
Magnesium (Mg)-Total			99.3		%		80-120	07-JUN-22
Manganese (Mn)-Total			98.8		%		80-120	07-JUN-22
Molybdenum (Mo)-Total			102.7		%		80-120	07-JUN-22
Nickel (Ni)-Total			99.6		%		80-120	07-JUN-22
Potassium (K)-Total			94.0		%		80-120	07-JUN-22
Phosphorus (P)-Total			95.5		%		80-120	07-JUN-22
Rubidium (Rb)-Total			97.5		%		80-120	07-JUN-22
Selenium (Se)-Total			100.9		%		80-120	07-JUN-22
Silicon (Si)-Total			94.1		%		80-120	07-JUN-22
Silver (Ag)-Total			101.6		%		80-120	07-JUN-22
Sodium (Na)-Total			123.5	MES	%		80-120	07-JUN-22
Strontium (Sr)-Total			100.7		%		80-120	07-JUN-22
Sulfur (S)-Total			98.8		%		80-120	07-JUN-22
Tellurium (Te)-Total			100.9		%		80-120	07-JUN-22
Thallium (Tl)-Total			102.1		%		80-120	07-JUN-22
Thorium (Th)-Total			95.6		%		80-120	07-JUN-22
Tin (Sn)-Total			100.8		%		80-120	07-JUN-22
Titanium (Ti)-Total			93.9		%		80-120	07-JUN-22
Tungsten (W)-Total			100.3		%		80-120	07-JUN-22
Uranium (U)-Total			98.8		%		80-120	07-JUN-22
Vanadium (V)-Total			101.3		%		80-120	07-JUN-22
Zinc (Zn)-Total			98.6		%		80-120	07-JUN-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5795695							
WG3736309-2	LCS							
Zirconium (Zr)-Total			98.0		%		80-120	07-JUN-22
WG3736307-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	07-JUN-22
Aluminum (Al)-Total			<0.0030		mg/L		0.003	07-JUN-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Boron (B)-Total			<0.010		mg/L		0.01	07-JUN-22
Boron (B)-Total			<0.010		mg/L		0.01	07-JUN-22
Cadmium (Cd)-Total			<0.000005C		mg/L		0.000005	07-JUN-22
Cadmium (Cd)-Total			<0.000005C		mg/L		0.000005	07-JUN-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	07-JUN-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	07-JUN-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	07-JUN-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	07-JUN-22
Iron (Fe)-Total			<0.010		mg/L		0.01	07-JUN-22
Iron (Fe)-Total			<0.010		mg/L		0.01	07-JUN-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	07-JUN-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	07-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5795695							
WG3736307-1 MB								
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	07-JUN-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	07-JUN-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	07-JUN-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	07-JUN-22
Potassium (K)-Total			<0.050		mg/L		0.05	07-JUN-22
Potassium (K)-Total			<0.050		mg/L		0.05	07-JUN-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	07-JUN-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	07-JUN-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	07-JUN-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	07-JUN-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Silicon (Si)-Total			<0.10		mg/L		0.1	07-JUN-22
Silicon (Si)-Total			<0.10		mg/L		0.1	07-JUN-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Sodium (Na)-Total			<0.050		mg/L		0.05	07-JUN-22
Sodium (Na)-Total			<0.050		mg/L		0.05	07-JUN-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	07-JUN-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	07-JUN-22
Sulfur (S)-Total			<0.50		mg/L		0.5	07-JUN-22
Sulfur (S)-Total			<0.50		mg/L		0.5	07-JUN-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	07-JUN-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	07-JUN-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	07-JUN-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	Water							
Batch	R5795695							
WG3736307-1 MB								
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	07-JUN-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	07-JUN-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	07-JUN-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	07-JUN-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	07-JUN-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	07-JUN-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	07-JUN-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	07-JUN-22
WG3736309-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	07-JUN-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Boron (B)-Total			<0.010		mg/L		0.01	07-JUN-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	07-JUN-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	07-JUN-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	07-JUN-22
Iron (Fe)-Total			<0.010		mg/L		0.01	07-JUN-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	07-JUN-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	07-JUN-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	07-JUN-22
Potassium (K)-Total			<0.050		mg/L		0.05	07-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-WP								
Batch R5796520								
WG3738200-22 LCS								
Ammonia, Total (as N)			103.1		%		85-115	10-JUN-22
WG3738200-6 LCS								
Ammonia, Total (as N)			100.8		%		85-115	09-JUN-22
WG3738200-21 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	10-JUN-22
WG3738200-5 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	09-JUN-22
Batch R5800518								
WG3739853-2 LCS								
Ammonia, Total (as N)			102.3		%		85-115	14-JUN-22
WG3739853-1 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	14-JUN-22
NO2-L-IC-N-WP								
Batch R5794276								
WG3734788-14 LCS								
Nitrite (as N)			99.7		%		90-110	02-JUN-22
WG3734788-13 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	02-JUN-22
Batch R5797901								
WG3735270-7 DUP		L2711813-2						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	03-JUN-22
WG3735270-2 LCS								
Nitrite (as N)			100.3		%		90-110	03-JUN-22
WG3735270-6 LCS								
Nitrite (as N)			101.4		%		90-110	03-JUN-22
WG3735270-1 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	03-JUN-22
WG3735270-5 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	03-JUN-22
WG3735270-8 MS		L2711813-2						
Nitrite (as N)			104.3		%		75-125	03-JUN-22
NO3-L-IC-N-WP								
Batch R5794276								
WG3734788-14 LCS								
Nitrate (as N)			99.3		%		90-110	02-JUN-22
WG3734788-13 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	02-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-L-IC-N-WP		Water						
Batch	R5797901							
WG3735270-7	DUP	L2711813-2						
Nitrate (as N)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-JUN-22
WG3735270-2	LCS							
Nitrate (as N)			98.8		%		90-110	03-JUN-22
WG3735270-6	LCS							
Nitrate (as N)			98.1		%		90-110	03-JUN-22
WG3735270-1	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	03-JUN-22
WG3735270-5	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	03-JUN-22
WG3735270-8	MS	L2711813-2						
Nitrate (as N)			103.4		%		75-125	03-JUN-22
P-T-COL-WP		Water						
Batch	R5806244							
WG3742565-3	DUP	L2711813-1						
Phosphorus (P)-Total		0.0285	0.0279		mg/L	2.0	20	23-JUN-22
WG3742565-2	LCS							
Phosphorus (P)-Total			95.1		%		80-120	23-JUN-22
WG3742565-1	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	23-JUN-22
WG3742565-4	MS	L2711813-2						
Phosphorus (P)-Total			97.7		%		70-130	23-JUN-22
Batch	R5819707							
WG3747562-2	LCS							
Phosphorus (P)-Total			106.5		%		80-120	08-JUL-22
WG3747562-1	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	08-JUL-22
P-T-L-COL-WP		Water						
Batch	R5811738							
WG3745475-2	LCS							
Phosphorus (P)-Total			84.6		%		80-120	30-JUN-22
WG3745475-1	MB							
Phosphorus (P)-Total			<0.0010		mg/L		0.001	30-JUN-22
Batch	R5828269							
WG3750243-3	DUP	L2711813-18						
Phosphorus (P)-Total		0.0010	<0.0010	RPD-NA	mg/L	N/A	20	22-JUL-22
WG3750243-2	LCS							
Phosphorus (P)-Total			87.5		%		80-120	22-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-L-COL-WP		Water						
Batch R5828269								
WG3750243-1 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	22-JUL-22
SO4-IC-N-WP		Water						
Batch R5794276								
WG3734788-14 LCS								
Sulfate (SO4)			100.3		%		90-110	02-JUN-22
WG3734788-13 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	02-JUN-22
Batch R5797901								
WG3735270-7 DUP		L2711813-2						
Sulfate (SO4)		<0.30	<0.30	RPD-NA	mg/L	N/A	20	03-JUN-22
WG3735270-2 LCS								
Sulfate (SO4)			99.3		%		90-110	03-JUN-22
WG3735270-6 LCS								
Sulfate (SO4)			99.3		%		90-110	03-JUN-22
WG3735270-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	03-JUN-22
WG3735270-5 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	03-JUN-22
WG3735270-8 MS		L2711813-2						
Sulfate (SO4)			104.2		%		75-125	03-JUN-22
SOLIDS-TOTSUS-LR-WP		Water						
Batch R5794617								
WG3734802-2 LCS								
Total Suspended Solids			90.8		%		85-115	03-JUN-22
WG3734802-1 MB								
Total Suspended Solids			<1.0		mg/L		1	03-JUN-22
Batch R5795143								
WG3735086-2 LCS								
Total Suspended Solids			88.2		%		85-115	06-JUN-22
WG3735086-5 LCS								
Total Suspended Solids			93.5		%		85-115	06-JUN-22
WG3735086-1 MB								
Total Suspended Solids			<1.0		mg/L		1	06-JUN-22
WG3735086-4 MB								
Total Suspended Solids			<1.0		mg/L		1	06-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-LR-WP		Water						
Batch R5796731								
WG3736417-2 LCS								
Total Suspended Solids			100.2		%		85-115	07-JUN-22
WG3736417-1 MB								
Total Suspended Solids			<1.0		mg/L		1	07-JUN-22

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Acidity							
	17	31-MAY-22 14:09	16-JUN-22 11:30	14	16	days	EHT
	18	31-MAY-22 15:29	16-JUN-22 11:30	14	16	days	EHT
	19	31-MAY-22 08:44	16-JUN-22 11:30	14	16	days	EHT
Nitrate in Water by IC (Low Level)							
	1	28-MAY-22 09:21	02-JUN-22 16:00	3	5	days	EHTR
	2	28-MAY-22 10:30	03-JUN-22 13:00	3	6	days	EHTR
	3	28-MAY-22 11:36	03-JUN-22 13:00	3	6	days	EHTR
	4	28-MAY-22 12:16	03-JUN-22 13:00	3	6	days	EHTR
	5	28-MAY-22 12:44	02-JUN-22 16:00	3	5	days	EHTR
	6	28-MAY-22	02-JUN-22 16:00	3	5	days	EHTR
	7	29-MAY-22 09:42	03-JUN-22 13:00	3	5	days	EHTR
	8	29-MAY-22 10:13	03-JUN-22 13:00	3	5	days	EHTR
	9	29-MAY-22 11:13	03-JUN-22 13:00	3	5	days	EHTR
	10	29-MAY-22 11:33	02-JUN-22 16:00	3	4	days	EHTR
	11	29-MAY-22 12:51	02-JUN-22 16:00	3	4	days	EHTR
	12	29-MAY-22 14:49	02-JUN-22 16:00	3	4	days	EHTR
	13	29-MAY-22 15:22	02-JUN-22 16:00	3	4	days	EHTR
	15	30-MAY-22 16:51	03-JUN-22 13:00	3	4	days	EHTL
Nitrite in Water by IC (Low Level)							
	1	28-MAY-22 09:21	02-JUN-22 16:00	3	5	days	EHTR
	2	28-MAY-22 10:30	03-JUN-22 13:00	3	6	days	EHTR
	3	28-MAY-22 11:36	03-JUN-22 13:00	3	6	days	EHTR
	4	28-MAY-22 12:16	03-JUN-22 13:00	3	6	days	EHTR
	5	28-MAY-22 12:44	02-JUN-22 16:00	3	5	days	EHTR
	6	28-MAY-22	02-JUN-22 16:00	3	5	days	EHTR
	7	29-MAY-22 09:42	03-JUN-22 13:00	3	5	days	EHTR
	8	29-MAY-22 10:13	03-JUN-22 13:00	3	5	days	EHTR
	9	29-MAY-22 11:13	03-JUN-22 13:00	3	5	days	EHTR
	10	29-MAY-22 11:33	02-JUN-22 16:00	3	4	days	EHTR
	11	29-MAY-22 12:51	02-JUN-22 16:00	3	4	days	EHTR
	12	29-MAY-22 14:49	02-JUN-22 16:00	3	4	days	EHTR
	13	29-MAY-22 15:22	02-JUN-22 16:00	3	4	days	EHTR
	15	30-MAY-22 16:51	03-JUN-22 13:00	3	4	days	EHTL
Phosphorus, Total							
	18	31-MAY-22 15:29	08-JUL-22 16:30	28	38	days	EHT
Phosphorus, Total							
	6	28-MAY-22	30-JUN-22 15:55	28	33	days	EHT
	18	31-MAY-22 15:29	22-JUL-22 11:45	28	52	days	EHT
Cyanides							
Low Level Free Cyanide in water by CFA							
	3	28-MAY-22 11:36	27-JUN-22 00:00	14	30	days	EHT
	14	30-MAY-22 16:07	16-JUN-22 14:00	14	17	days	EHT
	15	30-MAY-22 16:51	16-JUN-22 14:00	14	17	days	EHT
Low Level Total Cyanide in water by CFA							
	3	28-MAY-22 11:36	27-JUN-22 00:00	14	30	days	EHT
	14	30-MAY-22 16:07	16-JUN-22 14:00	14	17	days	EHT
	15	30-MAY-22 16:51	16-JUN-22 14:00	14	17	days	EHT
Low level WAD Cyanide in water by CFA							
	3	28-MAY-22 11:36	27-JUN-22 00:00	14	30	days	EHT
	14	30-MAY-22 16:07	16-JUN-22 14:00	14	17	days	EHT
	15	30-MAY-22 16:51	16-JUN-22 14:00	14	17	days	EHT

Total Metals

Total Mercury in Water by CVAFS (Ultra)

Quality Control Report

Workorder: L2711813

Report Date: 25-JUL-22

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Total Metals							
Total Mercury in Water by CVAFS (Ultra)							
	1	28-MAY-22 09:21	02-JUL-22 15:41	28	35	days	EHT
	2	28-MAY-22 10:30	02-JUL-22 15:41	28	35	days	EHT
	3	28-MAY-22 11:36	02-JUL-22 15:41	28	35	days	EHT
	4	28-MAY-22 12:16	02-JUL-22 15:41	28	35	days	EHT
	5	28-MAY-22 12:44	02-JUL-22 15:41	28	35	days	EHT
	7	29-MAY-22 09:42	02-JUL-22 15:41	28	34	days	EHT
	8	29-MAY-22 10:13	02-JUL-22 15:41	28	34	days	EHT
	9	29-MAY-22 11:13	02-JUL-22 15:41	28	34	days	EHT
	10	29-MAY-22 11:33	02-JUL-22 15:41	28	34	days	EHT
	11	29-MAY-22 12:51	02-JUL-22 15:41	28	34	days	EHT
	12	29-MAY-22 14:49	02-JUL-22 15:41	28	34	days	EHT
	13	29-MAY-22 15:22	02-JUL-22 15:41	28	34	days	EHT
	14	30-MAY-22 16:07	02-JUL-22 15:41	28	33	days	EHT
	15	30-MAY-22 16:51	02-JUL-22 15:41	28	33	days	EHT
	16	31-MAY-22 13:10	02-JUL-22 15:41	28	32	days	EHT
	17	31-MAY-22 14:09	02-JUL-22 15:41	28	32	days	EHT
	18	31-MAY-22 15:29	02-JUL-22 15:41	28	32	days	EHT
	19	31-MAY-22 08:44	02-JUL-22 15:41	28	32	days	EHT

Dissolved Metals

Diss. Mercury in Water by CVAFS (Ultra)

1	28-MAY-22 09:21	02-JUL-22 09:00	28	35	days	EHT
2	28-MAY-22 10:30	02-JUL-22 09:00	28	35	days	EHT
3	28-MAY-22 11:36	02-JUL-22 09:00	28	35	days	EHT
4	28-MAY-22 12:16	02-JUL-22 09:00	28	35	days	EHT
5	28-MAY-22 12:44	02-JUL-22 09:00	28	35	days	EHT
7	29-MAY-22 09:42	02-JUL-22 09:00	28	34	days	EHT
8	29-MAY-22 10:13	02-JUL-22 09:00	28	34	days	EHT
9	29-MAY-22 11:13	02-JUL-22 09:00	28	34	days	EHT
10	29-MAY-22 11:33	02-JUL-22 09:00	28	34	days	EHT
11	29-MAY-22 12:51	02-JUL-22 09:00	28	34	days	EHT
12	29-MAY-22 14:49	02-JUL-22 09:00	28	34	days	EHT
13	29-MAY-22 15:22	02-JUL-22 09:00	28	34	days	EHT
14	30-MAY-22 16:07	02-JUL-22 09:00	28	33	days	EHT
15	30-MAY-22 16:51	02-JUL-22 09:00	28	33	days	EHT
16	31-MAY-22 13:10	02-JUL-22 09:00	28	32	days	EHT
17	31-MAY-22 14:09	02-JUL-22 09:00	28	32	days	EHT
18	31-MAY-22 15:29	02-JUL-22 09:00	28	32	days	EHT
19	31-MAY-22 08:44	02-JUL-22 09:00	28	32	days	EHT

Speciated Metals

Chromium +6

3	28-MAY-22 11:36	28-JUN-22 00:00	28	31	days	EHT

Legend & Qualifier Definitions:

EHT-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2711813 were received on 02-JUN-22 12:00.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the

Quality Control Report

Workorder: L2711813

Report Date: 25-JUL-22

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US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



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Chai



L2711813-COFC

COC Number: 22 -

Page 1 of 4

Report To Contact and company name below will appear on the final report			Turnaround Time (TAT) Requested			AFFIX ALS BARCODE LABEL HERE (ALS use only)																																																																																																																																																																																																																																																									
Company: Stantec Consulting			Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)						☒ Routine [R] if received by 3pm M-F - no surcharges apply ☐ 1 day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ 3 day [P3] if received by 3pm M-F - 25% rush-surcharge minimum ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.																																																																																																																																																																																																																																																						
Contact: Karen Mathers			Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A																																																																																																																																																																																																																																																												
Phone: 204-928-7621			☐ Compare Results to Criteria on Report - provide details below if box checked																																																																																																																																																																																																																																																												
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Street: 500 - 311 Portage Ave			Email 1 or Fax Karen.Mathers@Stantec.com																																																																																																																																																																																																																																																												
City/Province: Winnipeg, MB			Email 2																																																																																																																																																																																																																																																												
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Company: Alamos Gold			Email 1 or Fax			For all tests with rush TATs requested, please contact your AM to confirm availability.																																																																																																																																																																																																																																																									
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ALS Account # / Quote #: Q88846			AFE/Cost Center: PO#			<table border="1" style="width:100%; border-collapse: collapse; font-size: 8px;"> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <th>ALK-SPEC-WP</th> <th>ANIONS-6-L-IC-WP</th> <th>C-DOC-HTC-WP, C-TOC-HTC-WP</th> <th>HG-D-CVAA-WP</th> <th>HG-T-CVAA-WP</th> <th>MET-D-CCMS-WP, HARDNESS</th> <th>MET-T-CCMS-WP</th> <th>NH3-COL-WP</th> <th>P-T-COL-WP</th> <th>N-TOTKL-WP</th> <th>SOLIDS-TOTSUS-LR-WP</th> <th>ACY-TITR-TB</th> <th>CN-TL CN-FREE-L, CN-WAD-L</th> <th>CR-CR6-PWCO-IC-WT</th> <th rowspan="2">SAMPLES ON HOLD</th> <th rowspan="2">EXTENDED STORAGE REQUIRED</th> <th rowspan="2">SUSPECTED HAZARD (see notes)</th> </tr> <tr> <th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th> </tr> <tr> <td>1</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td> <td></td><td></td><td></td> </tr> <tr> <td>2</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>3</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>4</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>5</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>6</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>7</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>8</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>9</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>10</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>11</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>12</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> </table>			NUMBER OF CONTAINERS	ALK-SPEC-WP	ANIONS-6-L-IC-WP	C-DOC-HTC-WP, C-TOC-HTC-WP	HG-D-CVAA-WP	HG-T-CVAA-WP	MET-D-CCMS-WP, HARDNESS	MET-T-CCMS-WP	NH3-COL-WP	P-T-COL-WP	N-TOTKL-WP	SOLIDS-TOTSUS-LR-WP	ACY-TITR-TB	CN-TL CN-FREE-L, CN-WAD-L	CR-CR6-PWCO-IC-WT	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)														1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				2																		3																		4																		5																		6																		7																		8																		9																		10																		11																		12																	
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Drinking Water (DW) Samples (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)																																																																																																																																																																																																																																																													
Are samples taken from a Regulated DW System? ☐ YES ☐ NO		dissolved metals field filtered + preserved, dissolved mercury + nutrients preserved																																																																																																																																																																																																																																																													
Are samples for human consumption/ use? ☐ YES ☐ NO																																																																																																																																																																																																																																																															
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Released by: <i>B. Brad</i>	Date: 31-05-22	Time: 1630	Received by: <i>[Signature]</i>	Date: JUN 02 2022	Time: 1200	FINAL SHIPMENT RECEPTION (ALS use only)																																																																																																																																																																																																																																																									
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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

FEB 2022 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



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L2711813-COFC

Test Form

COC Number: 22 -

Page 2 of 4

Report To Contact and company name below will appear on the final report Company: Stantec Consulting Contact: Karen Mathers Phone: 204-928-7621 Company address below will appear on the final report Street: 500 - 311 Portage Ave City/Province: Winnipeg, MB Postal Code: R3B 2B9			Reports / Recipients Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL) Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A ☐ Compare Results to Criteria on Report - provide details below if box checked Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax Karen.Mathers@Stantec.com Email 2 Email 3			Turnaround Time (TAT) Requested ☒ Routine [R] if received by 3pm M-F - no surcharges apply ☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests. Date and Time Required for all E&P TATs: dd-mm-yy hh:mm am/pm For all tests with rush TATs requested, please contact your AM to confirm availability.			AFFIX ALS BARCODE LABEL HERE (ALS use only)																																																																																																																																															
Invoice To Same as Report To ☐ YES ☒ NO Copy of Invoice with Report ☐ YES ☒ NO Company: Alamos Gold Contact:			Invoice Recipients Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax Email 2			Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <th>ALK-SPEC-WP</th> <th>ANIONS-6-L-C-WP</th> <th>C-DOC-HTC-WP, C-TOC-HTC-WP</th> <th>HG-D-CVAA-WP</th> <th>HG-T-CVAA-WP</th> <th>MET-D-CCMS-WP, HARDNESS</th> <th>MET-T-CCMS-WP</th> <th>NH3-COL-WP</th> <th>P-T-COL-WP</th> <th>N-TOTKJ-WP</th> <th>SOLIDS-TOTSUS-LR-WP</th> <th>ACY-TITR-TB</th> <th>CN-TL, CN-FREE-L, CN-WAD-L</th> <th>CR-CRG-PWOO-IC-WT</th> <th rowspan="2">SAMPLES ON HOLD</th> <th rowspan="2">EXTENDED STORAGE REQUIRED</th> <th rowspan="2">SUSPECTED HAZARD (see notes)</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>14</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>15</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>16</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>17</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>18</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>19</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						NUMBER OF CONTAINERS	ALK-SPEC-WP	ANIONS-6-L-C-WP	C-DOC-HTC-WP, C-TOC-HTC-WP	HG-D-CVAA-WP	HG-T-CVAA-WP	MET-D-CCMS-WP, HARDNESS	MET-T-CCMS-WP	NH3-COL-WP	P-T-COL-WP	N-TOTKJ-WP	SOLIDS-TOTSUS-LR-WP	ACY-TITR-TB	CN-TL, CN-FREE-L, CN-WAD-L	CR-CRG-PWOO-IC-WT	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				19	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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Project Information ALS Account # / Quote #: Q88846 Job #: ALAMOS PO / AFE: LSD:			Oil and Gas Required Fields (client use) AFE/Cost Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location:			ALS Lab Work Order # (ALS use only): <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>ALS Sample # (ALS use only)</th> <th>Sample Identification and/or Coordinates (This description will appear on the report)</th> <th>Date (dd-mm-yy)</th> <th>Time (hh:mm)</th> <th>Sample Type</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>AQF44</td> <td>29-05-22</td> <td>1522</td> <td>W</td> </tr> <tr> <td>14</td> <td>AQF42</td> <td>20-05-22</td> <td>1607</td> <td>I</td> </tr> <tr> <td>15</td> <td>AQF40</td> <td>1</td> <td>1651</td> <td>I</td> </tr> <tr> <td>16</td> <td>ADM28</td> <td>31-05-22</td> <td>1310</td> <td>I</td> </tr> <tr> <td>17</td> <td>ADM29C</td> <td>1</td> <td>1409</td> <td>I</td> </tr> <tr> <td>18</td> <td>Field Blank</td> <td>1</td> <td>1526</td> <td>I</td> </tr> <tr> <td>19</td> <td>AQF45S</td> <td>31-05-22</td> <td>0844</td> <td>W</td> </tr> <tr> <td></td> <td>~~ADP46~~</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	13	AQF44	29-05-22	1522	W	14	AQF42	20-05-22	1607	I	15	AQF40	1	1651	I	16	ADM28	31-05-22	1310	I	17	ADM29C	1	1409	I	18	Field Blank	1	1526	I	19	AQF45S	31-05-22	0844	W		~~ADP46~~																																																																																																						
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SHIPMENT RELEASE (client use) Released by: B. Lyndal Date: 31-05-22 Time:			INITIAL SHIPMENT RECEPTION (ALS use only) Received by: [Signature] Date: JUN 02 2022 Time: [Signature]			FINAL SHIPMENT RECEPTION (ALS use only) Received by: Date: Time:																																																																																																																																																		

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

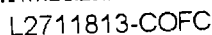
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Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

FEB 2022 FRONT

COC Number: **22 -**

Page 3 of 4

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Chain of



L2711813-COFC

COC Number: 22 -

Page 4 of 4

Report To Contact and company name below will appear on the final report		Report Recipients		Turnaround Time (TAT) Requested		AFFIX ALS BARCODE LABEL HERE (ALS use only)		
Company: Stantec Consulting		Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)		☒ Routine [R] if received by 3pm M-F - no surcharges apply ☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum - ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.				
Contact: Karen Mathers		Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A						
Phone: 204-928-7621		☐ Compare Results to Criteria on Report - provide details below if box checked Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX						
Company address below will appear on the final report		Email 1 or Fax Karen.Mathers@Stantec.com						
Street: 500 - 311 Portage Ave		Email 2						
City/Province: Winnipeg, MB		Email 3						
Postal Code: R3B 2B9								
Invoice To		Invoice Recipients		Date and Time Required for all E&P TATs:		dd-mm-yy hh:mm am/pm		
Same as Report To ☐ YES ☒ NO		Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX		For all tests with rush TATs requested, please contact your AM to confirm availability.				
Copy of Invoice with Report ☐ YES ☒ NO		Email 1 or Fax						
Company: Alamos Gold		Email 2						
Contact:								
Project Information		Oil and Gas Required Fields (client use)		ANALYSIS REQUEST Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below		SAMPLES ON HOLD		
ALS Account # / Quote #: Q88846		AFE/Cost Center: PO#						
Job #: ALAMOS		Major/Minor Code: Routing Code:						
PO / AFE:		Requisitioner:						
LSD:		Location:						
ALS Lab Work Order # (ALS use only):		ALS Contact:		Sampler:				
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS		EXTENDED STORAGE REQUIRED	
32	AQF44	29-05-22	1522					
33	AQF42	30-05-22	1607					
34	AQF40	1	1651					
35	AQM38	31-05-22	1310					
36	AQM39C	1	1409					
37	Field Blank	1	1526					
38	AQF45S	31-05-22	0844					
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		SAMPLE RECEIPT DETAILS (ALS use only)				
Are samples taken from a Regulated DW System? ☐ YES ☐ NO		① HG-D-U - CVAF-VA ② HG-T-U - CVAF-VA ③ MEHG-T - GCAF-VA		Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED				
Are samples for human consumption/ use? ☐ YES ☐ NO				Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO				
				Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A				
				INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C		
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)		FINAL SHIPMENT RECEPTION (ALS use only)				
Released by: [Signature]	Date: 31-05-22	Time: 1630	Received by: [Signature]	Date: JUN 02 2022	Time: [Signature]	Date:	Time:	

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1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

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Alamos Gold Inc.
ATTN: KAREN MATHERS
C/O Stantec Consulting
500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Date Received: 02-JUN-22
Report Date: 30-JUN-22 15:56 (MT)
Version: FINAL

Client Phone: 204-924-5735

Certificate of Analysis

Lab Work Order #: L2711833
Project P.O. #: NOT SUBMITTED
Job Reference: ALAMOS - 111473003
C of C Numbers:
Legal Site Desc: WQQ

Oluwaseun Osasona
Project Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

30-JUN-22 15:56 (MT)

Version: FINAL

Sample ID Description Sampled Date Sampled Time Client ID		L2711833-1 W 30-MAY-22 12:34 AQF6-0	L2711833-2 W 30-MAY-22 13:29 AQF6-2.5	L2711833-3 W 30-MAY-22 13:39 AQF6-5	L2711833-4 W 30-MAY-22 13:54 AQF6-10	L2711833-5 W 30-MAY-22 14:13 AQF6-15
Grouping	Analyte					
WATER						
Physical Tests	pH (pH units)	7.92	7.91	7.88	7.91	7.86
	Total Suspended Solids (mg/L)	1.0	1.2	1.4	1.3	1.6
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	139	138	141	140	144
	Ammonia, Total (as N) (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Bicarbonate (HCO3) (mg/L)	169	168	172	171	176
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	2.92	2.95	3.08	3.05	3.10
	Fluoride (F) (mg/L)	0.088	0.093	0.090	0.088	0.094
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	0.111	0.112	0.115	0.115	0.117
	Nitrate (as N) (mg/L)	0.111	0.112	0.115	0.115	0.117
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0076	0.0066	0.0056	0.0057	0.0083
	Sulfate (SO4) (mg/L)	115	119	121	120	124
	Organic / Inorganic Carbon	7.12	7.89	7.05	7.12	7.20
Total Metals	Aluminum (Al)-Total (mg/L)	0.0142	0.0112	0.0165	0.0112	0.0117
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	0.00011	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00130	0.00129	0.00129	0.00131	0.00127
	Barium (Ba)-Total (mg/L)	0.0195	0.0193	0.0201	0.0205	0.0204
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	0.028	0.028	0.034	0.028	0.027
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)	59.7	60.7	58.4	59.5	60.1
	Cesium (Cs)-Total (mg/L)	0.000195	0.000196	0.000196	0.000204	0.000193
	Chromium (Cr)-Total (mg/L)	<0.00010	<0.00010	0.00124	<0.00010	<0.00010
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	0.00068	<0.00050	0.00060	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	0.085	0.083	0.109	0.079	0.085
	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Total (mg/L)	0.0034	0.0034	0.0040	0.0034	0.0032
	Magnesium (Mg)-Total (mg/L)	19.2	19.7	19.0	20.2	20.8
	Manganese (Mn)-Total (mg/L)	0.283	0.288	0.303	0.299	0.309
	Mercury (Hg)-Total (ug/L)	0.00072	0.00075	0.00069	0.00074	0.00073

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

30-JUN-22 15:56 (MT)

Version: FINAL

Sample ID Description Sampled Date Sampled Time Client ID		L2711833-6 W 30-MAY-22 14:32 AQF6-25	L2711833-7 W 30-MAY-22 14:48 AQF6-60	L2711833-8 W 31-MAY-22 15:37 FIELD BLANK	L2711833-9 W TRIP BLANK	L2711833-10 W 30-MAY-22 QC-01
Grouping	Analyte					
WATER						
Physical Tests	pH (pH units)	7.51	7.51	5.62	5.61	7.87
	Total Suspended Solids (mg/L)	<1.0	1.5	<1.0	<1.0	1.5
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	188	198	<1.0	<1.0	138
	Ammonia, Total (as N) (mg/L)	<0.010	0.083	<0.010	<0.010	<0.010
	Bicarbonate (HCO3) (mg/L)	230	241	<1.2	<1.2	169
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	5.04	5.24	<0.10	<0.10	2.94
	Fluoride (F) (mg/L)	0.114	0.130	<0.020	<0.020	0.088
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	0.212	0.113	<0.0051	<0.0051	0.112
	Nitrate (as N) (mg/L)	0.212	0.0954	<0.0050	<0.0050	0.112
	Nitrite (as N) (mg/L)	<0.0010	0.0173	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0072	0.0055	<0.0010	0.0040	0.0052
			0.0047	0.0033	<0.0010	
	Sulfate (SO4) (mg/L)	191	205	<0.30	<0.30	116
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	6.36	5.31	<0.50	<0.50	7.44
Total Metals	Aluminum (Al)-Total (mg/L)	<0.0030	0.0037	<0.0030	<0.0030	0.0109
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00189	0.00173	<0.00010	<0.00010	0.00124
	Barium (Ba)-Total (mg/L)	0.0268	0.0294	<0.00010	<0.00010	0.0195
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	0.043	0.047	<0.010	<0.010	0.025
	Cadmium (Cd)-Total (mg/L)	<0.0000050	0.0000053	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)	84.3	90.2	0.066	<0.050	58.5
	Cesium (Cs)-Total (mg/L)	0.000271	0.000365	<0.000010	<0.000010	0.000193
	Chromium (Cr)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00052
	Iron (Fe)-Total (mg/L)	0.203	0.209	<0.010	<0.010	0.083
	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Total (mg/L)	0.0046	0.0047	<0.0010	<0.0010	0.0030
	Magnesium (Mg)-Total (mg/L)	31.0	31.9	<0.0050	<0.0050	19.9
	Manganese (Mn)-Total (mg/L)	0.295	1.17	<0.00010	<0.00010	0.284
	Mercury (Hg)-Total (ug/L)	0.00058	<0.00050	<0.00050	<0.00050	0.00127

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711833-1 W 30-MAY-22 12:34 AQF6-0	L2711833-2 W 30-MAY-22 13:29 AQF6-2.5	L2711833-3 W 30-MAY-22 13:39 AQF6-5	L2711833-4 W 30-MAY-22 13:54 AQF6-10	L2711833-5 W 30-MAY-22 14:13 AQF6-15
Grouping	Analyte					
WATER						
Total Metals	Molybdenum (Mo)-Total (mg/L)	0.000524	0.000403	0.000565	0.000401	0.000428
	Nickel (Ni)-Total (mg/L)	0.00056	0.00053	0.00145	<0.00050	0.00052
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.050	<0.030	<0.030
	Potassium (K)-Total (mg/L)	4.71	4.80	37.0	4.85	4.87
	Rubidium (Rb)-Total (mg/L)	0.00365	0.00369	0.00483	0.00378	0.00375
	Selenium (Se)-Total (mg/L)	0.000052	0.000060	<0.000050	<0.000050	0.000059
	Silicon (Si)-Total (mg/L)	3.90	3.90	4.57	3.91	4.01
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	15.0	15.7	13.6	15.6	16.0
	Strontium (Sr)-Total (mg/L)	0.173	0.176	0.185	0.179	0.179
	Sulfur (S)-Total (mg/L)	38.5	39.2	44.4	40.1	40.7
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	<0.00010	0.00095	0.00069	0.00019	0.00015
	Titanium (Ti)-Total (mg/L)	0.00086	0.00051	0.00068	0.00040	0.00052
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.00235	0.00235	0.00244	0.00242	0.00243
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0037	0.0039	0.0030	0.0035	0.0031
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00110	0.00109	0.00110	0.00105	0.00106
	Barium (Ba)-Dissolved (mg/L)	0.0200	0.0198	0.0203	0.0202	0.0201
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	0.031	0.032	0.034	0.035	0.030
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Dissolved (mg/L)	62.0	63.3	65.7	63.9	56.1
	Cesium (Cs)-Dissolved (mg/L)	0.000186	0.000183	0.000195	0.000195	0.000198
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00086	0.00058	0.00058	0.00055	0.00054
	Iron (Fe)-Dissolved (mg/L)	0.026	0.024	0.021	0.020	0.024

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

30-JUN-22 15:56 (MT)

Version: FINAL

Sample ID Description Sampled Date Sampled Time Client ID		L2711833-6 W 30-MAY-22 14:32 AQF6-25	L2711833-7 W 30-MAY-22 14:48 AQF6-60	L2711833-8 W 31-MAY-22 15:37 FIELD BLANK	L2711833-9 W TRIP BLANK	L2711833-10 W 30-MAY-22 QC-01
Grouping	Analyte					
WATER						
Total Metals	Molybdenum (Mo)-Total (mg/L)	0.000566	0.00115	<0.000050	<0.000050	0.000413
	Nickel (Ni)-Total (mg/L)	0.00052	0.00071	<0.00050	<0.00050	0.00052
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Total (mg/L)	7.61	8.06	<0.050	<0.050	4.75
	Rubidium (Rb)-Total (mg/L)	0.00525	0.00551	<0.00020	<0.00020	0.00373
	Selenium (Se)-Total (mg/L)	<0.000050	0.000054	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Total (mg/L)	5.15	5.36	<0.10	<0.10	3.85
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	25.6	28.0	0.260	<0.050	15.2
	Strontium (Sr)-Total (mg/L)	0.274	0.302	<0.00020	<0.00020	0.178
	Sulfur (S)-Total (mg/L)	65.7	68.4	<0.50	<0.50	37.9
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	0.00031	0.00026	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	0.00048
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.00416	0.00494	<0.000010	<0.000010	0.00233
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	LAB	FIELD
	Aluminum (Al)-Dissolved (mg/L)	<0.0010	0.0015	<0.0010	<0.0010	0.0026
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00109	0.00088	<0.00010	<0.00010	0.00117
	Barium (Ba)-Dissolved (mg/L)	0.0276	0.0313	<0.00010	<0.00010	0.0197
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	0.044	0.051	<0.010	<0.010	0.027
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Dissolved (mg/L)	79.5	86.5	<0.050	<0.050	56.0
	Cesium (Cs)-Dissolved (mg/L)	0.000274	0.000367	<0.000010	<0.000010	0.000206
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00069	0.00296	0.00099	<0.00020	0.00071
	Iron (Fe)-Dissolved (mg/L)	0.030	0.014	<0.010	<0.010	0.027

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711833-1 W 30-MAY-22 12:34 AQF6-0	L2711833-2 W 30-MAY-22 13:29 AQF6-2.5	L2711833-3 W 30-MAY-22 13:39 AQF6-5	L2711833-4 W 30-MAY-22 13:54 AQF6-10	L2711833-5 W 30-MAY-22 14:13 AQF6-15
Grouping	Analyte					
WATER						
Dissolved Metals	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.0039	0.0040	0.0043	0.0042	0.0034
	Magnesium (Mg)-Dissolved (mg/L)	20.2	20.9	21.0	21.4	19.5
	Manganese (Mn)-Dissolved (mg/L)	0.274	0.276	0.289	0.288	0.297
	Mercury (Hg)-Dissolved (ug/L)	0.00051	0.00085	0.00085	0.00081	0.00058
	Molybdenum (Mo)-Dissolved (mg/L)	0.000399	0.000395	0.000427	0.000408	0.000378
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	5.13	5.17	5.28	5.28	5.25
	Rubidium (Rb)-Dissolved (mg/L)	0.00374	0.00388	0.00386	0.00398	0.00394
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	0.000059
	Silicon (Si)-Dissolved (mg/L)	4.35	4.36	4.33	4.40	4.20
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	13.0	13.4	13.7	13.4	13.0
	Strontium (Sr)-Dissolved (mg/L)	0.174	0.174	0.179	0.184	0.173
	Sulfur (S)-Dissolved (mg/L)	42.2	42.5	43.4	43.6	41.2
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	0.00082	0.00048	0.00028	0.00020
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.00219	0.00224	0.00238	0.00232	0.00235
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2711833-6 W 30-MAY-22 14:32 AQF6-25	L2711833-7 W 30-MAY-22 14:48 AQF6-60	L2711833-8 W 31-MAY-22 15:37 FIELD BLANK	L2711833-9 W TRIP BLANK	L2711833-10 W 30-MAY-22 QC-01
Grouping	Analyte					
WATER						
Dissolved Metals	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000086	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.0048	0.0053	<0.0010	<0.0010	0.0031
	Magnesium (Mg)-Dissolved (mg/L)	27.8	29.4	<0.0050	<0.0050	18.7
	Manganese (Mn)-Dissolved (mg/L)	0.276	1.19	<0.00010	<0.00010	0.279
	Mercury (Hg)-Dissolved (ug/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00060
	Molybdenum (Mo)-Dissolved (mg/L)	0.000546	0.00111	<0.000050	<0.000050	0.000387
	Nickel (Ni)-Dissolved (mg/L)	0.00051	0.00072	<0.00050	<0.00050	0.00052
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	8.14	8.40	<0.050	<0.050	5.15
	Rubidium (Rb)-Dissolved (mg/L)	0.00576	0.00599	<0.00020	<0.00020	0.00404
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	0.000063
	Silicon (Si)-Dissolved (mg/L)	5.44	5.73	<0.050	<0.050	4.14
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	20.9	22.0	0.255 ^{RRV}	<0.050	12.7
	Strontium (Sr)-Dissolved (mg/L)	0.262	0.297	<0.00010	<0.00010	0.171
	Sulfur (S)-Dissolved (mg/L)	64.5	67.8	<0.50	<0.50	38.3
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	0.00040	0.00022	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.00402	0.00482	<0.000010	<0.000010	0.00227
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0024	<0.0010	<0.0010	<0.0010
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Laboratory Control Sample	Sodium (Na)-Total	MES	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2711833-10, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2711833-1, -2, -3, -4
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2711833-10, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2711833-10, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2711833-1, -2, -3, -4
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2711833-10, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L2711833-10, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2711833-10, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2711833-10, -5, -6, -7, -8, -9
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L2711833-10, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L2711833-3
Matrix Spike	Calcium (Ca)-Total	MS-B	L2711833-3
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2711833-3
Matrix Spike	Manganese (Mn)-Total	MS-B	L2711833-3
Matrix Spike	Sodium (Na)-Total	MS-B	L2711833-3
Matrix Spike	Strontium (Sr)-Total	MS-B	L2711833-3
Matrix Spike	Sulfur (S)-Total	MS-B	L2711833-3
Matrix Spike	Antimony (Sb)-Total	MS-B	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Arsenic (As)-Total	MS-B	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Total	MS-B	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Sulfur (S)-Total	MS-B	L2711833-1, -10, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Ammonia, Total (as N)	MS-B	L2711833-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Phosphorus (P)-Total	MS-B	L2711833-7, -8, -9
Matrix Spike	Sulfate (SO4)	MS-B	L2711833-1, -10, -3, -4, -6, -8

Qualifiers for Individual Parameters Listed:

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO3 2-/L.			
ALK-HCO3HCO3-CALC-WP	Water	Alkalinity, Bicarbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO3-/L.			
ALK-OHOH-CALC-WP	Water	Alkalinity, Hydroxide	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.			
ALK-TITR-WP	Water	Alkalinity, Total (as CaCO3)	APHA 2320B

Reference Information

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO₃⁻ and H₂CO₃ endpoints indicated electrometrically.

BR-IC-N-WP Water Bromide in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

C-DOC-HTC-WP Water Dissolved Organic Carbon by Combustion APHA 5310 B-WP

Filtered (0.45 µm) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

CL-L-IC-N-WP Water Chloride in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

EC-SCREEN-WP Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc

F-IC-N-WP Water Fluoride in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

HG-D-U-CVAF-VA Water Diss. Mercury in Water by CVAFS (Ultra) APHA 3030 B / EPA 1631 REV. E

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure may involve preliminary sample treatment by filtration (APHA 3030B) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.

HG-T-U-CVAF-VA Water Total Mercury in Water by CVAFS (Ultra) EPA 1631 REV. E

This analysis is carried out using procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.

MET-D-CCMS-WP Water Dissolved Metals in Water by CRC ICPMS APHA 3030B/6020B (mod)

Water samples are filtered (0.45 µm), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-T-CCMS-VA Water Total Metals in Water by CRC ICPMS EPA 200.2/6020A (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-T-CCMS-WP Water Total Metals in Water by CRC ICPMS EPA 200.2/6020B (mod.)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

NH3-COL-WP Water Ammonia by colour APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

NO2+NO3-CALC-L-WP Water Nitrate+Nitrite CALCULATION

NO2-L-IC-N-WP Water Nitrite in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

NO3-L-IC-N-WP Water Nitrate in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

P-T-COL-WP Water Phosphorus, Total APHA 4500 P PHOSPHORUS-L

Reference Information

This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.

P-T-L-COL-WP Water Phosphorus, Total APHA 4500 P PHOSPHORUS-L

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.

PH-WP Water pH APHA 4500H

The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.

SO4-IC-N-WP Water Sulfate in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

SOLIDS-TOTSUS-LR-WP Water Total Suspended Solids APHA 2540 D (modified)

Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 105°C.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

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Client: Alamos Gold Inc.
C/O Stantec Consulting 500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Contact: KAREN MATHERS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ALK-TITR-WP		Water						
Batch	R5794537							
WG3735861-4	LCS							
Alkalinity, Total (as CaCO ₃)			103.2		%		85-115	03-JUN-22
WG3735861-9	LCS							
Alkalinity, Total (as CaCO ₃)			102.2		%		85-115	03-JUN-22
WG3735861-1	MB							
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	03-JUN-22
WG3735861-6	MB							
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	03-JUN-22
BR-IC-N-WP		Water						
Batch	R5794276							
WG3734788-14	LCS							
Bromide (Br)			102.4		%		85-115	02-JUN-22
WG3734788-13	MB							
Bromide (Br)			<0.10		mg/L		0.1	02-JUN-22
Batch	R5797901							
WG3735270-3	DUP	L2711833-1						
Bromide (Br)		<0.10	<0.10	RPD-NA	mg/L	N/A	20	03-JUN-22
WG3735270-2	LCS							
Bromide (Br)			99.9		%		85-115	03-JUN-22
WG3735270-1	MB							
Bromide (Br)			<0.10		mg/L		0.1	03-JUN-22
WG3735270-4	MS	L2711833-1						
Bromide (Br)			106.4		%		75-125	03-JUN-22
C-DOC-HTC-WP		Water						
Batch	R5798338							
WG3737978-3	DUP	L2711833-6						
Dissolved Organic Carbon		6.36	6.04		mg/L	5.1	20	09-JUN-22
WG3737978-2	LCS							
Dissolved Organic Carbon			99.8		%		80-120	09-JUN-22
WG3737978-1	MB							
Dissolved Organic Carbon			<0.50		mg/L		0.5	09-JUN-22
CL-L-IC-N-WP		Water						
Batch	R5794276							
WG3734788-14	LCS							
Chloride (Cl)			98.4		%		90-110	02-JUN-22
WG3734788-13	MB							
Chloride (Cl)			<0.10		mg/L		0.1	02-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-U-CVAF-VA								
Water								
Batch	R5804968							
WG3741730-2	LCS							
Mercury (Hg)-Total			99.7		%		80-120	20-JUN-22
WG3741730-1	MB							
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	20-JUN-22
MET-D-CCMS-WP								
Water								
Batch	R5795695							
WG3736314-2	LCS							
Aluminum (Al)-Dissolved			113.8		%		80-120	07-JUN-22
Antimony (Sb)-Dissolved			99.5		%		80-120	07-JUN-22
Arsenic (As)-Dissolved			101.5		%		80-120	07-JUN-22
Barium (Ba)-Dissolved			106.4		%		80-120	07-JUN-22
Beryllium (Be)-Dissolved			118.5		%		80-120	07-JUN-22
Bismuth (Bi)-Dissolved			104.2		%		80-120	07-JUN-22
Boron (B)-Dissolved			114.4		%		80-120	07-JUN-22
Cadmium (Cd)-Dissolved			102.0		%		80-120	07-JUN-22
Calcium (Ca)-Dissolved			107.5		%		80-120	07-JUN-22
Cesium (Cs)-Dissolved			99.8		%		80-120	07-JUN-22
Chromium (Cr)-Dissolved			104.7		%		80-120	07-JUN-22
Cobalt (Co)-Dissolved			104.4		%		80-120	07-JUN-22
Copper (Cu)-Dissolved			102.7		%		80-120	07-JUN-22
Iron (Fe)-Dissolved			98.6		%		80-120	07-JUN-22
Lead (Pb)-Dissolved			100.9		%		80-120	07-JUN-22
Lithium (Li)-Dissolved			117.8		%		80-120	07-JUN-22
Magnesium (Mg)-Dissolved			107.4		%		80-120	07-JUN-22
Manganese (Mn)-Dissolved			104.1		%		80-120	07-JUN-22
Molybdenum (Mo)-Dissolved			104.8		%		80-120	07-JUN-22
Nickel (Ni)-Dissolved			101.8		%		80-120	07-JUN-22
Phosphorus (P)-Dissolved			115.9		%		80-120	07-JUN-22
Potassium (K)-Dissolved			105.8		%		80-120	07-JUN-22
Rubidium (Rb)-Dissolved			104.1		%		80-120	07-JUN-22
Selenium (Se)-Dissolved			97.1		%		80-120	07-JUN-22
Silicon (Si)-Dissolved			111.6		%		80-120	07-JUN-22
Silver (Ag)-Dissolved			103.4		%		80-120	07-JUN-22
Sodium (Na)-Dissolved			109.9		%		80-120	07-JUN-22
Strontium (Sr)-Dissolved			101.6		%		80-120	07-JUN-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5795695							
WG3736314-2	LCS							
Sulfur (S)-Dissolved			109.6		%		80-120	07-JUN-22
Tellurium (Te)-Dissolved			102.0		%		80-120	07-JUN-22
Thallium (Tl)-Dissolved			103.1		%		80-120	07-JUN-22
Thorium (Th)-Dissolved			101.6		%		80-120	07-JUN-22
Tin (Sn)-Dissolved			100.9		%		80-120	07-JUN-22
Titanium (Ti)-Dissolved			104.9		%		80-120	07-JUN-22
Tungsten (W)-Dissolved			98.2		%		80-120	07-JUN-22
Uranium (U)-Dissolved			103.0		%		80-120	07-JUN-22
Vanadium (V)-Dissolved			104.2		%		80-120	07-JUN-22
Zinc (Zn)-Dissolved			104.4		%		80-120	07-JUN-22
Zirconium (Zr)-Dissolved			99.5		%		80-120	07-JUN-22
WG3736314-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	07-JUN-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	07-JUN-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	07-JUN-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	07-JUN-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	07-JUN-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	07-JUN-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	07-JUN-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	07-JUN-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	07-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch R5795695								
WG3736314-1 MB								
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	07-JUN-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	07-JUN-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	07-JUN-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	07-JUN-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	07-JUN-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	07-JUN-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	07-JUN-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	07-JUN-22
Batch R5796635								
WG3737137-4 DUP		L2711833-5						
Aluminum (Al)-Dissolved		0.0031	0.0037		mg/L	19	20	09-JUN-22
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUN-22
Arsenic (As)-Dissolved		0.00106	0.00105		mg/L	0.8	20	09-JUN-22
Barium (Ba)-Dissolved		0.0201	0.0203		mg/L	0.8	20	09-JUN-22
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUN-22
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	09-JUN-22
Boron (B)-Dissolved		0.030	0.029		mg/L	2.1	20	09-JUN-22
Cadmium (Cd)-Dissolved		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	09-JUN-22
Calcium (Ca)-Dissolved		56.1	58.9		mg/L	4.8	20	09-JUN-22
Cesium (Cs)-Dissolved		0.000198	0.000200		mg/L	1.1	20	09-JUN-22
Chromium (Cr)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUN-22
Cobalt (Co)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUN-22
Copper (Cu)-Dissolved		0.00054	0.00054		mg/L	1.5	20	09-JUN-22
Iron (Fe)-Dissolved		0.024	0.024		mg/L	0.4	20	09-JUN-22
Lead (Pb)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	09-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5796635							
WG3737137-4 DUP		L2711833-5						
Lithium (Li)-Dissolved		0.0034	0.0035		mg/L	4.6	20	09-JUN-22
Magnesium (Mg)-Dissolved		19.5	19.6		mg/L	0.6	20	09-JUN-22
Manganese (Mn)-Dissolved		0.297	0.295		mg/L	0.6	20	09-JUN-22
Molybdenum (Mo)-Dissolved		0.000378	0.000397		mg/L	5.0	20	09-JUN-22
Nickel (Ni)-Dissolved		<0.00050	0.00050	RPD-NA	mg/L	N/A	20	09-JUN-22
Phosphorus (P)-Dissolved		<0.030	<0.030	RPD-NA	mg/L	N/A	20	09-JUN-22
Potassium (K)-Dissolved		5.25	5.35		mg/L	1.9	20	09-JUN-22
Rubidium (Rb)-Dissolved		0.00394	0.00405		mg/L	2.8	20	09-JUN-22
Selenium (Se)-Dissolved		0.000059	<0.000050	RPD-NA	mg/L	N/A	20	09-JUN-22
Silicon (Si)-Dissolved		4.20	4.20		mg/L	0.1	20	09-JUN-22
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	09-JUN-22
Sodium (Na)-Dissolved		13.0	13.2		mg/L	1.5	20	09-JUN-22
Strontium (Sr)-Dissolved		0.173	0.177		mg/L	2.2	20	09-JUN-22
Sulfur (S)-Dissolved		41.2	40.5		mg/L	1.7	20	09-JUN-22
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	09-JUN-22
Thallium (Tl)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	09-JUN-22
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUN-22
Tin (Sn)-Dissolved		0.00020	0.00020		mg/L	1.0	20	09-JUN-22
Titanium (Ti)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	09-JUN-22
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUN-22
Uranium (U)-Dissolved		0.00235	0.00236		mg/L	0.4	20	09-JUN-22
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	09-JUN-22
Zinc (Zn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-JUN-22
Zirconium (Zr)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	09-JUN-22
WG3737137-2 LCS								
Aluminum (Al)-Dissolved			102.6		%		80-120	09-JUN-22
Antimony (Sb)-Dissolved			101.2		%		80-120	09-JUN-22
Arsenic (As)-Dissolved			101.3		%		80-120	09-JUN-22
Barium (Ba)-Dissolved			102.9		%		80-120	09-JUN-22
Beryllium (Be)-Dissolved			95.8		%		80-120	09-JUN-22
Bismuth (Bi)-Dissolved			103.9		%		80-120	09-JUN-22
Boron (B)-Dissolved			91.6		%		80-120	09-JUN-22
Cadmium (Cd)-Dissolved			102.0		%		80-120	09-JUN-22
Calcium (Ca)-Dissolved			101.5		%		80-120	09-JUN-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5796635							
WG3737137-2	LCS							
Cesium (Cs)-Dissolved			101.0		%		80-120	09-JUN-22
Chromium (Cr)-Dissolved			104.7		%		80-120	09-JUN-22
Cobalt (Co)-Dissolved			102.9		%		80-120	09-JUN-22
Copper (Cu)-Dissolved			101.4		%		80-120	09-JUN-22
Iron (Fe)-Dissolved			102.3		%		80-120	09-JUN-22
Lead (Pb)-Dissolved			101.1		%		80-120	09-JUN-22
Lithium (Li)-Dissolved			92.1		%		80-120	09-JUN-22
Magnesium (Mg)-Dissolved			100.9		%		80-120	09-JUN-22
Manganese (Mn)-Dissolved			101.5		%		80-120	09-JUN-22
Molybdenum (Mo)-Dissolved			99.0		%		80-120	09-JUN-22
Nickel (Ni)-Dissolved			101.6		%		80-120	09-JUN-22
Phosphorus (P)-Dissolved			105.3		%		80-120	09-JUN-22
Potassium (K)-Dissolved			103.1		%		80-120	09-JUN-22
Rubidium (Rb)-Dissolved			102.8		%		80-120	09-JUN-22
Selenium (Se)-Dissolved			104.4		%		80-120	09-JUN-22
Silicon (Si)-Dissolved			103.0		%		80-120	09-JUN-22
Silver (Ag)-Dissolved			101.3		%		80-120	09-JUN-22
Sodium (Na)-Dissolved			102.5		%		80-120	09-JUN-22
Strontium (Sr)-Dissolved			101.1		%		80-120	09-JUN-22
Sulfur (S)-Dissolved			105.4		%		80-120	09-JUN-22
Tellurium (Te)-Dissolved			97.1		%		80-120	09-JUN-22
Thallium (Tl)-Dissolved			101.1		%		80-120	09-JUN-22
Thorium (Th)-Dissolved			103.5		%		80-120	09-JUN-22
Tin (Sn)-Dissolved			99.97		%		80-120	09-JUN-22
Titanium (Ti)-Dissolved			102.8		%		80-120	09-JUN-22
Tungsten (W)-Dissolved			99.1		%		80-120	09-JUN-22
Uranium (U)-Dissolved			101.4		%		80-120	09-JUN-22
Vanadium (V)-Dissolved			103.7		%		80-120	09-JUN-22
Zinc (Zn)-Dissolved			113.0		%		80-120	09-JUN-22
Zirconium (Zr)-Dissolved			97.7		%		80-120	09-JUN-22
WG3737137-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	09-JUN-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5796635							
WG3737137-1 MB								
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	09-JUN-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	09-JUN-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	09-JUN-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	09-JUN-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	09-JUN-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	09-JUN-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	09-JUN-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	09-JUN-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	09-JUN-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	09-JUN-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	09-JUN-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	09-JUN-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	09-JUN-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	09-JUN-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	09-JUN-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	09-JUN-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	09-JUN-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	09-JUN-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	09-JUN-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	09-JUN-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	09-JUN-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	09-JUN-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	09-JUN-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	09-JUN-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	09-JUN-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	09-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP	Water							
Batch	R5796635							
WG3737137-1 MB								
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	09-JUN-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	09-JUN-22
WG3737137-5 MS		L2711833-5						
Aluminum (Al)-Dissolved			92.7		%		70-130	09-JUN-22
Antimony (Sb)-Dissolved			95.6		%		70-130	09-JUN-22
Arsenic (As)-Dissolved			93.0		%		70-130	09-JUN-22
Barium (Ba)-Dissolved			N/A	MS-B	%		-	09-JUN-22
Beryllium (Be)-Dissolved			89.0		%		70-130	09-JUN-22
Bismuth (Bi)-Dissolved			89.2		%		70-130	09-JUN-22
Boron (B)-Dissolved			85.7		%		70-130	09-JUN-22
Cadmium (Cd)-Dissolved			89.7		%		70-130	09-JUN-22
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	09-JUN-22
Cesium (Cs)-Dissolved			93.0		%		70-130	09-JUN-22
Chromium (Cr)-Dissolved			92.2		%		70-130	09-JUN-22
Cobalt (Co)-Dissolved			89.9		%		70-130	09-JUN-22
Copper (Cu)-Dissolved			87.7		%		70-130	09-JUN-22
Iron (Fe)-Dissolved			88.9		%		70-130	09-JUN-22
Lead (Pb)-Dissolved			88.8		%		70-130	09-JUN-22
Lithium (Li)-Dissolved			87.8		%		70-130	09-JUN-22
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	09-JUN-22
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	09-JUN-22
Molybdenum (Mo)-Dissolved			95.4		%		70-130	09-JUN-22
Nickel (Ni)-Dissolved			89.7		%		70-130	09-JUN-22
Phosphorus (P)-Dissolved			96.3		%		70-130	09-JUN-22
Potassium (K)-Dissolved			N/A	MS-B	%		-	09-JUN-22
Rubidium (Rb)-Dissolved			93.5		%		70-130	09-JUN-22
Selenium (Se)-Dissolved			95.8		%		70-130	09-JUN-22
Silicon (Si)-Dissolved			87.8		%		70-130	09-JUN-22
Silver (Ag)-Dissolved			91.3		%		70-130	09-JUN-22
Sodium (Na)-Dissolved			N/A	MS-B	%		-	09-JUN-22
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	09-JUN-22
Sulfur (S)-Dissolved			N/A	MS-B	%		-	09-JUN-22
Tellurium (Te)-Dissolved			95.9		%		70-130	09-JUN-22
Thallium (Tl)-Dissolved			88.8		%		70-130	09-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5796635							
WG3737137-5	MS	L2711833-5						
Thorium (Th)-Dissolved			95.3		%		70-130	09-JUN-22
Tin (Sn)-Dissolved			93.1		%		70-130	09-JUN-22
Titanium (Ti)-Dissolved			92.3		%		70-130	09-JUN-22
Tungsten (W)-Dissolved			93.5		%		70-130	09-JUN-22
Uranium (U)-Dissolved			91.7		%		70-130	09-JUN-22
Vanadium (V)-Dissolved			94.2		%		70-130	09-JUN-22
Zinc (Zn)-Dissolved			88.8		%		70-130	09-JUN-22
Zirconium (Zr)-Dissolved			93.8		%		70-130	09-JUN-22
MET-T-CCMS-VA		Water						
Batch	R5805852							
WG3740534-6	LCS							
Aluminum (Al)-Total			105.5		%		80-120	22-JUN-22
Antimony (Sb)-Total			102.1		%		80-120	22-JUN-22
Arsenic (As)-Total			106.4		%		80-120	22-JUN-22
Barium (Ba)-Total			102.6		%		80-120	22-JUN-22
Beryllium (Be)-Total			103.0		%		80-120	22-JUN-22
Bismuth (Bi)-Total			108.9		%		80-120	22-JUN-22
Boron (B)-Total			102.0		%		80-120	22-JUN-22
Cadmium (Cd)-Total			105.8		%		80-120	22-JUN-22
Calcium (Ca)-Total			101.1		%		80-120	22-JUN-22
Cesium (Cs)-Total			103.1		%		80-120	22-JUN-22
Chromium (Cr)-Total			104.6		%		80-120	22-JUN-22
Cobalt (Co)-Total			104.5		%		80-120	22-JUN-22
Copper (Cu)-Total			105.4		%		80-120	22-JUN-22
Iron (Fe)-Total			110.1		%		80-120	22-JUN-22
Lead (Pb)-Total			107.0		%		80-120	22-JUN-22
Lithium (Li)-Total			102.7		%		80-120	22-JUN-22
Magnesium (Mg)-Total			107.8		%		80-120	22-JUN-22
Manganese (Mn)-Total			104.5		%		80-120	22-JUN-22
Molybdenum (Mo)-Total			104.3		%		80-120	22-JUN-22
Nickel (Ni)-Total			102.8		%		80-120	22-JUN-22
Phosphorus (P)-Total			118.1		%		80-120	22-JUN-22
Potassium (K)-Total			113.3		%		80-120	22-JUN-22
Rubidium (Rb)-Total			110.7		%		80-120	22-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA	Water							
Batch	R5805852							
WG3740534-6	LCS							
Selenium (Se)-Total			104.0		%		80-120	22-JUN-22
Silicon (Si)-Total			116.0		%		80-120	22-JUN-22
Silver (Ag)-Total			99.1		%		80-120	22-JUN-22
Sodium (Na)-Total			106.9		%		80-120	22-JUN-22
Strontium (Sr)-Total			102.1		%		80-120	22-JUN-22
Sulfur (S)-Total			104.2		%		80-120	22-JUN-22
Tellurium (Te)-Total			104.0		%		80-120	22-JUN-22
Thallium (Tl)-Total			106.7		%		80-120	22-JUN-22
Thorium (Th)-Total			103.5		%		80-120	22-JUN-22
Tin (Sn)-Total			104.9		%		80-120	22-JUN-22
Titanium (Ti)-Total			101.9		%		80-120	22-JUN-22
Tungsten (W)-Total			105.7		%		80-120	22-JUN-22
Uranium (U)-Total			109.3		%		80-120	22-JUN-22
Vanadium (V)-Total			107.0		%		80-120	22-JUN-22
Zinc (Zn)-Total			106.4		%		80-120	22-JUN-22
Zirconium (Zr)-Total			99.3		%		80-120	22-JUN-22
WG3740534-9	LCS							
Aluminum (Al)-Total			105.5		%		80-120	22-JUN-22
Antimony (Sb)-Total			102.1		%		80-120	22-JUN-22
Arsenic (As)-Total			106.4		%		80-120	22-JUN-22
Barium (Ba)-Total			102.6		%		80-120	22-JUN-22
Beryllium (Be)-Total			103.0		%		80-120	22-JUN-22
Bismuth (Bi)-Total			108.9		%		80-120	22-JUN-22
Boron (B)-Total			102.0		%		80-120	22-JUN-22
Cadmium (Cd)-Total			105.8		%		80-120	22-JUN-22
Calcium (Ca)-Total			101.1		%		80-120	22-JUN-22
Cesium (Cs)-Total			103.1		%		80-120	22-JUN-22
Chromium (Cr)-Total			104.6		%		80-120	22-JUN-22
Cobalt (Co)-Total			104.5		%		80-120	22-JUN-22
Copper (Cu)-Total			105.4		%		80-120	22-JUN-22
Iron (Fe)-Total			110.1		%		80-120	22-JUN-22
Lead (Pb)-Total			107.0		%		80-120	22-JUN-22
Lithium (Li)-Total			102.7		%		80-120	22-JUN-22
Magnesium (Mg)-Total			107.8		%		80-120	22-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5805852							
WG3740534-9	LCS							
Manganese (Mn)-Total			104.5		%		80-120	22-JUN-22
Molybdenum (Mo)-Total			104.3		%		80-120	22-JUN-22
Nickel (Ni)-Total			102.8		%		80-120	22-JUN-22
Phosphorus (P)-Total			118.1		%		80-120	22-JUN-22
Potassium (K)-Total			113.3		%		80-120	22-JUN-22
Rubidium (Rb)-Total			110.7		%		80-120	22-JUN-22
Selenium (Se)-Total			104.0		%		80-120	22-JUN-22
Silicon (Si)-Total			116.0		%		80-120	22-JUN-22
Silver (Ag)-Total			99.1		%		80-120	22-JUN-22
Sodium (Na)-Total			106.9		%		80-120	22-JUN-22
Strontium (Sr)-Total			102.1		%		80-120	22-JUN-22
Sulfur (S)-Total			104.2		%		80-120	22-JUN-22
Tellurium (Te)-Total			104.0		%		80-120	22-JUN-22
Thallium (Tl)-Total			106.7		%		80-120	22-JUN-22
Thorium (Th)-Total			103.5		%		80-120	22-JUN-22
Tin (Sn)-Total			104.9		%		80-120	22-JUN-22
Titanium (Ti)-Total			101.9		%		80-120	22-JUN-22
Tungsten (W)-Total			105.7		%		80-120	22-JUN-22
Uranium (U)-Total			109.3		%		80-120	22-JUN-22
Vanadium (V)-Total			107.0		%		80-120	22-JUN-22
Zinc (Zn)-Total			106.4		%		80-120	22-JUN-22
Zirconium (Zr)-Total			99.3		%		80-120	22-JUN-22
WG3740534-5	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	22-JUN-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	22-JUN-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	22-JUN-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	22-JUN-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	22-JUN-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	22-JUN-22
Boron (B)-Total			<0.010		mg/L		0.01	22-JUN-22
Cadmium (Cd)-Total			<0.000005C		mg/L		0.000005	22-JUN-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	22-JUN-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	22-JUN-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	22-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch R5805852								
WG3740534-5 MB								
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	22-JUN-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	22-JUN-22
Iron (Fe)-Total			<0.010		mg/L		0.01	22-JUN-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	22-JUN-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	22-JUN-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	22-JUN-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	22-JUN-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	22-JUN-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	22-JUN-22
Phosphorus (P)-Total			<0.050		mg/L		0.05	22-JUN-22
Potassium (K)-Total			<0.050		mg/L		0.05	22-JUN-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	22-JUN-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	22-JUN-22
Silicon (Si)-Total			<0.10		mg/L		0.1	22-JUN-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	22-JUN-22
Sodium (Na)-Total			<0.050		mg/L		0.05	22-JUN-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	22-JUN-22
Sulfur (S)-Total			<0.50		mg/L		0.5	22-JUN-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	22-JUN-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	22-JUN-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	22-JUN-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	22-JUN-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	22-JUN-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	22-JUN-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	22-JUN-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	22-JUN-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	22-JUN-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	22-JUN-22
MET-T-CCMS-WP		Water						
Batch R5795695								
WG3736309-2 LCS								
Aluminum (Al)-Total			98.2		%		80-120	07-JUN-22
Antimony (Sb)-Total			106.3		%		80-120	07-JUN-22
Arsenic (As)-Total			99.0		%		80-120	07-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5795695							
WG3736309-2	LCS							
Barium (Ba)-Total			101.8		%		80-120	07-JUN-22
Beryllium (Be)-Total			91.6		%		80-120	07-JUN-22
Bismuth (Bi)-Total			100.1		%		80-120	07-JUN-22
Boron (B)-Total			90.2		%		80-120	07-JUN-22
Cadmium (Cd)-Total			102.4		%		80-120	07-JUN-22
Calcium (Ca)-Total			96.6		%		80-120	07-JUN-22
Cesium (Cs)-Total			99.6		%		80-120	07-JUN-22
Chromium (Cr)-Total			99.1		%		80-120	07-JUN-22
Cobalt (Co)-Total			101.0		%		80-120	07-JUN-22
Copper (Cu)-Total			100.5		%		80-120	07-JUN-22
Iron (Fe)-Total			97.5		%		80-120	07-JUN-22
Lead (Pb)-Total			99.4		%		80-120	07-JUN-22
Lithium (Li)-Total			89.0		%		80-120	07-JUN-22
Magnesium (Mg)-Total			99.3		%		80-120	07-JUN-22
Manganese (Mn)-Total			98.8		%		80-120	07-JUN-22
Molybdenum (Mo)-Total			102.7		%		80-120	07-JUN-22
Nickel (Ni)-Total			99.6		%		80-120	07-JUN-22
Potassium (K)-Total			94.0		%		80-120	07-JUN-22
Phosphorus (P)-Total			95.5		%		80-120	07-JUN-22
Rubidium (Rb)-Total			97.5		%		80-120	07-JUN-22
Selenium (Se)-Total			100.9		%		80-120	07-JUN-22
Silicon (Si)-Total			94.1		%		80-120	07-JUN-22
Silver (Ag)-Total			101.6		%		80-120	07-JUN-22
Sodium (Na)-Total			123.5	MES	%		80-120	07-JUN-22
Strontium (Sr)-Total			100.7		%		80-120	07-JUN-22
Sulfur (S)-Total			98.8		%		80-120	07-JUN-22
Tellurium (Te)-Total			100.9		%		80-120	07-JUN-22
Thallium (Tl)-Total			102.1		%		80-120	07-JUN-22
Thorium (Th)-Total			95.6		%		80-120	07-JUN-22
Tin (Sn)-Total			100.8		%		80-120	07-JUN-22
Titanium (Ti)-Total			93.9		%		80-120	07-JUN-22
Tungsten (W)-Total			100.3		%		80-120	07-JUN-22
Uranium (U)-Total			98.8		%		80-120	07-JUN-22
Vanadium (V)-Total			101.3		%		80-120	07-JUN-22



Quality Control Report

Workorder: L2711833

Report Date: 30-JUN-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5795695							
WG3736309-2	LCS							
Zinc (Zn)-Total			98.6		%		80-120	07-JUN-22
Zirconium (Zr)-Total			98.0		%		80-120	07-JUN-22
WG3736309-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	07-JUN-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Boron (B)-Total			<0.010		mg/L		0.01	07-JUN-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	07-JUN-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	07-JUN-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	07-JUN-22
Iron (Fe)-Total			<0.010		mg/L		0.01	07-JUN-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	07-JUN-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	07-JUN-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	07-JUN-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	07-JUN-22
Potassium (K)-Total			<0.050		mg/L		0.05	07-JUN-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	07-JUN-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	07-JUN-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	07-JUN-22
Silicon (Si)-Total			<0.10		mg/L		0.1	07-JUN-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	07-JUN-22
Sodium (Na)-Total			<0.050		mg/L		0.05	07-JUN-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	07-JUN-22
Sulfur (S)-Total			<0.50		mg/L		0.5	07-JUN-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	07-JUN-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	07-JUN-22



Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed	
MET-T-CCMS-WP		Water							
Batch	R5795695								
WG3736309-1 MB									
Thorium (Th)-Total			<0.00010		mg/L		0.0001	07-JUN-22	
Tin (Sn)-Total			<0.00010		mg/L		0.0001	07-JUN-22	
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	07-JUN-22	
Tungsten (W)-Total			<0.00010		mg/L		0.0001	07-JUN-22	
Uranium (U)-Total			<0.000010		mg/L		0.00001	07-JUN-22	
Vanadium (V)-Total			<0.00050		mg/L		0.0005	07-JUN-22	
Zinc (Zn)-Total			<0.0030		mg/L		0.003	07-JUN-22	
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	07-JUN-22	
NH3-COL-WP		Water							
Batch	R5796520								
WG3738200-10 LCS									
Ammonia, Total (as N)			99.3		%		85-115	09-JUN-22	
WG3738200-9 MB									
Ammonia, Total (as N)			<0.010		mg/L		0.01	09-JUN-22	
NO2-L-IC-N-WP		Water							
Batch	R5794276								
WG3734788-14 LCS									
Nitrite (as N)			99.7		%		90-110	02-JUN-22	
WG3734788-13 MB									
Nitrite (as N)			<0.0010		mg/L		0.001	02-JUN-22	
Batch	R5797901								
WG3735270-3 DUP		L2711833-1							
Nitrite (as N)			<0.0010	RPD-NA	mg/L	N/A	20	03-JUN-22	
WG3735270-2 LCS									
Nitrite (as N)			100.3		%		90-110	03-JUN-22	
WG3735270-1 MB									
Nitrite (as N)			<0.0010		mg/L		0.001	03-JUN-22	
WG3735270-4 MS		L2711833-1							
Nitrite (as N)			110.1		%		75-125	03-JUN-22	
NO3-L-IC-N-WP		Water							
Batch	R5794276								
WG3734788-14 LCS									
Nitrate (as N)			99.3		%		90-110	02-JUN-22	
WG3734788-13 MB									
Nitrate (as N)			<0.0050		mg/L		0.005	02-JUN-22	



Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-L-IC-N-WP		Water						
Batch	R5797901							
WG3735270-3	DUP	L2711833-1						
Nitrate (as N)		0.111	0.110		mg/L	0.3	20	03-JUN-22
WG3735270-2	LCS							
Nitrate (as N)			98.8		%		90-110	03-JUN-22
WG3735270-1	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	03-JUN-22
WG3735270-4	MS	L2711833-1						
Nitrate (as N)			104.6		%		75-125	03-JUN-22
P-T-COL-WP		Water						
Batch	R5798716							
WG3737480-7	DUP	L2711833-9						
Phosphorus (P)-Total		0.0040	<0.0030	RPD-NA	mg/L	N/A	20	13-JUN-22
WG3737480-6	LCS							
Phosphorus (P)-Total			95.7		%		80-120	13-JUN-22
WG3737480-5	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	13-JUN-22
WG3737480-8	MS	L2711833-10						
Phosphorus (P)-Total			95.6		%		70-130	13-JUN-22
P-T-L-COL-WP		Water						
Batch	R5811738							
WG3745475-2	LCS							
Phosphorus (P)-Total			84.6		%		80-120	30-JUN-22
WG3745475-1	MB							
Phosphorus (P)-Total			<0.0010		mg/L		0.001	30-JUN-22
PH-WP		Water						
Batch	R5794537							
WG3735861-2	LCS							
pH			6.99		pH units		6.9-7.1	03-JUN-22
WG3735861-7	LCS							
pH			7.02		pH units		6.9-7.1	03-JUN-22
SO4-IC-N-WP		Water						
Batch	R5794276							
WG3734788-14	LCS							
Sulfate (SO4)			100.3		%		90-110	02-JUN-22
WG3734788-13	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	02-JUN-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-N-WP								
Batch R5797901								
WG3735270-3	DUP	L2711833-1						
Sulfate (SO4)		115	115		mg/L	0.1	20	03-JUN-22
WG3735270-2	LCS							
Sulfate (SO4)			99.3		%		90-110	03-JUN-22
WG3735270-1	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	03-JUN-22
WG3735270-4	MS	L2711833-1						
Sulfate (SO4)			N/A	MS-B	%		-	03-JUN-22
SOLIDS-TOTSUS-LR-WP								
Batch R5795143								
WG3735086-6	DUP	L2711833-1						
Total Suspended Solids		1.0	1.0		mg/L	0.0	20	06-JUN-22
WG3735086-5	LCS							
Total Suspended Solids			93.5		%		85-115	06-JUN-22
WG3735086-4	MB							
Total Suspended Solids			<1.0		mg/L		1	06-JUN-22
Batch R5796370								
WG3737488-3	DUP	L2711833-9						
Total Suspended Solids		<1.0	<1.0	RPD-NA	mg/L	N/A	20	09-JUN-22
WG3737488-2	LCS							
Total Suspended Solids			95.7		%		85-115	09-JUN-22
WG3737488-1	MB							
Total Suspended Solids			<1.0		mg/L		1	09-JUN-22
Batch R5796731								
WG3736417-2	LCS							
Total Suspended Solids			100.2		%		85-115	07-JUN-22
WG3736417-1	MB							
Total Suspended Solids			<1.0		mg/L		1	07-JUN-22

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
pH							
	1	30-MAY-22 12:34	03-JUN-22 10:21	0.25	94	hours	EHTR-FM
	2	30-MAY-22 13:29	03-JUN-22 10:21	0.25	93	hours	EHTR-FM
	3	30-MAY-22 13:39	03-JUN-22 10:21	0.25	93	hours	EHTR-FM
	4	30-MAY-22 13:54	03-JUN-22 10:21	0.25	92	hours	EHTR-FM
	5	30-MAY-22 14:13	03-JUN-22 10:21	0.25	92	hours	EHTR-FM
	6	30-MAY-22 14:32	03-JUN-22 10:21	0.25	92	hours	EHTR-FM
	7	30-MAY-22 14:48	03-JUN-22 10:21	0.25	91	hours	EHTR-FM
	8	31-MAY-22 15:37	03-JUN-22 10:21	0.25	67	hours	EHTR-FM
	9	Not provided	03-JUN-22 10:21	0.25	22	hours	EHTR-FM
	10	30-MAY-22	03-JUN-22 10:21	0.25	94	hours	EHTR-FM
Anions and Nutrients							
Nitrate in Water by IC (Low Level)							
	1	30-MAY-22 12:34	03-JUN-22 13:00	3	4	days	EHTL
	3	30-MAY-22 13:39	03-JUN-22 13:00	3	4	days	EHTL
	4	30-MAY-22 13:54	03-JUN-22 13:00	3	4	days	EHTL
	6	30-MAY-22 14:32	03-JUN-22 13:00	3	4	days	EHTL
	10	30-MAY-22	03-JUN-22 13:00	3	4	days	EHTR
Nitrite in Water by IC (Low Level)							
	1	30-MAY-22 12:34	03-JUN-22 13:00	3	4	days	EHTL
	3	30-MAY-22 13:39	03-JUN-22 13:00	3	4	days	EHTL
	4	30-MAY-22 13:54	03-JUN-22 13:00	3	4	days	EHTL
	6	30-MAY-22 14:32	03-JUN-22 13:00	3	4	days	EHTL
	10	30-MAY-22	03-JUN-22 13:00	3	4	days	EHTR
Phosphorus, Total							
	7	30-MAY-22 14:48	30-JUN-22 15:55	28	31	days	EHT
	8	31-MAY-22 15:37	30-JUN-22 15:55	28	30	days	EHT

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:

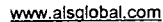
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.

Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2711833 were received on 02-JUN-22 12:00.

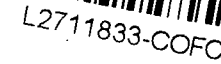
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



Canada Toll Free: 1 800 668 9878



REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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FEB 2022 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.



Alamos Gold Inc.
ATTN: KAREN MATHERS
C/O Stantec Consulting
500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Date Received: 30-JUN-22
Report Date: 23-AUG-22 11:14 (MT)
Version: FINAL REV. 2

Client Phone: 204-924-5735

Certificate of Analysis

Lab Work Order #: L2719501
Project P.O. #: NOT SUBMITTED
Job Reference: ALAMOS
C of C Numbers:
Legal Site Desc:

Comments: .
23-AUG-2022 Revised report - ID's on -5 and -6 corrected

Hua Wo
Chemistry Laboratory Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2719501-1 WATER 25-JUN-22 11:53 AQM71	L2719501-2 WATER 25-JUN-22 12:26 AQM72	L2719501-3 WATER 25-JUN-22 13:03 AQM73	L2719501-4 WATER 25-JUN-22 13:30 AQM74	L2719501-5 WATER 25-JUN-22 11:11 AQF7S
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	40.9	6.98	12.9	13.8	15.4
	Total Suspended Solids (mg/L)	2.0	5.1	<1.0	4.4	<1.0
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<2.0	5.4	3.0	2.4	<2.0
	Alkalinity, Total (as CaCO3) (mg/L)	29.8	2.3	7.0	11.2	14.3
	Ammonia, Total (as N) (mg/L)	0.015	<0.010	0.020	0.016	<0.010
	Bicarbonate (HCO3) (mg/L)	36.4	2.8	8.5	13.7	17.4
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.037	0.051	0.044	0.040	0.040
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.070	<0.070	<0.070	<0.070	<0.070
	Nitrate (as N) (mg/L)	0.022	<0.020	<0.020	<0.020	<0.020
	Nitrite (as N) (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Total Kjeldahl Nitrogen (mg/L)	0.44	0.39	0.45	0.57	0.31
	Phosphorus (P)-Total (mg/L)	0.0087	0.0053	0.0155	0.0271	0.0065
	Sulfate (SO4) (mg/L)	9.05	0.32	<0.30	0.44	0.62
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0014
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	17.0	22.2	23.2	13.0	9.17
	Total Organic Carbon (mg/L)	15.7	21.8	21.8	12.3	8.99
Total Metals	Aluminum (Al)-Total (mg/L)	0.0641	0.286	0.0863	0.0708	0.0300
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00023	0.00030	0.00035	0.00022	0.00020
	Barium (Ba)-Total (mg/L)	0.00900	0.00936	0.00400	0.00621	0.00721
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	0.0000103	<0.0000050	0.0000060	<0.0000050
	Calcium (Ca)-Total (mg/L)	14.5	2.05	4.20	4.33	4.28
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00025	0.00048	0.00028	0.00023	0.00018
	Cobalt (Co)-Total (mg/L)	<0.00010	0.00038	0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050	0.00082	<0.00050	0.00056	<0.00050
	Iron (Fe)-Total (mg/L)	0.172	1.83	0.449	0.246	0.078

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2719501-6 WATER 25-JUN-22 11:33 AQF7D	L2719501-7 WATER 25-JUN-22 14:20 FIELD BLANK	L2719501-8 WATER 26-JUN-22 08:45 AQF42	L2719501-9 WATER 26-JUN-22 09:24 AQF40	L2719501-10 WATER 26-JUN-22 12:23 AQF38
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	15.9	<0.20	9.36	10.1	20.6
	Total Suspended Solids (mg/L)	1.4	<1.0	2.0	4.2	2.9
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0
	Alkalinity, Total (as CaCO3) (mg/L)	14.7	<1.0	8.1	8.5	21.3
	Ammonia, Total (as N) (mg/L)	0.024	0.014	<0.010	<0.010	<0.010
	Bicarbonate (HCO3) (mg/L)	17.9	<1.2	9.9	10.4	26.0
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.038	<0.020	0.056	0.056	0.070
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.070	<0.070	<0.070	<0.070	<0.070
	Nitrate (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Nitrite (as N) (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Total Kjeldahl Nitrogen (mg/L)	0.39	<0.20	0.35	0.36	0.45
	Phosphorus (P)-Total (mg/L)	0.0090	0.0013	0.0156	0.0215	0.0170
	Sulfate (SO4) (mg/L)	0.76	<0.30	0.42	0.41	<0.30
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	8.81	0.93 ^{RRV}	9.99	9.84	10.4
	Total Organic Carbon (mg/L)	8.72	<0.50 ^{RRV}	9.47	9.90	11.1
Total Metals	Aluminum (Al)-Total (mg/L)	0.0254	<0.0030	0.0588	0.0626	0.0403
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00025	<0.00010	0.00016	0.00017	0.00018
	Barium (Ba)-Total (mg/L)	0.00813	<0.00010	0.00601	0.00604	0.00898
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	0.0000052	<0.0000050
	Calcium (Ca)-Total (mg/L)	4.35	<0.050	2.85	3.00	6.40
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00011	<0.00010	0.00024	0.00020	0.00018
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	0.114	<0.010	0.361	0.342	0.230

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2719501-11 WATER 26-JUN-22 14:22 AQF41	L2719501-12 WATER 26-JUN-22 16:06 AQF45	L2719501-13 WATER 26-JUN-22 13:45 AQF46	L2719501-14 WATER 27-JUN-22 08:33 AQM28	L2719501-15 WATER 27-JUN-22 10:42 AQM29C
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	9.90	10.2	23.4	18.2	8.74
	Total Suspended Solids (mg/L)	7.3	2.8	2.9	5.0	2.2
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<2.0	2.2	<2.0	<2.0	<2.0
	Alkalinity, Total (as CaCO3) (mg/L)	7.3	8.5	23.8	9.0	6.8
	Ammonia, Total (as N) (mg/L)	<0.010	<0.010	0.011	<0.010	0.016
	Bicarbonate (HCO3) (mg/L)	8.9	10.4	29.0	11.0	8.3
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.72	<0.50	<0.50	0.65	<0.50
	Fluoride (F) (mg/L)	0.056	0.056	0.038	0.048	0.050
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.070	<0.070	<0.070	<0.070	<0.070
	Nitrate (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Nitrite (as N) (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Total Kjeldahl Nitrogen (mg/L)	0.40	0.37	0.54	0.40	0.28
	Phosphorus (P)-Total (mg/L)	0.0206	0.0148	0.0139	0.0167	0.0202
	Sulfate (SO4) (mg/L)	0.46	0.54	0.46	7.37	1.11
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	9.53	9.62	12.1	11.3	8.07
	Total Organic Carbon (mg/L)	8.94	8.50	10.2	10.2	7.18
Total Metals	Aluminum (Al)-Total (mg/L)	0.0948	0.0778	0.0420	0.171	0.0539
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00016	0.00016	0.00023	0.00024	0.00016
	Barium (Ba)-Total (mg/L)	0.0100	0.00614	0.00712	0.00750	0.00612
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000089	<0.0000050	<0.0000050	0.0000248	<0.0000050
	Calcium (Ca)-Total (mg/L)	3.26	3.05	7.58	5.71	2.63
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00030	0.00024	0.00014	0.00033	0.00019
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	0.00098	0.00012
	Copper (Cu)-Total (mg/L)	0.00066	<0.00050	<0.00050	0.00469	0.00079
	Iron (Fe)-Total (mg/L)	0.488	0.325	0.063	0.849	0.317

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2719501-16 WATER 27-JUN-22 14:57 AQF43	L2719501-17 WATER 27-JUN-22 15:19 AQF44	L2719501-18 WATER 27-JUN-22 QC-01	L2719501-19 WATER 27-JUN-22 TRIP BLANK	
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	10.6	9.82	18.2	<0.20	
	Total Suspended Solids (mg/L)	2.0	2.1	3.0	<1.0	
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<2.0	<2.0	<2.0	<2.0	
	Alkalinity, Total (as CaCO3) (mg/L)	8.5	8.5	8.6	<1.0	
	Ammonia, Total (as N) (mg/L)	<0.010	<0.010	0.032	0.060	
	Bicarbonate (HCO3) (mg/L)	10.4	10.4	10.5	<1.2	
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	
	Chloride (Cl) (mg/L)	<0.50	<0.50	0.72	<0.50	
	Fluoride (F) (mg/L)	0.057	0.057	0.049	<0.020	
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	
	Nitrate and Nitrite as N (mg/L)	<0.070	<0.070	<0.070	<0.070	
	Nitrate (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	
	Nitrite (as N) (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Total Kjeldahl Nitrogen (mg/L)	<0.20	0.33	0.39	<0.20	
	Phosphorus (P)-Total (mg/L)	0.0140	0.0142	0.0181	<0.0010	
	Sulfate (SO4) (mg/L)	0.51	0.48	7.47	<0.30	
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	9.53	9.93	11.4	<0.50	
	Total Organic Carbon (mg/L)	8.84	8.39	10.5	<0.50	
Total Metals	Aluminum (Al)-Total (mg/L)	0.0681	0.0659	0.192	<0.0030	
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Total (mg/L)	0.00016	0.00017	0.00024	<0.00010	
	Barium (Ba)-Total (mg/L)	0.00596	0.00609	0.00775	<0.00010	
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	0.0000237	<0.0000050	
	Calcium (Ca)-Total (mg/L)	2.91	2.95	5.70	<0.050	
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Total (mg/L)	0.00026	0.00023	0.00766	<0.00010	
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	0.00105	<0.00010	
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	0.00516	<0.00050	
	Iron (Fe)-Total (mg/L)	0.314	0.321	1.07	<0.010	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2719501-1 WATER 25-JUN-22 11:53 AQM71	L2719501-2 WATER 25-JUN-22 12:26 AQM72	L2719501-3 WATER 25-JUN-22 13:03 AQM73	L2719501-4 WATER 25-JUN-22 13:30 AQM74	L2719501-5 WATER 25-JUN-22 11:11 AQF7S
Grouping	Analyte					
WATER						
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	0.000105	<0.000050	0.000067	<0.000050
	Lithium (Li)-Total (mg/L)	0.0014	0.0016	0.0016	0.0013	0.0010
	Magnesium (Mg)-Total (mg/L)	1.41	0.566	0.763	0.921	1.42
	Manganese (Mn)-Total (mg/L)	0.0122	0.0318	0.0181	0.0244	0.00313
	Mercury (Hg)-Total (ug/L)	0.00199	0.00232	0.00207	0.00305	0.00126
	Molybdenum (Mo)-Total (mg/L)	0.000058	0.000052	<0.000050	0.000234	0.000065
	Nickel (Ni)-Total (mg/L)	0.00056	0.00103	0.00054	<0.00050	<0.00050
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Total (mg/L)	0.517	0.327	0.077	0.502	0.503
	Rubidium (Rb)-Total (mg/L)	0.00077	0.00069	<0.00020	0.00068	0.00097
	Selenium (Se)-Total (mg/L)	0.000052	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Total (mg/L)	1.33	3.92	2.73	0.52	1.04
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	1.21	0.797	0.965	0.874	0.998
	Strontium (Sr)-Total (mg/L)	0.0205	0.00851	0.00933	0.0103	0.0120
	Sulfur (S)-Total (mg/L)	3.51	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00068
	Titanium (Ti)-Total (mg/L)	0.00172	0.00597	0.00088	0.00121	0.00046
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.000020	0.000036	<0.000010	0.000020	<0.000010
	Vanadium (V)-Total (mg/L)	<0.00050	0.00077	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0031	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00020	0.00034	<0.00020	<0.00020	<0.00020
Dissolved Metals	Dissolved MeHg Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0471	0.249	0.0835	0.0505	0.0260
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00023	0.00023	0.00032	0.00019	0.00017
	Barium (Ba)-Dissolved (mg/L)	0.00899	0.00826	0.00368	0.00552	0.0281
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	<0.000050	0.0000088	<0.000050	<0.000050	<0.000050

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2719501-6	L2719501-7	L2719501-8	L2719501-9	L2719501-10
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date	25-JUN-22	25-JUN-22	26-JUN-22	26-JUN-22	26-JUN-22
		Sampled Time	11:33	14:20	08:45	09:24	12:23
		Client ID	AQF7D	FIELD BLANK	AQF42	AQF40	AQF38
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	0.000057	0.000061	<0.000050	
	Lithium (Li)-Total (mg/L)	0.0010	<0.0010	0.0015	0.0015	0.0013	
	Magnesium (Mg)-Total (mg/L)	1.40	<0.0050	0.761	0.801	1.44	
	Manganese (Mn)-Total (mg/L)	0.00576	<0.00010	0.0158	0.0229	0.0659	
	Mercury (Hg)-Total (ug/L)	0.00167	<0.00050	0.00203	0.00223	0.00146	
	Molybdenum (Mo)-Total (mg/L)	0.000072	<0.000050	0.000201	0.000076	0.00145	
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	0.492	<0.050	0.515	0.535	0.518	
	Rubidium (Rb)-Total (mg/L)	0.00082	<0.00020	0.00097	0.00098	0.00084	
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Silicon (Si)-Total (mg/L)	1.07	<0.10	2.07	1.98	1.03	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	0.987	0.066	0.981	0.981	1.01	
	Strontium (Sr)-Total (mg/L)	0.0119	<0.00020	0.0109	0.0106	0.0143	
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	0.0116	<0.00010	0.00028	0.00024	0.00029	
	Titanium (Ti)-Total (mg/L)	0.00048	<0.00030	0.00171	0.00153	0.00059	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	0.000010	<0.000010	0.000024	0.000023	0.000015	
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	0.0049	<0.0030	
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved MeHg Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0201	<0.0010	0.0341	0.0359	0.0222	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00021	<0.00010	0.00016	0.00017	0.00016	
	Barium (Ba)-Dissolved (mg/L)	0.00815	0.00057 ^{RRV}	0.00552	0.00533	0.00792	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2719501-11	L2719501-12	L2719501-13	L2719501-14	L2719501-15
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date	26-JUN-22	26-JUN-22	26-JUN-22	27-JUN-22	27-JUN-22
		Sampled Time	14:22	16:06	13:45	08:33	10:42
		Client ID	AQF41	AQF45	AQF46	AQM28	AQM29C
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	0.000092	0.000053	<0.000050	0.000103	0.000058	
	Lithium (Li)-Total (mg/L)	0.0015	0.0015	0.0012	0.0015	0.0015	
	Magnesium (Mg)-Total (mg/L)	0.814	0.825	1.53	1.18	0.656	
	Manganese (Mn)-Total (mg/L)	0.0631	0.0168	0.0105	0.0380	0.0199	
	Mercury (Hg)-Total (ug/L)	0.00362	0.00176	0.00161	0.00205	0.00129	
	Molybdenum (Mo)-Total (mg/L)	0.000071	0.000078	0.000067	0.000056	<0.000050	
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	<0.00050	0.0589	0.00408	
	Phosphorus (P)-Total (mg/L)	0.052	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	0.573	0.511	0.594	0.703	0.482	
	Rubidium (Rb)-Total (mg/L)	0.00108	0.00099	0.00078	0.00096	0.00098	
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Silicon (Si)-Total (mg/L)	2.05	2.03	0.37	2.45	2.12	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	0.974	0.986	0.902	1.23	0.938	
	Strontium (Sr)-Total (mg/L)	0.0127	0.0112	0.0120	0.0156	0.0107	
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	2.46	0.54	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	0.00016	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Total (mg/L)	0.00342	0.00251	0.00086	0.00157	0.00182	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	0.000029	0.000028	<0.000010	0.000028	0.000024	
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	0.0071	<0.0030	<0.0030	0.0135	<0.0030	
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved MeHg Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0334	0.0343	0.0264	0.127	0.0244	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00015	0.00014	0.00024	0.00021	0.00014	
	Barium (Ba)-Dissolved (mg/L)	0.00950	0.00558	0.0253 ^{RRV}	0.00763	0.00577	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	0.0000193	<0.0000050	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2719501-16	L2719501-17	L2719501-18	L2719501-19	
		Description	WATER	WATER	WATER	WATER	
		Sampled Date	27-JUN-22	27-JUN-22	27-JUN-22	27-JUN-22	
		Sampled Time	14:57	15:19			
		Client ID	AQF43	AQF44	QC-01	TRIP BLANK	
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	0.000103	<0.000050		
	Lithium (Li)-Total (mg/L)	0.0015	0.0015	<0.0010	<0.0010		
	Magnesium (Mg)-Total (mg/L)	0.847	0.828	1.20	<0.0050		
	Manganese (Mn)-Total (mg/L)	0.0167	0.0173	0.0429	<0.00010		
	Mercury (Hg)-Total (ug/L)	0.00176	0.00187	0.00199	<0.00050		
	Molybdenum (Mo)-Total (mg/L)	0.000051	<0.000050	0.000789	<0.000050		
	Nickel (Ni)-Total (mg/L)	0.00058	<0.00050	0.0615	<0.00050		
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030		
	Potassium (K)-Total (mg/L)	0.537	0.562	0.700	<0.050		
	Rubidium (Rb)-Total (mg/L)	0.00100	0.00098	0.00105	<0.00020		
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050		
	Silicon (Si)-Total (mg/L)	2.13	2.17	2.51	<0.10		
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010		
	Sodium (Na)-Total (mg/L)	1.08	1.10	1.26	<0.050		
	Strontium (Sr)-Total (mg/L)	0.0118	0.0118	0.0151	<0.00020		
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	2.24	<0.50		
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020		
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010		
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Tin (Sn)-Total (mg/L)	<0.00010	0.00031	<0.00010	<0.00010		
	Titanium (Ti)-Total (mg/L)	0.00184	0.00178	0.00183	<0.00030		
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Uranium (U)-Total (mg/L)	0.000023	0.000020	0.000024	<0.000010		
	Vanadium (V)-Total (mg/L)	0.00088	0.00086	0.00070	<0.00050		
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0123	0.0151	<0.0030		
	Zirconium (Zr)-Total (mg/L)	0.00026	<0.00020	<0.00020	<0.00020		
Dissolved Metals	Dissolved MeHg Filtration Location	FIELD	FIELD	FIELD	FIELD		
	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD		
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD		
	Aluminum (Al)-Dissolved (mg/L)	0.0311	0.0334	0.126	<0.0010		
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Arsenic (As)-Dissolved (mg/L)	0.00017	0.00016	0.00021	<0.00010		
	Barium (Ba)-Dissolved (mg/L)	0.00534	0.0253 ^{RRV}	0.00717	<0.00010		
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050		
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010		
	Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.000050	0.0000193	<0.000050		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2719501-1 WATER 25-JUN-22 11:53 AQM71	L2719501-2 WATER 25-JUN-22 12:26 AQM72	L2719501-3 WATER 25-JUN-22 13:03 AQM73	L2719501-4 WATER 25-JUN-22 13:30 AQM74	L2719501-5 WATER 25-JUN-22 11:11 AQF7S
Grouping	Analyte					
WATER						
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	14.1	1.91	3.96	4.07	3.96
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	0.00016	0.00039	0.00017	0.00015	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00033	0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00063	0.00087	0.00028	0.00044	0.00118
	Iron (Fe)-Dissolved (mg/L)	0.132	1.43	0.398	0.140	0.068
	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000066	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	1.39	0.538	0.734	0.889	1.35
	Manganese (Mn)-Dissolved (mg/L)	0.0107	0.0283	0.0171	0.0105	0.00142
	Mercury (Hg)-Dissolved (ug/L)	0.00167	0.00240	0.00198	0.00162	0.00131
	Molybdenum (Mo)-Dissolved (mg/L)	0.000052	<0.000050	<0.000050	0.000233	0.000084
	Nickel (Ni)-Dissolved (mg/L)	0.00070	0.00089	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.555	0.284	0.094	0.465	0.594
	Rubidium (Rb)-Dissolved (mg/L)	0.00076	0.00065	<0.00020	0.00060	0.00090
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	1.30	3.80	2.64	0.458	1.03
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.20	0.773	0.925	0.846	0.987
	Strontium (Sr)-Dissolved (mg/L)	0.0202	0.00807	0.00880	0.00986	0.0118
	Sulfur (S)-Dissolved (mg/L)	3.63	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00016
	Titanium (Ti)-Dissolved (mg/L)	0.00070	0.00470	0.00069	0.00060	0.00036
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000015	0.000033	<0.000010	0.000016	<0.000010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	0.00069	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0033	0.0028	0.0026	0.0015	0.0036
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	0.00039	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	0.71	<0.50	1.34	<0.50	<0.50
	Methylmercury (as MeHg)-Dissolved (ug/L)	0.000262	0.000209	0.000205	0.000214	0.000055
	Methylmercury (as MeHg)-Total (ug/L)	0.000337	0.000170	0.000137	0.000212	0.000038

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2719501-6 WATER 25-JUN-22 11:33 AQF7D	L2719501-7 WATER 25-JUN-22 14:20 FIELD BLANK	L2719501-8 WATER 26-JUN-22 08:45 AQF42	L2719501-9 WATER 26-JUN-22 09:24 AQF40	L2719501-10 WATER 26-JUN-22 12:23 AQF38
Grouping	Analyte					
WATER						
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	4.09	<0.050	2.57	2.77	5.94
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	0.00013	0.00013	0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00030	<0.00020	0.00033	0.00032	<0.00020
	Iron (Fe)-Dissolved (mg/L)	0.069	<0.010	0.183	0.180	0.093
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	1.37	<0.0050	0.716	0.779	1.41
	Manganese (Mn)-Dissolved (mg/L)	0.00129	<0.00010	0.00212	0.00348	0.00631
	Mercury (Hg)-Dissolved (ug/L)	0.00127	<0.00050	0.00164	0.00177	0.00135
	Molybdenum (Mo)-Dissolved (mg/L)	0.000060	<0.000050	0.000078	0.000077	0.00137
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.496	<0.050	0.552	0.532	0.545
	Rubidium (Rb)-Dissolved (mg/L)	0.00091	<0.00020	0.00090	0.00091	0.00079
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	1.05	<0.050	1.98	1.97	0.981
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	0.964	<0.050	0.930	0.950	0.978
	Strontium (Sr)-Dissolved (mg/L)	0.0117	<0.00010	0.0105	0.0107	0.0142
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	0.00181	<0.00010	0.00030	0.00019	0.00020
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	0.00046	0.00051	<0.00030
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	<0.000010	<0.000010	0.000019	0.000021	0.000012
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0011	0.0016	0.0010	0.0064	0.0051
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	1.35	<0.50	0.52	<0.50
	Methylmercury (as MeHg)-Dissolved (ug/L)	0.000060	0.000129	0.000147	0.000145	0.000184
	Methylmercury (as MeHg)-Total (ug/L)	0.000072	<0.000020	0.000056	0.000399	0.000023

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2719501-11 WATER 26-JUN-22 14:22 AQF41	L2719501-12 WATER 26-JUN-22 16:06 AQF45	L2719501-13 WATER 26-JUN-22 13:45 AQF46	L2719501-14 WATER 27-JUN-22 08:33 AQM28	L2719501-15 WATER 27-JUN-22 10:42 AQM29C
Grouping	Analyte					
WATER						
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	2.73	2.78	6.99	5.40	2.44
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	0.00013	0.00012	<0.00010	0.00021	0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	0.00056	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00062	0.00031	0.00115	0.00355	0.00092
	Iron (Fe)-Dissolved (mg/L)	0.177	0.176	0.043	0.641	0.164
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	0.000062	<0.000050
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	0.748	0.786	1.44	1.14	0.645
	Manganese (Mn)-Dissolved (mg/L)	0.00415	0.00238	0.00608	0.0269	0.00858
	Mercury (Hg)-Dissolved (ug/L)	0.00216	0.00204	0.00149	0.00282	0.00112
	Molybdenum (Mo)-Dissolved (mg/L)	0.000068	0.000102	0.000070	0.000072	<0.000050
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	0.0538	0.00348
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.506	0.489	0.549	0.723	0.499
	Rubidium (Rb)-Dissolved (mg/L)	0.00094	0.00094	0.00070	0.00097	0.00090
	Selenium (Se)-Dissolved (mg/L)	<0.000050	0.000073	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	1.89	1.90	0.332	2.46	2.07
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	0.934	0.911	0.842	1.22	0.904
	Strontium (Sr)-Dissolved (mg/L)	0.0103	0.0106	0.0116	0.0154	0.0105
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	2.12	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	0.00023	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	0.00017	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00052	0.00056	0.00034	0.00076	<0.00030
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000022	0.000021	<0.000010	0.000022	0.000020
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0023	0.0011	0.0035	0.0110	0.0019
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	0.51	<0.50	0.57	<0.50
	Methylmercury (as MeHg)-Dissolved (ug/L)	0.000088	0.000097	0.000076	0.000082	0.000124
	Methylmercury (as MeHg)-Total (ug/L)	0.000061	0.000064	0.000116	0.000060	0.000051

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2719501-16 WATER 27-JUN-22 14:57 AQF43	L2719501-17 WATER 27-JUN-22 15:19 AQF44	L2719501-18 WATER 27-JUN-22 QC-01	L2719501-19 WATER 27-JUN-22 TRIP BLANK	
Grouping	Analyte					
WATER						
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	2.92	2.68	5.43	<0.050	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Dissolved (mg/L)	0.00012	0.00013	0.00019	<0.00010	
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	0.00056	<0.00010	
	Copper (Cu)-Dissolved (mg/L)	0.00022	0.00136	0.00367	0.00024	
	Iron (Fe)-Dissolved (mg/L)	0.168	0.174	0.636	<0.010	
	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000050	0.000074	<0.000050	
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Magnesium (Mg)-Dissolved (mg/L)	0.814	0.759	1.13	<0.0050	
	Manganese (Mn)-Dissolved (mg/L)	0.00276	0.00264	0.0274	<0.00010	
	Mercury (Hg)-Dissolved (ug/L)	0.00175	0.00168	0.00181	<0.00050	
	Molybdenum (Mo)-Dissolved (mg/L)	0.000081	0.000181 ^{RRV}	<0.000050	<0.000050	
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	0.0539	0.00055	
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Dissolved (mg/L)	0.668	0.628	0.726	<0.050	
	Rubidium (Rb)-Dissolved (mg/L)	0.00091	0.00094	0.00102	<0.00020	
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Silicon (Si)-Dissolved (mg/L)	1.92	1.99	2.45	<0.050	
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Dissolved (mg/L)	0.954	0.962	1.16	<0.050	
	Strontium (Sr)-Dissolved (mg/L)	0.0106	0.0104	0.0152	<0.00010	
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	2.34	<0.50	
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Dissolved (mg/L)	0.00010	0.00019	<0.00010	<0.00010	
	Titanium (Ti)-Dissolved (mg/L)	0.00037	0.00041	0.00071	<0.00030	
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Dissolved (mg/L)	0.000019	0.000019	0.000022	<0.000010	
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Dissolved (mg/L)	0.0045	0.0033	0.0125	0.0015	
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
Speciated Metals	Chromium, Hexavalent (ug/L)	1.80	<0.50	<0.50	<0.50	
	Methylmercury (as MeHg)-Dissolved (ug/L)	0.000177	0.000059	<0.000020	<0.000020	
	Methylmercury (as MeHg)-Total (ug/L)	0.000056	0.000062	<0.000020	<0.000020	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Vanadium (V)-Total	B	L2719501-7
Matrix Spike	Silver (Ag)-Dissolved	MES	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Dissolved Organic Carbon	MS-B	L2719501-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Total Organic Carbon	MS-B	L2719501-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Arsenic (As)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Iron (Fe)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Uranium (U)-Dissolved	MS-B	L2719501-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L2719501-16, -17
Matrix Spike	Barium (Ba)-Total	MS-B	L2719501-1, -10, -11, -12, -13, -14, -15, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L2719501-18, -19
Matrix Spike	Calcium (Ca)-Total	MS-B	L2719501-16, -17
Matrix Spike	Calcium (Ca)-Total	MS-B	L2719501-1, -10, -11, -12, -13, -14, -15, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L2719501-18, -19
Matrix Spike	Copper (Cu)-Total	MS-B	L2719501-16, -17
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2719501-16, -17
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2719501-1, -10, -11, -12, -13, -14, -15, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2719501-18, -19
Matrix Spike	Potassium (K)-Total	MS-B	L2719501-18, -19
Matrix Spike	Sodium (Na)-Total	MS-B	L2719501-16, -17
Matrix Spike	Sodium (Na)-Total	MS-B	L2719501-1, -10, -11, -12, -13, -14, -15, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L2719501-18, -19
Matrix Spike	Strontium (Sr)-Total	MS-B	L2719501-16, -17
Matrix Spike	Strontium (Sr)-Total	MS-B	L2719501-1, -10, -11, -12, -13, -14, -15, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L2719501-18, -19
Matrix Spike	Sulfur (S)-Total	MS-B	L2719501-16, -17
Matrix Spike	Sulfur (S)-Total	MS-B	L2719501-18, -19

Qualifiers for Individual Parameters Listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-TITR-TB	Water	Acidity	APHA 2310 B modified

This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.

Reference Information

ALK-CO3CO3-CALC-WP Water Alkalinity, Carbonate CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO₃ 2-/L.

ALK-HCO3HCO3-CALC-WP Water Alkalinity, Bicarbonate CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO₃-/L

ALK-OHOH-CALC-WP Water Alkalinity, Hydroxide CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.

ALK-TITR-WP Water Alkalinity, Total (as CaCO₃) APHA 2320B

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO₃- and H₂CO₃ endpoints indicated electrometrically.

BR-IC-N-WP Water Bromide in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

C-DOC-HTC-WP Water Dissolved Organic Carbon by Combustion APHA 5310 B-WP

Filtered (0.45 um) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

C-TOC-HTC-WP Water Total Organic Carbon by Combustion APHA 5310 B-WP

Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

CL-IC-N-WP Water Chloride in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

CN-FREE-L-CFA-VA Water Low Level Free Cyanide in water by CFA ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-T-L-CFA-VA Water Low Level Total Cyanide in water by CFA ISO 14403:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.

CN-WAD-L-CFA-VA Water Low level WAD Cyanide in water by CFA APHA 4500-CN CYANIDE

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

CR-CR6-PWQO-IC-WT Water Chromium +6 EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-SCREEN-WP Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc

F-IC-N-WP Water Fluoride in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

HARDNESS-CALC-WP Water Hardness Calculated APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

HG-D-U-CVAF-VA Water Diss. Mercury in Water by CVAFS (Ultra) APHA 3030 B / EPA 1631 REV. E

Reference Information

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure may involve preliminary sample treatment by filtration (APHA 3030B) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.

HG-T-U-CVAF-VA Water Total Mercury in Water by CVAFS (Ultra) EPA 1631 REV. E

This analysis is carried out using procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.

MEHG-D-GCAF-VA Water Diss. Methylmercury in Water by GCAFS EPA 1630 (mod)

This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".

MEHG-T-GCAF-VA Water Total Methylmercury in Water by GCAFS EPA 1630 (mod)

This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".

MET-D-CCMS-WP Water Dissolved Metals in Water by CRC ICPMS APHA 3030B/6020B (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-T-CCMS-WP Water Total Metals in Water by CRC ICPMS EPA 200.2/6020B (mod.)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

N-TOTKJ-WP Water Total Kjeldahl Nitrogen APHA 4500 NorgD (modified)

Aqueous samples are digested in a block digester with sulfuric acid and copper sulfate as a catalyst. Total Kjeldahl Nitrogen is then analyzed using a discrete analyzer with colorimetric detection.

NH3-COL-WP Water Ammonia by colour APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

NO2+NO3-CALC-WP Water Nitrate+Nitrite CALCULATION

NO2-IC-N-WP Water Nitrite in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

NO3-IC-N-WP Water Nitrate in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

P-T-COL-WP Water Phosphorus, Total APHA 4500 P PHOSPHORUS-L

This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.

P-T-L-COL-WP Water Phosphorus, Total APHA 4500 P PHOSPHORUS-L

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourmetrically after persulphate digestion of the sample.

SO4-IC-N-WP Water Sulfate in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

SOLIDS-TOTSUS-LR-WP Water Total Suspended Solids APHA 2540 D (modified)

Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 - 105°C.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Reference Information

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lw - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L2719501

Report Date: 23-AUG-22

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Client: Alamos Gold Inc.
C/O Stantec Consulting 500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Contact: KAREN MATHERS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-TITR-TB								
Water								
Batch	R5829042							
WG3749095-2	LCS							
Acidity (as CaCO3)			98.3		%		85-115	26-JUL-22
WG3749095-1	MB							
Acidity (as CaCO3)			2.2		mg/L		3	26-JUL-22
ALK-TITR-WP								
Water								
Batch	R5815536							
WG3746445-14	LCS							
Alkalinity, Total (as CaCO3)			103.3		%		85-115	05-JUL-22
WG3746445-9	LCS							
Alkalinity, Total (as CaCO3)			103.3		%		85-115	05-JUL-22
WG3746445-11	MB							
Alkalinity, Total (as CaCO3)			<1.0		mg/L		1	05-JUL-22
WG3746445-6	MB							
Alkalinity, Total (as CaCO3)			<1.0		mg/L		1	05-JUL-22
BR-IC-N-WP								
Water								
Batch	R5814860							
WG3745829-3	DUP	L2719501-6						
Bromide (Br)		<0.10	<0.10	RPD-NA	mg/L	N/A	20	02-JUL-22
WG3745829-2	LCS							
Bromide (Br)			102.6		%		85-115	02-JUL-22
WG3745829-6	LCS							
Bromide (Br)			102.5		%		85-115	02-JUL-22
WG3745829-1	MB							
Bromide (Br)			<0.10		mg/L		0.1	02-JUL-22
WG3745829-5	MB							
Bromide (Br)			<0.10		mg/L		0.1	02-JUL-22
WG3745829-4	MS	L2719501-6						
Bromide (Br)			104.8		%		75-125	02-JUL-22
C-DOC-HTC-WP								
Water								
Batch	R5829339							
WG3752695-3	DUP	L2719501-1						
Dissolved Organic Carbon		17.0	17.2		mg/L	0.9	20	27-JUL-22
WG3752695-2	LCS							
Dissolved Organic Carbon			101.8		%		80-120	27-JUL-22
WG3752695-1	MB							
Dissolved Organic Carbon			<0.50		mg/L		0.5	27-JUL-22
WG3752695-4	MS	L2719501-2						
Dissolved Organic Carbon			N/A	MS-B	%		-	27-JUL-22



Quality Control Report

Workorder: L2719501

Report Date: 23-AUG-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-TOC-HTC-WP								
Batch R5829338								
WG3752757-3 DUP		L2719501-3						
Total Organic Carbon		21.8	22.5		mg/L	3.3	20	26-JUL-22
WG3752757-2 LCS								
Total Organic Carbon			101.1		%		80-120	26-JUL-22
WG3752757-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	26-JUL-22
WG3752757-4 MS		L2719501-4						
Total Organic Carbon			N/A	MS-B	%		-	26-JUL-22
CL-IC-N-WP								
Batch R5814860								
WG3745829-3 DUP		L2719501-6						
Chloride (Cl)		<0.50	<0.50	RPD-NA	mg/L	N/A	20	02-JUL-22
WG3745829-2 LCS								
Chloride (Cl)			99.4		%		90-110	02-JUL-22
WG3745829-6 LCS								
Chloride (Cl)			97.7		%		90-110	02-JUL-22
WG3745829-1 MB								
Chloride (Cl)			<0.50		mg/L		0.5	02-JUL-22
WG3745829-5 MB								
Chloride (Cl)			<0.50		mg/L		0.5	02-JUL-22
WG3745829-4 MS		L2719501-6						
Chloride (Cl)			103.1		%		75-125	02-JUL-22
CN-FREE-L-CFA-VA								
Batch R5822695								
WG3749606-3 DUP		L2719501-16						
Cyanide, Free		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	16-JUL-22
WG3749606-2 LCS								
Cyanide, Free			95.2		%		80-120	16-JUL-22
WG3749606-1 MB								
Cyanide, Free			<0.0010		mg/L		0.001	16-JUL-22
WG3749606-4 MS		L2719501-17						
Cyanide, Free			100.1		%		75-125	16-JUL-22
CN-T-L-CFA-VA								
Batch R5822695								
WG3749606-3 DUP		L2719501-16						
Cyanide, Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	16-JUL-22
WG3749606-2 LCS								
Cyanide, Total			86.5		%		80-120	16-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-L-CFA-VA								
Water								
Batch	R5822695							
WG3749606-1 MB								
Cyanide, Total			<0.0010		mg/L		0.001	16-JUL-22
WG3749606-4 MS		L2719501-17						
Cyanide, Total			91.2		%		75-125	16-JUL-22
CN-WAD-L-CFA-VA								
Water								
Batch	R5822695							
WG3749606-3 DUP		L2719501-16						
Cyanide, Weak Acid Diss		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	16-JUL-22
WG3749606-2 LCS								
Cyanide, Weak Acid Diss			93.9		%		80-120	16-JUL-22
WG3749606-1 MB								
Cyanide, Weak Acid Diss			<0.0010		mg/L		0.001	16-JUL-22
WG3749606-4 MS		L2719501-17						
Cyanide, Weak Acid Diss			100.6		%		75-125	16-JUL-22
CR-CR6-PWQO-IC-WT								
Water								
Batch	R5822038							
WG3748840-2 LCS								
Chromium, Hexavalent			100.1		%		80-120	13-JUL-22
WG3748840-1 MB								
Chromium, Hexavalent			<0.50		ug/L		0.5	13-JUL-22
Batch	R5822356							
WG3749227-2 LCS								
Chromium, Hexavalent			98.0		%		80-120	14-JUL-22
WG3749227-1 MB								
Chromium, Hexavalent			<0.50		ug/L		0.5	14-JUL-22
F-IC-N-WP								
Water								
Batch	R5814860							
WG3745829-3 DUP		L2719501-6						
Fluoride (F)		0.038	0.038		mg/L	0.1	20	02-JUL-22
WG3745829-2 LCS								
Fluoride (F)			101.9		%		90-110	02-JUL-22
WG3745829-6 LCS								
Fluoride (F)			100.6		%		90-110	02-JUL-22
WG3745829-1 MB								
Fluoride (F)			<0.020		mg/L		0.02	02-JUL-22
WG3745829-5 MB								
Fluoride (F)			<0.020		mg/L		0.02	02-JUL-22
WG3745829-4 MS		L2719501-6						



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F-IC-N-WP								
Water								
Batch	R5814860							
WG3745829-4	MS	L2719501-6						
Fluoride (F)			107.0		%		75-125	02-JUL-22
HG-D-U-CVAF-VA								
Water								
Batch	R5828127							
WG3751764-3	DUP	L2719501-2						
Mercury (Hg)-Dissolved		0.00240	0.00251		ug/L	4.7	20	23-JUL-22
WG3751764-2	LCS							
Mercury (Hg)-Dissolved			95.9		%		80-120	23-JUL-22
WG3751764-1	MB	NP						
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	23-JUL-22
WG3751764-4	MS	L2719501-18						
Mercury (Hg)-Dissolved			97.6		%		70-130	23-JUL-22
HG-T-U-CVAF-VA								
Water								
Batch	R5827733							
WG3751362-3	DUP	L2719501-2						
Mercury (Hg)-Total		0.00232	0.00237		ug/L	2.2	20	21-JUL-22
WG3751362-2	LCS							
Mercury (Hg)-Total			102.3		%		80-120	21-JUL-22
WG3751362-1	MB							
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	21-JUL-22
WG3751362-4	MS	L2719501-18						
Mercury (Hg)-Total			89.5		%		70-130	21-JUL-22
MEHG-D-GCAF-VA								
Water								
Batch	R5835722							
WG3755558-2	DUP	L2719501-10						
Methylmercury (as MeHg)-Dissolved		0.000184	0.000180		ug/L	1.9	30	08-AUG-22
WG3755558-3	LCS							
Methylmercury (as MeHg)-Dissolved			77.1		%		70-130	08-AUG-22
WG3755558-1	MB							
Methylmercury (as MeHg)-Dissolved			<0.000020		ug/L		0.00002	08-AUG-22
WG3755558-4	MS	L2719501-16						
Methylmercury (as MeHg)-Dissolved			93.1		%		60-140	08-AUG-22
Batch	R5840199							
WG3756176-3	LCS							
Methylmercury (as MeHg)-Dissolved			86.6		%		70-130	10-AUG-22
WG3756176-1	MB							
Methylmercury (as MeHg)-Dissolved			<0.000020		ug/L		0.00002	10-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MEHG-T-GCAF-VA		Water						
Batch	R5835722							
WG3755152-2	DUP	L2719501-1						
Methylmercury (as MeHg)-Total		0.000337	0.000302		ug/L	11	30	05-AUG-22
WG3755553-2	DUP	L2719501-12						
Methylmercury (as MeHg)-Total		0.000064	0.000067		ug/L	5.2	30	08-AUG-22
WG3755152-3	LCS							
Methylmercury (as MeHg)-Total			90.0		%		70-130	05-AUG-22
WG3755553-3	LCS							
Methylmercury (as MeHg)-Total			97.9		%		70-130	08-AUG-22
WG3755558-3	LCS							
Methylmercury (as MeHg)-Total			77.1		%		70-130	09-AUG-22
WG3755152-1	MB							
Methylmercury (as MeHg)-Total			<0.000020		ug/L		0.00002	05-AUG-22
WG3755553-1	MB							
Methylmercury (as MeHg)-Total			<0.000020		ug/L		0.00002	08-AUG-22
WG3755558-1	MB							
Methylmercury (as MeHg)-Total			<0.000020		ug/L		0.00002	09-AUG-22
WG3755553-4	MS	L2719501-3						
Methylmercury (as MeHg)-Total			99.0		%		60-140	08-AUG-22
Batch	R5840199							
WG3756176-3	LCS							
Methylmercury (as MeHg)-Total			86.6		%		70-130	10-AUG-22
WG3756176-1	MB							
Methylmercury (as MeHg)-Total			<0.000020		ug/L		0.00002	10-AUG-22
MET-D-CCMS-WP		Water						
Batch	R5817477							
WG3746405-4	DUP	L2719501-11						
Aluminum (Al)-Dissolved		0.0334	0.0319		mg/L	4.5	20	06-JUL-22
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	06-JUL-22
Arsenic (As)-Dissolved		0.00015	0.00013		mg/L	12	20	06-JUL-22
Barium (Ba)-Dissolved		0.00950	0.00943		mg/L	0.7	20	06-JUL-22
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	06-JUL-22
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	06-JUL-22
Boron (B)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	06-JUL-22
Cadmium (Cd)-Dissolved		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	06-JUL-22
Calcium (Ca)-Dissolved		2.73	2.75		mg/L	0.6	20	06-JUL-22
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	06-JUL-22
Chromium (Cr)-Dissolved		0.00013	0.00013		mg/L	0.5	20	06-JUL-22



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MET-D-CCMS-WP		Water						
Batch	R5817477							
WG3746405-4 DUP		L2719501-11						
Cobalt (Co)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	06-JUL-22
Copper (Cu)-Dissolved		0.00062	0.00064		mg/L	2.4	20	06-JUL-22
Iron (Fe)-Dissolved		0.177	0.173		mg/L	2.0	20	06-JUL-22
Lead (Pb)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	06-JUL-22
Lithium (Li)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	06-JUL-22
Magnesium (Mg)-Dissolved		0.748	0.739		mg/L	1.3	20	06-JUL-22
Manganese (Mn)-Dissolved		0.00415	0.00422		mg/L	1.5	20	06-JUL-22
Molybdenum (Mo)-Dissolved		0.000068	0.000077		mg/L	12	20	06-JUL-22
Nickel (Ni)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	06-JUL-22
Phosphorus (P)-Dissolved		<0.030	<0.030	RPD-NA	mg/L	N/A	20	06-JUL-22
Potassium (K)-Dissolved		0.506	0.504		mg/L	0.4	20	06-JUL-22
Rubidium (Rb)-Dissolved		0.00094	0.00092		mg/L	2.4	20	06-JUL-22
Selenium (Se)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	06-JUL-22
Silicon (Si)-Dissolved		1.89	1.91		mg/L	1.1	20	06-JUL-22
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	06-JUL-22
Sodium (Na)-Dissolved		0.934	0.933		mg/L	0.1	20	06-JUL-22
Strontium (Sr)-Dissolved		0.0103	0.0104		mg/L	0.5	20	06-JUL-22
Sulfur (S)-Dissolved		<0.50	<0.50	RPD-NA	mg/L	N/A	20	06-JUL-22
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	06-JUL-22
Thallium (Tl)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	06-JUL-22
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	06-JUL-22
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	06-JUL-22
Titanium (Ti)-Dissolved		0.00052	0.00047		mg/L	9.5	20	06-JUL-22
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	06-JUL-22
Uranium (U)-Dissolved		0.000022	0.000017	J	mg/L	0.000005	0.00002	06-JUL-22
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	06-JUL-22
Zinc (Zn)-Dissolved		0.0023	0.0034	J	mg/L	0.0011	0.002	06-JUL-22
Zirconium (Zr)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	06-JUL-22
WG3746402-2 LCS								
Aluminum (Al)-Dissolved			102.2		%		80-120	06-JUL-22
Antimony (Sb)-Dissolved			97.9		%		80-120	06-JUL-22
Arsenic (As)-Dissolved			96.1		%		80-120	06-JUL-22
Barium (Ba)-Dissolved			98.3		%		80-120	06-JUL-22
Beryllium (Be)-Dissolved			99.8		%		80-120	06-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5817477							
WG3746402-2	LCS							
Bismuth (Bi)-Dissolved			93.0		%		80-120	06-JUL-22
Boron (B)-Dissolved			94.7		%		80-120	06-JUL-22
Cadmium (Cd)-Dissolved			97.9		%		80-120	06-JUL-22
Calcium (Ca)-Dissolved			102.7		%		80-120	06-JUL-22
Cesium (Cs)-Dissolved			102.9		%		80-120	06-JUL-22
Chromium (Cr)-Dissolved			99.1		%		80-120	06-JUL-22
Cobalt (Co)-Dissolved			97.8		%		80-120	06-JUL-22
Copper (Cu)-Dissolved			96.6		%		80-120	06-JUL-22
Iron (Fe)-Dissolved			97.0		%		80-120	06-JUL-22
Lead (Pb)-Dissolved			95.2		%		80-120	06-JUL-22
Lithium (Li)-Dissolved			100.8		%		80-120	06-JUL-22
Magnesium (Mg)-Dissolved			110.1		%		80-120	06-JUL-22
Manganese (Mn)-Dissolved			98.6		%		80-120	06-JUL-22
Molybdenum (Mo)-Dissolved			98.7		%		80-120	06-JUL-22
Nickel (Ni)-Dissolved			99.7		%		80-120	06-JUL-22
Phosphorus (P)-Dissolved			102.9		%		80-120	06-JUL-22
Potassium (K)-Dissolved			98.0		%		80-120	06-JUL-22
Rubidium (Rb)-Dissolved			99.8		%		80-120	06-JUL-22
Selenium (Se)-Dissolved			96.2		%		80-120	06-JUL-22
Silicon (Si)-Dissolved			98.1		%		80-120	06-JUL-22
Silver (Ag)-Dissolved			99.5		%		80-120	06-JUL-22
Sodium (Na)-Dissolved			102.8		%		80-120	06-JUL-22
Strontium (Sr)-Dissolved			98.7		%		80-120	06-JUL-22
Sulfur (S)-Dissolved			96.9		%		80-120	06-JUL-22
Tellurium (Te)-Dissolved			93.6		%		80-120	06-JUL-22
Thallium (Tl)-Dissolved			95.2		%		80-120	06-JUL-22
Thorium (Th)-Dissolved			90.6		%		80-120	06-JUL-22
Tin (Sn)-Dissolved			97.5		%		80-120	06-JUL-22
Titanium (Ti)-Dissolved			95.7		%		80-120	06-JUL-22
Tungsten (W)-Dissolved			94.8		%		80-120	06-JUL-22
Uranium (U)-Dissolved			89.2		%		80-120	06-JUL-22
Vanadium (V)-Dissolved			99.3		%		80-120	06-JUL-22
Zinc (Zn)-Dissolved			104.9		%		80-120	06-JUL-22
Zirconium (Zr)-Dissolved			89.0		%		80-120	06-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5817477							
WG3746405-2	LCS							
Aluminum (Al)-Dissolved			98.0		%		80-120	06-JUL-22
Antimony (Sb)-Dissolved			90.2		%		80-120	06-JUL-22
Arsenic (As)-Dissolved			90.3		%		80-120	06-JUL-22
Barium (Ba)-Dissolved			93.3		%		80-120	06-JUL-22
Beryllium (Be)-Dissolved			91.6		%		80-120	06-JUL-22
Bismuth (Bi)-Dissolved			94.4		%		80-120	06-JUL-22
Boron (B)-Dissolved			88.0		%		80-120	06-JUL-22
Cadmium (Cd)-Dissolved			90.3		%		80-120	06-JUL-22
Calcium (Ca)-Dissolved			97.1		%		80-120	06-JUL-22
Cesium (Cs)-Dissolved			94.9		%		80-120	06-JUL-22
Chromium (Cr)-Dissolved			91.9		%		80-120	06-JUL-22
Cobalt (Co)-Dissolved			90.3		%		80-120	06-JUL-22
Copper (Cu)-Dissolved			89.6		%		80-120	06-JUL-22
Iron (Fe)-Dissolved			90.6		%		80-120	06-JUL-22
Lead (Pb)-Dissolved			91.0		%		80-120	06-JUL-22
Lithium (Li)-Dissolved			87.2		%		80-120	06-JUL-22
Magnesium (Mg)-Dissolved			100.8		%		80-120	06-JUL-22
Manganese (Mn)-Dissolved			92.6		%		80-120	06-JUL-22
Molybdenum (Mo)-Dissolved			90.1		%		80-120	06-JUL-22
Nickel (Ni)-Dissolved			91.3		%		80-120	06-JUL-22
Phosphorus (P)-Dissolved			94.2		%		80-120	06-JUL-22
Potassium (K)-Dissolved			91.9		%		80-120	06-JUL-22
Rubidium (Rb)-Dissolved			91.0		%		80-120	06-JUL-22
Selenium (Se)-Dissolved			89.0		%		80-120	06-JUL-22
Silicon (Si)-Dissolved			94.0		%		80-120	06-JUL-22
Silver (Ag)-Dissolved			90.9		%		80-120	06-JUL-22
Sodium (Na)-Dissolved			94.2		%		80-120	06-JUL-22
Strontium (Sr)-Dissolved			90.9		%		80-120	06-JUL-22
Sulfur (S)-Dissolved			88.8		%		80-120	06-JUL-22
Tellurium (Te)-Dissolved			83.7		%		80-120	06-JUL-22
Thallium (Tl)-Dissolved			91.7		%		80-120	06-JUL-22
Thorium (Th)-Dissolved			90.1		%		80-120	06-JUL-22
Tin (Sn)-Dissolved			90.8		%		80-120	06-JUL-22
Titanium (Ti)-Dissolved			90.5		%		80-120	06-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP	Water							
Batch	R5817477							
WG3746405-2	LCS							
Tungsten (W)-Dissolved			89.9		%		80-120	06-JUL-22
Uranium (U)-Dissolved			87.1		%		80-120	06-JUL-22
Vanadium (V)-Dissolved			93.2		%		80-120	06-JUL-22
Zinc (Zn)-Dissolved			99.9		%		80-120	06-JUL-22
Zirconium (Zr)-Dissolved			85.4		%		80-120	06-JUL-22
WG3746402-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	06-JUL-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	06-JUL-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	06-JUL-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	06-JUL-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	06-JUL-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	06-JUL-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	06-JUL-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	06-JUL-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	06-JUL-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	06-JUL-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	06-JUL-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	06-JUL-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	06-JUL-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	06-JUL-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	06-JUL-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	06-JUL-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	06-JUL-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	06-JUL-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	06-JUL-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	06-JUL-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22

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MET-D-CCMS-WP		Water						
Batch	R5817477							
WG3746402-1 MB								
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	06-JUL-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	06-JUL-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	06-JUL-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	06-JUL-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	06-JUL-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	06-JUL-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	06-JUL-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	06-JUL-22
WG3746405-1 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	06-JUL-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	06-JUL-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	06-JUL-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	06-JUL-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	06-JUL-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	06-JUL-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	06-JUL-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	06-JUL-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	06-JUL-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	06-JUL-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	06-JUL-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	06-JUL-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	06-JUL-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	06-JUL-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	06-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP								
Water								
Batch	R5817477							
WG3746405-1 MB								
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	06-JUL-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	06-JUL-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	06-JUL-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	06-JUL-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	06-JUL-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	06-JUL-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	06-JUL-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	06-JUL-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	06-JUL-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	06-JUL-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	06-JUL-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	06-JUL-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	06-JUL-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	06-JUL-22
WG3746405-5 MS		L2719501-11						
Aluminum (Al)-Dissolved			100.5		%		70-130	06-JUL-22
Antimony (Sb)-Dissolved			102.1		%		70-130	06-JUL-22
Arsenic (As)-Dissolved			100.4		%		70-130	06-JUL-22
Barium (Ba)-Dissolved			101.8		%		70-130	06-JUL-22
Beryllium (Be)-Dissolved			102.6		%		70-130	06-JUL-22
Bismuth (Bi)-Dissolved			92.7		%		70-130	06-JUL-22
Boron (B)-Dissolved			95.7		%		70-130	06-JUL-22
Cadmium (Cd)-Dissolved			101.0		%		70-130	06-JUL-22
Calcium (Ca)-Dissolved			105.3		%		70-130	06-JUL-22
Cesium (Cs)-Dissolved			106.5		%		70-130	06-JUL-22
Chromium (Cr)-Dissolved			98.2		%		70-130	06-JUL-22
Cobalt (Co)-Dissolved			98.9		%		70-130	06-JUL-22
Copper (Cu)-Dissolved			97.7		%		70-130	06-JUL-22
Iron (Fe)-Dissolved			98.8		%		70-130	06-JUL-22
Lead (Pb)-Dissolved			100.7		%		70-130	06-JUL-22
Lithium (Li)-Dissolved			102.4		%		70-130	06-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5817477							
WG3746405-5	MS	L2719501-11						
Magnesium (Mg)-Dissolved			99.3		%		70-130	06-JUL-22
Manganese (Mn)-Dissolved			99.3		%		70-130	06-JUL-22
Molybdenum (Mo)-Dissolved			98.1		%		70-130	06-JUL-22
Nickel (Ni)-Dissolved			99.1		%		70-130	06-JUL-22
Phosphorus (P)-Dissolved			100.5		%		70-130	06-JUL-22
Potassium (K)-Dissolved			103.1		%		70-130	06-JUL-22
Rubidium (Rb)-Dissolved			105.8		%		70-130	06-JUL-22
Selenium (Se)-Dissolved			103.7		%		70-130	06-JUL-22
Silicon (Si)-Dissolved			101.7		%		70-130	06-JUL-22
Silver (Ag)-Dissolved			100.7		%		70-130	06-JUL-22
Sodium (Na)-Dissolved			102.1		%		70-130	06-JUL-22
Strontium (Sr)-Dissolved			104.2		%		70-130	06-JUL-22
Sulfur (S)-Dissolved			100.3		%		70-130	06-JUL-22
Tellurium (Te)-Dissolved			94.2		%		70-130	06-JUL-22
Thallium (Tl)-Dissolved			99.5		%		70-130	06-JUL-22
Thorium (Th)-Dissolved			103.7		%		70-130	06-JUL-22
Tin (Sn)-Dissolved			99.1		%		70-130	06-JUL-22
Titanium (Ti)-Dissolved			97.9		%		70-130	06-JUL-22
Tungsten (W)-Dissolved			97.6		%		70-130	06-JUL-22
Uranium (U)-Dissolved			99.5		%		70-130	06-JUL-22
Vanadium (V)-Dissolved			101.5		%		70-130	06-JUL-22
Zinc (Zn)-Dissolved			101.6		%		70-130	06-JUL-22
Zirconium (Zr)-Dissolved			99.2		%		70-130	06-JUL-22
MET-T-CCMS-WP		Water						
Batch	R5816621							
WG3746127-2	LCS							
Aluminum (Al)-Total			104.5		%		80-120	05-JUL-22
Antimony (Sb)-Total			107.3		%		80-120	05-JUL-22
Barium (Ba)-Total			106.3		%		80-120	05-JUL-22
Beryllium (Be)-Total			108.3		%		80-120	05-JUL-22
Bismuth (Bi)-Total			101.1		%		80-120	05-JUL-22
Boron (B)-Total			105.9		%		80-120	05-JUL-22
Cadmium (Cd)-Total			105.8		%		80-120	05-JUL-22
Calcium (Ca)-Total			107.9		%		80-120	05-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5816621							
WG3746127-2	LCS							
Cesium (Cs)-Total			105.9		%		80-120	05-JUL-22
Chromium (Cr)-Total			105.5		%		80-120	05-JUL-22
Cobalt (Co)-Total			105.5		%		80-120	05-JUL-22
Copper (Cu)-Total			104.5		%		80-120	05-JUL-22
Iron (Fe)-Total			103.1		%		80-120	05-JUL-22
Lead (Pb)-Total			101.9		%		80-120	05-JUL-22
Lithium (Li)-Total			112.6		%		80-120	05-JUL-22
Magnesium (Mg)-Total			115.4		%		80-120	05-JUL-22
Manganese (Mn)-Total			103.3		%		80-120	05-JUL-22
Molybdenum (Mo)-Total			103.0		%		80-120	05-JUL-22
Nickel (Ni)-Total			104.8		%		80-120	05-JUL-22
Potassium (K)-Total			103.6		%		80-120	05-JUL-22
Phosphorus (P)-Total			107.0		%		80-120	05-JUL-22
Rubidium (Rb)-Total			102.6		%		80-120	05-JUL-22
Selenium (Se)-Total			105.2		%		80-120	05-JUL-22
Silicon (Si)-Total			100.1		%		80-120	05-JUL-22
Silver (Ag)-Total			104.0		%		80-120	05-JUL-22
Sodium (Na)-Total			107.7		%		80-120	05-JUL-22
Strontium (Sr)-Total			105.4		%		80-120	05-JUL-22
Sulfur (S)-Total			107.1		%		80-120	05-JUL-22
Tellurium (Te)-Total			98.0		%		80-120	05-JUL-22
Thallium (Tl)-Total			102.9		%		80-120	05-JUL-22
Thorium (Th)-Total			98.7		%		80-120	05-JUL-22
Tin (Sn)-Total			102.4		%		80-120	05-JUL-22
Titanium (Ti)-Total			100.5		%		80-120	05-JUL-22
Tungsten (W)-Total			100.2		%		80-120	05-JUL-22
Uranium (U)-Total			99.99		%		80-120	05-JUL-22
Vanadium (V)-Total			106.5		%		80-120	05-JUL-22
Zinc (Zn)-Total			105.5		%		80-120	05-JUL-22
Zirconium (Zr)-Total			94.4		%		80-120	05-JUL-22
WG3746140-2	LCS							
Aluminum (Al)-Total			101.2		%		80-120	05-JUL-22
Antimony (Sb)-Total			107.5		%		80-120	05-JUL-22
Barium (Ba)-Total			105.0		%		80-120	05-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5816621							
WG3746140-2	LCS							
Beryllium (Be)-Total			109.4		%		80-120	05-JUL-22
Bismuth (Bi)-Total			104.8		%		80-120	05-JUL-22
Boron (B)-Total			108.0		%		80-120	05-JUL-22
Cadmium (Cd)-Total			104.0		%		80-120	05-JUL-22
Calcium (Ca)-Total			110.2		%		80-120	05-JUL-22
Cesium (Cs)-Total			104.3		%		80-120	05-JUL-22
Chromium (Cr)-Total			102.4		%		80-120	05-JUL-22
Cobalt (Co)-Total			101.9		%		80-120	05-JUL-22
Copper (Cu)-Total			101.3		%		80-120	05-JUL-22
Iron (Fe)-Total			102.3		%		80-120	05-JUL-22
Lead (Pb)-Total			106.0		%		80-120	05-JUL-22
Lithium (Li)-Total			118.2		%		80-120	05-JUL-22
Magnesium (Mg)-Total			112.5		%		80-120	05-JUL-22
Manganese (Mn)-Total			100.4		%		80-120	05-JUL-22
Molybdenum (Mo)-Total			100.4		%		80-120	05-JUL-22
Nickel (Ni)-Total			101.5		%		80-120	05-JUL-22
Potassium (K)-Total			99.6		%		80-120	05-JUL-22
Phosphorus (P)-Total			102.4		%		80-120	05-JUL-22
Rubidium (Rb)-Total			98.9		%		80-120	05-JUL-22
Selenium (Se)-Total			102.2		%		80-120	05-JUL-22
Silicon (Si)-Total			102.9		%		80-120	05-JUL-22
Silver (Ag)-Total			102.5		%		80-120	05-JUL-22
Sodium (Na)-Total			110.4		%		80-120	05-JUL-22
Strontium (Sr)-Total			102.2		%		80-120	05-JUL-22
Sulfur (S)-Total			103.8		%		80-120	05-JUL-22
Tellurium (Te)-Total			90.4		%		80-120	05-JUL-22
Thallium (Tl)-Total			106.8		%		80-120	05-JUL-22
Thorium (Th)-Total			98.5		%		80-120	05-JUL-22
Tin (Sn)-Total			102.6		%		80-120	05-JUL-22
Titanium (Ti)-Total			98.1		%		80-120	05-JUL-22
Tungsten (W)-Total			102.0		%		80-120	05-JUL-22
Uranium (U)-Total			104.3		%		80-120	05-JUL-22
Vanadium (V)-Total			104.5		%		80-120	05-JUL-22
Zinc (Zn)-Total			104.6		%		80-120	05-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5816621							
WG3746140-2	LCS							
Zirconium (Zr)-Total			91.7		%		80-120	05-JUL-22
WG3746127-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	05-JUL-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	05-JUL-22
Boron (B)-Total			<0.010		mg/L		0.01	05-JUL-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	05-JUL-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	05-JUL-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	05-JUL-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	05-JUL-22
Iron (Fe)-Total			<0.010		mg/L		0.01	05-JUL-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	05-JUL-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	05-JUL-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	05-JUL-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	05-JUL-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	05-JUL-22
Potassium (K)-Total			<0.050		mg/L		0.05	05-JUL-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	05-JUL-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	05-JUL-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	05-JUL-22
Silicon (Si)-Total			<0.10		mg/L		0.1	05-JUL-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	05-JUL-22
Sodium (Na)-Total			<0.050		mg/L		0.05	05-JUL-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	05-JUL-22
Sulfur (S)-Total			<0.50		mg/L		0.5	05-JUL-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	05-JUL-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	05-JUL-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	05-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5816621							
WG3746127-1 MB								
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	05-JUL-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	05-JUL-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	05-JUL-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	05-JUL-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	05-JUL-22
WG3746140-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	05-JUL-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	05-JUL-22
Boron (B)-Total			<0.010		mg/L		0.01	05-JUL-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	05-JUL-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	05-JUL-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	05-JUL-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	05-JUL-22
Iron (Fe)-Total			<0.010		mg/L		0.01	05-JUL-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	05-JUL-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	05-JUL-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	05-JUL-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	05-JUL-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	05-JUL-22
Potassium (K)-Total			<0.050		mg/L		0.05	05-JUL-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	05-JUL-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	05-JUL-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	05-JUL-22
Silicon (Si)-Total			<0.10		mg/L		0.1	05-JUL-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	05-JUL-22
Sodium (Na)-Total			<0.050		mg/L		0.05	05-JUL-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	05-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5816621							
WG3746140-1 MB								
Sulfur (S)-Total			<0.50		mg/L		0.5	05-JUL-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	05-JUL-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	05-JUL-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	05-JUL-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	05-JUL-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	05-JUL-22
Vanadium (V)-Total			0.00051	B	mg/L		0.0005	05-JUL-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	05-JUL-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	05-JUL-22
Batch	R5817477							
WG3746393-2 LCS								
Aluminum (Al)-Total			104.9		%		80-120	06-JUL-22
Antimony (Sb)-Total			107.7		%		80-120	06-JUL-22
Barium (Ba)-Total			103.8		%		80-120	06-JUL-22
Beryllium (Be)-Total			103.8		%		80-120	06-JUL-22
Bismuth (Bi)-Total			102.8		%		80-120	06-JUL-22
Boron (B)-Total			100.5		%		80-120	06-JUL-22
Cadmium (Cd)-Total			104.1		%		80-120	06-JUL-22
Calcium (Ca)-Total			106.2		%		80-120	06-JUL-22
Cesium (Cs)-Total			103.8		%		80-120	06-JUL-22
Chromium (Cr)-Total			104.2		%		80-120	06-JUL-22
Cobalt (Co)-Total			103.4		%		80-120	06-JUL-22
Copper (Cu)-Total			103.2		%		80-120	06-JUL-22
Iron (Fe)-Total			100.8		%		80-120	06-JUL-22
Lead (Pb)-Total			101.9		%		80-120	06-JUL-22
Lithium (Li)-Total			100.7		%		80-120	06-JUL-22
Magnesium (Mg)-Total			114.2		%		80-120	06-JUL-22
Manganese (Mn)-Total			103.4		%		80-120	06-JUL-22
Molybdenum (Mo)-Total			101.8		%		80-120	06-JUL-22
Nickel (Ni)-Total			102.8		%		80-120	06-JUL-22
Potassium (K)-Total			98.9		%		80-120	06-JUL-22
Phosphorus (P)-Total			103.8		%		80-120	06-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5817477							
WG3746393-2	LCS							
Rubidium (Rb)-Total			105.7		%		80-120	06-JUL-22
Selenium (Se)-Total			106.1		%		80-120	06-JUL-22
Silicon (Si)-Total			102.2		%		80-120	06-JUL-22
Silver (Ag)-Total			102.1		%		80-120	06-JUL-22
Sodium (Na)-Total			107.0		%		80-120	06-JUL-22
Strontium (Sr)-Total			98.0		%		80-120	06-JUL-22
Sulfur (S)-Total			88.6		%		80-120	06-JUL-22
Tellurium (Te)-Total			101.1		%		80-120	06-JUL-22
Thallium (Tl)-Total			101.3		%		80-120	06-JUL-22
Thorium (Th)-Total			99.8		%		80-120	06-JUL-22
Tin (Sn)-Total			102.7		%		80-120	06-JUL-22
Titanium (Ti)-Total			99.9		%		80-120	06-JUL-22
Tungsten (W)-Total			100.6		%		80-120	06-JUL-22
Uranium (U)-Total			99.0		%		80-120	06-JUL-22
Vanadium (V)-Total			104.2		%		80-120	06-JUL-22
Zinc (Zn)-Total			106.8		%		80-120	06-JUL-22
Zirconium (Zr)-Total			91.9		%		80-120	06-JUL-22
WG3746393-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	06-JUL-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	06-JUL-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	06-JUL-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	06-JUL-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	06-JUL-22
Boron (B)-Total			<0.010		mg/L		0.01	06-JUL-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	06-JUL-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	06-JUL-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	06-JUL-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	06-JUL-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	06-JUL-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	06-JUL-22
Iron (Fe)-Total			<0.010		mg/L		0.01	06-JUL-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	06-JUL-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	06-JUL-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	06-JUL-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5817477							
WG3746393-1 MB								
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	06-JUL-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	06-JUL-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	06-JUL-22
Potassium (K)-Total			<0.050		mg/L		0.05	06-JUL-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	06-JUL-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	06-JUL-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	06-JUL-22
Silicon (Si)-Total			<0.10		mg/L		0.1	06-JUL-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	06-JUL-22
Sodium (Na)-Total			<0.050		mg/L		0.05	06-JUL-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	06-JUL-22
Sulfur (S)-Total			<0.50		mg/L		0.5	06-JUL-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	06-JUL-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	06-JUL-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	06-JUL-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	06-JUL-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	06-JUL-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	06-JUL-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	06-JUL-22
Vanadium (V)-Total			0.00050		mg/L		0.0005	06-JUL-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	06-JUL-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	06-JUL-22
N-TOTKJ-WP		Water						
Batch	R5818616							
WG3747261-7 DUP		L2719501-13						
Total Kjeldahl Nitrogen		0.54	0.53		mg/L	2.8	20	08-JUL-22
WG3747261-2 LCS								
Total Kjeldahl Nitrogen			105.9		%		75-125	08-JUL-22
WG3747261-6 LCS								
Total Kjeldahl Nitrogen			96.1		%		75-125	08-JUL-22
WG3747261-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	08-JUL-22
WG3747261-5 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	08-JUL-22
WG3747261-8 MS		L2719501-13						



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOTKJ-WP								
Water								
Batch	R5818616							
WG3747261-8	MS	L2719501-13						
Total Kjeldahl Nitrogen			105.2		%		70-130	08-JUL-22
NH3-COL-WP								
Water								
Batch	R5827665							
WG3750748-2	LCS							
Ammonia, Total (as N)			100.6		%		85-115	18-JUL-22
WG3750748-6	LCS							
Ammonia, Total (as N)			100.5		%		85-115	18-JUL-22
WG3750748-1	MB							
Ammonia, Total (as N)			<0.010		mg/L		0.01	18-JUL-22
WG3750748-5	MB							
Ammonia, Total (as N)			<0.010		mg/L		0.01	18-JUL-22
NO2-IC-N-WP								
Water								
Batch	R5814860							
WG3745829-3	DUP	L2719501-6						
Nitrite (as N)		<0.010	<0.010	RPD-NA	mg/L	N/A	20	02-JUL-22
WG3745829-2	LCS							
Nitrite (as N)			99.3		%		90-110	02-JUL-22
WG3745829-6	LCS							
Nitrite (as N)			97.9		%		90-110	02-JUL-22
WG3745829-1	MB							
Nitrite (as N)			<0.010		mg/L		0.01	02-JUL-22
WG3745829-5	MB							
Nitrite (as N)			<0.010		mg/L		0.01	02-JUL-22
WG3745829-4	MS	L2719501-6						
Nitrite (as N)			103.0		%		75-125	02-JUL-22
NO3-IC-N-WP								
Water								
Batch	R5814860							
WG3745829-3	DUP	L2719501-6						
Nitrate (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	02-JUL-22
WG3745829-2	LCS							
Nitrate (as N)			100.2		%		90-110	02-JUL-22
WG3745829-6	LCS							
Nitrate (as N)			98.6		%		90-110	02-JUL-22
WG3745829-1	MB							
Nitrate (as N)			<0.020		mg/L		0.02	02-JUL-22
WG3745829-5	MB							



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-N-WP	Water							
Batch R5814860								
WG3745829-5 MB								
Nitrate (as N)			<0.020		mg/L		0.02	02-JUL-22
WG3745829-4 MS		L2719501-6						
Nitrate (as N)			105.1		%		75-125	02-JUL-22
P-T-COL-WP	Water							
Batch R5830877								
WG3753160-15 DUP		L2719501-18						
Phosphorus (P)-Total		0.0181	0.0184		mg/L	1.6	20	29-JUL-22
WG3753160-10 LCS								
Phosphorus (P)-Total			97.1		%		80-120	29-JUL-22
WG3753160-14 LCS								
Phosphorus (P)-Total			97.8		%		80-120	29-JUL-22
WG3753160-13 MB								
Phosphorus (P)-Total			<0.0030		mg/L		0.003	29-JUL-22
WG3753160-9 MB								
Phosphorus (P)-Total			<0.0030		mg/L		0.003	29-JUL-22
P-T-L-COL-WP	Water							
Batch R5834279								
WG3753971-2 LCS								
Phosphorus (P)-Total			88.8		%		80-120	03-AUG-22
WG3753971-1 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	03-AUG-22
SO4-IC-N-WP	Water							
Batch R5814860								
WG3745829-3 DUP		L2719501-6						
Sulfate (SO4)		0.76	0.77		mg/L	0.4	20	02-JUL-22
WG3745829-2 LCS								
Sulfate (SO4)			101.0		%		90-110	02-JUL-22
WG3745829-6 LCS								
Sulfate (SO4)			99.8		%		90-110	02-JUL-22
WG3745829-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	02-JUL-22
WG3745829-5 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	02-JUL-22
WG3745829-4 MS		L2719501-6						
Sulfate (SO4)			105.4		%		75-125	02-JUL-22
SOLIDS-TOTSUS-LR-WP	Water							



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-LR-WP								
Batch R5815819								
WG3745694-6 DUP		L2719501-12						
Total Suspended Solids		2.8	3.2		mg/L	11	20	04-JUL-22
WG3745694-2 LCS								
Total Suspended Solids			99.8		%		85-115	04-JUL-22
WG3745694-5 LCS								
Total Suspended Solids			99.1		%		85-115	04-JUL-22
WG3745694-1 MB								
Total Suspended Solids			<1.0		mg/L		1	04-JUL-22
WG3745694-4 MB								
Total Suspended Solids			<1.0		mg/L		1	04-JUL-22

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Suspended Solids							
	1	25-JUN-22 11:53	04-JUL-22 12:00	7	9	days	EHT
	2	25-JUN-22 12:26	04-JUL-22 12:00	7	9	days	EHT
	3	25-JUN-22 13:03	04-JUL-22 12:00	7	9	days	EHT
	4	25-JUN-22 13:30	04-JUL-22 12:00	7	9	days	EHT
	5	25-JUN-22 11:11	04-JUL-22 12:00	7	9	days	EHT
	6	25-JUN-22 11:33	04-JUL-22 12:00	7	9	days	EHT
	7	25-JUN-22 14:20	04-JUL-22 12:00	7	9	days	EHT
	8	26-JUN-22 08:45	04-JUL-22 12:00	7	8	days	EHT
	9	26-JUN-22 09:24	04-JUL-22 12:00	7	8	days	EHT
	10	26-JUN-22 12:23	04-JUL-22 12:00	7	8	days	EHT
	11	26-JUN-22 14:22	04-JUL-22 12:00	7	8	days	EHT
	12	26-JUN-22 16:06	04-JUL-22 12:00	7	8	days	EHT
	13	26-JUN-22 13:45	04-JUL-22 12:00	7	8	days	EHT
Anions and Nutrients							
Acidity							
	1	25-JUN-22 11:53	13-JUL-22 19:00	14	18	days	EHT
	2	25-JUN-22 12:26	13-JUL-22 19:00	14	18	days	EHT
	3	25-JUN-22 13:03	13-JUL-22 19:00	14	18	days	EHT
	4	25-JUN-22 13:30	13-JUL-22 19:00	14	18	days	EHT
	5	25-JUN-22 11:11	13-JUL-22 19:00	14	18	days	EHT
	6	25-JUN-22 11:33	13-JUL-22 19:00	14	18	days	EHT
	7	25-JUN-22 14:20	13-JUL-22 19:00	14	18	days	EHT
	8	26-JUN-22 08:45	13-JUL-22 19:00	14	17	days	EHT
	9	26-JUN-22 09:24	13-JUL-22 19:00	14	17	days	EHT
	10	26-JUN-22 12:23	13-JUL-22 19:00	14	17	days	EHT
	11	26-JUN-22 14:22	13-JUL-22 19:00	14	17	days	EHT
	12	26-JUN-22 16:06	13-JUL-22 19:00	14	17	days	EHT
	13	26-JUN-22 13:45	13-JUL-22 19:00	14	17	days	EHT
	14	27-JUN-22 08:33	13-JUL-22 19:00	14	16	days	EHT
	15	27-JUN-22 10:42	13-JUL-22 19:00	14	16	days	EHT
	16	27-JUN-22 14:57	13-JUL-22 19:00	14	16	days	EHT
	17	27-JUN-22 15:19	13-JUL-22 19:00	14	16	days	EHT
	18	27-JUN-22	13-JUL-22 19:00	14	16	days	EHT
	19	27-JUN-22	13-JUL-22 19:00	14	16	days	EHT
Nitrate in Water by IC							
	1	25-JUN-22 11:53	02-JUL-22 10:00	3	7	days	EHTR
	2	25-JUN-22 12:26	02-JUL-22 10:00	3	7	days	EHTR
	3	25-JUN-22 13:03	02-JUL-22 10:00	3	7	days	EHTR
	4	25-JUN-22 13:30	02-JUL-22 10:00	3	7	days	EHTR
	5	25-JUN-22 11:11	02-JUL-22 10:00	3	7	days	EHTR
	6	25-JUN-22 11:33	02-JUL-22 10:00	3	7	days	EHTR
	7	25-JUN-22 14:20	02-JUL-22 10:00	3	7	days	EHTR
	8	26-JUN-22 08:45	02-JUL-22 10:00	3	6	days	EHTR
	9	26-JUN-22 09:24	02-JUL-22 10:00	3	6	days	EHTR
	10	26-JUN-22 12:23	02-JUL-22 10:00	3	6	days	EHTR
	11	26-JUN-22 14:22	02-JUL-22 10:00	3	6	days	EHTR
	12	26-JUN-22 16:06	02-JUL-22 10:00	3	6	days	EHTR
	13	26-JUN-22 13:45	02-JUL-22 10:00	3	6	days	EHTR
	14	27-JUN-22 08:33	02-JUL-22 10:00	3	5	days	EHTR
	15	27-JUN-22 10:42	02-JUL-22 10:00	3	5	days	EHTR
	16	27-JUN-22 14:57	02-JUL-22 10:00	3	5	days	EHTL
	17	27-JUN-22 15:19	02-JUL-22 10:00	3	5	days	EHTL
	18	27-JUN-22	02-JUL-22 10:00	3	5	days	EHTR
	19	27-JUN-22	02-JUL-22 10:00	3	5	days	EHTR
Nitrite in Water by IC							
	1	25-JUN-22 11:53	02-JUL-22 10:00	3	7	days	EHTR

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Nitrite in Water by IC							
	2	25-JUN-22 12:26	02-JUL-22 10:00	3	7	days	EHTR
	3	25-JUN-22 13:03	02-JUL-22 10:00	3	7	days	EHTR
	4	25-JUN-22 13:30	02-JUL-22 10:00	3	7	days	EHTR
	5	25-JUN-22 11:11	02-JUL-22 10:00	3	7	days	EHTR
	6	25-JUN-22 11:33	02-JUL-22 10:00	3	7	days	EHTR
	7	25-JUN-22 14:20	02-JUL-22 10:00	3	7	days	EHTR
	8	26-JUN-22 08:45	02-JUL-22 10:00	3	6	days	EHTR
	9	26-JUN-22 09:24	02-JUL-22 10:00	3	6	days	EHTR
	10	26-JUN-22 12:23	02-JUL-22 10:00	3	6	days	EHTR
	11	26-JUN-22 14:22	02-JUL-22 10:00	3	6	days	EHTR
	12	26-JUN-22 16:06	02-JUL-22 10:00	3	6	days	EHTR
	13	26-JUN-22 13:45	02-JUL-22 10:00	3	6	days	EHTR
	14	27-JUN-22 08:33	02-JUL-22 10:00	3	5	days	EHTR
	15	27-JUN-22 10:42	02-JUL-22 10:00	3	5	days	EHTR
	16	27-JUN-22 14:57	02-JUL-22 10:00	3	5	days	EHTL
	17	27-JUN-22 15:19	02-JUL-22 10:00	3	5	days	EHTL
	18	27-JUN-22	02-JUL-22 10:00	3	5	days	EHTR
	19	27-JUN-22	02-JUL-22 10:00	3	5	days	EHTR
Phosphorus, Total							
	1	25-JUN-22 11:53	29-JUL-22 10:00	28	34	days	EHT
	2	25-JUN-22 12:26	29-JUL-22 10:00	28	34	days	EHT
	3	25-JUN-22 13:03	29-JUL-22 10:00	28	34	days	EHT
	4	25-JUN-22 13:30	29-JUL-22 10:00	28	34	days	EHT
	5	25-JUN-22 11:11	29-JUL-22 10:00	28	34	days	EHT
	6	25-JUN-22 11:33	29-JUL-22 10:00	28	34	days	EHT
	7	25-JUN-22 14:20	29-JUL-22 10:00	28	34	days	EHT
	8	26-JUN-22 08:45	29-JUL-22 10:00	28	33	days	EHT
	9	26-JUN-22 09:24	29-JUL-22 10:00	28	33	days	EHT
	10	26-JUN-22 12:23	29-JUL-22 10:00	28	33	days	EHT
	11	26-JUN-22 14:22	29-JUL-22 10:00	28	33	days	EHT
	12	26-JUN-22 16:06	29-JUL-22 10:00	28	33	days	EHT
	13	26-JUN-22 13:45	29-JUL-22 10:00	28	33	days	EHT
	14	27-JUN-22 08:33	29-JUL-22 10:00	28	32	days	EHT
	15	27-JUN-22 10:42	29-JUL-22 10:00	28	32	days	EHT
	16	27-JUN-22 14:57	29-JUL-22 10:00	28	32	days	EHT
	17	27-JUN-22 15:19	29-JUL-22 10:00	28	32	days	EHT
	18	27-JUN-22	29-JUL-22 10:00	28	32	days	EHT
	19	27-JUN-22	29-JUL-22 10:00	28	32	days	EHT
Phosphorus, Total							
	7	25-JUN-22 14:20	03-AUG-22 09:00	28	39	days	EHT
	19	27-JUN-22	03-AUG-22 09:00	28	37	days	EHT
Cyanides							
Low Level Free Cyanide in water by CFA							
	1	25-JUN-22 11:53	16-JUL-22 13:23	14	21	days	EHT
	2	25-JUN-22 12:26	16-JUL-22 13:23	14	21	days	EHT
	3	25-JUN-22 13:03	16-JUL-22 13:23	14	21	days	EHT
	4	25-JUN-22 13:30	16-JUL-22 13:23	14	21	days	EHT
	5	25-JUN-22 11:11	16-JUL-22 13:23	14	21	days	EHT
	6	25-JUN-22 11:33	16-JUL-22 13:23	14	21	days	EHT
	7	25-JUN-22 14:20	16-JUL-22 13:23	14	21	days	EHT
	8	26-JUN-22 08:45	16-JUL-22 13:23	14	20	days	EHT
	9	26-JUN-22 09:24	16-JUL-22 13:23	14	20	days	EHT
	10	26-JUN-22 12:23	16-JUL-22 13:23	14	20	days	EHT
	11	26-JUN-22 14:22	16-JUL-22 13:23	14	20	days	EHT
	12	26-JUN-22 16:06	16-JUL-22 13:23	14	20	days	EHT
	13	26-JUN-22 13:45	16-JUL-22 13:23	14	20	days	EHT

Quality Control Report

Workorder: L2719501

Report Date: 23-AUG-22

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Cyanides							
Low Level Free Cyanide in water by CFA							
	14	27-JUN-22 08:33	16-JUL-22 13:23	14	19	days	EHT
	15	27-JUN-22 10:42	16-JUL-22 13:23	14	19	days	EHT
	16	27-JUN-22 14:57	16-JUL-22 13:23	14	19	days	EHT
	17	27-JUN-22 15:19	16-JUL-22 13:23	14	19	days	EHT
	18	27-JUN-22	16-JUL-22 13:23	14	19	days	EHT
	19	27-JUN-22	16-JUL-22 13:23	14	19	days	EHT
Low Level Total Cyanide in water by CFA							
	1	25-JUN-22 11:53	16-JUL-22 13:23	14	21	days	EHT
	2	25-JUN-22 12:26	16-JUL-22 13:23	14	21	days	EHT
	3	25-JUN-22 13:03	16-JUL-22 13:23	14	21	days	EHT
	4	25-JUN-22 13:30	16-JUL-22 13:23	14	21	days	EHT
	5	25-JUN-22 11:11	16-JUL-22 13:23	14	21	days	EHT
	6	25-JUN-22 11:33	16-JUL-22 13:23	14	21	days	EHT
	7	25-JUN-22 14:20	16-JUL-22 13:23	14	21	days	EHT
	8	26-JUN-22 08:45	16-JUL-22 13:23	14	20	days	EHT
	9	26-JUN-22 09:24	16-JUL-22 13:23	14	20	days	EHT
	10	26-JUN-22 12:23	16-JUL-22 13:23	14	20	days	EHT
	11	26-JUN-22 14:22	16-JUL-22 13:23	14	20	days	EHT
	12	26-JUN-22 16:06	16-JUL-22 13:23	14	20	days	EHT
	13	26-JUN-22 13:45	16-JUL-22 13:23	14	20	days	EHT
	14	27-JUN-22 08:33	16-JUL-22 13:23	14	19	days	EHT
	15	27-JUN-22 10:42	16-JUL-22 13:23	14	19	days	EHT
	16	27-JUN-22 14:57	16-JUL-22 13:23	14	19	days	EHT
	17	27-JUN-22 15:19	16-JUL-22 13:23	14	19	days	EHT
	18	27-JUN-22	16-JUL-22 13:23	14	19	days	EHT
	19	27-JUN-22	16-JUL-22 13:23	14	19	days	EHT
Low level WAD Cyanide in water by CFA							
	1	25-JUN-22 11:53	16-JUL-22 13:23	14	21	days	EHT
	2	25-JUN-22 12:26	16-JUL-22 13:23	14	21	days	EHT
	3	25-JUN-22 13:03	16-JUL-22 13:23	14	21	days	EHT
	4	25-JUN-22 13:30	16-JUL-22 13:23	14	21	days	EHT
	5	25-JUN-22 11:11	16-JUL-22 13:23	14	21	days	EHT
	6	25-JUN-22 11:33	16-JUL-22 13:23	14	21	days	EHT
	7	25-JUN-22 14:20	16-JUL-22 13:23	14	21	days	EHT
	8	26-JUN-22 08:45	16-JUL-22 13:23	14	20	days	EHT
	9	26-JUN-22 09:24	16-JUL-22 13:23	14	20	days	EHT
	10	26-JUN-22 12:23	16-JUL-22 13:23	14	20	days	EHT
	11	26-JUN-22 14:22	16-JUL-22 13:23	14	20	days	EHT
	12	26-JUN-22 16:06	16-JUL-22 13:23	14	20	days	EHT
	13	26-JUN-22 13:45	16-JUL-22 13:23	14	20	days	EHT
	14	27-JUN-22 08:33	16-JUL-22 13:23	14	19	days	EHT
	15	27-JUN-22 10:42	16-JUL-22 13:23	14	19	days	EHT
	16	27-JUN-22 14:57	16-JUL-22 13:23	14	19	days	EHT
	17	27-JUN-22 15:19	16-JUL-22 13:23	14	19	days	EHT
	18	27-JUN-22	16-JUL-22 13:23	14	19	days	EHT
	19	27-JUN-22	16-JUL-22 13:23	14	19	days	EHT
Organic / Inorganic Carbon							
Dissolved Organic Carbon by Combustion							
	1	25-JUN-22 11:53	27-JUL-22 15:00	28	32	days	EHT
	2	25-JUN-22 12:26	27-JUL-22 15:00	28	32	days	EHT
	3	25-JUN-22 13:03	27-JUL-22 15:00	28	32	days	EHT
	4	25-JUN-22 13:30	27-JUL-22 15:00	28	32	days	EHT
	5	25-JUN-22 11:11	27-JUL-22 15:00	28	32	days	EHT
	6	25-JUN-22 11:33	27-JUL-22 15:00	28	32	days	EHT
	7	25-JUN-22 14:20	27-JUL-22 15:00	28	32	days	EHT
	8	26-JUN-22 08:45	27-JUL-22 15:00	28	31	days	EHT

Quality Control Report

Workorder: L2719501

Report Date: 23-AUG-22

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Organic / Inorganic Carbon							
Dissolved Organic Carbon by Combustion							
	9	26-JUN-22 09:24	27-JUL-22 15:00	28	31	days	EHT
	10	26-JUN-22 12:23	27-JUL-22 15:00	28	31	days	EHT
	11	26-JUN-22 14:22	27-JUL-22 15:00	28	31	days	EHT
	12	26-JUN-22 16:06	27-JUL-22 15:00	28	31	days	EHT
	13	26-JUN-22 13:45	27-JUL-22 15:00	28	31	days	EHT
	14	27-JUN-22 08:33	27-JUL-22 15:00	28	30	days	EHT
	15	27-JUN-22 10:42	27-JUL-22 15:00	28	30	days	EHT
	16	27-JUN-22 14:57	27-JUL-22 15:00	28	30	days	EHT
	17	27-JUN-22 15:19	27-JUL-22 15:00	28	30	days	EHT
	18	27-JUN-22	27-JUL-22 15:00	28	30	days	EHT
	19	27-JUN-22	27-JUL-22 15:00	28	30	days	EHT
Total Organic Carbon by Combustion							
	1	25-JUN-22 11:53	26-JUL-22 15:00	28	31	days	EHT
	2	25-JUN-22 12:26	26-JUL-22 15:00	28	31	days	EHT
	3	25-JUN-22 13:03	26-JUL-22 15:00	28	31	days	EHT
	4	25-JUN-22 13:30	26-JUL-22 15:00	28	31	days	EHT
	5	25-JUN-22 11:11	26-JUL-22 15:00	28	31	days	EHT
	6	25-JUN-22 11:33	26-JUL-22 15:00	28	31	days	EHT
	7	25-JUN-22 14:20	26-JUL-22 15:00	28	31	days	EHT
	8	26-JUN-22 08:45	26-JUL-22 15:00	28	30	days	EHT
	9	26-JUN-22 09:24	26-JUL-22 15:00	28	30	days	EHT
	10	26-JUN-22 12:23	26-JUL-22 15:00	28	30	days	EHT
	11	26-JUN-22 14:22	26-JUL-22 15:00	28	30	days	EHT
	12	26-JUN-22 16:06	26-JUL-22 15:00	28	30	days	EHT
	13	26-JUN-22 13:45	26-JUL-22 15:00	28	30	days	EHT
	14	27-JUN-22 08:33	26-JUL-22 15:00	28	29	days	EHT
	15	27-JUN-22 10:42	26-JUL-22 15:00	28	29	days	EHT
	16	27-JUN-22 14:57	26-JUL-22 15:00	28	29	days	EHT
	17	27-JUN-22 15:19	26-JUL-22 15:00	28	29	days	EHT
	18	27-JUN-22	26-JUL-22 15:00	28	29	days	EHT
	19	27-JUN-22	26-JUL-22 15:00	28	29	days	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
 EHTR: Exceeded ALS recommended hold time prior to sample receipt.
 EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
 EHT: Exceeded ALS recommended hold time prior to analysis.
 Rec. HT: ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
 Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2719501 were received on 30-JUN-22 12:02.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



L2719501-COFC

COC Number: **22 -**

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[illegible]

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

FEB 2022 FROM

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



L2719501-COFC

COC Number: **22 -**

Page 1 of 2

Report To Contact and company name below will appear on the final report		Report to (TAT) Requested Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL) Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A ☐ Compare Results to Criteria on Report - provide details below if box checked Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX		Turnaround Time (TAT) Requested ☒ Routine [R] if received by 3pm M-F - no surcharges apply ☐ 1 day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.		AFFIX ALS BARCODE LABEL HERE (ALS use only)			
Company: Stantec Consulting Contact: Karen Mathers Phone: 204-928-7621 Company address below will appear on the final report Street: 500 - 311 Portage Ave City/Province: Winnipeg, MB Postal Code: R3B 2B9		Email 1 or Fax: Karen.Mathers@Stantec.com Email 2: Rod.Horne@Stantec.com Email 3: Jeremy.Jackson@Stantec.com		Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests. Date and Time Required for all E&P TATs: dd-mm-yy hh:mm am/pm For all tests with rush TATs requested, please contact your AM to confirm availability.					
Invoice To Same as Report To ☐ YES ☒ NO Copy of Invoice with Report ☐ YES ☒ NO Company: Alamos Gold Contact:		Invoice Recipients Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax Email 2		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below					
Project Information ALS Account # / Quote #: Q88846 Job #: ALAMOS PO / AFE: LSD:		Oil and Gas Required Fields (client use) AFE/Cost Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location:		NUMBER OF CONTAINERS ALK-SPEC-WP, ACY-TITR-TB ANIONS-6-L-IC-WP C-DOC-HTC-WP, C-TOC-HTC-WP HG-D-U-CVAF-VA HG-T-U-CVAF-VA MET-D-CCMS-WP, HARDNESS MET-T-CCMS-WP NH3-COL-WP P-T-COL-WP N-TOTU-WP SOLIDS-TOTSUS-LR-WP MEHG-D-GCAF-VA, MEHG-T-GCAF CN-TL, CN-FREE-L, CN-WAD-L CR-CR6-PWQO-IC-WT		SAMPLES ON HOLD EXTENDED STORAGE REQUIRED SUSPECTED HAZARD (see notes)			
ALS Lab Work Order # (ALS use only):		ALS Contact: J. Dalmajier Sampler: BG							
ALS Sample # (ALS use only)		Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mm-yy)		Time (hh:mm)		Sample Type	
		AQM71		25-06-22		1153		W	
		AQM72				1326			
		AQM73				1303			
		AQM74				1330			
		AQF75				1111			
		AQF70				1133			
		Field Blank				1430			
		AQF43		26-06-22		0845			
		AQF40				0924			
		AQF38				1223			
		AQF41				1422			
		AQF45				1606			
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)							
Are samples taken from a Regulated DW System? ☐ YES ☐ NO		all dissolved samples field filtered							
Are samples for human consumption/ use? ☐ YES ☐ NO									
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)		FINAL SHIPMENT RECEPTION (ALS use only)					
Released by: R. L. L. L.		Received by: A. S.		Received by:					
Date: 26-06-22		Date: 14-06-22		Date: 30-06-22					
Time: 11:00		Time: 14:50		Time: 12:02					

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

FEA 2073 FROM



Alamos Gold Inc.
ATTN: KAREN MATHERS
C/O Stantec Consulting
500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Date Received: 29-JUL-22
Report Date: 09-SEP-22 14:19 (MT)
Version: FINAL

Client Phone: 204-924-5735

Certificate of Analysis

Lab Work Order #: L2725589
Project P.O. #: NOT SUBMITTED
Job Reference: ALAMOS
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2725589-1 W 24-JUL-22 09:29 AQM28	L2725589-2 W 24-JUL-22 10:22 AQM29C	L2725589-3 W 24-JUL-22 10:59 AQM71	L2725589-4 W 24-JUL-22 11:32 AQM72	L2725589-5 W 24-JUL-22 11:59 AQM73
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	21.4	9.71	52.9	23.1	18.5
	Total Suspended Solids (mg/L)	1.8	2.8	<1.0	12.8	1.4
Anions and Nutrients	Alkalinity, Total (as CaCO ₃) (mg/L)	8.9	7.0	41.2	14.2	10.6
	Ammonia, Total (as N) (mg/L)	0.014	<0.010	0.016	0.059	0.032
	Bicarbonate (HCO ₃) (mg/L)	10.9	8.5	50.3	17.3	12.9
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.69	0.32	0.47	<0.10	<0.10
	Fluoride (F) (mg/L)	0.054	0.054	0.045	0.046	0.054
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.0051	<0.0051	0.0181	<0.0051	<0.0051
	Nitrate (as N) (mg/L)	<0.0050	<0.0050	0.0181	<0.0050	<0.0050
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.32	<0.20	0.29	0.82	0.35
	Phosphorus (P)-Total (mg/L)	0.0176	0.0202	0.0144	0.0506	0.0333
	Sulfate (SO ₄) (mg/L)	8.89	1.47	7.69	<0.30	<0.30
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	0.0024	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	11.5	8.24	17.2	27.4	24.7
	Total Organic Carbon (mg/L)	10.7	7.83	16.8	30.1	24.6
Inorganic Parameters	Acidity (as CaCO ₃) (mg/L)	2.2 ^{PEHT}	<2.0	3.2 ^{HTD}	12.4	9.1
Total Metals	Aluminum (Al)-Total (mg/L)	0.193	0.0469	0.0484	0.191	0.103
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00027	0.00015	0.00031	0.00075	0.00053
	Barium (Ba)-Total (mg/L)	0.00764	0.00595	0.0101	0.0156	0.00603
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000223	0.0000056	<0.0000050	0.0000115	0.0000051
	Calcium (Ca)-Total (mg/L)	6.16	2.83	17.9	7.00	4.82
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00033	0.00014	0.00018	0.00051	0.00024
	Cobalt (Co)-Total (mg/L)	0.00082	0.00014	0.00011	0.00141	0.00029
	Copper (Cu)-Total (mg/L)	0.00588	0.00097	<0.00050	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	0.845	0.301	0.326	7.72	0.810

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2725589-6 W 24-JUL-22 12:34 AQM74	L2725589-7 W 24-JUL-22 09:29 QC-01	L2725589-8 W 25-JUL-22 10:30 AQF7S	L2725589-9 W 25-JUL-22 11:50 AQF7D	L2725589-10 W 25-JUL-22 11:55 AQF38
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	16.0	18.0	16.3	16.3	22.0
	Total Suspended Solids (mg/L)	4.7	2.1	<1.0	4.6	2.0
Anions and Nutrients	Alkalinity, Total (as CaCO ₃) (mg/L)	13.3	13.4	14.3	13.8	21.6
	Ammonia, Total (as N) (mg/L)	0.024	0.028	0.055	0.041	0.010
	Bicarbonate (HCO ₃) (mg/L)	16.2	16.3	17.4	16.8	26.4
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.19	<0.10	0.10	0.14	0.23
	Fluoride (F) (mg/L)	0.046	0.051	0.043	0.039	0.080
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	0.0136	<0.0051	<0.0051	0.0263	<0.0051
	Nitrate (as N) (mg/L)	0.0136	<0.0050	<0.0050	0.0263	<0.0050
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.25	0.50	<0.20	0.40	0.25
	Phosphorus (P)-Total (mg/L)	0.0331	0.0425	0.0089	0.0329	0.0187
	Sulfate (SO ₄) (mg/L)	0.47	<0.30	0.64	1.02	<0.30
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0050 ^{DLM}	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	0.0012 ^{DLM}	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0050 ^{RRV}	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	13.1	25.4	9.09	7.85	11.5
	Total Organic Carbon (mg/L)	12.1	25.4	20.5 ^{HTD}	8.36 ^{HTD}	11.0 ^{HTD}
Inorganic Parameters	Acidity (as CaCO ₃) (mg/L)	4.7	9.3	<2.0 ^{HTD}	4.3 ^{HTD}	<2.0 ^{HTD}
Total Metals	Aluminum (Al)-Total (mg/L)	0.0749	0.103	0.0251	0.0560	0.0526
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00025	0.00054	0.00020	0.00020	0.00022
	Barium (Ba)-Total (mg/L)	0.00650	0.00596	0.00621	0.00919	0.00896
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	0.0000062	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)	4.79	5.70	3.93	4.25	4.12
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00018	0.00028	0.00013	0.00010	0.00013
	Cobalt (Co)-Total (mg/L)	0.00011	0.00030	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	0.00055	<0.00050	<0.00050	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	0.362	0.847	0.049	0.209	0.205

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2725589-11 W 25-JUL-22 14:11 AQF43	L2725589-12 W 26-JUL-22 12:43 AQF44	L2725589-13 W 26-JUL-22 13:20 AQF42	L2725589-14 W 26-JUL-22 13:49 AQF40	L2725589-15 W 27-JUL-22 12:45 AQF45
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	9.76	9.69	9.47	9.54	10.2
	Total Suspended Solids (mg/L)	1.4	1.6	1.3	2.5	2.2
Anions and Nutrients	Alkalinity, Total (as CaCO ₃) (mg/L)	8.1	8.3	9.7	7.6	8.9
	Ammonia, Total (as N) (mg/L)	0.030	0.015	0.022	0.017	0.018
	Bicarbonate (HCO ₃) (mg/L)	9.9	10.1	11.8	9.3	10.9
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.17	0.16	0.31	0.18	0.39
	Fluoride (F) (mg/L)	0.061	0.062	0.060	0.061	0.062
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051
	Nitrate (as N) (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	<0.20	<0.20	<0.20	0.24	<0.20
	Phosphorus (P)-Total (mg/L)	0.0151	0.0161	0.0183	0.0163	0.0175
	Sulfate (SO ₄) (mg/L)	0.44	0.44	0.49	0.44	0.59
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	10.0	9.32	9.05	9.35	9.60
	Total Organic Carbon (mg/L)	9.20	9.15	9.16	9.41	9.13
Inorganic Parameters	Acidity (as CaCO ₃) (mg/L)	<2.0 ^{HTD}	<2.0	<2.0	<2.0	<2.0
Total Metals	Aluminum (Al)-Total (mg/L)	0.0579	0.0642	0.0483	0.0442	0.0731
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00019	0.00016	0.00017	0.00016	0.00018
	Barium (Ba)-Total (mg/L)	0.00571	0.00586	0.00574	0.00626	0.00609
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	0.0000068	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)	2.68	2.72	2.56	2.71	2.84
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00015	0.00016	0.00127	0.00014	0.00019
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	0.00062	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	0.250	0.265	0.247	0.235	0.266

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2725589-16 W 27-JUL-22 13:07 AQF46	L2725589-17 W 25-JUL-22 11:55 AQF41	L2725589-18 W 25-JUL-22 11:55 FIELD BLANK	L2725589-19 W 25-JUL-22 11:55 TRIP BLANK	
Grouping	Analyte						
WATER							
Physical Tests	Hardness (as CaCO3) (mg/L)	26.0	9.40	<0.20	<0.20		
	Total Suspended Solids (mg/L)	2.3	1.7	<1.0	<1.0		
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	25.6	8.2	<1.0	<1.0		
	Ammonia, Total (as N) (mg/L)	0.030	0.037	0.024	0.012		
	Bicarbonate (HCO3) (mg/L)	31.2	10.0	<1.2	<1.2		
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10		
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60		
	Chloride (Cl) (mg/L)	<0.10	0.18	<0.10	<0.10		
	Fluoride (F) (mg/L)	0.043	0.061	<0.020	<0.020		
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34		
	Nitrate and Nitrite as N (mg/L)	<0.0051	<0.0051	<0.0051	<0.0051		
	Nitrate (as N) (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050		
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010		
	Total Kjeldahl Nitrogen (mg/L)	0.22	<0.20	<0.20	<0.20		
	Phosphorus (P)-Total (mg/L)	0.0156	0.0133	<0.0010	<0.0010		
	Sulfate (SO4) (mg/L)	0.39	0.44	<0.30	<0.30		
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010 ^{PEHT}	<0.0010		
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010 ^{PEHT}	<0.0010		
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010 ^{PEHT}	<0.0010		
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	12.0	8.91	1.25	<0.50		
	Total Organic Carbon (mg/L)	12.3	9.29	1.17 ^{HTD}	<0.50 ^{HTD}		
Inorganic Parameters	Acidity (as CaCO3) (mg/L)	2.8	<2.0 ^{HTD}	<2.0 ^{HTD}	<2.0 ^{HTD}		
Total Metals	Aluminum (Al)-Total (mg/L)	0.0293	0.0424	<0.0030	<0.0030		
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Arsenic (As)-Total (mg/L)	0.00028	0.00016	<0.00010	<0.00010		
	Barium (Ba)-Total (mg/L)	0.00715	0.00552	<0.00010	<0.00010		
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050		
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010		
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050		
	Calcium (Ca)-Total (mg/L)	7.86	2.69	<0.050	<0.050		
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010		
	Chromium (Cr)-Total (mg/L)	<0.00010	0.00015	0.00013	<0.00010		
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050		
	Iron (Fe)-Total (mg/L)	0.079	0.227	<0.010	<0.010		

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2725589-1 W 24-JUL-22 09:29 AQM28	L2725589-2 W 24-JUL-22 10:22 AQM29C	L2725589-3 W 24-JUL-22 10:59 AQM71	L2725589-4 W 24-JUL-22 11:32 AQM72	L2725589-5 W 24-JUL-22 11:59 AQM73
Grouping	Analyte					
WATER						
Total Metals	Lead (Pb)-Total (mg/L)	0.000088	<0.000050	<0.000050	0.000085	<0.000050
	Lithium (Li)-Total (mg/L)	0.0012	0.0011	0.0011	<0.0010	0.0012
	Magnesium (Mg)-Total (mg/L)	1.40	0.741	1.88	1.45	1.12
	Manganese (Mn)-Total (mg/L)	0.0431	0.0255	0.0301	0.309	0.0566
	Mercury (Hg)-Total (ug/L)	0.00176	0.00131	0.00235	0.00294	0.00179
	Molybdenum (Mo)-Total (mg/L)	0.000072	<0.000050	<0.000050	0.000085	<0.000050
	Nickel (Ni)-Total (mg/L)	0.0707	0.00681	0.00057	0.00132	0.00062
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	0.046	<0.030
	Potassium (K)-Total (mg/L)	0.735	0.521	0.425	0.202	0.067
	Rubidium (Rb)-Total (mg/L)	0.00113	0.00110	0.00072	0.00057	<0.00020
	Selenium (Se)-Total (mg/L)	0.000059	0.000059	<0.000050	0.000105	<0.000050
	Silicon (Si)-Total (mg/L)	2.48	2.36	3.07	3.44	3.79
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	1.30	0.979	1.43	0.693	1.13
	Strontium (Sr)-Total (mg/L)	0.0179	0.0120	0.0290	0.0233	0.0114
	Sulfur (S)-Total (mg/L)	3.41	0.74	3.24	<0.50	<0.50
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	0.00031	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00175	0.00128	0.00163	0.00576	0.00126
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.000027	0.000028	0.000018	0.000023	<0.000010
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	0.00127	<0.00050
	Zinc (Zn)-Total (mg/L)	0.0151	<0.0030	<0.0030	0.0094	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	0.00029	<0.00020
Dissolved Metals	Dissolved MeHg Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.131	0.0261	0.0362	0.147	0.0929
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00022	0.00015	0.00034	0.00062	0.00052
	Barium (Ba)-Dissolved (mg/L)	0.00756	0.00569	0.0105	0.0363 ^{RRV}	0.00575
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.0000179	<0.000050	<0.000050	0.0000097	<0.000050

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2725589-6	L2725589-7	L2725589-8	L2725589-9	L2725589-10
		W	W	W	W	W
		24-JUL-22	24-JUL-22	25-JUL-22	25-JUL-22	25-JUL-22
		12:34	09:29	10:30	11:50	11:55
		AQM74	QC-01	AQF7S	AQF7D	AQF38
Grouping	Analyte					
WATER						
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	0.000059	<0.000050	0.000118	0.000115
	Lithium (Li)-Total (mg/L)	<0.0010	0.0014	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Total (mg/L)	1.07	1.15	1.49	1.49	1.46
	Manganese (Mn)-Total (mg/L)	0.0398	0.0578	0.00800	0.0625	0.0622
	Mercury (Hg)-Total (ug/L)	0.00166	0.00121	0.00102	0.00149	0.00099
	Molybdenum (Mo)-Total (mg/L)	0.000274	<0.000050	0.000084	0.000050	<0.000050
	Nickel (Ni)-Total (mg/L)	<0.00050	0.00065	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Total (mg/L)	0.039	0.051	<0.030	<0.030	<0.030
	Potassium (K)-Total (mg/L)	0.437	0.080	0.520	0.515	0.517
	Rubidium (Rb)-Total (mg/L)	0.00069	<0.00020	0.00092	0.00098	0.00089
	Selenium (Se)-Total (mg/L)	0.000053	<0.000050	<0.000050	0.000052	0.000071
	Silicon (Si)-Total (mg/L)	1.14	3.89	0.84	1.20	1.13
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	0.907	1.17	1.00	0.986	0.996
	Strontium (Sr)-Total (mg/L)	0.0124	0.0132	0.0116	0.0127	0.0121
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	0.00145	0.00141
	Titanium (Ti)-Total (mg/L)	0.00149	0.00145	0.00036	0.00120	0.00107
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.000018	<0.000010	<0.000010	0.000011	0.000012
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals	Dissolved MeHg Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0452	0.0913	0.0194	0.0244	0.0103
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00022	0.00051	0.00018	0.00017	0.00016
	Barium (Ba)-Dissolved (mg/L)	0.00612	0.00548	0.00663	0.00900	0.00884
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	<0.000050	0.0000060	<0.000050	<0.000050	<0.000050

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2725589-11 W 25-JUL-22 14:11 AQF43	L2725589-12 W 26-JUL-22 12:43 AQF44	L2725589-13 W 26-JUL-22 13:20 AQF42	L2725589-14 W 26-JUL-22 13:49 AQF40	L2725589-15 W 27-JUL-22 12:45 AQF45
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010
	Magnesium (Mg)-Total (mg/L)	0.837	0.833	0.793	0.792	0.792	0.871
	Manganese (Mn)-Total (mg/L)	0.0221	0.0230	0.0178	0.0185	0.0185	0.0266
	Mercury (Hg)-Total (ug/L)	0.00136	0.00128	0.00184	0.00132	0.00132	0.00156
	Molybdenum (Mo)-Total (mg/L)	0.000076	0.000074	0.000082	0.000083	0.000083	0.000074
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Total (mg/L)	0.505	0.498	0.489	0.486	0.486	0.487
	Rubidium (Rb)-Total (mg/L)	0.00108	0.00112	0.00106	0.00102	0.00102	0.00103
	Selenium (Se)-Total (mg/L)	0.000057	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Total (mg/L)	2.16	2.22	2.10	2.13	2.13	2.10
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	1.02	0.995	1.02	0.974	0.974	0.991
	Strontium (Sr)-Total (mg/L)	0.0113	0.0121	0.0113	0.0119	0.0119	0.0119
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	0.00041	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00141	0.00178	0.00124	0.00112	0.00112	0.00276
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.000022	0.000026	0.000022	0.000023	0.000023	0.000030
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	0.0060	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals	Dissolved MeHg Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0292	0.0294	0.0255	0.0264	0.0264	0.0337
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00016	0.00015	0.00014	0.00017	0.00017	0.00014
	Barium (Ba)-Dissolved (mg/L)	0.00533	0.00537	0.00541	0.00538	0.00538	0.00528
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2725589-16 W 27-JUL-22 13:07 AQF46	L2725589-17 W 25-JUL-22 11:55 AQF41	L2725589-18 W 25-JUL-22 11:55 FIELD BLANK	L2725589-19 W 25-JUL-22 11:55 TRIP BLANK	
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050		
	Lithium (Li)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010		
	Magnesium (Mg)-Total (mg/L)	1.77	0.799	<0.0050	<0.0050		
	Manganese (Mn)-Total (mg/L)	0.0181	0.0142	<0.00010	<0.00010		
	Mercury (Hg)-Total (ug/L)	0.00128	0.00152	0.00126	<0.00050		
	Molybdenum (Mo)-Total (mg/L)	0.000071	0.000061	<0.000050	<0.000050		
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050		
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030		
	Potassium (K)-Total (mg/L)	0.497	0.484	<0.050	<0.050		
	Rubidium (Rb)-Total (mg/L)	0.00074	0.00094	<0.00020	<0.00020		
	Selenium (Se)-Total (mg/L)	0.000050	<0.000050	<0.000050	<0.000050		
	Silicon (Si)-Total (mg/L)	0.64	2.09	<0.10	<0.10		
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010		
	Sodium (Na)-Total (mg/L)	0.917	0.991	<0.050	<0.050		
	Strontium (Sr)-Total (mg/L)	0.0142	0.0118	<0.00020	<0.00020		
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50		
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020		
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010		
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Tin (Sn)-Total (mg/L)	<0.00010	0.00014	0.00015	<0.00010		
	Titanium (Ti)-Total (mg/L)	0.00035	0.00086	<0.00030	<0.00030		
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Uranium (U)-Total (mg/L)	<0.000010	0.000024	<0.000010	<0.000010		
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050		
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030		
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020		
Dissolved Metals	Dissolved MeHg Filtration Location	FIELD	FIELD	FIELD	FIELD		
	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD		
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD		
	Aluminum (Al)-Dissolved (mg/L)	0.0255	0.0261	<0.0010	<0.0010		
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Arsenic (As)-Dissolved (mg/L)	0.00028	0.00015	<0.00010	<0.00010		
	Barium (Ba)-Dissolved (mg/L)	0.00719	0.00525	0.00099 ^{RRV}	<0.00010		
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050		
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010		
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2725589-1 W 24-JUL-22 09:29 AQM28	L2725589-2 W 24-JUL-22 10:22 AQM29C	L2725589-3 W 24-JUL-22 10:59 AQM71	L2725589-4 W 24-JUL-22 11:32 AQM72	L2725589-5 W 24-JUL-22 11:59 AQM73
Grouping	Analyte					
WATER						
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	6.30	2.68	17.8	6.98	5.63
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	0.00019	<0.00010	0.00014	0.00043	0.00025
	Cobalt (Co)-Dissolved (mg/L)	0.00040	<0.00010	<0.00010	0.00124	0.00028
	Copper (Cu)-Dissolved (mg/L)	0.00468	0.00082	0.00022	0.00135	<0.00020
	Iron (Fe)-Dissolved (mg/L)	0.569	0.163	0.268	4.23	0.733
	Lead (Pb)-Dissolved (mg/L)	0.000058	<0.000050	<0.000050	0.000089	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.0015	0.0011	0.0012	<0.0010	0.0015
	Magnesium (Mg)-Dissolved (mg/L)	1.39	0.734	2.02	1.37	1.08
	Manganese (Mn)-Dissolved (mg/L)	0.0262	0.00752	0.0284	0.291	0.0559
	Mercury (Hg)-Dissolved (ug/L)	0.00175	0.00105	0.00201	0.00221	0.00176
	Molybdenum (Mo)-Dissolved (mg/L)	0.000065	<0.000050	<0.000050	0.000073	<0.000050
	Nickel (Ni)-Dissolved (mg/L)	0.0666	0.00621	0.00054	0.00159	0.00068
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.749	0.535	0.450	0.201	0.075
	Rubidium (Rb)-Dissolved (mg/L)	0.00109	0.00104	0.00069	0.00051	<0.00020
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	0.000051	<0.000050
	Silicon (Si)-Dissolved (mg/L)	2.55	2.39	3.21	3.64	3.88
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.44	1.09	1.51	0.717	1.19
	Strontium (Sr)-Dissolved (mg/L)	0.0187	0.0121	0.0299	0.0243	0.0134
	Sulfur (S)-Dissolved (mg/L)	4.14	0.88	4.12	<0.50	0.69
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	0.00027	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00070	<0.00030	0.00089	0.00401	0.00096
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000026	0.000022	0.000014	0.000018	<0.000010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	0.00079	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0118	0.0031	0.0015	0.0058	0.0034
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	0.00032	0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Methylmercury (as MeHg)-Dissolved (ug/L)	0.000055	0.000091	0.000454	0.000138	0.000158
	Methylmercury (as MeHg)-Total (ug/L)	0.000034	0.000042	0.000689	0.000199	0.000162

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2725589-6 W 24-JUL-22 12:34 AQM74	L2725589-7 W 24-JUL-22 09:29 QC-01	L2725589-8 W 25-JUL-22 10:30 AQF7S	L2725589-9 W 25-JUL-22 11:50 AQF7D	L2725589-10 W 25-JUL-22 11:55 AQF38
Grouping	Analyte					
WATER						
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	4.68	5.56	4.13	4.18	6.36 ^{RRV}
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	0.00019	0.00022	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00024	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00049	0.00020	0.00022	0.00022	<0.00020
	Iron (Fe)-Dissolved (mg/L)	0.197	0.698	0.031	0.093	0.031
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.0010	0.0013	<0.0010	<0.0010	0.0010
	Magnesium (Mg)-Dissolved (mg/L)	1.05	1.01	1.45	1.43	1.49
	Manganese (Mn)-Dissolved (mg/L)	0.0215	0.0527	0.00055	0.0467	0.00251
	Mercury (Hg)-Dissolved (ug/L)	0.00153	0.00110	0.00127	0.00103	0.00148
	Molybdenum (Mo)-Dissolved (mg/L)	0.000240	<0.000050	0.000076	0.000060	0.00180 ^{RRV}
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	0.00060	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.446	0.070	0.546	0.530	0.593
	Rubidium (Rb)-Dissolved (mg/L)	0.00072	<0.00020	0.00099	0.00096	0.00087
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	1.07	3.75	0.898	1.15	0.840
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	0.967	1.00	1.07	1.04	1.12
	Strontium (Sr)-Dissolved (mg/L)	0.0124	0.0122	0.0127	0.0126	0.0160
	Sulfur (S)-Dissolved (mg/L)	0.52	<0.50	<0.50	1.08	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	0.00096	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00061	0.00080	<0.00030	<0.00030	<0.00030
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000016	<0.000010	<0.000010	<0.000010	<0.000010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0036	0.0023	0.0011	0.0023	0.0040
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Methylmercury (as MeHg)-Dissolved (ug/L)	0.000214	0.000188	0.000139	0.000076	0.000087
	Methylmercury (as MeHg)-Total (ug/L)	0.000303	0.000169	0.000030	0.000059	<0.000020

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2725589-11 W 25-JUL-22 14:11 AQF43	L2725589-12 W 26-JUL-22 12:43 AQF44	L2725589-13 W 26-JUL-22 13:20 AQF42	L2725589-14 W 26-JUL-22 13:49 AQF40	L2725589-15 W 27-JUL-22 12:45 AQF45
Grouping	Analyte					
WATER						
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	2.61	2.66	2.59	2.62	2.80
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	0.00011	0.00011	0.00010	0.00011	0.00013
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00023	0.00030	0.00021	0.00022	0.00035
	Iron (Fe)-Dissolved (mg/L)	0.163	0.158	0.153	0.152	0.156
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	0.786	0.741	0.730	0.730	0.784
	Manganese (Mn)-Dissolved (mg/L)	0.00425	0.00457	0.00461	0.00558	0.00399
	Mercury (Hg)-Dissolved (ug/L)	0.00150	0.00159	0.00146	0.00118	0.00173
	Molybdenum (Mo)-Dissolved (mg/L)	0.000059	0.000092	0.000084	0.000084	0.000089
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.507	0.503	0.487	0.490	0.480
	Rubidium (Rb)-Dissolved (mg/L)	0.00102	0.00101	0.00095	0.00100	0.00104
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	2.18	1.99	1.95	1.97	2.06
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.06	0.870	0.888	0.908	0.894
	Strontium (Sr)-Dissolved (mg/L)	0.0122	0.0111	0.0112	0.0111	0.0113
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	0.56	0.56	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	0.00069	0.00016	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00045	0.00049	0.00044	0.00047	0.00065
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000021	0.000024	0.000025	0.000023	0.000025
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0013	<0.0010	0.0090	0.0021	0.0021
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Methylmercury (as MeHg)-Dissolved (ug/L)	0.000148	0.000073	0.000102	0.000159	0.000170
	Methylmercury (as MeHg)-Total (ug/L)	0.000050	0.000090	0.000055	0.000033	0.000052

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2725589-16 W 27-JUL-22 13:07 AQF46	L2725589-17 W 25-JUL-22 11:55 AQF41	L2725589-18 W 25-JUL-22 11:55 FIELD BLANK	L2725589-19 W 25-JUL-22 11:55 TRIP BLANK	
Grouping	Analyte					
WATER						
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	7.75	2.59	<0.050	<0.050	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	0.00012	<0.00010	<0.00010	
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Copper (Cu)-Dissolved (mg/L)	0.00032	0.00021	<0.00020	<0.00020	
	Iron (Fe)-Dissolved (mg/L)	0.052	0.147	<0.010	<0.010	
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Magnesium (Mg)-Dissolved (mg/L)	1.61	0.712	<0.0050	<0.0050	
	Manganese (Mn)-Dissolved (mg/L)	0.0117	0.00399	<0.00010	<0.00010	
	Mercury (Hg)-Dissolved (ug/L)	0.00077	0.00093	<0.00050	<0.00050	
	Molybdenum (Mo)-Dissolved (mg/L)	0.000073	0.000076	<0.000050	<0.000050	
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Dissolved (mg/L)	0.492	0.472	<0.050	<0.050	
	Rubidium (Rb)-Dissolved (mg/L)	0.00084	0.00092	<0.00020	<0.00020	
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Silicon (Si)-Dissolved (mg/L)	0.568	2.06	<0.050	<0.050	
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Dissolved (mg/L)	0.830	0.873	<0.050	<0.050	
	Strontium (Sr)-Dissolved (mg/L)	0.0135	0.0111	<0.00010	<0.00010	
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	<0.50	
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Dissolved (mg/L)	0.00024	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	0.00036	<0.00030	<0.00030	
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.000021	<0.000010	<0.000010	
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Dissolved (mg/L)	0.0048	0.0032	<0.0010	<0.0010	
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	0.61	
	Methylmercury (as MeHg)-Dissolved (ug/L)	0.000088	0.000145	0.000052 ^{RRV}	<0.000020	
	Methylmercury (as MeHg)-Total (ug/L)	0.000099	0.000034	<0.000020	<0.000020	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Alkalinity, Total (as CaCO ₃)	B	L2725589-13, -6
Method Blank	Alkalinity, Total (as CaCO ₃)	B	L2725589-13, -6
Method Blank	Cyanide, Total	B	L2725589-1, -10, -11, -12, -13, -19, -2, -3, -5, -6, -8, -9
Laboratory Control Sample	Sulfur (S)-Dissolved	MES	L2725589-1, -10, -11, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2725589-1, -10, -11, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Boron (B)-Dissolved	MS-B	L2725589-1, -10, -11, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2725589-1, -10, -11, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2725589-12, -13, -14, -15, -16, -17, -18, -19, -7
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2725589-1, -10, -11, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2725589-12, -13, -14, -15, -16, -17, -18, -19, -7
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2725589-12, -13, -14, -15, -16, -17, -18, -19, -7
Matrix Spike	Potassium (K)-Dissolved	MS-B	L2725589-1, -10, -11, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2725589-1, -10, -11, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2725589-1, -10, -11, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L2725589-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2725589-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L2725589-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Nickel (Ni)-Total	MS-B	L2725589-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
HTD	Hold time exceeded for re-analysis or dilution, but initial testing was conducted within hold time.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PEHT	Parameter Exceeded Recommended Holding Time Prior to Analysis
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-WT	Water	Acidity (as CaCO ₃)	APHA 2310 B - Potentiometric Titration
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO ₃ 2-/L.			
ALK-HCO3HCO3-CALC-WP	Water	Alkalinity, Bicarbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO ₃ /L			
ALK-OH-OH-CALC-WP	Water	Alkalinity, Hydroxide	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.			
ALK-TITR-WP	Water	Alkalinity, Total (as CaCO ₃)	APHA 2320B
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO ₃ - and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-N-WP	Water	Bromide in Water by IC	EPA 300.1 (mod)

Reference Information

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

C-DOC-HTC-WP Water Dissolved Organic Carbon by Combustion APHA 5310 B-WP

Filtered (0.45 um) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

C-TOC-HTC-WP Water Total Organic Carbon by Combustion APHA 5310 B-WP

Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

CL-L-IC-N-WP Water Chloride in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

CN-FREE-L-CFA-VA Water Low Level Free Cyanide in water by CFA ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-FREE-L-CFA-WT Water Low Level Free Cyanide in water by CFA ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-T-L-CFA-VA Water Low Level Total Cyanide in water by CFA ISO 14403:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.

CN-T-L-CFA-WT Water Low Level Total Cyanide in water by CFA ISO 14403-2:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, however it would be less than 1% and could be as low as zero.

CN-WAD-L-CFA-VA Water Low level WAD Cyanide in water by CFA APHA 4500-CN CYANIDE

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

CN-WAD-L-CFA-WT Water Low level WAD Cyanide in water by CFA APHA 4500CN I-Weak acid Dist Colorimet

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

CR-CR6-PWQO-IC-WT Water Chromium +6 EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-SCREEN-WP Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc

EC-SCREEN-WT Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F-IC-N-WP Water Fluoride in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

HARDNESS-CALC-WP Water Hardness Calculated APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

Reference Information

HG-D-U-CVAF-VA	Water	Diss. Mercury in Water by CVAFS (Ultra)	APHA 3030 B / EPA 1631 REV. E
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure may involve preliminary sample treatment by filtration (APHA 3030B) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.			
HG-T-U-CVAF-VA	Water	Total Mercury in Water by CVAFS (Ultra)	EPA 1631 REV. E
This analysis is carried out using procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.			
MEHG-D-GCAF-VA	Water	Diss. Methylmercury in Water by GCAFS	EPA 1630 (mod)
This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".			
MEHG-T-GCAF-VA	Water	Total Methylmercury in Water by GCAFS	EPA 1630 (mod)
This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".			
MET-D-CCMS-WP	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020B (mod)
Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
MET-T-CCMS-WP	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020B (mod.)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	APHA 4500 NorgD (modified)
Aqueous samples are digested in a block digester with sulfuric acid and copper sulfate as a catalyst. Total Kjeldahl Nitrogen is then analyzed using a discrete analyzer with colorimetric detection.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-N-WP	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-L-IC-N-WP	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.			
P-T-L-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourmetrically after persulphate digestion of the sample.			
SO4-IC-N-WP	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
SOLIDS-TOTSUS-LR-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 105°C.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Reference Information

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L2725589

Report Date: 09-SEP-22

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Client: Alamos Gold Inc.
C/O Stantec Consulting 500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Contact: KAREN MATHERS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-WT		Water						
Batch R5837022								
WG3754894-27 DUP		L2725589-1						
Acidity (as CaCO ₃)		2.2	2.3		mg/L	3.6	20	06-AUG-22
WG3754894-26 LCS								
Acidity (as CaCO ₃)			105.4		%		85-115	06-AUG-22
WG3754894-25 MB								
Acidity (as CaCO ₃)			<2.0		mg/L		3	06-AUG-22
Batch R5838418								
WG3755205-2 LCS								
Acidity (as CaCO ₃)			107.3		%		85-115	06-AUG-22
WG3755205-1 MB								
Acidity (as CaCO ₃)			<2.0		mg/L		3	06-AUG-22
Batch R5839338								
WG3755208-2 LCS								
Acidity (as CaCO ₃)			110.3		%		85-115	09-AUG-22
WG3755208-1 MB								
Acidity (as CaCO ₃)			<2.0		mg/L		3	09-AUG-22
ALK-TITR-WP		Water						
Batch R5836215								
WG3754842-15 DUP		L2725589-1						
Alkalinity, Total (as CaCO ₃)		8.9	8.9		mg/L	0.0	20	04-AUG-22
WG3754842-14 LCS								
Alkalinity, Total (as CaCO ₃)			100.7		%		85-115	04-AUG-22
WG3754842-4 LCS								
Alkalinity, Total (as CaCO ₃)			100.5		%		85-115	04-AUG-22
WG3754842-1 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	04-AUG-22
WG3754842-11 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	04-AUG-22
Batch R5836323								
WG3754849-14 LCS								
Alkalinity, Total (as CaCO ₃)			97.9		%		85-115	04-AUG-22
WG3754849-9 LCS								
Alkalinity, Total (as CaCO ₃)			99.9		%		85-115	04-AUG-22
WG3754849-11 MB								
Alkalinity, Total (as CaCO ₃)			1.2	B	mg/L		1	04-AUG-22
WG3754849-6 MB								
Alkalinity, Total (as CaCO ₃)			1.3	B	mg/L		1	04-AUG-22



Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-TOC-HTC-WP								
Batch R5847730								
WG3758844-2	LCS							
Total Organic Carbon			106.8		%		80-120	22-AUG-22
WG3758844-1	MB							
Total Organic Carbon			<0.50		mg/L		0.5	22-AUG-22
Batch R5849039								
WG3759906-3	DUP	L2725589-10						
Total Organic Carbon		11.0	10.9		mg/L	0.4	20	26-AUG-22
WG3759906-2	LCS							
Total Organic Carbon			102.3		%		80-120	26-AUG-22
WG3759906-1	MB							
Total Organic Carbon			<0.50		mg/L		0.5	26-AUG-22
WG3759906-4	MS	L2725589-11						
Total Organic Carbon			92.7		%		70-130	26-AUG-22
CL-L-IC-N-WP								
Batch R5834777								
WG3753652-2	LCS							
Chloride (Cl)			98.2		%		90-110	30-JUL-22
WG3753652-1	MB							
Chloride (Cl)			<0.10		mg/L		0.1	30-JUL-22
Batch R5836061								
WG3754607-2	LCS							
Chloride (Cl)			98.0		%		90-110	04-AUG-22
WG3754607-1	MB							
Chloride (Cl)			<0.10		mg/L		0.1	04-AUG-22
Batch R5836260								
WG3754238-2	LCS							
Chloride (Cl)			98.3		%		90-110	03-AUG-22
WG3754238-1	MB							
Chloride (Cl)			<0.10		mg/L		0.1	03-AUG-22
CN-FREE-L-CFA-VA								
Batch R5837090								
WG3755071-3	DUP	L2725589-12						
Cyanide, Free		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	07-AUG-22
WG3755071-2	LCS							
Cyanide, Free			96.9		%		80-120	07-AUG-22
WG3755071-1	MB							
Cyanide, Free			<0.0010		mg/L		0.001	07-AUG-22
WG3755071-4	MS	L2725589-13						

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-U-CVAF-VA		Water						
Batch	R5851797							
WG3760500-3	DUP	L2725589-1						
Mercury (Hg)-Dissolved		0.00175	0.00186		ug/L	6.2	20	31-AUG-22
WG3760500-2	LCS							
Mercury (Hg)-Dissolved			107.8		%		80-120	31-AUG-22
WG3760500-1	MB	NP						
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	31-AUG-22
WG3760600-1	MB							
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	31-AUG-22
WG3760500-4	MS	L2725589-2						
Mercury (Hg)-Dissolved			97.9		%		70-130	31-AUG-22
HG-T-U-CVAF-VA		Water						
Batch	R5851736							
WG3760490-3	DUP	L2725589-1						
Mercury (Hg)-Total		0.00176	0.00167		ug/L	5.5	20	31-AUG-22
WG3760490-2	LCS							
Mercury (Hg)-Total			107.3		%		80-120	31-AUG-22
WG3760490-1	MB							
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	31-AUG-22
WG3760490-4	MS	L2725589-2						
Mercury (Hg)-Total			90.3		%		70-130	31-AUG-22
MEHG-D-GCAF-VA		Water						
Batch	R5843158							
WG3758158-3	LCS							
Methylmercury (as MeHg)-Dissolved			77.2		%		70-130	18-AUG-22
WG3758158-1	MB							
Methylmercury (as MeHg)-Dissolved			<0.000020		ug/L		0.00002	18-AUG-22
WG3758158-4	MS	L2725589-8						
Methylmercury (as MeHg)-Dissolved			70.4		%		60-140	18-AUG-22
Batch	R5848140							
WG3759010-1	MB							
Methylmercury (as MeHg)-Dissolved			<0.000020		ug/L		0.00002	23-AUG-22
MEHG-T-GCAF-VA		Water						
Batch	R5843158							
WG3758158-2	DUP	L2725589-2						
Methylmercury (as MeHg)-Total		0.000042	0.000044		ug/L	2.8	30	18-AUG-22
WG3758515-2	DUP	L2725589-10						
Methylmercury (as MeHg)-Total		<0.000020	0.000029	RPD-NA	ug/L	N/A	30	20-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MEHG-T-GCAF-VA		Water						
Batch	R5843158							
WG3757531-3	LCS							
Methylmercury (as MeHg)-Total			81.4		%		70-130	16-AUG-22
WG3758158-3	LCS							
Methylmercury (as MeHg)-Total			77.2		%		70-130	18-AUG-22
WG3758515-3	LCS							
Methylmercury (as MeHg)-Total			81.0		%		70-130	20-AUG-22
WG3757531-1	MB							
Methylmercury (as MeHg)-Total			<0.000020		ug/L		0.00002	16-AUG-22
WG3758158-1	MB							
Methylmercury (as MeHg)-Total			<0.000020		ug/L		0.00002	18-AUG-22
WG3758515-1	MB							
Methylmercury (as MeHg)-Total			<0.000020		ug/L		0.00002	20-AUG-22
MET-D-CCMS-WP		Water						
Batch	R5837587							
WG3754298-2	LCS							
Aluminum (Al)-Dissolved			107.9		%		80-120	05-AUG-22
Antimony (Sb)-Dissolved			98.1		%		80-120	05-AUG-22
Arsenic (As)-Dissolved			105.3		%		80-120	05-AUG-22
Barium (Ba)-Dissolved			104.3		%		80-120	05-AUG-22
Beryllium (Be)-Dissolved			115.7		%		80-120	05-AUG-22
Bismuth (Bi)-Dissolved			103.2		%		80-120	05-AUG-22
Boron (B)-Dissolved			119.9		%		80-120	05-AUG-22
Cadmium (Cd)-Dissolved			104.7		%		80-120	05-AUG-22
Calcium (Ca)-Dissolved			110.9		%		80-120	05-AUG-22
Cesium (Cs)-Dissolved			100.3		%		80-120	05-AUG-22
Chromium (Cr)-Dissolved			104.4		%		80-120	05-AUG-22
Cobalt (Co)-Dissolved			105.6		%		80-120	05-AUG-22
Copper (Cu)-Dissolved			102.1		%		80-120	05-AUG-22
Iron (Fe)-Dissolved			103.2		%		80-120	05-AUG-22
Lead (Pb)-Dissolved			99.4		%		80-120	05-AUG-22
Lithium (Li)-Dissolved			117.3		%		80-120	05-AUG-22
Magnesium (Mg)-Dissolved			115.8		%		80-120	05-AUG-22
Manganese (Mn)-Dissolved			105.1		%		80-120	05-AUG-22
Molybdenum (Mo)-Dissolved			103.1		%		80-120	05-AUG-22
Nickel (Ni)-Dissolved			104.5		%		80-120	05-AUG-22
Phosphorus (P)-Dissolved			113.8		%		80-120	05-AUG-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5837587							
WG3754298-2	LCS							
Potassium (K)-Dissolved			110.8		%		80-120	05-AUG-22
Rubidium (Rb)-Dissolved			104.5		%		80-120	05-AUG-22
Selenium (Se)-Dissolved			101.1		%		80-120	05-AUG-22
Silicon (Si)-Dissolved			111.1		%		80-120	05-AUG-22
Silver (Ag)-Dissolved			97.3		%		80-120	05-AUG-22
Sodium (Na)-Dissolved			113.0		%		80-120	05-AUG-22
Strontium (Sr)-Dissolved			104.7		%		80-120	05-AUG-22
Sulfur (S)-Dissolved			124.5	MES	%		80-120	05-AUG-22
Tellurium (Te)-Dissolved			96.9		%		80-120	05-AUG-22
Thallium (Tl)-Dissolved			100.7		%		80-120	05-AUG-22
Thorium (Th)-Dissolved			94.8		%		80-120	05-AUG-22
Tin (Sn)-Dissolved			100.1		%		80-120	05-AUG-22
Titanium (Ti)-Dissolved			104.4		%		80-120	05-AUG-22
Tungsten (W)-Dissolved			102.5		%		80-120	05-AUG-22
Uranium (U)-Dissolved			97.7		%		80-120	05-AUG-22
Vanadium (V)-Dissolved			106.9		%		80-120	05-AUG-22
Zinc (Zn)-Dissolved			104.8		%		80-120	05-AUG-22
Zirconium (Zr)-Dissolved			96.1		%		80-120	05-AUG-22
WG3754298-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	05-AUG-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	05-AUG-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	05-AUG-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	05-AUG-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	05-AUG-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	05-AUG-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	05-AUG-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	05-AUG-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	05-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch R5837587								
WG3754298-1 MB								
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	05-AUG-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	05-AUG-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	05-AUG-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	05-AUG-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	05-AUG-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	05-AUG-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	05-AUG-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	05-AUG-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	05-AUG-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	05-AUG-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	05-AUG-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	05-AUG-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	05-AUG-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	05-AUG-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	05-AUG-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	05-AUG-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	05-AUG-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	05-AUG-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	05-AUG-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	05-AUG-22
Batch R5841553								
WG3755978-4 DUP		L2725589-7						
Aluminum (Al)-Dissolved		0.0913	0.0878		mg/L	3.9	20	11-AUG-22
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-AUG-22
Arsenic (As)-Dissolved		0.00051	0.00048		mg/L	6.4	20	11-AUG-22
Barium (Ba)-Dissolved		0.00548	0.00565		mg/L	3.1	20	11-AUG-22
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-AUG-22
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	11-AUG-22
Boron (B)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	11-AUG-22
Cadmium (Cd)-Dissolved		0.0000060	<0.0000050	RPD-NA	mg/L	N/A	20	11-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5841553							
WG3755978-4	DUP	L2725589-7						
Calcium (Ca)-Dissolved		5.56	5.70		mg/L	2.6	20	11-AUG-22
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	11-AUG-22
Chromium (Cr)-Dissolved		0.00022	0.00025		mg/L	13	20	11-AUG-22
Cobalt (Co)-Dissolved		0.00024	0.00025		mg/L	1.2	20	11-AUG-22
Copper (Cu)-Dissolved		0.00020	<0.00020	RPD-NA	mg/L	N/A	20	11-AUG-22
Iron (Fe)-Dissolved		0.698	0.689		mg/L	1.4	20	11-AUG-22
Lead (Pb)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	11-AUG-22
Lithium (Li)-Dissolved		0.0013	0.0014		mg/L	3.6	20	11-AUG-22
Magnesium (Mg)-Dissolved		1.01	1.00		mg/L	0.4	20	11-AUG-22
Manganese (Mn)-Dissolved		0.0527	0.0533		mg/L	1.0	20	11-AUG-22
Molybdenum (Mo)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	11-AUG-22
Nickel (Ni)-Dissolved		0.00060	0.00057		mg/L	5.2	20	11-AUG-22
Phosphorus (P)-Dissolved		<0.030	<0.030	RPD-NA	mg/L	N/A	20	11-AUG-22
Potassium (K)-Dissolved		0.070	0.072		mg/L	2.8	20	11-AUG-22
Rubidium (Rb)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	11-AUG-22
Selenium (Se)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	11-AUG-22
Silicon (Si)-Dissolved		3.75	3.71		mg/L	1.0	20	11-AUG-22
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	11-AUG-22
Sodium (Na)-Dissolved		1.00	1.01		mg/L	0.5	20	11-AUG-22
Strontium (Sr)-Dissolved		0.0122	0.0127		mg/L	4.2	20	11-AUG-22
Sulfur (S)-Dissolved		<0.50	<0.50	RPD-NA	mg/L	N/A	20	11-AUG-22
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	11-AUG-22
Thallium (Tl)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	11-AUG-22
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-AUG-22
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-AUG-22
Titanium (Ti)-Dissolved		0.00080	0.00083		mg/L	3.9	20	11-AUG-22
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-AUG-22
Uranium (U)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	11-AUG-22
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	11-AUG-22
Zinc (Zn)-Dissolved		0.0023	0.0028		mg/L	19	20	11-AUG-22
Zirconium (Zr)-Dissolved		<0.00020	0.00024	RPD-NA	mg/L	N/A	20	11-AUG-22
WG3755978-2	LCS							
Aluminum (Al)-Dissolved			101.3		%		80-120	11-AUG-22
Antimony (Sb)-Dissolved			103.0		%		80-120	11-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5841553							
WG3755978-2	LCS							
Arsenic (As)-Dissolved			99.4		%		80-120	11-AUG-22
Barium (Ba)-Dissolved			102.1		%		80-120	11-AUG-22
Beryllium (Be)-Dissolved			105.2		%		80-120	11-AUG-22
Bismuth (Bi)-Dissolved			108.8		%		80-120	11-AUG-22
Boron (B)-Dissolved			103.3		%		80-120	11-AUG-22
Cadmium (Cd)-Dissolved			107.9		%		80-120	11-AUG-22
Calcium (Ca)-Dissolved			106.2		%		80-120	11-AUG-22
Cesium (Cs)-Dissolved			100.7		%		80-120	11-AUG-22
Chromium (Cr)-Dissolved			99.6		%		80-120	11-AUG-22
Cobalt (Co)-Dissolved			99.1		%		80-120	11-AUG-22
Copper (Cu)-Dissolved			98.5		%		80-120	11-AUG-22
Iron (Fe)-Dissolved			96.4		%		80-120	11-AUG-22
Lead (Pb)-Dissolved			96.8		%		80-120	11-AUG-22
Lithium (Li)-Dissolved			106.5		%		80-120	11-AUG-22
Magnesium (Mg)-Dissolved			99.98		%		80-120	11-AUG-22
Manganese (Mn)-Dissolved			102.2		%		80-120	11-AUG-22
Molybdenum (Mo)-Dissolved			103.7		%		80-120	11-AUG-22
Nickel (Ni)-Dissolved			97.8		%		80-120	11-AUG-22
Phosphorus (P)-Dissolved			104.6		%		80-120	11-AUG-22
Potassium (K)-Dissolved			101.6		%		80-120	11-AUG-22
Rubidium (Rb)-Dissolved			102.7		%		80-120	11-AUG-22
Selenium (Se)-Dissolved			98.5		%		80-120	11-AUG-22
Silicon (Si)-Dissolved			108.6		%		80-120	11-AUG-22
Silver (Ag)-Dissolved			101.9		%		80-120	11-AUG-22
Sodium (Na)-Dissolved			97.7		%		80-120	11-AUG-22
Strontium (Sr)-Dissolved			98.6		%		80-120	11-AUG-22
Sulfur (S)-Dissolved			115.0		%		80-120	11-AUG-22
Tellurium (Te)-Dissolved			100.5		%		80-120	11-AUG-22
Thallium (Tl)-Dissolved			103.2		%		80-120	11-AUG-22
Thorium (Th)-Dissolved			97.5		%		80-120	11-AUG-22
Tin (Sn)-Dissolved			102.8		%		80-120	11-AUG-22
Titanium (Ti)-Dissolved			97.2		%		80-120	11-AUG-22
Tungsten (W)-Dissolved			102.1		%		80-120	11-AUG-22
Uranium (U)-Dissolved			96.1		%		80-120	11-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5841553							
WG3755978-2	LCS							
Vanadium (V)-Dissolved			98.9		%		80-120	11-AUG-22
Zinc (Zn)-Dissolved			101.1		%		80-120	11-AUG-22
Zirconium (Zr)-Dissolved			97.5		%		80-120	11-AUG-22
WG3755978-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	11-AUG-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	11-AUG-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	11-AUG-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	11-AUG-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	11-AUG-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	11-AUG-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	11-AUG-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	11-AUG-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	11-AUG-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	11-AUG-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	11-AUG-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	11-AUG-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	11-AUG-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	11-AUG-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	11-AUG-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	11-AUG-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	11-AUG-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	11-AUG-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	11-AUG-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	11-AUG-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	11-AUG-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	11-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP	Water							
Batch	R5841553							
WG3755978-1 MB								
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	11-AUG-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	11-AUG-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	11-AUG-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	11-AUG-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	11-AUG-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	11-AUG-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	11-AUG-22
WG3755978-5 MS		L2725589-7						
Aluminum (Al)-Dissolved			95.6		%		70-130	11-AUG-22
Antimony (Sb)-Dissolved			101.8		%		70-130	11-AUG-22
Arsenic (As)-Dissolved			99.9		%		70-130	11-AUG-22
Barium (Ba)-Dissolved			98.4		%		70-130	11-AUG-22
Beryllium (Be)-Dissolved			101.7		%		70-130	11-AUG-22
Bismuth (Bi)-Dissolved			97.3		%		70-130	11-AUG-22
Boron (B)-Dissolved			95.3		%		70-130	11-AUG-22
Cadmium (Cd)-Dissolved			108.4		%		70-130	11-AUG-22
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	11-AUG-22
Cesium (Cs)-Dissolved			103.7		%		70-130	11-AUG-22
Chromium (Cr)-Dissolved			96.4		%		70-130	11-AUG-22
Cobalt (Co)-Dissolved			95.8		%		70-130	11-AUG-22
Copper (Cu)-Dissolved			95.1		%		70-130	11-AUG-22
Iron (Fe)-Dissolved			93.7		%		70-130	11-AUG-22
Lead (Pb)-Dissolved			98.3		%		70-130	11-AUG-22
Lithium (Li)-Dissolved			101.1		%		70-130	11-AUG-22
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	11-AUG-22
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	11-AUG-22
Molybdenum (Mo)-Dissolved			100.0		%		70-130	11-AUG-22
Nickel (Ni)-Dissolved			94.9		%		70-130	11-AUG-22
Phosphorus (P)-Dissolved			98.5		%		70-130	11-AUG-22
Potassium (K)-Dissolved			97.0		%		70-130	11-AUG-22
Rubidium (Rb)-Dissolved			101.5		%		70-130	11-AUG-22
Selenium (Se)-Dissolved			102.9		%		70-130	11-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5841553							
WG3755978-5 MS		L2725589-7						
Silicon (Si)-Dissolved			90.9		%		70-130	11-AUG-22
Silver (Ag)-Dissolved			99.9		%		70-130	11-AUG-22
Sodium (Na)-Dissolved			93.1		%		70-130	11-AUG-22
Strontium (Sr)-Dissolved			99.6		%		70-130	11-AUG-22
Sulfur (S)-Dissolved			101.0		%		70-130	11-AUG-22
Tellurium (Te)-Dissolved			101.1		%		70-130	11-AUG-22
Thallium (Tl)-Dissolved			101.5		%		70-130	11-AUG-22
Thorium (Th)-Dissolved			108.0		%		70-130	11-AUG-22
Tin (Sn)-Dissolved			99.8		%		70-130	11-AUG-22
Titanium (Ti)-Dissolved			91.4		%		70-130	11-AUG-22
Tungsten (W)-Dissolved			97.9		%		70-130	11-AUG-22
Uranium (U)-Dissolved			101.5		%		70-130	11-AUG-22
Vanadium (V)-Dissolved			96.1		%		70-130	11-AUG-22
Zinc (Zn)-Dissolved			99.4		%		70-130	11-AUG-22
Zirconium (Zr)-Dissolved			95.1		%		70-130	11-AUG-22
MET-T-CCMS-WP		Water						
Batch	R5839578							
WG3755357-4 DUP		L2725589-1						
Aluminum (Al)-Total		0.193	0.193		mg/L	0.1	20	09-AUG-22
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-AUG-22
Arsenic (As)-Total		0.00027	0.00027		mg/L	3.4	20	09-AUG-22
Barium (Ba)-Total		0.00764	0.00758		mg/L	0.8	20	09-AUG-22
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-AUG-22
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	09-AUG-22
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	09-AUG-22
Cadmium (Cd)-Total		0.0000223	0.0000232		mg/L	3.8	20	09-AUG-22
Calcium (Ca)-Total		6.16	6.08		mg/L	1.3	20	09-AUG-22
Cesium (Cs)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	09-AUG-22
Chromium (Cr)-Total		0.00033	0.00034		mg/L	1.9	20	09-AUG-22
Cobalt (Co)-Total		0.00082	0.00085		mg/L	4.0	20	09-AUG-22
Copper (Cu)-Total		0.00588	0.00589		mg/L	0.2	20	09-AUG-22
Iron (Fe)-Total		0.845	0.843		mg/L	0.2	20	09-AUG-22
Lead (Pb)-Total		0.000088	0.000094		mg/L	5.9	20	09-AUG-22
Lithium (Li)-Total		0.0012	0.0012		mg/L	0.9	20	09-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5839578							
WG3755357-4 DUP		L2725589-1						
Magnesium (Mg)-Total		1.40	1.38		mg/L	0.8	20	09-AUG-22
Manganese (Mn)-Total		0.0431	0.0437		mg/L	1.5	20	09-AUG-22
Molybdenum (Mo)-Total		0.000072	0.000060		mg/L	17	20	09-AUG-22
Nickel (Ni)-Total		0.0707	0.0705		mg/L	0.3	20	09-AUG-22
Potassium (K)-Total		0.735	0.735		mg/L	0.0	20	09-AUG-22
Phosphorus (P)-Total		<0.030	<0.030	RPD-NA	mg/L	N/A	20	09-AUG-22
Rubidium (Rb)-Total		0.00113	0.00120		mg/L	6.4	20	09-AUG-22
Selenium (Se)-Total		0.000059	0.000058		mg/L	2.3	20	09-AUG-22
Silicon (Si)-Total		2.48	2.40		mg/L	3.1	20	09-AUG-22
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	09-AUG-22
Sodium (Na)-Total		1.30	1.32		mg/L	0.9	20	09-AUG-22
Strontium (Sr)-Total		0.0179	0.0178		mg/L	0.7	20	09-AUG-22
Sulfur (S)-Total		3.41	3.46		mg/L	1.3	20	09-AUG-22
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	09-AUG-22
Thallium (Tl)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	09-AUG-22
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-AUG-22
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-AUG-22
Titanium (Ti)-Total		0.00175	0.00185		mg/L	5.6	20	09-AUG-22
Tungsten (W)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-AUG-22
Uranium (U)-Total		0.000027	0.000030		mg/L	11	20	09-AUG-22
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	09-AUG-22
Zinc (Zn)-Total		0.0151	0.0146		mg/L	2.9	20	09-AUG-22
Zirconium (Zr)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	09-AUG-22
WG3755357-2 LCS								
Aluminum (Al)-Total			104.4		%		80-120	09-AUG-22
Antimony (Sb)-Total			104.9		%		80-120	09-AUG-22
Arsenic (As)-Total			99.5		%		80-120	09-AUG-22
Barium (Ba)-Total			101.4		%		80-120	09-AUG-22
Beryllium (Be)-Total			101.8		%		80-120	09-AUG-22
Bismuth (Bi)-Total			94.8		%		80-120	09-AUG-22
Boron (B)-Total			95.7		%		80-120	09-AUG-22
Cadmium (Cd)-Total			102.1		%		80-120	09-AUG-22
Calcium (Ca)-Total			100.1		%		80-120	09-AUG-22
Cesium (Cs)-Total			101.0		%		80-120	09-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	Water							
Batch	R5839578							
WG3755357-2	LCS							
Chromium (Cr)-Total			101.6		%		80-120	09-AUG-22
Cobalt (Co)-Total			101.6		%		80-120	09-AUG-22
Copper (Cu)-Total			99.7		%		80-120	09-AUG-22
Iron (Fe)-Total			95.5		%		80-120	09-AUG-22
Lead (Pb)-Total			96.5		%		80-120	09-AUG-22
Lithium (Li)-Total			102.2		%		80-120	09-AUG-22
Magnesium (Mg)-Total			102.8		%		80-120	09-AUG-22
Manganese (Mn)-Total			103.8		%		80-120	09-AUG-22
Molybdenum (Mo)-Total			103.4		%		80-120	09-AUG-22
Nickel (Ni)-Total			100.3		%		80-120	09-AUG-22
Potassium (K)-Total			102.0		%		80-120	09-AUG-22
Phosphorus (P)-Total			102.7		%		80-120	09-AUG-22
Rubidium (Rb)-Total			96.9		%		80-120	09-AUG-22
Selenium (Se)-Total			100.9		%		80-120	09-AUG-22
Silicon (Si)-Total			101.1		%		80-120	09-AUG-22
Silver (Ag)-Total			101.6		%		80-120	09-AUG-22
Sodium (Na)-Total			104.1		%		80-120	09-AUG-22
Strontium (Sr)-Total			100.2		%		80-120	09-AUG-22
Sulfur (S)-Total			99.3		%		80-120	09-AUG-22
Tellurium (Te)-Total			93.4		%		80-120	09-AUG-22
Thallium (Tl)-Total			98.7		%		80-120	09-AUG-22
Thorium (Th)-Total			91.4		%		80-120	09-AUG-22
Tin (Sn)-Total			102.3		%		80-120	09-AUG-22
Titanium (Ti)-Total			98.8		%		80-120	09-AUG-22
Tungsten (W)-Total			100.7		%		80-120	09-AUG-22
Uranium (U)-Total			91.6		%		80-120	09-AUG-22
Vanadium (V)-Total			100.5		%		80-120	09-AUG-22
Zinc (Zn)-Total			102.3		%		80-120	09-AUG-22
Zirconium (Zr)-Total			98.5		%		80-120	09-AUG-22
WG3755357-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	09-AUG-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	09-AUG-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	09-AUG-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	09-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5839578							
WG3755357-1 MB								
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	09-AUG-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	09-AUG-22
Boron (B)-Total			<0.010		mg/L		0.01	09-AUG-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	09-AUG-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	09-AUG-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	09-AUG-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	09-AUG-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	09-AUG-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	09-AUG-22
Iron (Fe)-Total			<0.010		mg/L		0.01	09-AUG-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	09-AUG-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	09-AUG-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	09-AUG-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	09-AUG-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	09-AUG-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	09-AUG-22
Potassium (K)-Total			<0.050		mg/L		0.05	09-AUG-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	09-AUG-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	09-AUG-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	09-AUG-22
Silicon (Si)-Total			<0.10		mg/L		0.1	09-AUG-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	09-AUG-22
Sodium (Na)-Total			<0.050		mg/L		0.05	09-AUG-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	09-AUG-22
Sulfur (S)-Total			<0.50		mg/L		0.5	09-AUG-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	09-AUG-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	09-AUG-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	09-AUG-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	09-AUG-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	09-AUG-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	09-AUG-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	09-AUG-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	09-AUG-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	09-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	Water							
Batch	R5839578							
WG3755357-1 MB								
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	09-AUG-22
WG3755357-5 MS		L2725589-1						
Aluminum (Al)-Total			93.5		%		70-130	09-AUG-22
Antimony (Sb)-Total			101.1		%		70-130	09-AUG-22
Arsenic (As)-Total			98.7		%		70-130	09-AUG-22
Barium (Ba)-Total			99.5		%		70-130	09-AUG-22
Beryllium (Be)-Total			99.8		%		70-130	09-AUG-22
Bismuth (Bi)-Total			97.6		%		70-130	09-AUG-22
Boron (B)-Total			97.0		%		70-130	09-AUG-22
Cadmium (Cd)-Total			102.6		%		70-130	09-AUG-22
Calcium (Ca)-Total			N/A	MS-B	%		-	09-AUG-22
Cesium (Cs)-Total			104.6		%		70-130	09-AUG-22
Chromium (Cr)-Total			101.6		%		70-130	09-AUG-22
Cobalt (Co)-Total			102.0		%		70-130	09-AUG-22
Copper (Cu)-Total			99.4		%		70-130	09-AUG-22
Iron (Fe)-Total			96.2		%		70-130	09-AUG-22
Lead (Pb)-Total			98.5		%		70-130	09-AUG-22
Lithium (Li)-Total			97.2		%		70-130	09-AUG-22
Magnesium (Mg)-Total			N/A	MS-B	%		-	09-AUG-22
Manganese (Mn)-Total			N/A	MS-B	%		-	09-AUG-22
Molybdenum (Mo)-Total			102.2		%		70-130	09-AUG-22
Nickel (Ni)-Total			N/A	MS-B	%		-	09-AUG-22
Potassium (K)-Total			98.5		%		70-130	09-AUG-22
Phosphorus (P)-Total			100.5		%		70-130	09-AUG-22
Rubidium (Rb)-Total			98.4		%		70-130	09-AUG-22
Selenium (Se)-Total			107.1		%		70-130	09-AUG-22
Silicon (Si)-Total			93.7		%		70-130	09-AUG-22
Silver (Ag)-Total			103.7		%		70-130	09-AUG-22
Sodium (Na)-Total			100.6		%		70-130	09-AUG-22
Strontium (Sr)-Total			99.3		%		70-130	09-AUG-22
Sulfur (S)-Total			103.2		%		70-130	09-AUG-22
Tellurium (Te)-Total			100.2		%		70-130	09-AUG-22
Thallium (Tl)-Total			99.2		%		70-130	09-AUG-22
Thorium (Th)-Total			96.0		%		70-130	09-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5839578							
WG3755357-5 MS		L2725589-1						
Tin (Sn)-Total			98.5		%		70-130	09-AUG-22
Titanium (Ti)-Total			95.8		%		70-130	09-AUG-22
Tungsten (W)-Total			97.2		%		70-130	09-AUG-22
Uranium (U)-Total			95.0		%		70-130	09-AUG-22
Vanadium (V)-Total			100.5		%		70-130	09-AUG-22
Zinc (Zn)-Total			101.2		%		70-130	09-AUG-22
Zirconium (Zr)-Total			99.4		%		70-130	09-AUG-22
N-TOTKJ-WP		Water						
Batch	R5836041							
WG3753995-14 LCS								
Total Kjeldahl Nitrogen			95.3		%		75-125	04-AUG-22
WG3753995-13 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	04-AUG-22
Batch	R5837861							
WG3755341-3 DUP		L2725589-3						
Total Kjeldahl Nitrogen		0.29	0.29		mg/L	0.0	20	08-AUG-22
WG3755341-2 LCS								
Total Kjeldahl Nitrogen			110.0		%		75-125	08-AUG-22
WG3755341-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	08-AUG-22
WG3755341-4 MS		L2725589-3						
Total Kjeldahl Nitrogen			107.5		%		70-130	08-AUG-22
Batch	R5840143							
WG3755433-2 LCS								
Total Kjeldahl Nitrogen			104.3		%		75-125	10-AUG-22
WG3755433-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	10-AUG-22
NH3-COL-WP		Water						
Batch	R5850436							
WG3760233-3 DUP		L2725589-1						
Ammonia, Total (as N)		0.014	0.018	J	mg/L	0.004	0.02	30-AUG-22
WG3760233-2 LCS								
Ammonia, Total (as N)			99.2		%		85-115	30-AUG-22
WG3760233-1 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	30-AUG-22
WG3760233-4 MS		L2725589-1						



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-LR-WP Water								
Batch R5834276								
WG3753849-5 LCS								
Total Suspended Solids			87.2		%		85-115	02-AUG-22
WG3753849-8 LCS								
Total Suspended Solids			94.5		%		85-115	02-AUG-22
WG3753849-4 MB								
Total Suspended Solids			<1.0		mg/L		1	02-AUG-22
WG3753849-7 MB								
Total Suspended Solids			<1.0		mg/L		1	02-AUG-22
Batch R5835158								
WG3753545-3 DUP		L2725589-1						
Total Suspended Solids		1.8	2.3	J	mg/L	0.5	2	30-JUL-22
WG3753545-2 LCS								
Total Suspended Solids			90.5		%		85-115	30-JUL-22
WG3753545-1 MB								
Total Suspended Solids			<1.0		mg/L		1	30-JUL-22
Batch R5837581								
WG3754042-5 LCS								
Total Suspended Solids			103.3		%		85-115	03-AUG-22
WG3754042-4 MB								
Total Suspended Solids			<1.0		mg/L		1	03-AUG-22
Batch R5838576								
WG3754870-3 DUP		L2725589-17						
Total Suspended Solids		1.7	<1.0	RPD-NA	mg/L	N/A	20	05-AUG-22
WG3754870-2 LCS								
Total Suspended Solids			98.3		%		85-115	05-AUG-22
WG3754870-1 MB								
Total Suspended Solids			<1.0		mg/L		1	05-AUG-22

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
J	Duplicate results and limits are expressed in terms of absolute difference.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Suspended Solids							
	3	24-JUL-22 10:59	02-AUG-22 09:00	7	9	days	EHT
	4	24-JUL-22 11:32	02-AUG-22 09:00	7	9	days	EHT
	5	24-JUL-22 11:59	02-AUG-22 09:00	7	9	days	EHT
	6	24-JUL-22 12:34	02-AUG-22 09:00	7	9	days	EHT
	7	24-JUL-22 09:29	05-AUG-22 09:00	7	12	days	EHT
	8	25-JUL-22 10:30	02-AUG-22 09:00	7	8	days	EHT
	9	25-JUL-22 11:50	02-AUG-22 09:00	7	8	days	EHT
	10	25-JUL-22 11:55	02-AUG-22 09:00	7	8	days	EHT
	11	25-JUL-22 14:11	02-AUG-22 09:00	7	8	days	EHT
	14	26-JUL-22 13:49	05-AUG-22 09:00	7	10	days	EHT
	16	27-JUL-22 13:07	05-AUG-22 09:00	7	9	days	EHT
	17	25-JUL-22 11:55	05-AUG-22 09:00	7	11	days	EHT
	18	25-JUL-22 11:55	02-AUG-22 09:00	7	8	days	EHT
	19	25-JUL-22 11:55	02-AUG-22 09:00	7	8	days	EHT
Anions and Nutrients							
Alkalinity, Total (as CaCO3)							
	7	24-JUL-22 09:29	08-AUG-22 07:49	14	15	days	EHT
Ammonia by colour							
	1	24-JUL-22 09:29	30-AUG-22 13:38	28	37	days	EHT
	2	24-JUL-22 10:22	30-AUG-22 11:45	28	37	days	EHT
	3	24-JUL-22 10:59	30-AUG-22 11:45	28	37	days	EHT
	4	24-JUL-22 11:32	30-AUG-22 13:38	28	37	days	EHT
	5	24-JUL-22 11:59	30-AUG-22 11:49	28	37	days	EHT
	6	24-JUL-22 12:34	30-AUG-22 11:49	28	37	days	EHT
	7	24-JUL-22 09:29	30-AUG-22 11:49	28	37	days	EHT
	8	25-JUL-22 10:30	30-AUG-22 11:53	28	36	days	EHT
	9	25-JUL-22 11:50	30-AUG-22 11:53	28	36	days	EHT
	10	25-JUL-22 11:55	30-AUG-22 11:57	28	36	days	EHT
	11	25-JUL-22 14:11	30-AUG-22 11:57	28	36	days	EHT
	12	26-JUL-22 12:43	30-AUG-22 11:57	28	35	days	EHT
	13	26-JUL-22 13:20	30-AUG-22 12:01	28	35	days	EHT
	14	26-JUL-22 13:49	30-AUG-22 12:01	28	35	days	EHT
	15	27-JUL-22 12:45	30-AUG-22 12:01	28	34	days	EHT
	16	27-JUL-22 13:07	30-AUG-22 12:04	28	34	days	EHT
	17	25-JUL-22 11:55	30-AUG-22 12:04	28	36	days	EHT
	18	25-JUL-22 11:55	30-AUG-22 12:04	28	36	days	EHT
	19	25-JUL-22 11:55	30-AUG-22 12:08	28	36	days	EHT
Nitrate in Water by IC (Low Level)							
	1	24-JUL-22 09:29	30-JUL-22 09:15	3	6	days	EHTR
	2	24-JUL-22 10:22	30-JUL-22 09:15	3	6	days	EHTR
	3	24-JUL-22 10:59	03-AUG-22 11:00	3	10	days	EHTR
	4	24-JUL-22 11:32	03-AUG-22 11:00	3	10	days	EHTR
	5	24-JUL-22 11:59	03-AUG-22 11:00	3	10	days	EHTR
	6	24-JUL-22 12:34	30-JUL-22 09:15	3	6	days	EHTR
	7	24-JUL-22 09:29	04-AUG-22 10:30	3	11	days	EHTR
	8	25-JUL-22 10:30	03-AUG-22 11:00	3	9	days	EHTR
	9	25-JUL-22 11:50	03-AUG-22 11:00	3	9	days	EHTR
	10	25-JUL-22 11:55	03-AUG-22 11:00	3	9	days	EHTR
	11	25-JUL-22 14:11	03-AUG-22 11:00	3	9	days	EHTR
	12	26-JUL-22 12:43	03-AUG-22 11:00	3	8	days	EHTL
	13	26-JUL-22 13:20	30-JUL-22 09:15	3	4	days	EHTL
	14	26-JUL-22 13:49	04-AUG-22 10:30	3	9	days	EHTL
	15	27-JUL-22 12:45	03-AUG-22 11:00	3	7	days	EHT
	16	27-JUL-22 13:07	04-AUG-22 10:30	3	8	days	EHT
	17	25-JUL-22 11:55	04-AUG-22 10:30	3	10	days	EHTR
	18	25-JUL-22 11:55	03-AUG-22 11:00	3	9	days	EHTR

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Nitrate in Water by IC (Low Level)	19	25-JUL-22 11:55	03-AUG-22 11:00	3	9	days	EHTR
Nitrite in Water by IC (Low Level)	1	24-JUL-22 09:29	30-JUL-22 09:15	3	6	days	EHTR
	2	24-JUL-22 10:22	30-JUL-22 09:15	3	6	days	EHTR
	3	24-JUL-22 10:59	03-AUG-22 11:00	3	10	days	EHTR
	4	24-JUL-22 11:32	03-AUG-22 11:00	3	10	days	EHTR
	5	24-JUL-22 11:59	03-AUG-22 11:00	3	10	days	EHTR
	6	24-JUL-22 12:34	30-JUL-22 09:15	3	6	days	EHTR
	7	24-JUL-22 09:29	04-AUG-22 10:30	3	11	days	EHTR
	8	25-JUL-22 10:30	03-AUG-22 11:00	3	9	days	EHTR
	9	25-JUL-22 11:50	03-AUG-22 11:00	3	9	days	EHTR
	10	25-JUL-22 11:55	03-AUG-22 11:00	3	9	days	EHTR
	11	25-JUL-22 14:11	03-AUG-22 11:00	3	9	days	EHTR
	12	26-JUL-22 12:43	03-AUG-22 11:00	3	8	days	EHTL
	13	26-JUL-22 13:20	30-JUL-22 09:15	3	4	days	EHTL
	14	26-JUL-22 13:49	04-AUG-22 10:30	3	9	days	EHTL
	15	27-JUL-22 12:45	03-AUG-22 11:00	3	7	days	EHT
	16	27-JUL-22 13:07	04-AUG-22 10:30	3	8	days	EHT
	17	25-JUL-22 11:55	04-AUG-22 10:30	3	10	days	EHTR
	18	25-JUL-22 11:55	03-AUG-22 11:00	3	9	days	EHTR
	19	25-JUL-22 11:55	03-AUG-22 11:00	3	9	days	EHTR
Phosphorus, Total	1	24-JUL-22 09:29	29-AUG-22 14:30	28	36	days	EHT
	2	24-JUL-22 10:22	29-AUG-22 14:30	28	36	days	EHT
	3	24-JUL-22 10:59	29-AUG-22 14:30	28	36	days	EHT
	4	24-JUL-22 11:32	29-AUG-22 14:30	28	36	days	EHT
	5	24-JUL-22 11:59	29-AUG-22 14:30	28	36	days	EHT
	6	24-JUL-22 12:34	29-AUG-22 14:30	28	36	days	EHT
	7	24-JUL-22 09:29	29-AUG-22 14:30	28	36	days	EHT
	8	25-JUL-22 10:30	29-AUG-22 14:30	28	35	days	EHT
	9	25-JUL-22 11:50	29-AUG-22 14:30	28	35	days	EHT
	10	25-JUL-22 11:55	29-AUG-22 14:30	28	35	days	EHT
	11	25-JUL-22 14:11	29-AUG-22 14:30	28	35	days	EHT
	12	26-JUL-22 12:43	29-AUG-22 14:30	28	34	days	EHT
	13	26-JUL-22 13:20	29-AUG-22 14:30	28	34	days	EHT
	14	26-JUL-22 13:49	29-AUG-22 14:30	28	34	days	EHT
	15	27-JUL-22 12:45	29-AUG-22 14:30	28	33	days	EHT
	16	27-JUL-22 13:07	29-AUG-22 14:30	28	33	days	EHT
	17	25-JUL-22 11:55	29-AUG-22 14:30	28	35	days	EHT
	18	25-JUL-22 11:55	29-AUG-22 14:30	28	35	days	EHT
	19	25-JUL-22 11:55	29-AUG-22 14:30	28	35	days	EHT
Phosphorus, Total	18	25-JUL-22 11:55	08-SEP-22 13:20	28	45	days	EHT
	19	25-JUL-22 11:55	08-SEP-22 13:20	28	45	days	EHT
Cyanides							
Low Level Free Cyanide in water by CFA	5	24-JUL-22 11:59	11-AUG-22 10:54	14	18	days	EHT
	7	24-JUL-22 09:29	12-AUG-22 12:05	14	19	days	EHT
Low Level Free Cyanide in water by CFA	18	25-JUL-22 11:55	31-AUG-22 00:00	14	37	days	EHT
Low Level Total Cyanide in water by CFA	4	24-JUL-22 11:32	11-AUG-22 10:54	14	18	days	EHT
Low Level Total Cyanide in water by CFA	18	25-JUL-22 11:55	31-AUG-22 00:00	14	37	days	EHT

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Cyanides							
Low level WAD Cyanide in water by CFA	7	24-JUL-22 09:29	12-AUG-22 12:05	14	19	days	EHT
Low level WAD Cyanide in water by CFA	18	25-JUL-22 11:55	31-AUG-22 00:00	14	37	days	EHT
Organic / Inorganic Carbon							
Dissolved Organic Carbon by Combustion	1	24-JUL-22 09:29	22-AUG-22 15:00	28	29	days	EHT
	2	24-JUL-22 10:22	22-AUG-22 15:00	28	29	days	EHT
	3	24-JUL-22 10:59	22-AUG-22 15:00	28	29	days	EHT
	4	24-JUL-22 11:32	22-AUG-22 15:00	28	29	days	EHT
	5	24-JUL-22 11:59	22-AUG-22 15:00	28	29	days	EHT
	6	24-JUL-22 12:34	22-AUG-22 15:00	28	29	days	EHT
	7	24-JUL-22 09:29	22-AUG-22 15:00	28	29	days	EHT
	10	25-JUL-22 11:55	26-AUG-22 15:00	28	32	days	EHT
	11	25-JUL-22 14:11	26-AUG-22 15:00	28	32	days	EHT
	12	26-JUL-22 12:43	26-AUG-22 15:00	28	31	days	EHT
	13	26-JUL-22 13:20	26-AUG-22 15:00	28	31	days	EHT
	14	26-JUL-22 13:49	26-AUG-22 15:00	28	31	days	EHT
	15	27-JUL-22 12:45	26-AUG-22 15:00	28	30	days	EHT
	16	27-JUL-22 13:07	26-AUG-22 15:00	28	30	days	EHT
	17	25-JUL-22 11:55	26-AUG-22 15:00	28	32	days	EHT
	18	25-JUL-22 11:55	26-AUG-22 15:00	28	32	days	EHT
	19	25-JUL-22 11:55	26-AUG-22 15:00	28	32	days	EHT
Total Organic Carbon by Combustion	1	24-JUL-22 09:29	22-AUG-22 15:00	28	29	days	EHT
	2	24-JUL-22 10:22	22-AUG-22 15:00	28	29	days	EHT
	3	24-JUL-22 10:59	22-AUG-22 15:00	28	29	days	EHT
	4	24-JUL-22 11:32	22-AUG-22 15:00	28	29	days	EHT
	5	24-JUL-22 11:59	22-AUG-22 15:00	28	29	days	EHT
	6	24-JUL-22 12:34	22-AUG-22 15:00	28	29	days	EHT
	7	24-JUL-22 09:29	26-AUG-22 15:00	28	33	days	EHT
	10	25-JUL-22 11:55	26-AUG-22 15:00	28	32	days	EHT
	11	25-JUL-22 14:11	26-AUG-22 15:00	28	32	days	EHT
	12	26-JUL-22 12:43	26-AUG-22 15:00	28	31	days	EHT
	13	26-JUL-22 13:20	26-AUG-22 15:00	28	31	days	EHT
	14	26-JUL-22 13:49	26-AUG-22 15:00	28	31	days	EHT
	15	27-JUL-22 12:45	26-AUG-22 15:00	28	30	days	EHT
	16	27-JUL-22 13:07	26-AUG-22 15:00	28	30	days	EHT
	17	25-JUL-22 11:55	26-AUG-22 15:00	28	32	days	EHT
	18	25-JUL-22 11:55	26-AUG-22 15:00	28	32	days	EHT
	19	25-JUL-22 11:55	26-AUG-22 15:00	28	32	days	EHT
Inorganic Parameters							
Acidity (as CaCO3)	3	24-JUL-22 10:59	09-AUG-22 00:00	14	16	days	EHT
	8	25-JUL-22 10:30	09-AUG-22 00:00	14	15	days	EHT
	9	25-JUL-22 11:50	09-AUG-22 00:00	14	15	days	EHT
	10	25-JUL-22 11:55	09-AUG-22 00:00	14	15	days	EHT
	17	25-JUL-22 11:55	09-AUG-22 00:00	14	15	days	EHT
	18	25-JUL-22 11:55	09-AUG-22 00:00	14	15	days	EHT
	19	25-JUL-22 11:55	09-AUG-22 00:00	14	15	days	EHT
Total Metals							
Total Mercury in Water by CVAFS (Ultra)	1	24-JUL-22 09:29	31-AUG-22 14:17	28	38	days	EHT
	2	24-JUL-22 10:22	31-AUG-22 14:17	28	38	days	EHT
	3	24-JUL-22 10:59	31-AUG-22 14:17	28	38	days	EHT
	4	24-JUL-22 11:32	31-AUG-22 14:17	28	38	days	EHT

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Total Metals							
Total Mercury in Water by CVAFS (Ultra)							
	5	24-JUL-22 11:59	31-AUG-22 14:17	28	38	days	EHT
	6	24-JUL-22 12:34	31-AUG-22 14:17	28	38	days	EHT
	7	24-JUL-22 09:29	31-AUG-22 14:17	28	38	days	EHT
	8	25-JUL-22 10:30	31-AUG-22 14:17	28	37	days	EHT
	9	25-JUL-22 11:50	31-AUG-22 14:17	28	37	days	EHT
	10	25-JUL-22 11:55	31-AUG-22 14:17	28	37	days	EHT
	11	25-JUL-22 14:11	31-AUG-22 14:17	28	37	days	EHT
	12	26-JUL-22 12:43	31-AUG-22 14:17	28	36	days	EHT
	13	26-JUL-22 13:20	31-AUG-22 14:17	28	36	days	EHT
	14	26-JUL-22 13:49	31-AUG-22 14:17	28	36	days	EHT
	15	27-JUL-22 12:45	31-AUG-22 14:17	28	35	days	EHT
	16	27-JUL-22 13:07	31-AUG-22 14:17	28	35	days	EHT
	17	25-JUL-22 11:55	31-AUG-22 14:17	28	37	days	EHT
	18	25-JUL-22 11:55	31-AUG-22 14:17	28	37	days	EHT
	19	25-JUL-22 11:55	31-AUG-22 14:17	28	37	days	EHT

Dissolved Metals

Diss. Mercury in Water by CVAFS (Ultra)

1	24-JUL-22 09:29	31-AUG-22 11:00	28	38	days	EHT
2	24-JUL-22 10:22	31-AUG-22 11:00	28	38	days	EHT
3	24-JUL-22 10:59	31-AUG-22 11:00	28	38	days	EHT
4	24-JUL-22 11:32	31-AUG-22 11:00	28	38	days	EHT
5	24-JUL-22 11:59	31-AUG-22 11:00	28	38	days	EHT
6	24-JUL-22 12:34	31-AUG-22 11:00	28	38	days	EHT
7	24-JUL-22 09:29	31-AUG-22 11:00	28	38	days	EHT
8	25-JUL-22 10:30	31-AUG-22 11:00	28	37	days	EHT
9	25-JUL-22 11:50	31-AUG-22 11:00	28	37	days	EHT
10	25-JUL-22 11:55	31-AUG-22 11:00	28	37	days	EHT
11	25-JUL-22 14:11	31-AUG-22 11:00	28	37	days	EHT
12	26-JUL-22 12:43	31-AUG-22 11:00	28	36	days	EHT
13	26-JUL-22 13:20	31-AUG-22 11:00	28	36	days	EHT
14	26-JUL-22 13:49	31-AUG-22 11:00	28	36	days	EHT
15	27-JUL-22 12:45	31-AUG-22 11:00	28	35	days	EHT
16	27-JUL-22 13:07	31-AUG-22 11:00	28	35	days	EHT
17	25-JUL-22 11:55	31-AUG-22 11:00	28	37	days	EHT
18	25-JUL-22 11:55	31-AUG-22 11:00	28	37	days	EHT
19	25-JUL-22 11:55	31-AUG-22 11:00	28	37	days	EHT

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2725589 were received on 29-JUL-22 11:45.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

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The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number

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L2725589-COFC

Report To Contact and company name below will appear on the final report		Reports / Recipients		Turnaround Time (TAT)																																																									
Company:	Stantec Consulting	Select Report Format:	☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)	☒ Routine [R] if received by 3pm M-F - no																																																									
Contact:	Karen Mathers	Merge QC/QCI Reports with COA	☐ YES ☐ NO ☐ N/A	☐ 4 day [P4] if received by 3pm M-F - 20%																																																									
Phone:	204-928-7621	☐ Compare Results to Criteria on Report - provide details below if box checked		☐ 3 day [P3] if received by 3pm M-F - 25%																																																									
Company address below will appear on the final report		Select Distribution:	☒ EMAIL ☐ MAIL ☐ FAX	☐ 2 day [P2] if received by 3pm M-F - 50%																																																									
Street:	500 - 311 Portage Ave	Email 1 or Fax	Karen.Mathers@stantec.com	☐ 1 day [E] if received by 3pm M-F - 100%																																																									
City/Province:	Winnipeg, MB	Email 2	jeremy.jackson@stantec.com	☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.																																																									
Postal Code:	R3B 2B9	Email 3		Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.																																																									
Invoice To	Same as Report To ☐ YES ☒ NO	Invoice Recipients		Date and Time Required for all E&P TATs: dd-mm-yy hh:mm am/pm																																																									
	Copy of Invoice with Report ☐ YES ☒ NO	Select Invoice Distribution:	☒ EMAIL ☐ MAIL ☐ FAX	For all tests with rush TATs requested, please contact your AM to confirm availability.																																																									
Company:	Alamos Gold	Email 1 or Fax		Analysis Request																																																									
Contact:		Email 2		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																									
Project Information		Oil and Gas Required Fields (client use)		NUMBER OF CONTAINERS																																																									
ALS Account # / Quote #:	Q88846	AFE/Cost Center:	PO#	<table border="1"> <tr> <td>ALK-SPEC-WP, ACY-ITTR-TB</td> <td>ANIONS-6-L-IC-WP</td> <td>C-DOC-HTC-WP, C-TOC-HTC-WP</td> <td>HG-DU-CVAF-VA</td> <td>HG-TU-CVAF-VA</td> <td>MET-D-CCMS-WP, HARDNESS</td> <td>MET-T-CCMS-WP</td> <td>NH3-COL-WP</td> <td>P-T-COL-WP</td> <td>N-TOTK-WP</td> <td>SOLIDS-TOTSUS-LR-WP</td> <td>MEHG-D-GCAF-VA, MEHG-T-GCAF</td> <td>CN-TL, CN-FREE-L, CN-WAD-L</td> <td>CR-CR6-PW00-IC-WT</td> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>		ALK-SPEC-WP, ACY-ITTR-TB	ANIONS-6-L-IC-WP	C-DOC-HTC-WP, C-TOC-HTC-WP	HG-DU-CVAF-VA	HG-TU-CVAF-VA	MET-D-CCMS-WP, HARDNESS	MET-T-CCMS-WP	NH3-COL-WP	P-T-COL-WP	N-TOTK-WP	SOLIDS-TOTSUS-LR-WP	MEHG-D-GCAF-VA, MEHG-T-GCAF	CN-TL, CN-FREE-L, CN-WAD-L	CR-CR6-PW00-IC-WT																																										
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Job #:	ALAMOS	Major/Minor Code:	Routing Code:																																																										
PO / AFE:		Requisitioner:		<table border="1"> <tr> <td colspan="13">SAMPLES ON HOLD</td> <td>EXTENDED STORAGE REQUIRED</td> <td>SUSPECTED HAZARD (see notes)</td> </tr> <tr><td colspan="13"></td><td></td><td></td></tr> </table>		SAMPLES ON HOLD													EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)																																									
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LSD:		Location:																																																											
ALS Lab Work Order # (ALS use only):		ALS Contact:	Sampler: BS																																																										
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type																																																									
1	AQM38	24-07-22	0929	W																																																									
2	AQM39C		1033																																																										
3	AQM71		1059																																																										
4	AQM72		1132																																																										
5	AQM73		1159																																																										
6	AQM74		1234																																																										
7	QC-01																																																												
8	AQF7S	25-07-22	1030																																																										
9	AQF7D		1150																																																										
10	AQF38		1155																																																										
11	AQF43		1305																																																										
12	AQF44		1411																																																										
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		SAMPLE RECEIPT DETAILS (ALS use only)																																																									
Are samples taken from a Regulated DW System? ☐ YES ☐ NO		all dissolved bottles field filtered		Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED																																																									
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				Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A																																																									
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SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)		FINAL SHIPMENT RECEPTION (ALS use only)																																																									
Released by:	Date:	Time:	Received by:	Date:	Time:																																																								
B. Boyd	July 28/22	0930	[Signature]	July 29/22	1145																																																								

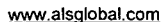
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

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COC Number: **22 -**

Page 2 of 2

Canada Toll Free: 1 800 668 9878



L2725589-COFC

Report To						Contact and company name below will appear on the final report								Reports / Recipients							Turnaround Time (TAT) Req														
Company:						Stantec Consulting						Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)						☒ Routine [R] if received by 3pm M-F - no surch ☐ 4 day [P4] if received by 3pm M-F - 20% rush ☐ 3 day [P3] if received by 3pm M-F - 25% rush ☐ 2 day [P2] if received by 3pm M-F - 50% rush ☐ 1 day [E] if received by 3pm M-F - 100% rush ☐ Same day [E2] if received by 10am M-5 - 200%																	
Contact:						Karen Mathers						Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A																							
Phone:						204-928-7621						☐ Compare Results to Criteria on Report - provide details below if box checked																							
Company address below will appear on the final report												Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX																							
Street:						500 - 311 Portage Ave						Email 1 or Fax Karen.Mathers@Stantec.com																							
City/Province:						Winnipeg, MB						Email 2 jeremy.jackson@stantec.com						Additional fees may apply to rush requ																	
Postal Code:						R3B 2B9						Email 3						Date and Time Required for all E&P TATs:																	
Invoice To						Same as Report To ☐ YES ☒ NO						Invoice Recipients						For all tests with rush TATs requested, please contact your AM to confirm availability.																	
						Copy of Invoice with Report ☐ YES ☒ NO						Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX						Analysis Request																	
Company:						Alamos Gold						Email 1 or Fax																							
Contact:												Email 2																							
Project Information												Oil and Gas Required Fields (client use)												NUMBER OF CONTAINERS											
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13		AQF43								26.07.22		1243		W		12 ✓																			
14		AQF40								↓		1320		I		1 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓																			
15		AQF45								↓		1349		I		1 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓																			
16		AQF46								27.07.22		1248		W		12 ✓																			
17		AQF41								↓		1307		I		1 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓																			
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																								5.2											
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Released by: B. Inard				Date: July 28, 22				Time: 1230				Received by: [Signature]				Date: July 29, 22				Time: 1105				Received by:				Date:				Time:			

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1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW/COC form.



Alamos Gold Inc.
ATTN: KAREN MATHERS
C/O Stantec Consulting
500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Date Received: 26-AUG-22
Report Date: 23-SEP-22 08:20 (MT)
Version: FINAL REV. 2

Client Phone: 204-924-5735

Certificate of Analysis

Lab Work Order #: L2730355
Project P.O. #: NOT SUBMITTED
Job Reference: ALAMOS
C of C Numbers:
Legal Site Desc:

Comments:

23-SEP-2022 Revised report - NO3 data

Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2730355-1 W 23-AUG-22 09:56 AQM72	L2730355-2 W 23-AUG-22 10:35 AQM73	L2730355-3 W 23-AUG-22 11:10 AQM74	L2730355-4 W 23-AUG-22 09:15 AQM71	L2730355-5 W 23-AUG-22 11:47 AQM28
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	26.0	20.0	15.9	52.7	20.2
	Total Suspended Solids (mg/L)	20.7	2.5	160	1.9	1.1
Anions and Nutrients	Alkalinity, Total (as CaCO ₃) (mg/L)	19.9	17.3	15.8	45.5	11.5
	Ammonia, Total (as N) (mg/L)	0.091	0.064	0.019	0.017	0.023
	Bicarbonate (HCO ₃) (mg/L)	24.3	21.1	19.3	55.5	14.0
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	<0.10	<0.10	0.28	0.59	0.66
	Fluoride (F) (mg/L)	0.048	0.053	0.049	0.048	0.059
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.0051 ^{HTD}	<0.0051 ^{HTD}	<0.0051 ^{HTD}	0.0252 ^{HTD}	<0.0051 ^{HTD}
	Nitrate (as N) (mg/L)	<0.0050 ^{HTD}	<0.0050 ^{HTD}	<0.0050 ^{HTD}	0.0252 ^{HTD}	<0.0050 ^{HTD}
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.87	0.58	0.47	0.40	0.26
	Phosphorus (P)-Total (mg/L)	0.0656	0.0426	0.0214	0.0163	0.0168
	Sulfate (SO ₄) (mg/L)	<0.30	<0.30	0.38	5.13	8.90
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	0.0013	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	30.6	28.0	13.6	20.4	12.4
	Total Organic Carbon (mg/L)	33.9	28.2	13.6	18.6	12.1
Inorganic Parameters	Acidity (as CaCO ₃) (mg/L)	15.8	11.3	6.4	5.4	2.1
Total Metals	Aluminum (Al)-Total (mg/L)	0.155	0.103	0.0489	0.0370	0.134
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00079	0.00068	0.00030	0.00040	0.00031
	Barium (Ba)-Total (mg/L)	0.0162	0.00704	0.00681	0.0106	0.00772
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000093	0.0000092	<0.0000050	<0.0000050	0.0000181
	Calcium (Ca)-Total (mg/L)	7.98	6.02	4.65	17.6	6.00
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00052	0.00030	0.00018	0.00021	0.00028
	Cobalt (Co)-Total (mg/L)	0.00145	0.00041	<0.00010	0.00012	0.00056
	Copper (Cu)-Total (mg/L)	0.00061	<0.00050	<0.00050	<0.00050	0.00486
	Iron (Fe)-Total (mg/L)	7.64	1.09	0.279	0.419	0.738

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2730355-6 W 23-AUG-22 13:17 AQM29C	L2730355-7 W 23-AUG-22 14:14 AQF41	L2730355-8 W 23-AUG-22 14:43 AQF40	L2730355-9 W 23-AUG-22 15:24 AQF46	L2730355-10 W 23-AUG-22 QC-01
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	9.59	9.48	9.75	27.0	21.4
	Total Suspended Solids (mg/L)	2.0	1.2	1.1	<1.0	3.1
Anions and Nutrients	Alkalinity, Total (as CaCO ₃) (mg/L)	8.8	10.0	10.1	28.0	15.7
	Ammonia, Total (as N) (mg/L)	0.030	0.012	0.019	<0.010	0.041
	Bicarbonate (HCO ₃) (mg/L)	10.7	12.2	12.3	34.2	19.2
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.34	0.21	0.17	<0.10	<0.10
	Fluoride (F) (mg/L)	0.057	0.064	0.065	0.046	0.055
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.0051 ^{HTD}	<0.0051 ^{HTD}	<0.0051 ^{HTD}	<0.0051 ^{HTD}	<0.0051 ^{HTD}
	Nitrate (as N) (mg/L)	<0.0050 ^{HTD}	<0.0050 ^{HTD}	<0.0050 ^{HTD}	<0.0050 ^{HTD}	<0.0050 ^{HTD}
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	<0.20	0.21	0.23	0.39	0.72
	Phosphorus (P)-Total (mg/L)	0.0174	0.0151	0.0154	0.0157	0.0412
	Sulfate (SO ₄) (mg/L)	1.74	0.52	0.45	0.33	<0.30
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0011
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	9.03	9.94	9.62	12.9	28.3
	Total Organic Carbon (mg/L)	8.93	9.30	9.27	12.4	27.9
Inorganic Parameters	Acidity (as CaCO ₃) (mg/L)	<2.0	<2.0	<2.0	5.1	11.4
Total Metals	Aluminum (Al)-Total (mg/L)	0.0446	0.0355	0.0340	0.0212	0.0947
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00021	0.00020	0.00019	0.00032	0.00066
	Barium (Ba)-Total (mg/L)	0.00519	0.00536	0.00523	0.00880	0.00720
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000054	<0.0000050	<0.0000050	<0.0000050	0.0000097
	Calcium (Ca)-Total (mg/L)	2.76	2.55	2.62	7.92	5.87
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00014	0.00027	0.00014	0.00014	0.00029
	Cobalt (Co)-Total (mg/L)	0.00010	<0.00010	<0.00010	<0.00010	0.00041
	Copper (Cu)-Total (mg/L)	0.00109	<0.00050	<0.00050	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	0.343	0.208	0.208	0.150	1.07

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2730355-11 W 23-AUG-22 16:25 FIELD BLANK	L2730355-12 W 24-AUG-22 09:21 AQF45	L2730355-13 W 24-AUG-22 10:41 AQF42	L2730355-14 W 24-AUG-22 12:32 AQF7S	L2730355-15 W 24-AUG-22 12:50 AQF7D
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	<0.20	11.1	9.82	16.0	15.7
	Total Suspended Solids (mg/L)	<1.0	1.9	<1.0	<1.0	1.3
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	<1.0	11.3	10.1	15.6	15.7
	Ammonia, Total (as N) (mg/L)	0.033 ^{RRV}	0.041	0.043	0.052	0.023
	Bicarbonate (HCO3) (mg/L)	<1.2	13.8	12.3	19.0	19.2
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	<0.10	0.19	0.17	0.10	0.10
	Fluoride (F) (mg/L)	<0.020	0.066	0.064	0.045	0.039
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.0051 ^{HTD}	<0.0051 ^{HTD}	<0.0051 ^{HTD}	<0.0051 ^{HTD}	<0.0051 ^{HTD}
	Nitrate (as N) (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	<0.20	0.23	<0.20	0.25	<0.20
	Phosphorus (P)-Total (mg/L)	<0.0010	0.0175	0.0139	0.0080	0.0119
	Sulfate (SO4) (mg/L)	<0.30	0.54	0.47	0.62	0.75
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	0.56	10.9	10.7	9.94	8.83
	Total Organic Carbon (mg/L)	<0.50	9.31	9.34	9.13	8.64
Inorganic Parameters	Acidity (as CaCO3) (mg/L)	<2.0	2.6	<2.0	<2.0	4.6
Total Metals	Aluminum (Al)-Total (mg/L)	0.0056	0.112	0.0373	0.0207	0.0288
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	<0.00010	0.00023	0.00021	0.00024	0.00026
	Barium (Ba)-Total (mg/L)	0.00013	0.00653	0.00547	0.00637	0.00936
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)	<0.050	3.19	2.84	4.19	4.06
	Cesium (Cs)-Total (mg/L)	<0.000010	0.000014	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00011	0.00074	0.00015	0.00015	0.00013
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	<0.010	0.305	0.217	0.035	0.149

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2730355-16 W 24-AUG-22 13:38 AQF38	L2730355-17 W 24-AUG-22 14:58 AQF43	L2730355-18 W 24-AUG-22 15:22 AQF44	L2730355-19 W 24-AUG-22 TRIP BLANK	
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	21.4	10.5	10.6	<0.20	
	Total Suspended Solids (mg/L)	4.0	1.0	1.1	<1.0	
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	21.9	11.1	11.0	<1.0	
	Ammonia, Total (as N) (mg/L)	0.011	0.014	0.024	0.010	
	Bicarbonate (HCO3) (mg/L)	26.7	13.5	13.4	<1.2	
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	
	Chloride (Cl) (mg/L)	0.12	0.18	0.19	<0.10	
	Fluoride (F) (mg/L)	0.087	0.066	0.066	<0.020	
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	
	Nitrate and Nitrite as N (mg/L)	<0.0051	0.0086	<0.0051	<0.0051	
	Nitrate (as N) (mg/L)	<0.0050 ^{HTD}	0.0086 ^{HTD}	<0.0050 ^{HTD}	<0.0050 ^{HTD}	
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Total Kjeldahl Nitrogen (mg/L)	0.43	0.20	0.26	<0.20	
	Phosphorus (P)-Total (mg/L)	0.0191	0.0161	0.0151	<0.0010	
	Sulfate (SO4) (mg/L)	<0.30	0.49	0.54	<0.30	
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	13.5	11.2	10.4	<0.50	
	Total Organic Carbon (mg/L)	11.9	9.27	9.23	<0.50	
Inorganic Parameters	Acidity (as CaCO3) (mg/L)	2.1	<2.0	<2.0	<2.0	
Total Metals	Aluminum (Al)-Total (mg/L)	0.0322	0.0472	0.0519	<0.0030	
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Total (mg/L)	0.00027	0.00023	0.00023	<0.00010	
	Barium (Ba)-Total (mg/L)	0.0106	0.00547	0.00574	<0.00010	
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Calcium (Ca)-Total (mg/L)	6.34	3.05	3.06	<0.050	
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Total (mg/L)	0.00014	0.00025	0.00024	0.00010	
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Iron (Fe)-Total (mg/L)	0.150	0.211	0.223	<0.010	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2730355-1 W 23-AUG-22 09:56 AQM72	L2730355-2 W 23-AUG-22 10:35 AQM73	L2730355-3 W 23-AUG-22 11:10 AQM74	L2730355-4 W 23-AUG-22 09:15 AQM71	L2730355-5 W 23-AUG-22 11:47 AQM28
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	0.000060	<0.000050	<0.000050	0.000060	
	Lithium (Li)-Total (mg/L)	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	
	Magnesium (Mg)-Total (mg/L)	1.64	1.11	1.04	1.81	1.31	
	Manganese (Mn)-Total (mg/L)	0.319	0.0922	0.0249	0.0492	0.0396	
	Molybdenum (Mo)-Total (mg/L)	0.000081	<0.000050	0.000240	<0.000050	0.000058	
	Nickel (Ni)-Total (mg/L)	0.00155	0.00083	<0.00050	0.00069	0.0607	
	Phosphorus (P)-Total (mg/L)	0.031	0.035	<0.030	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	0.254	0.126	0.588	0.585	0.666	
	Rubidium (Rb)-Total (mg/L)	0.00059	<0.00020	0.00093	0.00094	0.00104	
	Selenium (Se)-Total (mg/L)	0.000089	0.000060	0.000055	0.000070	0.000058	
	Silicon (Si)-Total (mg/L)	4.19	3.71	1.03	3.98	2.22	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	1.36	1.62	1.38	1.91	1.66	
	Strontium (Sr)-Total (mg/L)	0.0265	0.0146	0.0124	0.0289	0.0190	
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	2.06	2.61	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	<0.00010	0.00021	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Total (mg/L)	0.00480	0.00130	0.00077	0.00124	0.00114	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	0.000016	<0.000010	0.000013	0.000014	0.000026	
	Vanadium (V)-Total (mg/L)	0.00086	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	0.0091	0.0073	0.0055	0.0065	0.0148	
	Zirconium (Zr)-Total (mg/L)	0.00033	0.00042	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.138	0.0931	0.0418	0.0287	0.104	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00072	0.00058	0.00021	0.00034	0.00023	
	Barium (Ba)-Dissolved (mg/L)	0.0156	0.00676	0.00587	0.00992	0.00708	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	0.0000086	0.0000078	<0.0000050	<0.0000050	0.0000165	
	Calcium (Ca)-Dissolved (mg/L)	7.90	6.10	4.59	18.0	5.85	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Dissolved (mg/L)	0.00041	0.00025	0.00012	0.00016	0.00019	

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2730355-6 W 23-AUG-22 13:17 AQM29C	L2730355-7 W 23-AUG-22 14:14 AQF41	L2730355-8 W 23-AUG-22 14:43 AQF40	L2730355-9 W 23-AUG-22 15:24 AQF46	L2730355-10 W 23-AUG-22 QC-01
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	0.000058	
	Lithium (Li)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	
	Magnesium (Mg)-Total (mg/L)	0.720	0.739	0.758	1.63	1.04	
	Manganese (Mn)-Total (mg/L)	0.0154	0.0140	0.0141	0.0212	0.0897	
	Molybdenum (Mo)-Total (mg/L)	0.000066	0.000062	0.000063	0.000068	<0.000050	
	Nickel (Ni)-Total (mg/L)	0.00819	<0.00050	<0.00050	<0.00050	0.00083	
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	0.050	
	Potassium (K)-Total (mg/L)	0.543	0.482	0.485	0.482	0.122	
	Rubidium (Rb)-Total (mg/L)	0.00102	0.00109	0.00107	0.00082	<0.00020	
	Selenium (Se)-Total (mg/L)	0.000054	0.000051	<0.000050	<0.000050	0.000067	
	Silicon (Si)-Total (mg/L)	2.45	2.07	2.07	0.94	3.49	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	1.28	1.22	1.19	1.10	1.23	
	Strontium (Sr)-Total (mg/L)	0.0123	0.0121	0.0118	0.0151	0.0145	
	Sulfur (S)-Total (mg/L)	0.52	<0.50	<0.50	<0.50	<0.50	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	0.00011	<0.00010	<0.00010	<0.00010	0.00092	
	Titanium (Ti)-Total (mg/L)	0.00102	0.00080	0.00089	0.00043	0.00118	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	0.000023	0.000020	0.000021	<0.000010	<0.000010	
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	0.0057	0.0053	0.0044	0.0044	0.0094	
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0255	0.0232	0.0204	0.0185	0.0982	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00017	0.00016	0.00017	0.00030	0.00060	
	Barium (Ba)-Dissolved (mg/L)	0.00448	0.00474	0.00470	0.00737	0.00719	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000065	
	Calcium (Ca)-Dissolved (mg/L)	2.63	2.54	2.62	7.93	6.59	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	0.00012	0.00012	<0.00010	0.00026	

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2730355-11 W 23-AUG-22 16:25 FIELD BLANK	L2730355-12 W 24-AUG-22 09:21 AQF45	L2730355-13 W 24-AUG-22 10:41 AQF42	L2730355-14 W 24-AUG-22 12:32 AQF7S	L2730355-15 W 24-AUG-22 12:50 AQF7D
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	0.000066	<0.000050	<0.000050	<0.000050	
	Lithium (Li)-Total (mg/L)	<0.0010	0.0012	0.0010	<0.0010	<0.0010	
	Magnesium (Mg)-Total (mg/L)	<0.0050	0.980	0.841	1.48	1.44	
	Manganese (Mn)-Total (mg/L)	0.00025	0.0317	0.0165	0.00993	0.0525	
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000092	0.000072	0.000075	<0.000050	
	Nickel (Ni)-Total (mg/L)	<0.00050	0.00087	<0.00050	0.00058	<0.00050	
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	<0.050	0.539	0.513	0.540	0.519	
	Rubidium (Rb)-Total (mg/L)	<0.00020	0.00130	0.00109	0.00105	0.00100	
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	0.000051	0.000065	<0.000050	
	Silicon (Si)-Total (mg/L)	<0.10	2.49	2.33	0.85	1.10	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	<0.050	1.14	1.07	1.06	1.03	
	Strontium (Sr)-Total (mg/L)	<0.00020	0.0138	0.0130	0.0131	0.0129	
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00466	
	Titanium (Ti)-Total (mg/L)	<0.00030	0.00438	0.00099	0.00031	<0.00030	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	<0.000010	0.000037	0.000026	<0.000010	<0.000010	
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0039	<0.0030	0.0032	0.0032	
	Zirconium (Zr)-Total (mg/L)	<0.00020	0.00024	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	<0.0010	0.0378	0.0216	0.0127	0.0225	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	<0.00010	0.00016	0.00016	0.00018	0.00018	
	Barium (Ba)-Dissolved (mg/L)	<0.00010	0.00518	0.00504	0.00580	0.00848	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Calcium (Ca)-Dissolved (mg/L)	<0.050	2.99	2.66	4.14	4.09	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	0.00014	0.00011	<0.00010	<0.00010	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2730355-16 W 24-AUG-22 13:38 AQF38	L2730355-17 W 24-AUG-22 14:58 AQF43	L2730355-18 W 24-AUG-22 15:22 AQF44	L2730355-19 W 24-AUG-22 TRIP BLANK	
Grouping	Analyte					
WATER						
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Lithium (Li)-Total (mg/L)	<0.0010	0.0010	0.0011	<0.0010	
	Magnesium (Mg)-Total (mg/L)	1.56	0.886	0.895	<0.0050	
	Manganese (Mn)-Total (mg/L)	0.0788	0.0206	0.0209	0.00017	
	Molybdenum (Mo)-Total (mg/L)	0.00224	0.000102	0.000093	<0.000050	
	Nickel (Ni)-Total (mg/L)	<0.00050	0.00067	<0.00050	0.00057	
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	0.594	0.526	0.517	<0.050	
	Rubidium (Rb)-Total (mg/L)	0.00093	0.00109	0.00120	<0.00020	
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	0.000079	<0.000050	
	Silicon (Si)-Total (mg/L)	1.08	2.28	2.27	<0.10	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	1.13	1.10	1.09	<0.050	
	Strontium (Sr)-Total (mg/L)	0.0170	0.0134	0.0134	<0.00020	
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Total (mg/L)	0.00129	0.00148	0.00154	<0.00030	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	0.000013	0.000025	0.000027	<0.000010	
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0049	0.0049	<0.0030	
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0083	0.0230	0.0218	<0.0010	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00014	0.00015	0.00015	<0.00010	
	Barium (Ba)-Dissolved (mg/L)	0.00857	0.00471	0.00479	0.00021	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Calcium (Ca)-Dissolved (mg/L)	6.21	2.88	2.91	<0.050	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	0.00012	<0.00010	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2730355-1 W 23-AUG-22 09:56 AQM72	L2730355-2 W 23-AUG-22 10:35 AQM73	L2730355-3 W 23-AUG-22 11:10 AQM74	L2730355-4 W 23-AUG-22 09:15 AQM71	L2730355-5 W 23-AUG-22 11:47 AQM28
Grouping	Analyte					
WATER						
Dissolved Metals	Cobalt (Co)-Dissolved (mg/L)	0.00142	0.00042	<0.00010	0.00012 ^{RRV}	0.00031
	Copper (Cu)-Dissolved (mg/L)	0.00041	0.00033	0.00047	0.00188	0.00418
	Iron (Fe)-Dissolved (mg/L)	7.45	0.926	0.207	0.334	0.621
	Lead (Pb)-Dissolved (mg/L)	0.000053	0.000065	<0.000050	0.000123	0.000089
	Lithium (Li)-Dissolved (mg/L)	<0.0010	0.0013	<0.0010	0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	1.52	1.16	1.09	1.91	1.35
	Manganese (Mn)-Dissolved (mg/L)	0.316	0.0927	0.0240	0.0490	0.0286
	Molybdenum (Mo)-Dissolved (mg/L)	0.000089	<0.000050	0.000311	0.000061	0.000072
	Nickel (Ni)-Dissolved (mg/L)	0.00126	0.00066	<0.00050	0.00054	0.0595
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.250	0.113	0.564	0.560	0.685
	Rubidium (Rb)-Dissolved (mg/L)	0.00050	<0.00020	0.00081	0.00093	0.00099
	Selenium (Se)-Dissolved (mg/L)	0.000082	0.000055	<0.000050	<0.000050	0.000079
	Silicon (Si)-Dissolved (mg/L)	4.37	3.86	1.04	3.97	2.19
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	0.795	1.17	1.00	1.55	1.29
	Strontium (Sr)-Dissolved (mg/L)	0.0293	0.0162	0.0134	0.0322	0.0197
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	2.14	3.15
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	0.00036	<0.00010	<0.00010	0.00044 ^{RRV}
	Titanium (Ti)-Dissolved (mg/L)	0.00396	0.00094	0.00048	0.00074	0.00060
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000018	<0.000010	0.000013	0.000016	0.000028
	Vanadium (V)-Dissolved (mg/L)	0.00068	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0031	0.0036	0.0010	0.0030	0.0094
	Zirconium (Zr)-Dissolved (mg/L)	0.00038	0.00022	<0.00020	0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2730355-6 W 23-AUG-22 13:17 AQM29C	L2730355-7 W 23-AUG-22 14:14 AQF41	L2730355-8 W 23-AUG-22 14:43 AQF40	L2730355-9 W 23-AUG-22 15:24 AQF46	L2730355-10 W 23-AUG-22 QC-01
Grouping	Analyte					
WATER						
Dissolved Metals	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00044
	Copper (Cu)-Dissolved (mg/L)	0.00085	0.00028	0.00030	0.00029	0.00058
	Iron (Fe)-Dissolved (mg/L)	0.227	0.153	0.148	0.077	0.957
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	0.000057
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0014
	Magnesium (Mg)-Dissolved (mg/L)	0.733	0.762	0.778	1.75	1.20
	Manganese (Mn)-Dissolved (mg/L)	0.00959	0.00552	0.00511	0.0174	0.0923
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	0.000076	0.000093	0.000060	<0.000050
	Nickel (Ni)-Dissolved (mg/L)	0.00772	<0.00050	<0.00050	<0.00050	0.00066
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.527	0.468	0.503	0.481	0.127
	Rubidium (Rb)-Dissolved (mg/L)	0.00104	0.00106	0.00099	0.00075	<0.00020
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	0.000052	<0.000050	0.000077
	Silicon (Si)-Dissolved (mg/L)	2.45	2.10	2.05	0.934	3.84
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	0.971	0.958	1.04	0.928	1.11
	Strontium (Sr)-Dissolved (mg/L)	0.0131	0.0125	0.0132	0.0166	0.0156
	Sulfur (S)-Dissolved (mg/L)	0.82	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	0.00041 ^{RRV}	0.00047 ^{RRV}	0.00024	0.00055 ^{RRV}	0.00045
	Titanium (Ti)-Dissolved (mg/L)	0.00041	0.00039	0.00037	<0.00030	0.00110
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000023	0.000024	0.000023	<0.000010	<0.000010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0014	0.0018	0.0033	0.0017	0.0036
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	0.00026	<0.00020	<0.00020	0.00021
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2730355-11 W 23-AUG-22 16:25 FIELD BLANK	L2730355-12 W 24-AUG-22 09:21 AQF45	L2730355-13 W 24-AUG-22 10:41 AQF42	L2730355-14 W 24-AUG-22 12:32 AQF7S	L2730355-15 W 24-AUG-22 12:50 AQF7D
Grouping	Analyte					
WATER						
Dissolved Metals	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	<0.00020	0.00068	0.00042	0.00030	0.00030
	Iron (Fe)-Dissolved (mg/L)	<0.010	0.153	0.145	0.015	0.098
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	0.000121	0.000099	0.000112
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	<0.0050	0.887	0.771	1.38	1.33
	Manganese (Mn)-Dissolved (mg/L)	<0.00010	0.0119	0.00551	0.00052	0.0252
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	0.000115	0.000096	0.000118	0.000083
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	<0.050	0.496	0.488	0.547	0.504
	Rubidium (Rb)-Dissolved (mg/L)	<0.00020	0.00116	0.00108	0.00093	0.00094
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	0.000062	<0.000050
	Silicon (Si)-Dissolved (mg/L)	<0.050	2.06	2.02	0.762	0.992
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	<0.050	0.990	0.963	0.951	0.894
	Strontium (Sr)-Dissolved (mg/L)	<0.00010	0.0129	0.0119	0.0124	0.0119
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	0.00010	0.00137
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	0.00119	0.00046	<0.00030	<0.00030
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.000028	0.000021	<0.000010	<0.000010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0012	0.0030	0.0026	0.0047
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2730355-16 W 24-AUG-22 13:38 AQF38	L2730355-17 W 24-AUG-22 14:58 AQF43	L2730355-18 W 24-AUG-22 15:22 AQF44	L2730355-19 W 24-AUG-22 TRIP BLANK	
Grouping	Analyte					
WATER						
Dissolved Metals	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Copper (Cu)-Dissolved (mg/L)	0.00024	0.00033	0.00029	<0.00020	
	Iron (Fe)-Dissolved (mg/L)	0.012	0.135	0.133	<0.010	
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	0.000124	<0.000050	
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Magnesium (Mg)-Dissolved (mg/L)	1.44	0.804	0.822	<0.0050	
	Manganese (Mn)-Dissolved (mg/L)	0.00099	0.00578	0.00604	<0.00010	
	Molybdenum (Mo)-Dissolved (mg/L)	0.00222	0.000098	0.000147	<0.000050	
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Dissolved (mg/L)	0.560	0.548	0.544	<0.050	
	Rubidium (Rb)-Dissolved (mg/L)	0.00084	0.00100	0.00099	<0.00020	
	Selenium (Se)-Dissolved (mg/L)	0.000056	<0.000050	<0.000050	<0.000050	
	Silicon (Si)-Dissolved (mg/L)	0.928	2.02	2.05	<0.050	
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Dissolved (mg/L)	0.988	0.986	0.989	<0.050	
	Strontium (Sr)-Dissolved (mg/L)	0.0163	0.0121	0.0123	<0.00010	
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	<0.50	
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	0.00058	0.00045	<0.00030	
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.000022	0.000022	<0.000010	
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	<0.0010	0.0026	<0.0010	
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Total Suspended Solids	DUP-H	L2730355-1, -2, -3, -4
Matrix Spike	Dissolved Organic Carbon	MS-B	L2730355-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Dissolved Organic Carbon	MS-B	L2730355-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2730355-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2730355-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2730355-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2730355-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2730355-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2730355-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2730355-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L2730355-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Boron (B)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Copper (Cu)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Lithium (Li)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L2730355-11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Potassium (K)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sulfur (S)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Uranium (U)-Total	MS-B	L2730355-1, -10, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
HTD	Hold time exceeded for re-analysis or dilution, but initial testing was conducted within hold time.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-WT	Water	Acidity (as CaCO ₃)	APHA 2310 B - Potentiometric Titration
ALK-CO₃CO₃-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO ₃ 2-/L.			
ALK-HCO₃HCO₃-CALC-WP	Water	Alkalinity, Bicarbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO ₃ -/L.			
ALK-OH₂-CALC-WP	Water	Alkalinity, Hydroxide	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.			
ALK-TITR-WP	Water	Alkalinity, Total (as CaCO ₃)	APHA 2320B
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO ₃ - and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-N-WP	Water	Bromide in Water by IC	EPA 300.1 (mod)

Reference Information

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

C-DOC-HTC-WP Water Dissolved Organic Carbon by Combustion APHA 5310 B-WP

Filtered (0.45 um) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

C-TOC-HTC-WP Water Total Organic Carbon by Combustion APHA 5310 B-WP

Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

CL-L-IC-N-WP Water Chloride in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

CN-FREE-L-CFA-WT Water Low Level Free Cyanide in water by CFA ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-T-L-CFA-WT Water Low Level Total Cyanide in water by CFA ISO 14403-2:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, however it would be less than 1% and could be as low as zero.

CN-WAD-L-CFA-WT Water Low level WAD Cyanide in water by CFA APHA 4500CN I-Weak acid Dist Colorimet

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

CR-CR6-PWQO-IC-WT Water Chromium +6 EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-SCREEN-WP Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc

EC-SCREEN-WT Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F-IC-N-WP Water Fluoride in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

HARDNESS-CALC-WP Water Hardness Calculated APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

MET-D-CCMS-WP Water Dissolved Metals in Water by CRC ICPMS APHA 3030B/6020B (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-T-CCMS-WP Water Total Metals in Water by CRC ICPMS EPA 200.2/6020B (mod.)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Reference Information

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	APHA 4500 NorgD (modified)
Aqueous samples are digested in a block digester with sulfuric acid and copper sulfate as a catalyst. Total Kjeldahl Nitrogen is then analyzed using a discrete analyzer with colorimetric detection.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-N-WP	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-L-IC-N-WP	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.			
P-T-L-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
SO4-IC-N-WP	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
SOLIDS-TOTSUS-LR-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 105°C.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BR-IC-N-WP		Water						
Batch	R5863438							
WG3762087-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	09-SEP-22
WG3762087-5 MB								
Bromide (Br)			<0.10		mg/L		0.1	09-SEP-22
C-DOC-HTC-WP		Water						
Batch	R5853061							
WG3760918-7 DUP		L2730355-16						
Dissolved Organic Carbon		13.5	14.0		mg/L	4.1	20	02-SEP-22
WG3760918-2 LCS								
Dissolved Organic Carbon			105.8		%		80-120	02-SEP-22
WG3760918-6 LCS								
Dissolved Organic Carbon			104.6		%		80-120	02-SEP-22
WG3760918-1 MB								
Dissolved Organic Carbon			<0.50		mg/L		0.5	02-SEP-22
WG3760918-5 MB								
Dissolved Organic Carbon			<0.50		mg/L		0.5	02-SEP-22
WG3760918-8 MS		L2730355-17						
Dissolved Organic Carbon			N/A	MS-B	%		-	02-SEP-22
Batch	R5854339							
WG3761283-10 LCS								
Dissolved Organic Carbon			102.8		%		80-120	04-SEP-22
WG3761283-9 MB								
Dissolved Organic Carbon			<0.50		mg/L		0.5	04-SEP-22
Batch	R5854354							
WG3761308-2 LCS								
Dissolved Organic Carbon			103.2		%		80-120	03-SEP-22
WG3761308-1 MB								
Dissolved Organic Carbon			<0.50		mg/L		0.5	03-SEP-22
C-TOC-HTC-WP		Water						
Batch	R5853062							
WG3760923-7 DUP		L2730355-16						
Total Organic Carbon		11.9	11.4		mg/L	4.4	20	02-SEP-22
WG3760923-10 LCS								
Total Organic Carbon			102.8		%		80-120	02-SEP-22
WG3760923-6 LCS								
Total Organic Carbon			103.9		%		80-120	02-SEP-22
WG3760923-5 MB								
Total Organic Carbon			<0.50		mg/L		0.5	02-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-TOC-HTC-WP								
Batch R5853062								
WG3760923-9 MB								
Total Organic Carbon			<0.50		mg/L		0.5	02-SEP-22
WG3760923-8 MS		L2730355-17						
Total Organic Carbon			88.6		%		70-130	02-SEP-22
Batch R5854342								
WG3761292-10 LCS								
Total Organic Carbon			102.6		%		80-120	04-SEP-22
WG3761292-9 MB								
Total Organic Carbon			<0.50		mg/L		0.5	04-SEP-22
CL-L-IC-N-WP								
Batch R5856696								
WG3760513-11 DUP		L2730355-5						
Chloride (Cl)		0.66	0.66		mg/L	0.1	20	31-AUG-22
WG3760513-10 LCS								
Chloride (Cl)			97.7		%		90-110	31-AUG-22
WG3760513-6 LCS								
Chloride (Cl)			97.3		%		90-110	31-AUG-22
WG3760513-5 MB								
Chloride (Cl)			<0.10		mg/L		0.1	31-AUG-22
WG3760513-9 MB								
Chloride (Cl)			<0.10		mg/L		0.1	31-AUG-22
WG3760513-12 MS		L2730355-5						
Chloride (Cl)			104.0		%		75-125	31-AUG-22
CN-FREE-L-CFA-WT								
Batch R5853280								
WG3760775-2 LCS								
Cyanide, Free			105.7		%		80-120	01-SEP-22
WG3760775-7 LCS								
Cyanide, Free			104.3		%		80-120	01-SEP-22
WG3760775-1 MB								
Cyanide, Free			<0.0010		mg/L		0.001	01-SEP-22
WG3760775-6 MB								
Cyanide, Free			<0.0010		mg/L		0.001	01-SEP-22
CN-T-L-CFA-WT								
Batch R5853280								
WG3760775-2 LCS								
Cyanide, Total			98.9		%		80-120	01-SEP-22
WG3760775-7 LCS								



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-L-CFA-WT								
Batch R5853280								
WG3760775-7	LCS							
Cyanide, Total			98.9		%		80-120	01-SEP-22
WG3760775-1	MB							
Cyanide, Total			<0.0010		mg/L		0.001	01-SEP-22
WG3760775-6	MB							
Cyanide, Total			<0.0010		mg/L		0.001	01-SEP-22
CN-WAD-L-CFA-WT								
Batch R5853280								
WG3760775-2	LCS							
Cyanide, Weak Acid Diss			115.4		%		80-120	01-SEP-22
WG3760775-7	LCS							
Cyanide, Weak Acid Diss			114.0		%		80-120	01-SEP-22
WG3760775-1	MB							
Cyanide, Weak Acid Diss			<0.0010		mg/L		0.001	01-SEP-22
WG3760775-6	MB							
Cyanide, Weak Acid Diss			<0.0010		mg/L		0.001	01-SEP-22
CR-CR6-PWQO-IC-WT								
Batch R5853365								
WG3760729-2	LCS							
Chromium, Hexavalent			99.4		%		80-120	01-SEP-22
WG3760729-1	MB							
Chromium, Hexavalent			<0.50		ug/L		0.5	01-SEP-22
Batch R5853368								
WG3760730-2	LCS							
Chromium, Hexavalent			97.6		%		80-120	01-SEP-22
WG3760730-1	MB							
Chromium, Hexavalent			<0.50		ug/L		0.5	01-SEP-22
F-IC-N-WP								
Batch R5856696								
WG3760513-11	DUP	L2730355-5						
Fluoride (F)		0.059	0.059		mg/L	0.3	20	31-AUG-22
WG3760513-10	LCS							
Fluoride (F)			102.8		%		90-110	31-AUG-22
WG3760513-6	LCS							
Fluoride (F)			102.4		%		90-110	31-AUG-22
WG3760513-5	MB							
Fluoride (F)			<0.020		mg/L		0.02	31-AUG-22
WG3760513-9	MB							



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F-IC-N-WP								
Water								
Batch	R5856696							
WG3760513-9 MB								
Fluoride (F)			<0.020		mg/L		0.02	31-AUG-22
WG3760513-12 MS		L2730355-5						
Fluoride (F)			109.5		%		75-125	31-AUG-22
MET-D-CCMS-WP								
Water								
Batch	R5853517							
WG3760664-2 LCS								
Aluminum (Al)-Dissolved			100.0		%		80-120	01-SEP-22
Antimony (Sb)-Dissolved			103.2		%		80-120	01-SEP-22
Arsenic (As)-Dissolved			99.1		%		80-120	01-SEP-22
Barium (Ba)-Dissolved			97.7		%		80-120	01-SEP-22
Beryllium (Be)-Dissolved			93.7		%		80-120	01-SEP-22
Bismuth (Bi)-Dissolved			102.0		%		80-120	01-SEP-22
Boron (B)-Dissolved			92.9		%		80-120	01-SEP-22
Cadmium (Cd)-Dissolved			101.2		%		80-120	01-SEP-22
Calcium (Ca)-Dissolved			94.5		%		80-120	01-SEP-22
Cesium (Cs)-Dissolved			104.3		%		80-120	01-SEP-22
Chromium (Cr)-Dissolved			100.0		%		80-120	01-SEP-22
Cobalt (Co)-Dissolved			98.9		%		80-120	01-SEP-22
Copper (Cu)-Dissolved			101.1		%		80-120	01-SEP-22
Iron (Fe)-Dissolved			94.7		%		80-120	01-SEP-22
Lead (Pb)-Dissolved			99.0		%		80-120	01-SEP-22
Lithium (Li)-Dissolved			88.7		%		80-120	01-SEP-22
Magnesium (Mg)-Dissolved			100.5		%		80-120	01-SEP-22
Manganese (Mn)-Dissolved			99.6		%		80-120	01-SEP-22
Molybdenum (Mo)-Dissolved			101.4		%		80-120	01-SEP-22
Nickel (Ni)-Dissolved			98.8		%		80-120	01-SEP-22
Phosphorus (P)-Dissolved			97.6		%		80-120	01-SEP-22
Potassium (K)-Dissolved			99.0		%		80-120	01-SEP-22
Rubidium (Rb)-Dissolved			98.2		%		80-120	01-SEP-22
Selenium (Se)-Dissolved			102.1		%		80-120	01-SEP-22
Silicon (Si)-Dissolved			101.4		%		80-120	01-SEP-22
Silver (Ag)-Dissolved			99.9		%		80-120	01-SEP-22
Sodium (Na)-Dissolved			98.9		%		80-120	01-SEP-22
Strontium (Sr)-Dissolved			102.3		%		80-120	01-SEP-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5853517							
WG3760664-2	LCS							
Sulfur (S)-Dissolved			103.3		%		80-120	01-SEP-22
Tellurium (Te)-Dissolved			102.8		%		80-120	01-SEP-22
Thallium (Tl)-Dissolved			97.0		%		80-120	01-SEP-22
Thorium (Th)-Dissolved			95.6		%		80-120	01-SEP-22
Tin (Sn)-Dissolved			101.1		%		80-120	01-SEP-22
Titanium (Ti)-Dissolved			95.7		%		80-120	01-SEP-22
Tungsten (W)-Dissolved			98.8		%		80-120	01-SEP-22
Uranium (U)-Dissolved			99.9		%		80-120	01-SEP-22
Vanadium (V)-Dissolved			100.4		%		80-120	01-SEP-22
Zinc (Zn)-Dissolved			100.1		%		80-120	01-SEP-22
Zirconium (Zr)-Dissolved			95.7		%		80-120	01-SEP-22
WG3760664-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	01-SEP-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	01-SEP-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	01-SEP-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	01-SEP-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	01-SEP-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	01-SEP-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	01-SEP-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	01-SEP-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	01-SEP-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	01-SEP-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	01-SEP-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	01-SEP-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	01-SEP-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	01-SEP-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	01-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch R5853517								
WG3760664-1 MB								
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	01-SEP-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	01-SEP-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	01-SEP-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	01-SEP-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	01-SEP-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	01-SEP-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	01-SEP-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	01-SEP-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	01-SEP-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	01-SEP-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	01-SEP-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	01-SEP-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	01-SEP-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	01-SEP-22
Batch R5854036								
WG3760978-4 DUP		L2730355-10						
Aluminum (Al)-Dissolved		0.0982	0.0969		mg/L	1.3	20	02-SEP-22
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	02-SEP-22
Arsenic (As)-Dissolved		0.00060	0.00058		mg/L	2.6	20	02-SEP-22
Barium (Ba)-Dissolved		0.00719	0.00721		mg/L	0.2	20	02-SEP-22
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	02-SEP-22
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	02-SEP-22
Boron (B)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	02-SEP-22
Cadmium (Cd)-Dissolved		0.0000065	0.0000081	J	mg/L	0.000001	0.00001	02-SEP-22
Calcium (Ca)-Dissolved		6.59	6.77		mg/L	2.7	20	02-SEP-22
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	02-SEP-22
Chromium (Cr)-Dissolved		0.00026	0.00025		mg/L	2.1	20	02-SEP-22
Cobalt (Co)-Dissolved		0.00044	0.00042		mg/L	3.8	20	02-SEP-22
Copper (Cu)-Dissolved		0.00058	<0.00020	G	mg/L	N/A	20	02-SEP-22
Iron (Fe)-Dissolved		0.957	0.968		mg/L	1.1	20	02-SEP-22
Lead (Pb)-Dissolved		0.000057	0.000060		mg/L	4.5	20	02-SEP-22



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MET-D-CCMS-WP		Water						
Batch	R5854036							
WG3760978-4	DUP	L2730355-10						
Lithium (Li)-Dissolved		0.0014	0.0014		mg/L	2.4	20	02-SEP-22
Magnesium (Mg)-Dissolved		1.20	1.17		mg/L	2.1	20	02-SEP-22
Manganese (Mn)-Dissolved		0.0923	0.0917		mg/L	0.7	20	02-SEP-22
Molybdenum (Mo)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	02-SEP-22
Nickel (Ni)-Dissolved		0.00066	0.00063		mg/L	5.0	20	02-SEP-22
Phosphorus (P)-Dissolved		<0.030	<0.030	RPD-NA	mg/L	N/A	20	02-SEP-22
Potassium (K)-Dissolved		0.127	0.122		mg/L	4.2	20	02-SEP-22
Rubidium (Rb)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	02-SEP-22
Selenium (Se)-Dissolved		0.000077	0.000064		mg/L	17	20	02-SEP-22
Silicon (Si)-Dissolved		3.84	3.80		mg/L	1.1	20	02-SEP-22
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	02-SEP-22
Sodium (Na)-Dissolved		1.11	1.09		mg/L	1.2	20	02-SEP-22
Strontium (Sr)-Dissolved		0.0156	0.0156		mg/L	0.2	20	02-SEP-22
Sulfur (S)-Dissolved		<0.50	<0.50	RPD-NA	mg/L	N/A	20	02-SEP-22
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	02-SEP-22
Thallium (Tl)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	02-SEP-22
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	02-SEP-22
Tin (Sn)-Dissolved		0.00045	0.00043		mg/L	4.7	20	02-SEP-22
Titanium (Ti)-Dissolved		0.00110	0.00102		mg/L	7.6	20	02-SEP-22
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	02-SEP-22
Uranium (U)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	02-SEP-22
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	02-SEP-22
Zinc (Zn)-Dissolved		0.0036	0.0032		mg/L	11	20	02-SEP-22
Zirconium (Zr)-Dissolved		0.00021	0.00020		mg/L	0.9	20	02-SEP-22
WG3760978-2	LCS							
Aluminum (Al)-Dissolved			99.1		%		80-120	02-SEP-22
Antimony (Sb)-Dissolved			104.8		%		80-120	02-SEP-22
Arsenic (As)-Dissolved			99.0		%		80-120	02-SEP-22
Barium (Ba)-Dissolved			101.9		%		80-120	02-SEP-22
Beryllium (Be)-Dissolved			102.0		%		80-120	02-SEP-22
Bismuth (Bi)-Dissolved			99.96		%		80-120	02-SEP-22
Boron (B)-Dissolved			101.0		%		80-120	02-SEP-22
Cadmium (Cd)-Dissolved			98.4		%		80-120	02-SEP-22
Calcium (Ca)-Dissolved			101.6		%		80-120	02-SEP-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5854036							
WG3760978-2	LCS							
Cesium (Cs)-Dissolved			101.2		%		80-120	02-SEP-22
Chromium (Cr)-Dissolved			98.4		%		80-120	02-SEP-22
Cobalt (Co)-Dissolved			98.7		%		80-120	02-SEP-22
Copper (Cu)-Dissolved			98.4		%		80-120	02-SEP-22
Iron (Fe)-Dissolved			94.1		%		80-120	02-SEP-22
Lead (Pb)-Dissolved			93.3		%		80-120	02-SEP-22
Lithium (Li)-Dissolved			98.1		%		80-120	02-SEP-22
Magnesium (Mg)-Dissolved			98.2		%		80-120	02-SEP-22
Manganese (Mn)-Dissolved			98.8		%		80-120	02-SEP-22
Molybdenum (Mo)-Dissolved			106.7		%		80-120	02-SEP-22
Nickel (Ni)-Dissolved			96.7		%		80-120	02-SEP-22
Phosphorus (P)-Dissolved			105.2		%		80-120	02-SEP-22
Potassium (K)-Dissolved			98.6		%		80-120	02-SEP-22
Rubidium (Rb)-Dissolved			98.3		%		80-120	02-SEP-22
Selenium (Se)-Dissolved			98.8		%		80-120	02-SEP-22
Silicon (Si)-Dissolved			99.0		%		80-120	02-SEP-22
Silver (Ag)-Dissolved			101.2		%		80-120	02-SEP-22
Sodium (Na)-Dissolved			102.0		%		80-120	02-SEP-22
Strontium (Sr)-Dissolved			101.1		%		80-120	02-SEP-22
Sulfur (S)-Dissolved			90.6		%		80-120	02-SEP-22
Tellurium (Te)-Dissolved			103.8		%		80-120	02-SEP-22
Thallium (Tl)-Dissolved			97.1		%		80-120	02-SEP-22
Thorium (Th)-Dissolved			97.6		%		80-120	02-SEP-22
Tin (Sn)-Dissolved			98.8		%		80-120	02-SEP-22
Titanium (Ti)-Dissolved			96.3		%		80-120	02-SEP-22
Tungsten (W)-Dissolved			94.1		%		80-120	02-SEP-22
Uranium (U)-Dissolved			98.7		%		80-120	02-SEP-22
Vanadium (V)-Dissolved			99.2		%		80-120	02-SEP-22
Zinc (Zn)-Dissolved			95.7		%		80-120	02-SEP-22
Zirconium (Zr)-Dissolved			98.8		%		80-120	02-SEP-22
WG3760978-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	02-SEP-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	02-SEP-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	02-SEP-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5854036							
WG3760978-1 MB								
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	02-SEP-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	02-SEP-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	02-SEP-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	02-SEP-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	02-SEP-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	02-SEP-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	02-SEP-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	02-SEP-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	02-SEP-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	02-SEP-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	02-SEP-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	02-SEP-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	02-SEP-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	02-SEP-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	02-SEP-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	02-SEP-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	02-SEP-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	02-SEP-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	02-SEP-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	02-SEP-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	02-SEP-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	02-SEP-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	02-SEP-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	02-SEP-22
Strontium (Sr)-Dissolved			0.00010		mg/L		0.0001	02-SEP-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	02-SEP-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	02-SEP-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	02-SEP-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	02-SEP-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	02-SEP-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	02-SEP-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	02-SEP-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	02-SEP-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	02-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP	Water							
Batch	R5854036							
WG3760978-1 MB								
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	02-SEP-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	02-SEP-22
WG3760978-5 MS		L2730355-10						
Aluminum (Al)-Dissolved			89.4		%		70-130	02-SEP-22
Antimony (Sb)-Dissolved			110.5		%		70-130	02-SEP-22
Arsenic (As)-Dissolved			96.1		%		70-130	02-SEP-22
Barium (Ba)-Dissolved			100.2		%		70-130	02-SEP-22
Beryllium (Be)-Dissolved			98.7		%		70-130	02-SEP-22
Bismuth (Bi)-Dissolved			93.4		%		70-130	02-SEP-22
Boron (B)-Dissolved			107.0		%		70-130	02-SEP-22
Cadmium (Cd)-Dissolved			96.1		%		70-130	02-SEP-22
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	02-SEP-22
Cesium (Cs)-Dissolved			97.4		%		70-130	02-SEP-22
Chromium (Cr)-Dissolved			96.4		%		70-130	02-SEP-22
Cobalt (Co)-Dissolved			93.4		%		70-130	02-SEP-22
Copper (Cu)-Dissolved			91.7		%		70-130	02-SEP-22
Iron (Fe)-Dissolved			92.2		%		70-130	02-SEP-22
Lead (Pb)-Dissolved			91.3		%		70-130	02-SEP-22
Lithium (Li)-Dissolved			94.8		%		70-130	02-SEP-22
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	02-SEP-22
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	02-SEP-22
Molybdenum (Mo)-Dissolved			116.3		%		70-130	02-SEP-22
Nickel (Ni)-Dissolved			94.1		%		70-130	02-SEP-22
Phosphorus (P)-Dissolved			94.4		%		70-130	02-SEP-22
Potassium (K)-Dissolved			89.4		%		70-130	02-SEP-22
Rubidium (Rb)-Dissolved			92.1		%		70-130	02-SEP-22
Selenium (Se)-Dissolved			97.6		%		70-130	02-SEP-22
Silicon (Si)-Dissolved			98.9		%		70-130	02-SEP-22
Silver (Ag)-Dissolved			99.5		%		70-130	02-SEP-22
Sodium (Na)-Dissolved			91.9		%		70-130	02-SEP-22
Strontium (Sr)-Dissolved			105.1		%		70-130	02-SEP-22
Sulfur (S)-Dissolved			92.4		%		70-130	02-SEP-22
Tellurium (Te)-Dissolved			114.8		%		70-130	02-SEP-22
Thallium (Tl)-Dissolved			89.6		%		70-130	02-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5854036							
WG3760978-5	MS	L2730355-10						
Thorium (Th)-Dissolved			99.2		%		70-130	02-SEP-22
Tin (Sn)-Dissolved			105.3		%		70-130	02-SEP-22
Titanium (Ti)-Dissolved			103.8		%		70-130	02-SEP-22
Tungsten (W)-Dissolved			102.1		%		70-130	02-SEP-22
Uranium (U)-Dissolved			95.9		%		70-130	02-SEP-22
Vanadium (V)-Dissolved			95.8		%		70-130	02-SEP-22
Zinc (Zn)-Dissolved			94.1		%		70-130	02-SEP-22
Zirconium (Zr)-Dissolved			113.6		%		70-130	02-SEP-22
MET-T-CCMS-WP		Water						
Batch	R5852456							
WG3760366-4	DUP	L2730355-12						
Aluminum (Al)-Total		0.112	0.107		mg/L	4.4	20	31-AUG-22
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-AUG-22
Arsenic (As)-Total		0.00023	0.00022		mg/L	1.8	20	31-AUG-22
Barium (Ba)-Total		0.00653	0.00650		mg/L	0.5	20	31-AUG-22
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-AUG-22
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	31-AUG-22
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	31-AUG-22
Cadmium (Cd)-Total		<0.0000050	0.0000058	RPD-NA	mg/L	N/A	20	31-AUG-22
Calcium (Ca)-Total		3.19	3.15		mg/L	1.5	20	31-AUG-22
Cesium (Cs)-Total		0.000014	0.000011	J	mg/L	0.000003	0.00002	31-AUG-22
Chromium (Cr)-Total		0.00074	0.00026	J,G	mg/L	0.00048	0.0002	31-AUG-22
Cobalt (Co)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-AUG-22
Copper (Cu)-Total		<0.00050	0.00052	RPD-NA	mg/L	N/A	20	31-AUG-22
Iron (Fe)-Total		0.305	0.296		mg/L	3.0	20	31-AUG-22
Lead (Pb)-Total		0.000066	0.000064		mg/L	3.3	20	31-AUG-22
Lithium (Li)-Total		0.0012	0.0011		mg/L	3.9	20	31-AUG-22
Magnesium (Mg)-Total		0.980	0.962		mg/L	1.9	20	31-AUG-22
Manganese (Mn)-Total		0.0317	0.0312		mg/L	1.6	20	31-AUG-22
Molybdenum (Mo)-Total		0.000092	0.000108		mg/L	16	20	31-AUG-22
Nickel (Ni)-Total		0.00087	0.00067	J	mg/L	0.00020	0.001	31-AUG-22
Potassium (K)-Total		0.539	0.525		mg/L	2.6	20	31-AUG-22
Phosphorus (P)-Total		<0.030	<0.030	RPD-NA	mg/L	N/A	20	31-AUG-22
Rubidium (Rb)-Total		0.00130	0.00129		mg/L	1.1	20	31-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5852456							
WG3760366-4 DUP		L2730355-12						
Selenium (Se)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	31-AUG-22
Silicon (Si)-Total		2.49	2.42		mg/L	2.7	20	31-AUG-22
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	31-AUG-22
Sodium (Na)-Total		1.14	1.13		mg/L	0.7	20	31-AUG-22
Strontium (Sr)-Total		0.0138	0.0138		mg/L	0.1	20	31-AUG-22
Sulfur (S)-Total		<0.50	<0.50	RPD-NA	mg/L	N/A	20	31-AUG-22
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	31-AUG-22
Thallium (Tl)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	31-AUG-22
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-AUG-22
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-AUG-22
Titanium (Ti)-Total		0.00438	0.00414		mg/L	5.6	20	31-AUG-22
Tungsten (W)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-AUG-22
Uranium (U)-Total		0.000037	0.000034		mg/L	6.5	20	31-AUG-22
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	31-AUG-22
Zinc (Zn)-Total		0.0039	0.0037		mg/L	5.0	20	31-AUG-22
Zirconium (Zr)-Total		0.00024	0.00025		mg/L	2.4	20	31-AUG-22
WG3760156-2 LCS								
Aluminum (Al)-Total			94.0		%		80-120	31-AUG-22
Antimony (Sb)-Total			105.0		%		80-120	31-AUG-22
Arsenic (As)-Total			104.6		%		80-120	31-AUG-22
Barium (Ba)-Total			103.2		%		80-120	31-AUG-22
Beryllium (Be)-Total			92.8		%		80-120	31-AUG-22
Bismuth (Bi)-Total			94.4		%		80-120	31-AUG-22
Boron (B)-Total			91.0		%		80-120	31-AUG-22
Cadmium (Cd)-Total			98.0		%		80-120	31-AUG-22
Calcium (Ca)-Total			92.2		%		80-120	31-AUG-22
Cesium (Cs)-Total			106.1		%		80-120	31-AUG-22
Chromium (Cr)-Total			95.6		%		80-120	31-AUG-22
Cobalt (Co)-Total			95.2		%		80-120	31-AUG-22
Copper (Cu)-Total			95.1		%		80-120	31-AUG-22
Iron (Fe)-Total			94.8		%		80-120	31-AUG-22
Lead (Pb)-Total			88.7		%		80-120	31-AUG-22
Lithium (Li)-Total			86.1		%		80-120	31-AUG-22
Magnesium (Mg)-Total			92.4		%		80-120	31-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5852456							
WG3760156-2	LCS							
Manganese (Mn)-Total			94.0		%		80-120	31-AUG-22
Molybdenum (Mo)-Total			97.3		%		80-120	31-AUG-22
Nickel (Ni)-Total			93.9		%		80-120	31-AUG-22
Potassium (K)-Total			94.6		%		80-120	31-AUG-22
Phosphorus (P)-Total			97.7		%		80-120	31-AUG-22
Rubidium (Rb)-Total			96.1		%		80-120	31-AUG-22
Selenium (Se)-Total			102.4		%		80-120	31-AUG-22
Silicon (Si)-Total			94.8		%		80-120	31-AUG-22
Silver (Ag)-Total			101.8		%		80-120	31-AUG-22
Sodium (Na)-Total			99.9		%		80-120	31-AUG-22
Strontium (Sr)-Total			98.3		%		80-120	31-AUG-22
Sulfur (S)-Total			112.1		%		80-120	31-AUG-22
Tellurium (Te)-Total			99.9		%		80-120	31-AUG-22
Thallium (Tl)-Total			89.5		%		80-120	31-AUG-22
Thorium (Th)-Total			82.2		%		80-120	31-AUG-22
Tin (Sn)-Total			99.3		%		80-120	31-AUG-22
Titanium (Ti)-Total			89.9		%		80-120	31-AUG-22
Tungsten (W)-Total			91.7		%		80-120	31-AUG-22
Uranium (U)-Total			83.8		%		80-120	31-AUG-22
Vanadium (V)-Total			96.1		%		80-120	31-AUG-22
Zinc (Zn)-Total			98.5		%		80-120	31-AUG-22
Zirconium (Zr)-Total			87.1		%		80-120	31-AUG-22
WG3760366-2	LCS							
Aluminum (Al)-Total			100.6		%		80-120	31-AUG-22
Antimony (Sb)-Total			100.8		%		80-120	31-AUG-22
Arsenic (As)-Total			99.0		%		80-120	31-AUG-22
Barium (Ba)-Total			100.7		%		80-120	31-AUG-22
Beryllium (Be)-Total			100.2		%		80-120	31-AUG-22
Bismuth (Bi)-Total			97.3		%		80-120	31-AUG-22
Boron (B)-Total			101.5		%		80-120	31-AUG-22
Cadmium (Cd)-Total			100.2		%		80-120	31-AUG-22
Calcium (Ca)-Total			98.6		%		80-120	31-AUG-22
Cesium (Cs)-Total			101.4		%		80-120	31-AUG-22
Chromium (Cr)-Total			102.0		%		80-120	31-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5852456							
WG3760366-2	LCS							
Cobalt (Co)-Total			101.1		%		80-120	31-AUG-22
Copper (Cu)-Total			100.3		%		80-120	31-AUG-22
Iron (Fe)-Total			100.2		%		80-120	31-AUG-22
Lead (Pb)-Total			96.3		%		80-120	31-AUG-22
Lithium (Li)-Total			100.7		%		80-120	31-AUG-22
Magnesium (Mg)-Total			99.7		%		80-120	31-AUG-22
Manganese (Mn)-Total			99.9		%		80-120	31-AUG-22
Molybdenum (Mo)-Total			96.9		%		80-120	31-AUG-22
Nickel (Ni)-Total			100.3		%		80-120	31-AUG-22
Potassium (K)-Total			99.0		%		80-120	31-AUG-22
Phosphorus (P)-Total			106.2		%		80-120	31-AUG-22
Rubidium (Rb)-Total			99.5		%		80-120	31-AUG-22
Selenium (Se)-Total			99.7		%		80-120	31-AUG-22
Silicon (Si)-Total			101.1		%		80-120	31-AUG-22
Silver (Ag)-Total			101.0		%		80-120	31-AUG-22
Sodium (Na)-Total			104.2		%		80-120	31-AUG-22
Strontium (Sr)-Total			100.7		%		80-120	31-AUG-22
Sulfur (S)-Total			104.4		%		80-120	31-AUG-22
Tellurium (Te)-Total			96.5		%		80-120	31-AUG-22
Thallium (Tl)-Total			94.3		%		80-120	31-AUG-22
Thorium (Th)-Total			90.7		%		80-120	31-AUG-22
Tin (Sn)-Total			97.9		%		80-120	31-AUG-22
Titanium (Ti)-Total			96.8		%		80-120	31-AUG-22
Tungsten (W)-Total			99.0		%		80-120	31-AUG-22
Uranium (U)-Total			96.8		%		80-120	31-AUG-22
Vanadium (V)-Total			100.7		%		80-120	31-AUG-22
Zinc (Zn)-Total			96.4		%		80-120	31-AUG-22
Zirconium (Zr)-Total			88.8		%		80-120	31-AUG-22
WG3760156-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	31-AUG-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	31-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5852456							
WG3760156-1 MB								
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	31-AUG-22
Boron (B)-Total			<0.010		mg/L		0.01	31-AUG-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	31-AUG-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	31-AUG-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	31-AUG-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	31-AUG-22
Iron (Fe)-Total			<0.010		mg/L		0.01	31-AUG-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	31-AUG-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	31-AUG-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	31-AUG-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	31-AUG-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	31-AUG-22
Potassium (K)-Total			<0.050		mg/L		0.05	31-AUG-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	31-AUG-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	31-AUG-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	31-AUG-22
Silicon (Si)-Total			<0.10		mg/L		0.1	31-AUG-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	31-AUG-22
Sodium (Na)-Total			<0.050		mg/L		0.05	31-AUG-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	31-AUG-22
Sulfur (S)-Total			<0.50		mg/L		0.5	31-AUG-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	31-AUG-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	31-AUG-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	31-AUG-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	31-AUG-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	31-AUG-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	31-AUG-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	31-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5852456							
WG3760366-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	31-AUG-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	31-AUG-22
Boron (B)-Total			<0.010		mg/L		0.01	31-AUG-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	31-AUG-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	31-AUG-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	31-AUG-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	31-AUG-22
Iron (Fe)-Total			<0.010		mg/L		0.01	31-AUG-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	31-AUG-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	31-AUG-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	31-AUG-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	31-AUG-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	31-AUG-22
Potassium (K)-Total			<0.050		mg/L		0.05	31-AUG-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	31-AUG-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	31-AUG-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	31-AUG-22
Silicon (Si)-Total			<0.10		mg/L		0.1	31-AUG-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	31-AUG-22
Sodium (Na)-Total			<0.050		mg/L		0.05	31-AUG-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	31-AUG-22
Sulfur (S)-Total			<0.50		mg/L		0.5	31-AUG-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	31-AUG-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	31-AUG-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	31-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	Water							
Batch	R5852456							
WG3760366-1 MB								
Tungsten (W)-Total			<0.00010		mg/L		0.0001	31-AUG-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	31-AUG-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	31-AUG-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	31-AUG-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	31-AUG-22
WG3760366-5 MS		L2730355-12						
Aluminum (Al)-Total			97.0		%		70-130	31-AUG-22
Antimony (Sb)-Total			99.3		%		70-130	31-AUG-22
Arsenic (As)-Total			99.95		%		70-130	31-AUG-22
Barium (Ba)-Total			100.8		%		70-130	31-AUG-22
Beryllium (Be)-Total			101.6		%		70-130	31-AUG-22
Bismuth (Bi)-Total			115.9		%		70-130	31-AUG-22
Boron (B)-Total			104.9		%		70-130	31-AUG-22
Cadmium (Cd)-Total			102.1		%		70-130	31-AUG-22
Calcium (Ca)-Total			96.2		%		70-130	31-AUG-22
Cesium (Cs)-Total			103.0		%		70-130	31-AUG-22
Chromium (Cr)-Total			101.6		%		70-130	31-AUG-22
Cobalt (Co)-Total			103.3		%		70-130	31-AUG-22
Copper (Cu)-Total			102.6		%		70-130	31-AUG-22
Iron (Fe)-Total			101.7		%		70-130	31-AUG-22
Lead (Pb)-Total			100.5		%		70-130	31-AUG-22
Lithium (Li)-Total			103.8		%		70-130	31-AUG-22
Magnesium (Mg)-Total			96.5		%		70-130	31-AUG-22
Manganese (Mn)-Total			N/A	MS-B	%		-	31-AUG-22
Molybdenum (Mo)-Total			96.8		%		70-130	31-AUG-22
Nickel (Ni)-Total			105.0		%		70-130	31-AUG-22
Potassium (K)-Total			99.7		%		70-130	31-AUG-22
Phosphorus (P)-Total			101.1		%		70-130	31-AUG-22
Rubidium (Rb)-Total			99.1		%		70-130	31-AUG-22
Selenium (Se)-Total			106.6		%		70-130	31-AUG-22
Silicon (Si)-Total			98.3		%		70-130	31-AUG-22
Silver (Ag)-Total			102.0		%		70-130	31-AUG-22
Sodium (Na)-Total			104.9		%		70-130	31-AUG-22
Strontium (Sr)-Total			94.0		%		70-130	31-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5852456							
WG3760366-5 MS		L2730355-12						
Sulfur (S)-Total			102.6		%		70-130	31-AUG-22
Tellurium (Te)-Total			99.4		%		70-130	31-AUG-22
Thallium (Tl)-Total			96.5		%		70-130	31-AUG-22
Thorium (Th)-Total			100.8		%		70-130	31-AUG-22
Tin (Sn)-Total			99.4		%		70-130	31-AUG-22
Titanium (Ti)-Total			101.6		%		70-130	31-AUG-22
Tungsten (W)-Total			101.3		%		70-130	31-AUG-22
Uranium (U)-Total			99.9		%		70-130	31-AUG-22
Vanadium (V)-Total			101.5		%		70-130	31-AUG-22
Zinc (Zn)-Total			98.7		%		70-130	31-AUG-22
Zirconium (Zr)-Total			98.7		%		70-130	31-AUG-22
N-TOTKJ-WP		Water						
Batch	R5852757							
WG3760429-11 DUP		L2730355-16						
Total Kjeldahl Nitrogen		0.43	0.43		mg/L	1.2	20	01-SEP-22
WG3760429-10 LCS								
Total Kjeldahl Nitrogen			96.2		%		75-125	01-SEP-22
WG3760429-6 LCS								
Total Kjeldahl Nitrogen			112.3		%		75-125	01-SEP-22
WG3760429-5 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	01-SEP-22
WG3760429-9 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	01-SEP-22
WG3760429-12 MS		L2730355-16						
Total Kjeldahl Nitrogen			103.8		%		70-130	01-SEP-22
NH3-COL-WP		Water						
Batch	R5852738							
WG3760809-27 DUP		L2730355-18						
Ammonia, Total (as N)		0.024	0.027		mg/L	12	20	01-SEP-22
WG3760809-22 LCS								
Ammonia, Total (as N)			99.5		%		85-115	01-SEP-22
WG3760809-26 LCS								
Ammonia, Total (as N)			98.5		%		85-115	01-SEP-22
WG3760809-21 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	01-SEP-22
WG3760809-25 MB								



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-WP								
Batch R5852738								
WG3760809-25 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	01-SEP-22
WG3760809-28 MS		L2730355-18						
Ammonia, Total (as N)			91.5		%		75-125	01-SEP-22
Batch R5854676								
WG3761365-2 LCS								
Ammonia, Total (as N)			99.5		%		85-115	06-SEP-22
WG3761365-1 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	06-SEP-22
NO2-L-IC-N-WP								
Batch R5856696								
WG3760513-11 DUP		L2730355-5						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-22
WG3760513-10 LCS								
Nitrite (as N)			95.3		%		90-110	31-AUG-22
WG3760513-6 LCS								
Nitrite (as N)			95.2		%		90-110	31-AUG-22
WG3760513-5 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	31-AUG-22
WG3760513-9 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	31-AUG-22
WG3760513-12 MS		L2730355-5						
Nitrite (as N)			101.1		%		75-125	31-AUG-22
NO3-L-IC-N-WP								
Batch R5863438								
WG3762087-2 LCS								
Nitrate (as N)			100.2		%		90-110	09-SEP-22
WG3762087-6 LCS								
Nitrate (as N)			100.2		%		90-110	09-SEP-22
WG3762087-1 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	09-SEP-22
WG3762087-5 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	09-SEP-22
P-T-COL-WP								
Batch R5853577								
WG3760935-7 DUP		L2730355-9						
Phosphorus (P)-Total		0.0157	0.0152		mg/L	3.2	20	02-SEP-22
WG3760935-2 LCS								



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-WP								
Batch R5853577								
WG3760935-2	LCS							
Phosphorus (P)-Total			96.7		%		80-120	02-SEP-22
WG3760935-6	LCS							
Phosphorus (P)-Total			96.3		%		80-120	02-SEP-22
WG3760935-1	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	02-SEP-22
WG3760935-5	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	02-SEP-22
WG3760935-8	MS	L2730355-10						
Phosphorus (P)-Total			98.0		%		70-130	02-SEP-22
P-T-L-COL-WP								
Batch R5851576								
WG3760273-2	LCS							
Phosphorus (P)-Total			98.3		%		80-120	08-SEP-22
WG3760273-1	MB							
Phosphorus (P)-Total			<0.0010		mg/L		0.001	08-SEP-22
SO4-IC-N-WP								
Batch R5856696								
WG3760513-11	DUP	L2730355-5						
Sulfate (SO4)		8.90	8.91		mg/L	0.1	20	31-AUG-22
WG3760513-10	LCS							
Sulfate (SO4)			99.7		%		90-110	31-AUG-22
WG3760513-6	LCS							
Sulfate (SO4)			99.3		%		90-110	31-AUG-22
WG3760513-5	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	31-AUG-22
WG3760513-9	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	31-AUG-22
WG3760513-12	MS	L2730355-5						
Sulfate (SO4)			105.1		%		75-125	31-AUG-22
SOLIDS-TOTSUS-LR-WP								
Batch R5851318								
WG3760110-9	DUP	L2730355-10						
Total Suspended Solids		3.1	2.7		mg/L	14	20	30-AUG-22
WG3760110-8	LCS							
Total Suspended Solids			105.3		%		85-115	30-AUG-22
WG3760110-7	MB							
Total Suspended Solids			<1.0		mg/L		1	30-AUG-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-LR-WP		Water						
Batch R5853277								
WG3759923-2 LCS								
Total Suspended Solids			98.7		%		85-115	29-AUG-22
WG3759923-1 MB								
Total Suspended Solids			<1.0		mg/L		1	29-AUG-22

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
G	QC result did not meet ALS DQO. Refer to narrative comments for further information.
J	Duplicate results and limits are expressed in terms of absolute difference.
J,G	QC result did not meet ALS DQO. Refer to narrative comments for further information. Duplicate expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Alkalinity, Total (as CaCO ₃)	15	24-AUG-22 12:50	09-SEP-22 14:37	14	16	days	EHT
	19	24-AUG-22	14-SEP-22 16:18	14	21	days	EHT
Nitrate in Water by IC (Low Level)							
	1	23-AUG-22 09:56	09-SEP-22 11:00	3	17	days	EHTR
	2	23-AUG-22 10:35	09-SEP-22 11:00	3	17	days	EHTR
	3	23-AUG-22 11:10	09-SEP-22 11:00	3	17	days	EHTR
	4	23-AUG-22 09:15	09-SEP-22 11:00	3	17	days	EHTR
	5	23-AUG-22 11:47	09-SEP-22 11:00	3	17	days	EHTR
	6	23-AUG-22 13:17	09-SEP-22 11:00	3	17	days	EHTR
	7	23-AUG-22 14:14	09-SEP-22 11:00	3	17	days	EHTR
	8	23-AUG-22 14:43	09-SEP-22 11:00	3	17	days	EHTL
	9	23-AUG-22 15:24	09-SEP-22 11:00	3	17	days	EHTL
	10	23-AUG-22	09-SEP-22 11:00	3	17	days	EHTR
	11	23-AUG-22 16:25	09-SEP-22 11:00	3	17	days	EHTL
	12	24-AUG-22 09:21	09-SEP-22 11:00	3	16	days	EHTL
	13	24-AUG-22 10:41	09-SEP-22 11:00	3	16	days	EHTL
	14	24-AUG-22 12:32	09-SEP-22 11:00	3	16	days	EHTL
	15	24-AUG-22 12:50	09-SEP-22 11:00	3	16	days	EHTL
	16	24-AUG-22 13:38	09-SEP-22 11:00	3	16	days	EHTL
	17	24-AUG-22 14:58	09-SEP-22 11:00	3	16	days	EHT
	18	24-AUG-22 15:22	09-SEP-22 11:00	3	16	days	EHT
	19	24-AUG-22	09-SEP-22 11:00	3	16	days	EHTL
Nitrite in Water by IC (Low Level)							
	1	23-AUG-22 09:56	31-AUG-22 11:45	3	8	days	EHTR
	2	23-AUG-22 10:35	31-AUG-22 11:45	3	8	days	EHTR
	3	23-AUG-22 11:10	31-AUG-22 11:45	3	8	days	EHTR
	4	23-AUG-22 09:15	31-AUG-22 11:45	3	8	days	EHTR
	5	23-AUG-22 11:47	31-AUG-22 11:45	3	8	days	EHTR
	6	23-AUG-22 13:17	31-AUG-22 11:45	3	8	days	EHTR
	7	23-AUG-22 14:14	31-AUG-22 11:45	3	8	days	EHTR
	8	23-AUG-22 14:43	31-AUG-22 11:45	3	8	days	EHTL
	9	23-AUG-22 15:24	31-AUG-22 11:45	3	8	days	EHTL
	10	23-AUG-22	31-AUG-22 11:45	3	8	days	EHTR
	11	23-AUG-22 16:25	31-AUG-22 11:45	3	8	days	EHTL
	12	24-AUG-22 09:21	31-AUG-22 11:45	3	7	days	EHTL
	13	24-AUG-22 10:41	31-AUG-22 11:45	3	7	days	EHTL
	14	24-AUG-22 12:32	31-AUG-22 11:45	3	7	days	EHTL
	15	24-AUG-22 12:50	31-AUG-22 11:45	3	7	days	EHTL
	16	24-AUG-22 13:38	31-AUG-22 11:45	3	7	days	EHTL
	17	24-AUG-22 14:58	31-AUG-22 11:45	3	7	days	EHT
	18	24-AUG-22 15:22	31-AUG-22 11:45	3	7	days	EHT
	19	24-AUG-22	31-AUG-22 11:45	3	7	days	EHTL

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
 EHTR: Exceeded ALS recommended hold time prior to sample receipt.
 EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
 EHT: Exceeded ALS recommended hold time prior to analysis.
 Rec. HT: ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
 Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2730355 were received on 26-AUG-22 14:00.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the

Quality Control Report

Workorder: L2730355

Report Date: 23-SEP-22

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US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



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Ch (COC) / Analytical Request Form

COC Number: 22 -

Page 2 of 2



L2730355-COFC

Report To Contact and company name below will appear on the final report Company: Stantec Consulting Contact: Karen Mathers Phone: 204-928-7621 Company address below will appear on the final report Street: 500 - 311 Portage Ave City/Province: Winnipeg, MB Postal Code: R3B 2B9			Turnaround Time (TAT) Requested ☒ Routine [R] if received by 3pm M-F - no surcharges apply ☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.			AFFIX ALS BARCODE LABEL HERE (ALS use only)		
Invoice To Same as Report To ☐ YES ☒ NO Copy of Invoice with Report ☐ YES ☒ NO Company: Alamos Gold Contact:			Invoice Recipients Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: Karen.Mathers@Stantec.com Email 2: Brad.Horne@stantec.com Email 3: Jeremy.Jackson@stantec.com			Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests. Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm For all tests with rush TATs requested, please contact your AM to confirm availability.		
Project Information ALS Account # / Quote #: Q88846 Job #: ALAMOS PO / AFE: LSD:			Oil and Gas Required Fields (client use) AFE/Cost Center: Major/Minor Code: Requisitioner: Location:			Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below		
ALS Lab Work Order # (ALS use only):			ALS Contact: Judy Palmreijer			Sampler: DE		
Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)			Time (hh:mm)		
Sample Type			NUMBER OF CONTAINERS			ANALYSIS REQUEST		
13 AQF42 14 AQF75 15 AQF70 16 AQF38 17 AQF43 18 AQF44 19 TRIP BLANK			24-08-22 1041 1237 1350 1338 1458 1503			W W W W W W W		
Drinking Water (DW) Samples¹ (client use) Are samples taken from a Regulated DW System? ☐ YES ☐ NO Are samples for human consumption/ use? ☐ YES ☐ NO			Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only) dissolved metals + dissolved nutrients field filtered			SAMPLE RECEIPT DETAILS (ALS use only) Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A INITIAL COOLER TEMPERATURES °C: 26 FINAL COOLER TEMPERATURES °C:		
SHIPMENT RELEASE (client use) Released by: B. Dymel Date: Aug. 25/22 Time: 0830			INITIAL SHIPMENT RECEPTION (ALS use only) Received by: CM Date: AUG 26 2022 Time:			FINAL SHIPMENT RECEPTION (ALS use only) Received by: HUB Date: Time:		

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

FEB 2022 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Alamos Gold Inc.
ATTN: KAREN MATHERS
C/O Stantec Consulting
500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Date Received: 21-SEP-22
Report Date: 06-OCT-22 11:03 (MT)
Version: FINAL

Client Phone: 204-924-5735

Certificate of Analysis

Lab Work Order #: L2733754
Project P.O. #: NOT SUBMITTED
Job Reference: ALAMOS
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2733754-1 W 17-SEP-22 10:14 AQF41	L2733754-2 W 17-SEP-22 10:36 AQF40	L2733754-3 W 17-SEP-22 10:53 AQF43	L2733754-4 W 17-SEP-22 11:24 AQF46	L2733754-5 W 17-SEP-22 11:53 AQM29C
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	10.4	9.97	10.4	28.1	10.3
	Total Suspended Solids (mg/L)	1.5	<1.0	1.3	<1.0	1.7
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	10.3	10.2	10.6	30.4	10.0
	Ammonia, Total (as N) (mg/L)	0.012	0.022	0.025	0.026	0.020
	Bicarbonate (HCO3) (mg/L)	12.6	12.4	12.9	37.1	12.2
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.19	0.20	0.19	0.11	0.43
	Fluoride (F) (mg/L)	0.063	0.063	0.063	0.043	0.055
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.0051	<0.0051	<0.0051	0.0081	<0.0051
	Nitrate (as N) (mg/L)	<0.0050	<0.0050	<0.0050	0.0081	<0.0050
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.23	0.45	0.96	0.44	0.28
	Phosphorus (P)-Total (mg/L)	0.0157	0.0116	0.0129	0.0129	0.0161
	Sulfate (SO4) (mg/L)	0.63	0.71	0.46	0.36	2.47
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	11.4 ^{RRV}	9.68	11.4 ^{RRV}	13.8	9.96
	Total Organic Carbon (mg/L)	9.01 ^{RRV}	8.98	9.11 ^{RRV}	12.1	9.22
Inorganic Parameters	Acidity (as CaCO3) (mg/L)	<2.0	<2.0	<2.0	3.5	<2.0
Total Metals	Aluminum (Al)-Total (mg/L)	0.0567	0.0456	0.0489	0.0277	0.0747
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00018	0.00020	0.00019	0.00029	0.00020
	Barium (Ba)-Total (mg/L)	0.00637	0.00614	0.00612	0.00913	0.00664
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)	3.18	3.02	3.05	9.00	3.28
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00017	0.00013	0.00017	<0.00010	0.00017
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00020
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00145
	Iron (Fe)-Total (mg/L)	0.212	0.185	0.197	0.073	0.395

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2733754-6 W 17-SEP-22 12:32 AQM71	L2733754-7 W 17-SEP-22 12:50 AQM72	L2733754-8 W 17-SEP-22 13:07 AQM73	L2733754-9 W 17-SEP-22 13:29 AQM74	L2733754-10 W 17-SEP-22 13:55 AQM28
Grouping	Analyte						
WATER							
Physical Tests	Hardness (as CaCO3) (mg/L)		46.0	9.51	15.3	14.3	22.3
	Total Suspended Solids (mg/L)		<1.0	3.7	<1.0	1.8	3.4
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)		34.6	6.7	10.4	12.2	10.4
	Ammonia, Total (as N) (mg/L)		0.018	<0.010	0.022	0.039	0.014
	Bicarbonate (HCO3) (mg/L)		42.2	8.2	12.7	14.9	12.7
	Bromide (Br) (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)		<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)		0.62	<0.10	0.10	0.27	0.76
	Fluoride (F) (mg/L)		0.041	0.037	0.052	0.051	0.062
	Hydroxide (OH) (mg/L)		<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)		0.0078	<0.0051	<0.0051	<0.0051	<0.0051
	Nitrate (as N) (mg/L)		0.0078	<0.0050	<0.0050	<0.0050	<0.0050
	Nitrite (as N) (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)		0.37	0.41	0.46	0.43	0.30
	Phosphorus (P)-Total (mg/L)		0.0090	0.0335	0.0171	0.0190	0.0189
	Sulfate (SO4) (mg/L)		8.72	<0.30	<0.30	0.56	10.2
Cyanides	Cyanide, Weak Acid Diss (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)		19.2	17.5	26.8	16.0	12.6
	Total Organic Carbon (mg/L)		18.2	17.3	28.3	14.1	12.6
Inorganic Parameters	Acidity (as CaCO3) (mg/L)		3.2	5.3	7.5	4.1	<2.0
Total Metals	Aluminum (Al)-Total (mg/L)		0.0480	0.301	0.125	0.0844	0.217
	Antimony (Sb)-Total (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)		0.00029	0.00051	0.00042	0.00024	0.00027
	Barium (Ba)-Total (mg/L)		0.0100	0.0159	0.00596	0.00695	0.00837
	Beryllium (Be)-Total (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)		<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000189
	Calcium (Ca)-Total (mg/L)		16.2	3.35	5.22	4.29	6.52
	Cesium (Cs)-Total (mg/L)		<0.000010	0.000043	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)		0.00022	0.00069	0.00067	0.00475	0.00040
	Cobalt (Co)-Total (mg/L)		<0.00010	0.00058	0.00015	0.00014	0.00092
	Copper (Cu)-Total (mg/L)		<0.00050	0.00052	<0.00050	0.00058	0.00558
	Iron (Fe)-Total (mg/L)		0.215	7.11	0.611	0.243	0.889

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2733754-11 W 17-SEP-22 14:34 FIELD BLANK	L2733754-12 W 17-SEP-22 10:14 QC-01	L2733754-13 W 18-SEP-22 10:35 AQF45	L2733754-14 W 18-SEP-22 11:23 AQF42	L2733754-15 W 19-SEP-22 14:32 AQF7S
Grouping	Analyte						
WATER							
Physical Tests	Hardness (as CaCO3) (mg/L)		<0.20	22.7	12.2	10.6	15.6
	Total Suspended Solids (mg/L)		<1.0	3.3	1.4	1.2	<1.0
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)		<1.0	9.9	11.4	9.7	14.9
	Ammonia, Total (as N) (mg/L)		0.019	0.021	0.015	<0.010	0.030
	Bicarbonate (HCO3) (mg/L)		<1.2	12.1	13.9	11.8	18.2
	Bromide (Br) (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)		<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)		<0.10	0.76	0.23	0.28	0.12
	Fluoride (F) (mg/L)		<0.020	0.059	0.065	0.063	0.043
	Hydroxide (OH) (mg/L)		<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)		<0.0051	<0.0051	0.0053	0.0065	<0.0051
	Nitrate (as N) (mg/L)		<0.0050	<0.0050	0.0053	0.0065	<0.0050
	Nitrite (as N) (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)		<0.20	0.28	0.25	0.25	0.22
	Phosphorus (P)-Total (mg/L)		<0.0010	0.0187	0.0126	0.0103	0.0084
	Sulfate (SO4) (mg/L)		<0.30	10.2	0.56	0.51	0.68
Cyanides	Cyanide, Weak Acid Diss (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)		1.28 ^{RRV}	12.5	12.0 ^{RRV}	11.2 ^{RRV}	10.2
	Total Organic Carbon (mg/L)		<0.50	12.5	9.34 ^{RRV}	9.10 ^{RRV}	9.47
Inorganic Parameters	Acidity (as CaCO3) (mg/L)		<2.0	<2.0	<2.0	<2.0	<2.0
Total Metals	Aluminum (Al)-Total (mg/L)		0.0060	0.232	0.0754	0.0400	0.0239
	Antimony (Sb)-Total (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)		<0.00010	0.00027	0.00020	0.00020	0.00021
	Barium (Ba)-Total (mg/L)		0.00081	0.00795	0.00648	0.00597	0.00777
	Beryllium (Be)-Total (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)		<0.0000050	0.0000181	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)		<0.050	6.52	3.42	3.04	4.13
	Cesium (Cs)-Total (mg/L)		<0.000010	0.000011	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)		0.00010	0.00045	0.00020	0.00014	<0.00010
	Cobalt (Co)-Total (mg/L)		<0.00010	0.00100	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)		<0.00050	0.00580	<0.00050	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)		<0.010	0.965	0.224	0.172	0.047

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2733754-16 W 19-SEP-22 14:35 AQF7D	L2733754-17 W 19-SEP-22 15:30 AQF38	L2733754-18 W TRIP BLANK		
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	15.7	20.6	<0.20		
	Total Suspended Solids (mg/L)	1.3	4.1	<1.0		
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	15.4	22.6	<1.0		
	Ammonia, Total (as N) (mg/L)	0.022	0.018	<0.010		
	Bicarbonate (HCO3) (mg/L)	18.8	27.6	<1.2		
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10		
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60		
	Chloride (Cl) (mg/L)	0.10	0.17	<0.10		
	Fluoride (F) (mg/L)	0.043	0.084	<0.020		
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34		
	Nitrate and Nitrite as N (mg/L)	<0.0051	<0.0051	<0.0051		
	Nitrate (as N) (mg/L)	<0.0050	<0.0050	<0.0050		
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010		
	Total Kjeldahl Nitrogen (mg/L)	0.29	0.60	<0.20		
	Phosphorus (P)-Total (mg/L)	0.0073	0.0148	<0.0010		
	Sulfate (SO4) (mg/L)	0.63	<0.30	<0.30		
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010		
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010		
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	9.59	13.5	<0.50		
	Total Organic Carbon (mg/L)	9.07	11.4	<0.50		
Inorganic Parameters	Acidity (as CaCO3) (mg/L)	<2.0	<2.0	<2.0		
Total Metals	Aluminum (Al)-Total (mg/L)	0.0794	0.0313	0.0058		
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
	Arsenic (As)-Total (mg/L)	0.00024	0.00020	<0.00010		
	Barium (Ba)-Total (mg/L)	0.00821	0.0105	0.00072		
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050		
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010		
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050		
	Calcium (Ca)-Total (mg/L)	4.21	6.13	<0.050		
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010		
	Chromium (Cr)-Total (mg/L)	0.0113	0.00029	<0.00010		
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
	Copper (Cu)-Total (mg/L)	0.00078	<0.00050	<0.00050		
	Iron (Fe)-Total (mg/L)	0.197	0.114	<0.010		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2733754-1 W 17-SEP-22 10:14 AQF41	L2733754-2 W 17-SEP-22 10:36 AQF40	L2733754-3 W 17-SEP-22 10:53 AQF43	L2733754-4 W 17-SEP-22 11:24 AQF46	L2733754-5 W 17-SEP-22 11:53 AQM29C
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Lithium (Li)-Total (mg/L)	0.0013	0.0011	0.0011	<0.0010	0.0011	
	Magnesium (Mg)-Total (mg/L)	0.909	0.876	0.890	1.94	0.825	
	Manganese (Mn)-Total (mg/L)	0.0120	0.0108	0.0142	0.00759	0.0187	
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Molybdenum (Mo)-Total (mg/L)	0.000114	0.000109	0.000107	0.000068	0.000052	
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.0149	
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	0.532	0.515	0.500	0.595	0.552	
	Rubidium (Rb)-Total (mg/L)	0.00115	0.00107	0.00109	0.00089	0.00100	
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	0.000119	0.000065	<0.000050	
	Silicon (Si)-Total (mg/L)	2.49	2.33	2.41	1.09	2.66	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	1.16	1.10	1.08	1.05	1.10	
	Strontium (Sr)-Total (mg/L)	0.0117	0.0132	0.0130	0.0158	0.0130	
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50	0.63	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	0.00030	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Total (mg/L)	0.00167	0.00101	0.00127	0.00055	0.00141	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	0.000029	0.000027	0.000027	<0.000010	0.000028	
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	0.0051	<0.0030	<0.0030	<0.0030	0.0033	
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0237	0.0318	0.0271	0.0215	0.0450	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00016	0.00019	0.00019	0.00028	0.00018	
	Barium (Ba)-Dissolved (mg/L)	0.00565	0.00584	0.00582	0.00907	0.00652	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Calcium (Ca)-Dissolved (mg/L)	2.84	2.73	2.86	8.37	2.94	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2733754-6 W 17-SEP-22 12:32 AQM71	L2733754-7 W 17-SEP-22 12:50 AQM72	L2733754-8 W 17-SEP-22 13:07 AQM73	L2733754-9 W 17-SEP-22 13:29 AQM74	L2733754-10 W 17-SEP-22 13:55 AQM28
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	0.000150	<0.000050	<0.000050	0.000061	
	Lithium (Li)-Total (mg/L)	0.0011	0.0010	0.0014	0.0011	0.0011	
	Magnesium (Mg)-Total (mg/L)	1.81	0.676	1.04	0.988	1.49	
	Manganese (Mn)-Total (mg/L)	0.0153	0.0958	0.0248	0.0173	0.0434	
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000067	0.000104	0.000924	0.000073	
	Nickel (Ni)-Total (mg/L)	0.00051	0.00079	0.00078	0.00357	0.0797	
	Phosphorus (P)-Total (mg/L)	<0.030	0.086	<0.030	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	0.677	0.196	0.089	0.545	0.672	
	Rubidium (Rb)-Total (mg/L)	0.00082	0.00075	<0.00020	0.00075	0.00096	
	Selenium (Se)-Total (mg/L)	0.000050	0.000072	0.000061	0.000063	0.000051	
	Silicon (Si)-Total (mg/L)	4.09	2.89	4.28	1.56	2.61	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	1.61	0.691	1.29	1.12	1.41	
	Strontium (Sr)-Total (mg/L)	0.0243	0.0110	0.0121	0.0112	0.0200	
	Sulfur (S)-Total (mg/L)	3.07	<0.50	<0.50	<0.50	3.36	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Total (mg/L)	0.00097	0.0142	0.00140	0.00103	0.00177	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	0.000012	0.000031	<0.000010	0.000019	0.000030	
	Vanadium (V)-Total (mg/L)	<0.00050	0.00151	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	0.0143	
	Zirconium (Zr)-Total (mg/L)	<0.00020	0.00023	0.00021	<0.00020	<0.00020	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0395	0.0782	0.112	0.0655	0.141	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00024	0.00027	0.00042	0.00021	0.00024	
	Barium (Ba)-Dissolved (mg/L)	0.00962	0.00718	0.00570	0.00660	0.00881	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000262	
	Calcium (Ca)-Dissolved (mg/L)	15.6	2.90	4.69	4.16	6.62	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2733754-11 W 17-SEP-22 14:34 FIELD BLANK	L2733754-12 W 17-SEP-22 10:14 QC-01	L2733754-13 W 18-SEP-22 10:35 AQF45	L2733754-14 W 18-SEP-22 11:23 AQF42	L2733754-15 W 19-SEP-22 14:32 AQF7S
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	0.000064	<0.000050	<0.000050	<0.000050	
	Lithium (Li)-Total (mg/L)	<0.0010	0.0011	0.0011	0.0010	<0.0010	
	Magnesium (Mg)-Total (mg/L)	<0.0050	1.49	1.01	0.877	1.45	
	Manganese (Mn)-Total (mg/L)	<0.00010	0.0458	0.0184	0.0105	0.0127	
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000071	0.000096	0.000093	0.000079	
	Nickel (Ni)-Total (mg/L)	<0.00050	0.0811	<0.00050	<0.00050	<0.00050	
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	<0.050	0.683	0.536	0.517	0.519	
	Rubidium (Rb)-Total (mg/L)	<0.00020	0.00106	0.00110	0.00102	0.00095	
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	0.000059	
	Silicon (Si)-Total (mg/L)	<0.10	2.71	2.36	2.28	0.85	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	<0.050	1.45	1.15	1.11	1.05	
	Strontium (Sr)-Total (mg/L)	<0.00020	0.0196	0.0132	0.0130	0.0125	
	Sulfur (S)-Total (mg/L)	<0.50	3.26	<0.50	<0.50	<0.50	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Total (mg/L)	<0.00030	0.00233	0.00242	0.00076	0.00041	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	<0.000010	0.000035	0.000030	0.000024	0.000011	
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0133	<0.0030	0.0031	<0.0030	
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0053	0.140	0.0437	0.0247	0.0166	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	<0.00010	0.00024	0.00020	0.00017	0.00021	
	Barium (Ba)-Dissolved (mg/L)	0.00082	0.00746	0.00621	0.00555	0.00757	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	0.0000157	<0.0000050	<0.0000050	<0.0000050	
	Calcium (Ca)-Dissolved (mg/L)	<0.050	6.65	3.34	2.91	4.01	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2733754-16 W 19-SEP-22 14:35 AQF7D	L2733754-17 W 19-SEP-22 15:30 AQF38	L2733754-18 W TRIP BLANK		
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	0.000053	<0.000050	<0.000050			
	Lithium (Li)-Total (mg/L)	<0.0010	<0.0010	<0.0010			
	Magnesium (Mg)-Total (mg/L)	1.47	1.50	<0.0050			
	Manganese (Mn)-Total (mg/L)	0.0237	0.0491	<0.00010			
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050			
	Molybdenum (Mo)-Total (mg/L)	0.000246	0.00222	<0.000050			
	Nickel (Ni)-Total (mg/L)	0.00116	<0.00050	<0.00050			
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030			
	Potassium (K)-Total (mg/L)	0.523	0.566	<0.050			
	Rubidium (Rb)-Total (mg/L)	0.00098	0.00088	<0.00020			
	Selenium (Se)-Total (mg/L)	0.000061	0.000057	<0.000050			
	Silicon (Si)-Total (mg/L)	0.93	1.27	<0.10			
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010			
	Sodium (Na)-Total (mg/L)	1.06	1.22	<0.050			
	Strontium (Sr)-Total (mg/L)	0.0127	0.0156	<0.00020			
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50			
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020			
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010			
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010			
	Tin (Sn)-Total (mg/L)	0.00142	<0.00010	<0.00010			
	Titanium (Ti)-Total (mg/L)	0.00178	0.00045	<0.00030			
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010			
	Uranium (U)-Total (mg/L)	0.000015	0.000011	<0.000010			
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050			
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030			
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020			
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD			
	Aluminum (Al)-Dissolved (mg/L)	0.0172	0.0155	0.0042			
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010			
	Arsenic (As)-Dissolved (mg/L)	0.00024	0.00016	<0.00010			
	Barium (Ba)-Dissolved (mg/L)	0.00813	0.00911	0.00067			
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010			
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050			
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010			
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050			
	Calcium (Ca)-Dissolved (mg/L)	4.01	5.93	<0.050			
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2733754-1 W 17-SEP-22 10:14 AQF41	L2733754-2 W 17-SEP-22 10:36 AQF40	L2733754-3 W 17-SEP-22 10:53 AQF43	L2733754-4 W 17-SEP-22 11:24 AQF46	L2733754-5 W 17-SEP-22 11:53 AQM29C
Grouping	Analyte					
WATER						
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	<0.00010	0.00022	0.00012	<0.00010	0.00016
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00042	0.00264 ^{RRV}	0.00036	0.00032	0.00405 ^{RRV}
	Iron (Fe)-Dissolved (mg/L)	0.115	0.130	0.124	0.053	0.206
	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000148	<0.000050	<0.000050	0.000148
	Lithium (Li)-Dissolved (mg/L)	0.0011	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	0.801	0.765	0.796	1.74	0.730
	Manganese (Mn)-Dissolved (mg/L)	0.00444	0.00603	0.00576	0.00640	0.00923
	Molybdenum (Mo)-Dissolved (mg/L)	0.000102	0.000140	0.000089	0.000062	0.000077
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.0125
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.478	0.494	0.488	0.568	0.529
	Rubidium (Rb)-Dissolved (mg/L)	0.00098	0.00109	0.00101	0.00088	0.00094
	Selenium (Se)-Dissolved (mg/L)	<0.000050	0.000052	<0.000050	<0.000050	0.000054
	Silicon (Si)-Dissolved (mg/L)	2.11	2.22	2.20	1.02	2.49
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.02	1.01	0.975	0.950	0.978
	Strontium (Sr)-Dissolved (mg/L)	0.0125	0.0122	0.0125	0.0157	0.0124
	Sulfur (S)-Dissolved (mg/L)	0.75	<0.50	<0.50	<0.50	0.51
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	0.00056 ^{RRV}	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00034	0.00055	0.00041	<0.00030	0.00038
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000019	0.000023	0.000020	<0.000010	0.000021
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0048	<0.0010	0.0026	0.0051
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	0.50	<0.50	0.54	<0.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2733754-6 W 17-SEP-22 12:32 AQM71	L2733754-7 W 17-SEP-22 12:50 AQM72	L2733754-8 W 17-SEP-22 13:07 AQM73	L2733754-9 W 17-SEP-22 13:29 AQM74	L2733754-10 W 17-SEP-22 13:55 AQM28
Grouping	Analyte					
WATER						
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	0.00015	0.00020	0.00026	0.00015	0.00025
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00017	0.00014	<0.00010	0.00061
	Copper (Cu)-Dissolved (mg/L)	0.00045	0.00047	0.00123	0.00047	0.00616
	Iron (Fe)-Dissolved (mg/L)	0.158	2.24	0.537	0.126	0.568
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	0.000083	<0.000050	0.000142
	Lithium (Li)-Dissolved (mg/L)	0.0010	<0.0010	0.0013	0.0010	0.0011
	Magnesium (Mg)-Dissolved (mg/L)	1.70	0.550	0.881	0.944	1.41
	Manganese (Mn)-Dissolved (mg/L)	0.0138	0.0367	0.0234	0.00848	0.0350
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	<0.000050	0.000052	0.000411	0.000094
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	0.00060	<0.00050	0.0740
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.666	0.120	0.084	0.523	0.652
	Rubidium (Rb)-Dissolved (mg/L)	0.00089	0.00028	<0.00020	0.00077	0.00098
	Selenium (Se)-Dissolved (mg/L)	0.000057	<0.000050	0.000064	<0.000050	0.000098
	Silicon (Si)-Dissolved (mg/L)	3.89	2.51	4.01	1.38	2.38
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.46	0.609	1.14	1.06	1.37
	Strontium (Sr)-Dissolved (mg/L)	0.0253	0.00960	0.0112	0.0108	0.0197
	Sulfur (S)-Dissolved (mg/L)	3.61	<0.50	<0.50	<0.50	2.90
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	0.00011	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00064	0.00182	0.00115	0.00060	0.00109
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000011	<0.000010	<0.000010	0.000016	0.000026
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0016	0.0019	<0.0010	0.0171
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	0.00023	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	0.61	0.57	<0.50	<0.50	<0.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2733754-11 W 17-SEP-22 14:34 FIELD BLANK	L2733754-12 W 17-SEP-22 10:14 QC-01	L2733754-13 W 18-SEP-22 10:35 AQF45	L2733754-14 W 18-SEP-22 11:23 AQF42	L2733754-15 W 19-SEP-22 14:32 AQF7S
Grouping	Analyte					
WATER						
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	0.00012	0.00020	0.00014	0.00012	0.00013
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00047	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00120	0.00460	0.00028	0.00021	0.00095
	Iron (Fe)-Dissolved (mg/L)	<0.010	0.621	0.160	0.119	0.022
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	<0.0010	0.0011	0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	<0.0050	1.48	0.941	0.814	1.36
	Manganese (Mn)-Dissolved (mg/L)	<0.00010	0.0245	0.0146	0.00402	0.00077
	Molybdenum (Mo)-Dissolved (mg/L)	0.000063	0.000077	0.000098	0.000083	0.000092
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	0.0748	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	<0.050	0.694	0.490	0.503	0.504
	Rubidium (Rb)-Dissolved (mg/L)	<0.00020	0.00098	0.00092	0.00096	0.00093
	Selenium (Se)-Dissolved (mg/L)	<0.000050	0.000073	<0.000050	0.000061	0.000086
	Silicon (Si)-Dissolved (mg/L)	<0.050	2.44	2.21	2.14	0.794
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	<0.050	1.48	1.13	1.05	1.03
	Strontium (Sr)-Dissolved (mg/L)	<0.00010	0.0205	0.0131	0.0121	0.0117
	Sulfur (S)-Dissolved (mg/L)	<0.50	2.93	<0.50	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	0.00013	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	0.00091	0.00117	0.00032	<0.00030
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.000027	0.000025	0.000021	<0.000010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0111	<0.0010	<0.0010	0.0025
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2733754-16 W 19-SEP-22 14:35 AQF7D	L2733754-17 W 19-SEP-22 15:30 AQF38	L2733754-18 W TRIP BLANK		
Grouping	Analyte					
WATER						
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	0.00013	0.00049	0.00024		
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Copper (Cu)-Dissolved (mg/L)	0.00127	0.00032	<0.00020		
	Iron (Fe)-Dissolved (mg/L)	0.030	0.024	<0.010		
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050		
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Magnesium (Mg)-Dissolved (mg/L)	1.39	1.41	<0.0050		
	Manganese (Mn)-Dissolved (mg/L)	0.00284	0.00718	<0.00010		
	Molybdenum (Mo)-Dissolved (mg/L)	0.000098	0.00207	<0.000050		
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030		
	Potassium (K)-Dissolved (mg/L)	0.495	0.601	<0.050		
	Rubidium (Rb)-Dissolved (mg/L)	0.00092	0.00086	<0.00020		
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050		
	Silicon (Si)-Dissolved (mg/L)	0.774	1.17	<0.050		
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Sodium (Na)-Dissolved (mg/L)	1.06	1.20	<0.050		
	Strontium (Sr)-Dissolved (mg/L)	0.0120	0.0149	<0.00010		
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50		
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020		
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Tin (Sn)-Dissolved (mg/L)	0.00093	<0.00010	<0.00010		
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030		
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Uranium (U)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
	Zinc (Zn)-Dissolved (mg/L)	0.0018	0.0053	<0.0010		
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020		
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Cadmium (Cd)-Dissolved	B	L2733754-1
Matrix Spike	Selenium (Se)-Dissolved	MES	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Silver (Ag)-Dissolved	MES	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Dissolved Organic Carbon	MS-B	L2733754-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Total Organic Carbon	MS-B	L2733754-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2733754-1
Matrix Spike	Boron (B)-Dissolved	MS-B	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Boron (B)-Dissolved	MS-B	L2733754-1
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2733754-10, -11, -12, -13, -14, -15, -16, -17, -18, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2733754-1
Matrix Spike	Iron (Fe)-Dissolved	MS-B	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2733754-1
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2733754-1
Matrix Spike	Potassium (K)-Dissolved	MS-B	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L2733754-1
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2733754-1
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2733754-2, -3, -4, -5, -6, -7, -8
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2733754-1
Matrix Spike	Boron (B)-Total	MS-B	L2733754-1
Matrix Spike	Calcium (Ca)-Total	MS-B	L2733754-1
Matrix Spike	Copper (Cu)-Total	MS-B	L2733754-1
Matrix Spike	Iron (Fe)-Total	MS-B	L2733754-1
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2733754-1
Matrix Spike	Manganese (Mn)-Total	MS-B	L2733754-1
Matrix Spike	Potassium (K)-Total	MS-B	L2733754-1
Matrix Spike	Sodium (Na)-Total	MS-B	L2733754-1
Matrix Spike	Strontium (Sr)-Total	MS-B	L2733754-1
Matrix Spike	Sulfur (S)-Total	MS-B	L2733754-1
Matrix Spike	Zinc (Zn)-Total	MS-B	L2733754-1
Matrix Spike	Ammonia, Total (as N)	MS-B	L2733754-18

Qualifiers for Individual Parameters Listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-WT	Water	Acidity (as CaCO ₃)	APHA 2310 B - Potentiometric Titration
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO₃ 2-/L.

Reference Information

ALK-HCO₃HCO₃-CALC-WP Water Alkalinity, Bicarbonate CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO₃/L

ALK-OH-OH-CALC-WP Water Alkalinity, Hydroxide CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.

ALK-TITR-WP Water Alkalinity, Total (as CaCO₃) APHA 2320B

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO₃- and H₂CO₃ endpoints indicated electrometrically.

BR-IC-N-WP Water Bromide in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

C-DOC-HTC-WP Water Dissolved Organic Carbon by Combustion APHA 5310 B-WP

Filtered (0.45 µm) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

C-TOC-HTC-WP Water Total Organic Carbon by Combustion APHA 5310 B-WP

Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

CL-L-IC-N-WP Water Chloride in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

CN-FREE-L-CFA-WT Water Low Level Free Cyanide in water by CFA ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-T-L-CFA-WT Water Low Level Total Cyanide in water by CFA ISO 14403-2:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, however it would be less than 1% and could be as low as zero.

CN-WAD-L-CFA-WT Water Low level WAD Cyanide in water by CFA APHA 4500CN I-Weak acid Dist Colorimet

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

CR-CR6-PWQO-IC-WT Water Chromium +6 EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-SCREEN-WP Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc

EC-SCREEN-WT Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F-IC-N-WP Water Fluoride in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Reference Information

HARDNESS-CALC-WP	Water	Hardness Calculated	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
HG-T-CVAA-WP	Water	Mercury Total	EPA 1631E (mod)
Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.			
MET-D-CCMS-WP	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020B (mod)
Water samples are filtered (0.45 µm), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
MET-T-CCMS-WP	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020B (mod.)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	APHA 4500 NorgD (modified)
Aqueous samples are digested in a block digester with sulfuric acid and copper sulfate as a catalyst. Total Kjeldahl Nitrogen is then analyzed using a discrete analyzer with colorimetric detection.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH ₃ F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-N-WP	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-L-IC-N-WP	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.			
P-T-L-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourmetrically after persulphate digestion of the sample.			
SO4-IC-N-WP	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
SOLIDS-TOTSUS-LR-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 – 105°C.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

Reference Information

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lw - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L2733754

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Client: Alamos Gold Inc.
C/O Stantec Consulting 500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Contact: KAREN MATHERS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-WT		Water						
Batch	R5868464							
WG3765402-2	LCS							
Acidity (as CaCO ₃)			103.3		%		85-115	01-OCT-22
WG3765402-1	MB							
Acidity (as CaCO ₃)			<2.0		mg/L		3	01-OCT-22
ALK-TITR-WP		Water						
Batch	R5866643							
WG3765255-19	LCS							
Alkalinity, Total (as CaCO ₃)			100.6		%		85-115	27-SEP-22
WG3765255-16	MB							
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	27-SEP-22
Batch	R5866754							
WG3765392-15	LCS							
Alkalinity, Total (as CaCO ₃)			99.8		%		85-115	28-SEP-22
WG3765392-17	LCS							
Alkalinity, Total (as CaCO ₃)			102.8		%		85-115	28-SEP-22
WG3765392-6	MB							
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	28-SEP-22
WG3765392-9	MB							
Alkalinity, Total (as CaCO ₃)			1.0		mg/L		1	28-SEP-22
Batch	R5869356							
WG3766491-4	LCS							
Alkalinity, Total (as CaCO ₃)			98.8		%		85-115	04-OCT-22
WG3766491-1	MB							
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	04-OCT-22
BR-IC-N-WP		Water						
Batch	R5866443							
WG3764644-11	DUP	L2733754-6						
Bromide (Br)		<0.10	<0.10	RPD-NA	mg/L	N/A	20	23-SEP-22
WG3764644-10	LCS							
Bromide (Br)			100.2		%		85-115	23-SEP-22
WG3764644-6	LCS							
Bromide (Br)			99.3		%		85-115	23-SEP-22
WG3764644-5	MB							
Bromide (Br)			<0.10		mg/L		0.1	23-SEP-22
WG3764644-9	MB							
Bromide (Br)			<0.10		mg/L		0.1	23-SEP-22
WG3764644-12	MS	L2733754-6						
Bromide (Br)			103.4		%		75-125	23-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DOC-HTC-WP		Water						
Batch	R5866463							
WG3765028-3	DUP	L2733754-16						
Dissolved Organic Carbon		9.59	9.48		mg/L	1.2	20	27-SEP-22
WG3765028-2	LCS							
Dissolved Organic Carbon			109.4		%		80-120	27-SEP-22
WG3765028-1	MB							
Dissolved Organic Carbon			<0.50		mg/L		0.5	27-SEP-22
WG3765028-4	MS	L2733754-17						
Dissolved Organic Carbon			N/A	MS-B	%		-	27-SEP-22
C-TOC-HTC-WP		Water						
Batch	R5866464							
WG3765031-3	DUP	L2733754-16						
Total Organic Carbon		9.07	9.08		mg/L	0.1	20	27-SEP-22
WG3765031-2	LCS							
Total Organic Carbon			101.2		%		80-120	27-SEP-22
WG3765031-1	MB							
Total Organic Carbon			<0.50		mg/L		0.5	27-SEP-22
WG3765031-4	MS	L2733754-17						
Total Organic Carbon			N/A	MS-B	%		-	27-SEP-22
CL-L-IC-N-WP		Water						
Batch	R5866443							
WG3764644-11	DUP	L2733754-6						
Chloride (Cl)		0.62	0.62		mg/L	1.0	20	23-SEP-22
WG3764644-10	LCS							
Chloride (Cl)			98.8		%		90-110	23-SEP-22
WG3764644-6	LCS							
Chloride (Cl)			99.5		%		90-110	23-SEP-22
WG3764644-5	MB							
Chloride (Cl)			<0.10		mg/L		0.1	23-SEP-22
WG3764644-9	MB							
Chloride (Cl)			<0.10		mg/L		0.1	23-SEP-22
WG3764644-12	MS	L2733754-6						
Chloride (Cl)			102.8		%		75-125	23-SEP-22
CN-FREE-L-CFA-WT		Water						
Batch	R5866690							
WG3765086-3	DUP	L2733754-2						
Cyanide, Free		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	27-SEP-22
WG3765086-12	LCS							
Cyanide, Free			107.0		%		80-120	27-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-L-CFA-WT								
Batch R5866690								
WG3765086-2	LCS							
Cyanide, Free			105.8		%		80-120	27-SEP-22
WG3765086-7	LCS							
Cyanide, Free			106.4		%		80-120	27-SEP-22
WG3765086-1	MB							
Cyanide, Free			<0.0010		mg/L		0.001	27-SEP-22
WG3765086-11	MB							
Cyanide, Free			<0.0010		mg/L		0.001	27-SEP-22
WG3765086-6	MB							
Cyanide, Free			<0.0010		mg/L		0.001	27-SEP-22
WG3765086-4	MS	L2733754-2						
Cyanide, Free			105.5		%		75-125	27-SEP-22
CN-T-L-CFA-WT								
Batch R5866690								
WG3765086-3	DUP	L2733754-2						
Cyanide, Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	27-SEP-22
WG3765086-12	LCS							
Cyanide, Total			94.0		%		80-120	27-SEP-22
WG3765086-2	LCS							
Cyanide, Total			94.0		%		80-120	27-SEP-22
WG3765086-7	LCS							
Cyanide, Total			94.9		%		80-120	27-SEP-22
WG3765086-1	MB							
Cyanide, Total			<0.0010		mg/L		0.001	27-SEP-22
WG3765086-11	MB							
Cyanide, Total			<0.0010		mg/L		0.001	27-SEP-22
WG3765086-6	MB							
Cyanide, Total			<0.0010		mg/L		0.001	27-SEP-22
WG3765086-4	MS	L2733754-2						
Cyanide, Total			92.1		%		70-130	27-SEP-22
CN-WAD-L-CFA-WT								
Batch R5866690								
WG3765086-3	DUP	L2733754-2						
Cyanide, Weak Acid Diss		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	27-SEP-22
WG3765086-12	LCS							
Cyanide, Weak Acid Diss			112.5		%		80-120	27-SEP-22
WG3765086-2	LCS							
Cyanide, Weak Acid Diss			111.7		%		80-120	27-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAA-WP								
Batch R5866286								
WG3764758-10 LCS								
Mercury (Hg)-Total			97.8		%		80-120	23-SEP-22
WG3764758-2 LCS								
Mercury (Hg)-Total			90.4		%		80-120	23-SEP-22
WG3764758-1 MB								
Mercury (Hg)-Total			<0.000005C		mg/L		0.000005	23-SEP-22
WG3764758-9 MB								
Mercury (Hg)-Total			<0.000005C		mg/L		0.000005	23-SEP-22
Batch R5866577								
WG3765150-3 DUP		L2733754-2						
Mercury (Hg)-Total		<0.0000050	<0.000005C	RPD-NA	mg/L	N/A	20	27-SEP-22
WG3765150-2 LCS								
Mercury (Hg)-Total			96.6		%		80-120	27-SEP-22
WG3765150-6 LCS								
Mercury (Hg)-Total			94.6		%		80-120	27-SEP-22
WG3765150-1 MB								
Mercury (Hg)-Total			<0.000005C		mg/L		0.000005	27-SEP-22
WG3765150-5 MB								
Mercury (Hg)-Total			<0.000005C		mg/L		0.000005	27-SEP-22
WG3765150-4 MS		L2733754-3						
Mercury (Hg)-Total			90.5		%		70-130	27-SEP-22
MET-D-CCMS-WP								
Batch R5866757								
WG3764465-2 LCS								
Aluminum (Al)-Dissolved			97.2		%		80-120	23-SEP-22
Antimony (Sb)-Dissolved			94.4		%		80-120	23-SEP-22
Arsenic (As)-Dissolved			99.9		%		80-120	23-SEP-22
Barium (Ba)-Dissolved			101.6		%		80-120	23-SEP-22
Beryllium (Be)-Dissolved			99.2		%		80-120	23-SEP-22
Bismuth (Bi)-Dissolved			96.1		%		80-120	23-SEP-22
Boron (B)-Dissolved			96.6		%		80-120	23-SEP-22
Cadmium (Cd)-Dissolved			101.4		%		80-120	23-SEP-22
Calcium (Ca)-Dissolved			101.8		%		80-120	23-SEP-22
Cesium (Cs)-Dissolved			96.6		%		80-120	23-SEP-22
Chromium (Cr)-Dissolved			99.4		%		80-120	23-SEP-22
Cobalt (Co)-Dissolved			99.6		%		80-120	23-SEP-22
Copper (Cu)-Dissolved			99.8		%		80-120	23-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5866757							
WG3764465-2	LCS							
Iron (Fe)-Dissolved			97.2		%		80-120	23-SEP-22
Lead (Pb)-Dissolved			93.2		%		80-120	23-SEP-22
Lithium (Li)-Dissolved			102.7		%		80-120	23-SEP-22
Magnesium (Mg)-Dissolved			103.7		%		80-120	23-SEP-22
Manganese (Mn)-Dissolved			97.9		%		80-120	23-SEP-22
Molybdenum (Mo)-Dissolved			91.8		%		80-120	23-SEP-22
Nickel (Ni)-Dissolved			98.3		%		80-120	23-SEP-22
Phosphorus (P)-Dissolved			98.7		%		80-120	23-SEP-22
Potassium (K)-Dissolved			99.6		%		80-120	23-SEP-22
Rubidium (Rb)-Dissolved			100.4		%		80-120	23-SEP-22
Selenium (Se)-Dissolved			106.1		%		80-120	23-SEP-22
Silicon (Si)-Dissolved			98.2		%		80-120	23-SEP-22
Silver (Ag)-Dissolved			93.7		%		80-120	23-SEP-22
Sodium (Na)-Dissolved			104.4		%		80-120	23-SEP-22
Strontium (Sr)-Dissolved			97.6		%		80-120	23-SEP-22
Sulfur (S)-Dissolved			87.0		%		80-120	23-SEP-22
Tellurium (Te)-Dissolved			93.1		%		80-120	23-SEP-22
Thallium (Tl)-Dissolved			94.2		%		80-120	23-SEP-22
Thorium (Th)-Dissolved			87.8		%		80-120	23-SEP-22
Tin (Sn)-Dissolved			96.4		%		80-120	23-SEP-22
Titanium (Ti)-Dissolved			96.6		%		80-120	23-SEP-22
Tungsten (W)-Dissolved			92.9		%		80-120	23-SEP-22
Uranium (U)-Dissolved			89.8		%		80-120	23-SEP-22
Vanadium (V)-Dissolved			100.1		%		80-120	23-SEP-22
Zinc (Zn)-Dissolved			97.6		%		80-120	23-SEP-22
Zirconium (Zr)-Dissolved			83.6		%		80-120	23-SEP-22
WG3764466-2	LCS							
Aluminum (Al)-Dissolved			97.3		%		80-120	23-SEP-22
Antimony (Sb)-Dissolved			96.9		%		80-120	23-SEP-22
Arsenic (As)-Dissolved			99.9		%		80-120	23-SEP-22
Barium (Ba)-Dissolved			102.1		%		80-120	23-SEP-22
Beryllium (Be)-Dissolved			100.2		%		80-120	23-SEP-22
Bismuth (Bi)-Dissolved			92.1		%		80-120	23-SEP-22
Boron (B)-Dissolved			98.0		%		80-120	23-SEP-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5866757							
WG3764466-2	LCS							
Cadmium (Cd)-Dissolved			101.0		%		80-120	23-SEP-22
Calcium (Ca)-Dissolved			101.2		%		80-120	23-SEP-22
Cesium (Cs)-Dissolved			98.3		%		80-120	23-SEP-22
Chromium (Cr)-Dissolved			98.7		%		80-120	23-SEP-22
Cobalt (Co)-Dissolved			98.8		%		80-120	23-SEP-22
Copper (Cu)-Dissolved			98.2		%		80-120	23-SEP-22
Iron (Fe)-Dissolved			96.4		%		80-120	23-SEP-22
Lead (Pb)-Dissolved			91.2		%		80-120	23-SEP-22
Lithium (Li)-Dissolved			102.4		%		80-120	23-SEP-22
Magnesium (Mg)-Dissolved			103.8		%		80-120	23-SEP-22
Manganese (Mn)-Dissolved			98.0		%		80-120	23-SEP-22
Molybdenum (Mo)-Dissolved			93.7		%		80-120	23-SEP-22
Nickel (Ni)-Dissolved			98.6		%		80-120	23-SEP-22
Phosphorus (P)-Dissolved			100.3		%		80-120	23-SEP-22
Potassium (K)-Dissolved			99.1		%		80-120	23-SEP-22
Rubidium (Rb)-Dissolved			95.9		%		80-120	23-SEP-22
Selenium (Se)-Dissolved			103.1		%		80-120	23-SEP-22
Silicon (Si)-Dissolved			100.9		%		80-120	23-SEP-22
Silver (Ag)-Dissolved			95.9		%		80-120	23-SEP-22
Sodium (Na)-Dissolved			102.5		%		80-120	23-SEP-22
Strontium (Sr)-Dissolved			99.5		%		80-120	23-SEP-22
Sulfur (S)-Dissolved			80.3		%		80-120	23-SEP-22
Tellurium (Te)-Dissolved			90.6		%		80-120	23-SEP-22
Thallium (Tl)-Dissolved			92.3		%		80-120	23-SEP-22
Thorium (Th)-Dissolved			87.8		%		80-120	23-SEP-22
Tin (Sn)-Dissolved			97.0		%		80-120	23-SEP-22
Titanium (Ti)-Dissolved			94.5		%		80-120	23-SEP-22
Tungsten (W)-Dissolved			94.3		%		80-120	23-SEP-22
Uranium (U)-Dissolved			90.2		%		80-120	23-SEP-22
Vanadium (V)-Dissolved			99.4		%		80-120	23-SEP-22
Zinc (Zn)-Dissolved			97.4		%		80-120	23-SEP-22
Zirconium (Zr)-Dissolved			86.9		%		80-120	23-SEP-22
WG3764465-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	23-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5866757							
WG3764465-1 MB								
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	23-SEP-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	23-SEP-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	23-SEP-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	23-SEP-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	23-SEP-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	23-SEP-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	23-SEP-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	23-SEP-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	23-SEP-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	23-SEP-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	23-SEP-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	23-SEP-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	23-SEP-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	23-SEP-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	23-SEP-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	23-SEP-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	23-SEP-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	23-SEP-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	23-SEP-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	23-SEP-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	23-SEP-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	23-SEP-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	23-SEP-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5866757							
WG3764465-1 MB								
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	23-SEP-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	23-SEP-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	23-SEP-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	23-SEP-22
WG3764466-1 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	23-SEP-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	23-SEP-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	23-SEP-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	23-SEP-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	23-SEP-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	23-SEP-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	23-SEP-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	23-SEP-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	23-SEP-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	23-SEP-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	23-SEP-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	23-SEP-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	23-SEP-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	23-SEP-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	23-SEP-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	23-SEP-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	23-SEP-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	23-SEP-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	23-SEP-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	23-SEP-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	23-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5866757							
WG3764466-1 MB								
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	23-SEP-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	23-SEP-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	23-SEP-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	23-SEP-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	23-SEP-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	23-SEP-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	23-SEP-22
Batch	R5866878							
WG3764870-2 LCS								
Aluminum (Al)-Dissolved			101.0		%		80-120	27-SEP-22
Antimony (Sb)-Dissolved			97.4		%		80-120	27-SEP-22
Arsenic (As)-Dissolved			99.2		%		80-120	27-SEP-22
Barium (Ba)-Dissolved			100.5		%		80-120	27-SEP-22
Beryllium (Be)-Dissolved			96.5		%		80-120	27-SEP-22
Bismuth (Bi)-Dissolved			94.4		%		80-120	27-SEP-22
Boron (B)-Dissolved			105.0		%		80-120	27-SEP-22
Cadmium (Cd)-Dissolved			99.4		%		80-120	27-SEP-22
Calcium (Ca)-Dissolved			100.3		%		80-120	27-SEP-22
Cesium (Cs)-Dissolved			96.1		%		80-120	27-SEP-22
Chromium (Cr)-Dissolved			95.3		%		80-120	27-SEP-22
Cobalt (Co)-Dissolved			98.3		%		80-120	27-SEP-22
Copper (Cu)-Dissolved			94.9		%		80-120	27-SEP-22
Iron (Fe)-Dissolved			95.0		%		80-120	27-SEP-22
Lead (Pb)-Dissolved			94.7		%		80-120	27-SEP-22
Lithium (Li)-Dissolved			109.0		%		80-120	27-SEP-22
Magnesium (Mg)-Dissolved			104.9		%		80-120	27-SEP-22
Manganese (Mn)-Dissolved			99.8		%		80-120	27-SEP-22
Molybdenum (Mo)-Dissolved			96.9		%		80-120	27-SEP-22
Nickel (Ni)-Dissolved			96.2		%		80-120	27-SEP-22
Phosphorus (P)-Dissolved			104.1		%		80-120	27-SEP-22
Potassium (K)-Dissolved			98.2		%		80-120	27-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5866878							
WG3764870-2		LCS						
Rubidium (Rb)-Dissolved			98.9		%		80-120	27-SEP-22
Selenium (Se)-Dissolved			96.9		%		80-120	27-SEP-22
Silicon (Si)-Dissolved			101.5		%		80-120	27-SEP-22
Silver (Ag)-Dissolved			97.6		%		80-120	27-SEP-22
Sodium (Na)-Dissolved			97.4		%		80-120	27-SEP-22
Strontium (Sr)-Dissolved			98.1		%		80-120	27-SEP-22
Sulfur (S)-Dissolved			97.9		%		80-120	27-SEP-22
Tellurium (Te)-Dissolved			90.4		%		80-120	27-SEP-22
Thallium (Tl)-Dissolved			94.6		%		80-120	27-SEP-22
Thorium (Th)-Dissolved			88.3		%		80-120	27-SEP-22
Titanium (Ti)-Dissolved			96.9		%		80-120	27-SEP-22
Tungsten (W)-Dissolved			95.4		%		80-120	27-SEP-22
Uranium (U)-Dissolved			89.5		%		80-120	27-SEP-22
Vanadium (V)-Dissolved			98.9		%		80-120	27-SEP-22
Zinc (Zn)-Dissolved			96.9		%		80-120	27-SEP-22
Zirconium (Zr)-Dissolved			87.9		%		80-120	27-SEP-22
WG3764870-1		MB						
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	27-SEP-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	27-SEP-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	27-SEP-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	27-SEP-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	27-SEP-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	27-SEP-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	27-SEP-22
Cadmium (Cd)-Dissolved			<0.0000050	B	mg/L		0.000005	27-SEP-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	27-SEP-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	27-SEP-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	27-SEP-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	27-SEP-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	27-SEP-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	27-SEP-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	27-SEP-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	27-SEP-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	27-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch R5866878								
WG3764870-1 MB								
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	27-SEP-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	27-SEP-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	27-SEP-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	27-SEP-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	27-SEP-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	27-SEP-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	27-SEP-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	27-SEP-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	27-SEP-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	27-SEP-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	27-SEP-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	27-SEP-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	27-SEP-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	27-SEP-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	27-SEP-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	27-SEP-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	27-SEP-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	27-SEP-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	27-SEP-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	27-SEP-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	27-SEP-22
MET-T-CCMS-WP		Water						
Batch R5866586								
WG3764743-2 LCS								
Aluminum (Al)-Total			101.7		%		80-120	26-SEP-22
Antimony (Sb)-Total			99.4		%		80-120	26-SEP-22
Arsenic (As)-Total			101.9		%		80-120	26-SEP-22
Barium (Ba)-Total			103.4		%		80-120	26-SEP-22
Beryllium (Be)-Total			105.6		%		80-120	26-SEP-22
Bismuth (Bi)-Total			105.2		%		80-120	26-SEP-22
Boron (B)-Total			110.1		%		80-120	26-SEP-22
Cadmium (Cd)-Total			103.6		%		80-120	26-SEP-22
Calcium (Ca)-Total			104.8		%		80-120	26-SEP-22
Cesium (Cs)-Total			95.9		%		80-120	26-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5866586							
WG3764743-2	LCS							
Chromium (Cr)-Total			104.2		%		80-120	26-SEP-22
Cobalt (Co)-Total			104.1		%		80-120	26-SEP-22
Copper (Cu)-Total			104.3		%		80-120	26-SEP-22
Iron (Fe)-Total			109.7		%		80-120	26-SEP-22
Lead (Pb)-Total			96.6		%		80-120	26-SEP-22
Lithium (Li)-Total			104.7		%		80-120	26-SEP-22
Magnesium (Mg)-Total			102.6		%		80-120	26-SEP-22
Manganese (Mn)-Total			102.1		%		80-120	26-SEP-22
Molybdenum (Mo)-Total			98.4		%		80-120	26-SEP-22
Nickel (Ni)-Total			104.1		%		80-120	26-SEP-22
Potassium (K)-Total			102.3		%		80-120	26-SEP-22
Phosphorus (P)-Total			103.1		%		80-120	26-SEP-22
Rubidium (Rb)-Total			103.4		%		80-120	26-SEP-22
Selenium (Se)-Total			105.6		%		80-120	26-SEP-22
Silicon (Si)-Total			109.8		%		80-120	26-SEP-22
Silver (Ag)-Total			99.0		%		80-120	26-SEP-22
Sodium (Na)-Total			109.6		%		80-120	26-SEP-22
Strontium (Sr)-Total			95.0		%		80-120	26-SEP-22
Sulfur (S)-Total			104.6		%		80-120	26-SEP-22
Tellurium (Te)-Total			88.1		%		80-120	26-SEP-22
Thallium (Tl)-Total			98.8		%		80-120	26-SEP-22
Thorium (Th)-Total			93.5		%		80-120	26-SEP-22
Tin (Sn)-Total			97.6		%		80-120	26-SEP-22
Titanium (Ti)-Total			104.4		%		80-120	26-SEP-22
Tungsten (W)-Total			99.4		%		80-120	26-SEP-22
Vanadium (V)-Total			104.6		%		80-120	26-SEP-22
Zinc (Zn)-Total			101.4		%		80-120	26-SEP-22
Zirconium (Zr)-Total			96.7		%		80-120	26-SEP-22
WG3764743-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	26-SEP-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	26-SEP-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	26-SEP-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	26-SEP-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	26-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5866586							
WG3764743-1 MB								
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	26-SEP-22
Boron (B)-Total			<0.010		mg/L		0.01	26-SEP-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	26-SEP-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	26-SEP-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	26-SEP-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	26-SEP-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	26-SEP-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	26-SEP-22
Iron (Fe)-Total			<0.010		mg/L		0.01	26-SEP-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	26-SEP-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	26-SEP-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	26-SEP-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	26-SEP-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	26-SEP-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	26-SEP-22
Potassium (K)-Total			<0.050		mg/L		0.05	26-SEP-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	26-SEP-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	26-SEP-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	26-SEP-22
Silicon (Si)-Total			<0.10		mg/L		0.1	26-SEP-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	26-SEP-22
Sodium (Na)-Total			<0.050		mg/L		0.05	26-SEP-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	26-SEP-22
Sulfur (S)-Total			<0.50		mg/L		0.5	26-SEP-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	26-SEP-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	26-SEP-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	26-SEP-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	26-SEP-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	26-SEP-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	26-SEP-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	26-SEP-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	26-SEP-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	26-SEP-22



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MET-T-CCMS-WP		Water						
Batch	R5866757							
WG3764317-4 DUP		L2733754-2						
Aluminum (Al)-Total		0.0456	0.0431		mg/L	5.6	20	23-SEP-22
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	23-SEP-22
Arsenic (As)-Total		0.00020	0.00020		mg/L	0.6	20	23-SEP-22
Barium (Ba)-Total		0.00614	0.00616		mg/L	0.3	20	23-SEP-22
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	23-SEP-22
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	23-SEP-22
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	23-SEP-22
Cadmium (Cd)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	23-SEP-22
Calcium (Ca)-Total		3.02	3.03		mg/L	0.1	20	23-SEP-22
Cesium (Cs)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	23-SEP-22
Chromium (Cr)-Total		0.00013	0.00016	J	mg/L	0.00003	0.0002	23-SEP-22
Cobalt (Co)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	23-SEP-22
Copper (Cu)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	23-SEP-22
Iron (Fe)-Total		0.185	0.185		mg/L	0.4	20	23-SEP-22
Lead (Pb)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	23-SEP-22
Lithium (Li)-Total		0.0011	0.0011		mg/L	2.0	20	23-SEP-22
Magnesium (Mg)-Total		0.876	0.865		mg/L	1.2	20	23-SEP-22
Manganese (Mn)-Total		0.0108	0.0106		mg/L	1.7	20	23-SEP-22
Molybdenum (Mo)-Total		0.000109	0.000109		mg/L	0.2	20	23-SEP-22
Nickel (Ni)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	23-SEP-22
Potassium (K)-Total		0.515	0.517		mg/L	0.4	20	23-SEP-22
Phosphorus (P)-Total		<0.030	<0.030	RPD-NA	mg/L	N/A	20	23-SEP-22
Rubidium (Rb)-Total		0.00107	0.00110		mg/L	2.8	20	23-SEP-22
Selenium (Se)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	23-SEP-22
Silicon (Si)-Total		2.33	2.35		mg/L	1.1	20	23-SEP-22
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	23-SEP-22
Sodium (Na)-Total		1.10	1.07		mg/L	2.8	20	23-SEP-22
Strontium (Sr)-Total		0.0132	0.0131		mg/L	0.7	20	23-SEP-22
Sulfur (S)-Total		<0.50	<0.50	RPD-NA	mg/L	N/A	20	23-SEP-22
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	23-SEP-22
Thallium (Tl)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	23-SEP-22
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	23-SEP-22
Tin (Sn)-Total		0.00013	0.00011		mg/L	16	20	23-SEP-22
Titanium (Ti)-Total		0.00101	0.00091		mg/L	11	20	23-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5866757							
WG3764317-4	DUP	L2733754-2						
Tungsten (W)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	23-SEP-22
Uranium (U)-Total		0.000027	0.000026		mg/L	3.9	20	23-SEP-22
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	23-SEP-22
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	23-SEP-22
Zirconium (Zr)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	23-SEP-22
WG3764317-2	LCS							
Aluminum (Al)-Total			104.3		%		80-120	23-SEP-22
Antimony (Sb)-Total			102.1		%		80-120	23-SEP-22
Arsenic (As)-Total			101.0		%		80-120	23-SEP-22
Barium (Ba)-Total			101.0		%		80-120	23-SEP-22
Beryllium (Be)-Total			102.2		%		80-120	23-SEP-22
Bismuth (Bi)-Total			99.2		%		80-120	23-SEP-22
Boron (B)-Total			101.1		%		80-120	23-SEP-22
Cadmium (Cd)-Total			101.3		%		80-120	23-SEP-22
Calcium (Ca)-Total			99.5		%		80-120	23-SEP-22
Cesium (Cs)-Total			99.0		%		80-120	23-SEP-22
Chromium (Cr)-Total			102.8		%		80-120	23-SEP-22
Cobalt (Co)-Total			101.7		%		80-120	23-SEP-22
Copper (Cu)-Total			101.1		%		80-120	23-SEP-22
Iron (Fe)-Total			100.7		%		80-120	23-SEP-22
Lead (Pb)-Total			99.0		%		80-120	23-SEP-22
Lithium (Li)-Total			104.3		%		80-120	23-SEP-22
Magnesium (Mg)-Total			108.1		%		80-120	23-SEP-22
Manganese (Mn)-Total			101.1		%		80-120	23-SEP-22
Molybdenum (Mo)-Total			96.3		%		80-120	23-SEP-22
Nickel (Ni)-Total			101.9		%		80-120	23-SEP-22
Potassium (K)-Total			105.6		%		80-120	23-SEP-22
Phosphorus (P)-Total			105.5		%		80-120	23-SEP-22
Rubidium (Rb)-Total			100.8		%		80-120	23-SEP-22
Selenium (Se)-Total			102.0		%		80-120	23-SEP-22
Silicon (Si)-Total			105.8		%		80-120	23-SEP-22
Silver (Ag)-Total			96.6		%		80-120	23-SEP-22
Sodium (Na)-Total			106.8		%		80-120	23-SEP-22
Strontium (Sr)-Total			99.9		%		80-120	23-SEP-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	Water							
Batch	R5866757							
WG3764317-2 LCS								
Sulfur (S)-Total			94.0		%		80-120	23-SEP-22
Tellurium (Te)-Total			93.3		%		80-120	23-SEP-22
Thallium (Tl)-Total			99.6		%		80-120	23-SEP-22
Thorium (Th)-Total			95.4		%		80-120	23-SEP-22
Tin (Sn)-Total			98.1		%		80-120	23-SEP-22
Titanium (Ti)-Total			100.9		%		80-120	23-SEP-22
Tungsten (W)-Total			96.1		%		80-120	23-SEP-22
Uranium (U)-Total			99.0		%		80-120	23-SEP-22
Vanadium (V)-Total			102.5		%		80-120	23-SEP-22
Zinc (Zn)-Total			100.6		%		80-120	23-SEP-22
Zirconium (Zr)-Total			88.2		%		80-120	23-SEP-22
WG3764317-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	23-SEP-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	23-SEP-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	23-SEP-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	23-SEP-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	23-SEP-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	23-SEP-22
Boron (B)-Total			<0.010		mg/L		0.01	23-SEP-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	23-SEP-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	23-SEP-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	23-SEP-22
Chromium (Cr)-Total			0.00010		mg/L		0.0001	23-SEP-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	23-SEP-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	23-SEP-22
Iron (Fe)-Total			<0.010		mg/L		0.01	23-SEP-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	23-SEP-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	23-SEP-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	23-SEP-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	23-SEP-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	23-SEP-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	23-SEP-22
Potassium (K)-Total			<0.050		mg/L		0.05	23-SEP-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	23-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	Water							
Batch	R5866757							
WG3764317-1 MB								
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	23-SEP-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	23-SEP-22
Silicon (Si)-Total			<0.10		mg/L		0.1	23-SEP-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	23-SEP-22
Sodium (Na)-Total			<0.050		mg/L		0.05	23-SEP-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	23-SEP-22
Sulfur (S)-Total			<0.50		mg/L		0.5	23-SEP-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	23-SEP-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	23-SEP-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	23-SEP-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	23-SEP-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	23-SEP-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	23-SEP-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	23-SEP-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	23-SEP-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	23-SEP-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	23-SEP-22
WG3764317-5 MS		L2733754-2						
Aluminum (Al)-Total			105.1		%		70-130	23-SEP-22
Antimony (Sb)-Total			105.2		%		70-130	23-SEP-22
Arsenic (As)-Total			106.6		%		70-130	23-SEP-22
Barium (Ba)-Total			106.1		%		70-130	23-SEP-22
Beryllium (Be)-Total			110.3		%		70-130	23-SEP-22
Bismuth (Bi)-Total			122.0		%		70-130	23-SEP-22
Boron (B)-Total			109.7		%		70-130	23-SEP-22
Cadmium (Cd)-Total			108.7		%		70-130	23-SEP-22
Calcium (Ca)-Total			105.8		%		70-130	23-SEP-22
Cesium (Cs)-Total			106.6		%		70-130	23-SEP-22
Chromium (Cr)-Total			108.7		%		70-130	23-SEP-22
Cobalt (Co)-Total			108.8		%		70-130	23-SEP-22
Copper (Cu)-Total			108.9		%		70-130	23-SEP-22
Iron (Fe)-Total			108.5		%		70-130	23-SEP-22
Lead (Pb)-Total			105.1		%		70-130	23-SEP-22
Lithium (Li)-Total			112.2		%		70-130	23-SEP-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5866757							
WG3764317-5 MS		L2733754-2						
Magnesium (Mg)-Total			115.0		%		70-130	23-SEP-22
Manganese (Mn)-Total			105.0		%		70-130	23-SEP-22
Molybdenum (Mo)-Total			101.8		%		70-130	23-SEP-22
Nickel (Ni)-Total			110.1		%		70-130	23-SEP-22
Potassium (K)-Total			106.8		%		70-130	23-SEP-22
Phosphorus (P)-Total			105.6		%		70-130	23-SEP-22
Rubidium (Rb)-Total			105.6		%		70-130	23-SEP-22
Selenium (Se)-Total			112.1		%		70-130	23-SEP-22
Silicon (Si)-Total			105.1		%		70-130	23-SEP-22
Silver (Ag)-Total			104.9		%		70-130	23-SEP-22
Sodium (Na)-Total			108.1		%		70-130	23-SEP-22
Strontium (Sr)-Total			99.0		%		70-130	23-SEP-22
Sulfur (S)-Total			108.5		%		70-130	23-SEP-22
Tellurium (Te)-Total			103.4		%		70-130	23-SEP-22
Thallium (Tl)-Total			104.5		%		70-130	23-SEP-22
Thorium (Th)-Total			109.7		%		70-130	23-SEP-22
Tin (Sn)-Total			104.2		%		70-130	23-SEP-22
Titanium (Ti)-Total			106.8		%		70-130	23-SEP-22
Tungsten (W)-Total			102.6		%		70-130	23-SEP-22
Uranium (U)-Total			103.3		%		70-130	23-SEP-22
Vanadium (V)-Total			108.7		%		70-130	23-SEP-22
Zinc (Zn)-Total			107.4		%		70-130	23-SEP-22
Zirconium (Zr)-Total			102.8		%		70-130	23-SEP-22
N-TOTKJ-WP		Water						
Batch	R5866981							
WG3765254-11 DUP		L2733754-9						
Total Kjeldahl Nitrogen		0.43	0.35		mg/L	20	20	29-SEP-22
WG3765254-10 LCS								
Total Kjeldahl Nitrogen			97.5		%		75-125	29-SEP-22
WG3765254-6 LCS								
Total Kjeldahl Nitrogen			102.1		%		75-125	29-SEP-22
WG3765254-5 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	29-SEP-22
WG3765254-9 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	29-SEP-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOTKJ-WP								
Batch R5866981								
WG3765254-12 MS		L2733754-9						
Total Kjeldahl Nitrogen			100.9		%		70-130	29-SEP-22
Batch R5867250								
WG3765532-6 LCS								
Total Kjeldahl Nitrogen			101.5		%		75-125	30-SEP-22
WG3765532-5 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	30-SEP-22
NH3-COL-WP								
Batch R5867334								
WG3765925-18 LCS								
Ammonia, Total (as N)			93.3		%		85-115	30-SEP-22
WG3765925-20 LCS								
Ammonia, Total (as N)			93.6		%		85-115	30-SEP-22
WG3765925-17 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	30-SEP-22
WG3765925-19 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	30-SEP-22
Batch R5867337								
WG3766018-14 LCS								
Ammonia, Total (as N)			98.2		%		85-115	01-OCT-22
WG3766018-13 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	01-OCT-22
NO2-L-IC-N-WP								
Batch R5866443								
WG3764644-11 DUP		L2733754-6						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	23-SEP-22
WG3764644-10 LCS								
Nitrite (as N)			97.9		%		90-110	23-SEP-22
WG3764644-6 LCS								
Nitrite (as N)			98.6		%		90-110	23-SEP-22
WG3764644-5 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	23-SEP-22
WG3764644-9 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	23-SEP-22
WG3764644-12 MS		L2733754-6						
Nitrite (as N)			101.8		%		75-125	23-SEP-22
NO3-L-IC-N-WP								



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-L-IC-N-WP								
Batch R5866443								
WG3764644-11	DUP	L2733754-6						
Nitrate (as N)		0.0078	0.0067		mg/L	14	20	23-SEP-22
WG3764644-10	LCS							
Nitrate (as N)			100.7		%		90-110	23-SEP-22
WG3764644-6	LCS							
Nitrate (as N)			100.7		%		90-110	23-SEP-22
WG3764644-5	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	23-SEP-22
WG3764644-9	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	23-SEP-22
WG3764644-12	MS	L2733754-6						
Nitrate (as N)			103.7		%		75-125	23-SEP-22
P-T-COL-WP								
Batch R5866352								
WG3764633-11	DUP	L2733754-6						
Phosphorus (P)-Total		0.0090	0.0089		mg/L	1.2	20	26-SEP-22
WG3764633-10	LCS							
Phosphorus (P)-Total			94.9		%		80-120	26-SEP-22
WG3764633-6	LCS							
Phosphorus (P)-Total			95.4		%		80-120	26-SEP-22
WG3764633-5	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	26-SEP-22
WG3764633-9	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	26-SEP-22
WG3764633-12	MS	L2733754-7						
Phosphorus (P)-Total			95.0		%		70-130	26-SEP-22
Batch R5867215								
WG3765684-10	LCS							
Phosphorus (P)-Total			97.0		%		80-120	30-SEP-22
WG3765684-9	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	30-SEP-22
P-T-L-COL-WP								
Batch R5868463								
WG3765952-2	LCS							
Phosphorus (P)-Total			87.3		%		80-120	03-OCT-22
WG3765952-1	MB							
Phosphorus (P)-Total			<0.0010		mg/L		0.001	03-OCT-22
SO4-IC-N-WP								
Water								



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-N-WP								
Batch R5866443								
WG3764644-11	DUP	L2733754-6						
Sulfate (SO4)		8.72	8.72		mg/L	0.0	20	23-SEP-22
WG3764644-10	LCS							
Sulfate (SO4)			101.0		%		90-110	23-SEP-22
WG3764644-6	LCS							
Sulfate (SO4)			100.9		%		90-110	23-SEP-22
WG3764644-5	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	23-SEP-22
WG3764644-9	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	23-SEP-22
WG3764644-12	MS	L2733754-6						
Sulfate (SO4)			103.6		%		75-125	23-SEP-22
SOLIDS-TOTSUS-LR-WP								
Batch R5866106								
WG3764312-3	DUP	L2733754-9						
Total Suspended Solids		1.8	1.7		mg/L	3.8	20	22-SEP-22
WG3764312-2	LCS							
Total Suspended Solids			96.3		%		85-115	22-SEP-22
WG3764312-1	MB							
Total Suspended Solids			<1.0		mg/L		1	22-SEP-22
Batch R5866223								
WG3764412-8	LCS							
Total Suspended Solids			104.0		%		85-115	23-SEP-22
WG3764412-7	MB							
Total Suspended Solids			<1.0		mg/L		1	23-SEP-22

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Nitrate in Water by IC (Low Level)							
	1	17-SEP-22 10:14	23-SEP-22 10:00	3	6	days	EHTR
	2	17-SEP-22 10:36	23-SEP-22 10:00	3	6	days	EHTR
	3	17-SEP-22 10:53	23-SEP-22 10:00	3	6	days	EHTR
	4	17-SEP-22 11:24	23-SEP-22 10:00	3	6	days	EHTR
	5	17-SEP-22 11:53	23-SEP-22 10:00	3	6	days	EHTR
	6	17-SEP-22 12:32	23-SEP-22 10:00	3	6	days	EHTR
	7	17-SEP-22 12:50	23-SEP-22 10:00	3	6	days	EHTR
	8	17-SEP-22 13:07	23-SEP-22 10:00	3	6	days	EHTR
	9	17-SEP-22 13:29	23-SEP-22 10:00	3	6	days	EHTR
	10	17-SEP-22 13:55	23-SEP-22 10:00	3	6	days	EHTR
	11	17-SEP-22 14:34	23-SEP-22 10:00	3	6	days	EHTR
	12	17-SEP-22 10:14	23-SEP-22 10:00	3	6	days	EHTR
	13	18-SEP-22 10:35	23-SEP-22 10:00	3	5	days	EHTR
	14	18-SEP-22 11:23	23-SEP-22 10:00	3	5	days	EHTR
	15	19-SEP-22 14:32	23-SEP-22 10:00	3	4	days	EHT
	16	19-SEP-22 14:35	23-SEP-22 10:00	3	4	days	EHT
	17	19-SEP-22 15:30	23-SEP-22 10:00	3	4	days	EHT
Nitrite in Water by IC (Low Level)							
	1	17-SEP-22 10:14	23-SEP-22 10:00	3	6	days	EHTR
	2	17-SEP-22 10:36	23-SEP-22 10:00	3	6	days	EHTR
	3	17-SEP-22 10:53	23-SEP-22 10:00	3	6	days	EHTR
	4	17-SEP-22 11:24	23-SEP-22 10:00	3	6	days	EHTR
	5	17-SEP-22 11:53	23-SEP-22 10:00	3	6	days	EHTR
	6	17-SEP-22 12:32	23-SEP-22 10:00	3	6	days	EHTR
	7	17-SEP-22 12:50	23-SEP-22 10:00	3	6	days	EHTR
	8	17-SEP-22 13:07	23-SEP-22 10:00	3	6	days	EHTR
	9	17-SEP-22 13:29	23-SEP-22 10:00	3	6	days	EHTR
	10	17-SEP-22 13:55	23-SEP-22 10:00	3	6	days	EHTR
	11	17-SEP-22 14:34	23-SEP-22 10:00	3	6	days	EHTR
	12	17-SEP-22 10:14	23-SEP-22 10:00	3	6	days	EHTR
	13	18-SEP-22 10:35	23-SEP-22 10:00	3	5	days	EHTR
	14	18-SEP-22 11:23	23-SEP-22 10:00	3	5	days	EHTR
	15	19-SEP-22 14:32	23-SEP-22 10:00	3	4	days	EHT
	16	19-SEP-22 14:35	23-SEP-22 10:00	3	4	days	EHT
	17	19-SEP-22 15:30	23-SEP-22 10:00	3	4	days	EHT

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2733754 were received on 21-SEP-22 11:40.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

Quality Control Report

Workorder: L2733754

Report Date: 06-OCT-22

Page 25 of 25

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



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L2733754-COFC

Form

COC Number: 22 -

Page 1 of 2

Report To Contact and company name below will appear on the final report			Turnaround Time (TAT) Requested			AFFIX ALS BARCODE LABEL HERE (ALS use only)																																																																																																																																																																																																																																											
Company: Stantec Consulting Contact: Karen Mathers Phone: 204-928-7621 Company address below will appear on the final report Street: 500 - 311 Portage Ave City/Province: Winnipeg, MB Postal Code: R3B 2B9			Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL) Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A ☐ Compare Results to Criteria on Report - provide details below if box checked Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: Karen.Mathers@stantec.com Email 2: Brad.Horne@stantec.com Email 3: Jeremy.Jackson@stantec.com						☒ Routine [R] if received by 3pm M-F - no surcharges apply ☐ 1 day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.																																																																																																																																																																																																																																								
Invoice To: Same as Report To ☐ YES ☒ NO Copy of Invoice with Report ☐ YES ☒ NO Company: Alamos Gold Contact:			Invoice Recipients Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: Email 2:			Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests. Date and Time Required for all E&P TATs: dd-mm-yy hh:mm am/pm For all tests with rush TATs requested, please contact your AM to confirm availability.																																																																																																																																																																																																																																											
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Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



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L2733754-COFC

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COC Number: 22 -

Page 2 of 2

Report To		Contact and company name below will appear on the final report		reports / Recipients		Turnaround Time (TAT) Requested		AFFIX ALS BARCODE LABEL HERE (ALS use only)																																
Company:	Stantec Consulting		Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)		☒ Routine [R] if received by 3pm M-F - no surcharges apply ☐ 1 day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.																																			
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Phone:	204-928-7621		☐ Compare Results to Criteria on Report - provide details below if box checked Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX																																					
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City/Province:	Winnipeg, MB		Email 2 Brad.Horne@stantec.com																																					
Postal Code:	R3B 2B9		Email 3 Jeremy.Jackson@stantec.com																																					
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	Copy of Invoice with Report ☐ YES ☒ NO		Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm																																			
Company:	Alamos Gold		Email 1 or Fax		For all tests with rush TATs requested, please contact your AM to confirm availability.																																			
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15	ADP75		19-09-22	1432	W	9	✓	✓																																
16	ADP70		19-09-22	1435	W	9	✓	✓																																
17	ADP38		19-09-22	1530	W	9	✓	✓																																
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Released by: S.D.	Date: Sept 20/22	Time: 0900	Received by: [Signature]	Date: SEP 21 2022	Time: 11:40	Received by:	Date:	Time:																																

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1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

FEB 2022 FRONT



Alamos Gold Inc.
ATTN: KAREN MATHERS
C/O Stantec Consulting
500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Date Received: 03-OCT-22
Report Date: 27-OCT-22 07:09 (MT)
Version: FINAL

Client Phone: 204-924-5735

Certificate of Analysis

Lab Work Order #: L2735222
Project P.O. #: NOT SUBMITTED
Job Reference: ALAMOS
C of C Numbers:
Legal Site Desc:



Hua Wo
Chemistry Laboratory Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2735222-1 W 29-SEP-22 09:00 AQF44	L2735222-2 W 29-SEP-22 12:45 AQF34S	L2735222-3 W 29-SEP-22 12:48 AQF34D	L2735222-4 W 29-SEP-22 13:13 EP-SEEP	
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	12.2	138	139	181	
	Total Suspended Solids (mg/L)	1.5	1.9	1.7	<1.0	
Anions and Nutrients	Alkalinity, Total (as CaCO ₃) (mg/L)	11.4	89.9	89.2	113	
	Ammonia, Total (as N) (mg/L)	5.83 ^{RRV}	4.98 ^{RRV}	4.98	<0.010	
	Bicarbonate (HCO ₃) (mg/L)	13.9	110	109	138	
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	
	Chloride (Cl) (mg/L)	0.24	0.94	0.90	1.29	
	Fluoride (F) (mg/L)	0.061	0.078	0.080	0.081	
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	
	Nitrate and Nitrite as N (mg/L)	<0.0051	<0.0051	<0.0051	0.0779	
	Nitrate (as N) (mg/L)	<0.0050	<0.0050	<0.0050	0.0779	
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Total Kjeldahl Nitrogen (mg/L)	7.36	11.2	11.1	0.25	
	Phosphorus (P)-Total (mg/L)	0.0122	0.0207	0.0238	0.0063	
	Sulfate (SO ₄) (mg/L)	0.47	40.3	40.4	59.3	
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cyanide, Total (mg/L)	0.0018	<0.0010	<0.0010	<0.0010	
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	11.5	12.4	10.9	10.0	
	Total Organic Carbon (mg/L)	10.1	11.5	11.9	9.39	
Inorganic Parameters	Acidity (as CaCO ₃) (mg/L)	<2.0	<2.0	<2.0	<2.0	
Total Metals	Aluminum (Al)-Total (mg/L)	0.0544	0.0159	0.0152	0.0207	
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Total (mg/L)	0.00021	0.00134	0.00136	0.00216	
	Barium (Ba)-Total (mg/L)	0.00585	0.0163	0.0166	0.0129	
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	0.018	
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Calcium (Ca)-Total (mg/L)	3.44	34.3	33.8	43.8	
	Cesium (Cs)-Total (mg/L)	<0.000010	0.000063	0.000065	0.000192	
	Chromium (Cr)-Total (mg/L)	0.00016	<0.00010	<0.00010	<0.00010	
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050 ^{RRV}	0.00052 ^{RRV}	0.00074	
	Iron (Fe)-Total (mg/L)	0.207	0.060	0.059	0.087	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2735222-1	L2735222-2	L2735222-3	L2735222-4
		Description	W	W	W	W
		Sampled Date	29-SEP-22	29-SEP-22	29-SEP-22	29-SEP-22
		Sampled Time	09:00	12:45	12:48	13:13
		Client ID	AQF44	AQF34S	AQF34D	EP-SEEP
Grouping	Analyte					
WATER						
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Total (mg/L)	0.0013	0.0025	0.0024	0.0029	
	Magnesium (Mg)-Total (mg/L)	0.993	9.88	10.1	13.0	
	Manganese (Mn)-Total (mg/L)	0.0145	0.0365	0.0428	0.0160	
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Molybdenum (Mo)-Total (mg/L)	0.000253	0.000465	0.000443	0.000366	
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	0.00070	0.00052	
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	0.562	2.71	2.73	3.49	
	Rubidium (Rb)-Total (mg/L)	0.00106	0.00240	0.00249	0.00312	
	Selenium (Se)-Total (mg/L)	0.000065	<0.000050	0.000065	<0.000050	
	Silicon (Si)-Total (mg/L)	2.39	3.42	3.46	3.70	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	1.21	5.98	5.90	7.49	
	Strontium (Sr)-Total (mg/L)	0.0137	0.0798	0.0789	0.105	
	Sulfur (S)-Total (mg/L)	<0.50	14.5	14.6	21.0	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	<0.00010	0.00025	0.00294	0.00033	
	Titanium (Ti)-Total (mg/L)	0.00180	0.00051	0.00047	0.00101	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	0.000030	0.000509	0.000480	0.00104	
	Vanadium (V)-Total (mg/L)	<0.00050	0.00056	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0059	<0.0030	<0.0030	
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	LAB	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0294	0.0023	0.0055	0.0052	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00019	0.00117	0.00122	0.00182	
	Barium (Ba)-Dissolved (mg/L)	0.00655	0.0152	0.0159	0.0123	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	0.019	0.013	0.022	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Calcium (Ca)-Dissolved (mg/L)	3.35	38.2	38.5	50.4	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	0.000051	0.000051	0.000152	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2735222-1 W 29-SEP-22 09:00 AQF44	L2735222-2 W 29-SEP-22 12:45 AQF34S	L2735222-3 W 29-SEP-22 12:48 AQF34D	L2735222-4 W 29-SEP-22 13:13 EP-SEEP	
Grouping	Analyte					
WATER						
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	0.00012	<0.00010	<0.00010	<0.00010	
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Copper (Cu)-Dissolved (mg/L)	0.00031	0.00199 ^{RRV}	0.00182 ^{RRV}	0.00173	
	Iron (Fe)-Dissolved (mg/L)	0.117	0.013	0.020	0.031	
	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000053	0.000076	<0.000050	
	Lithium (Li)-Dissolved (mg/L)	0.0011	0.0025	0.0025	0.0028	
	Magnesium (Mg)-Dissolved (mg/L)	0.936	10.4	10.3	13.4	
	Manganese (Mn)-Dissolved (mg/L)	0.00498	0.00084	0.00905	0.00414	
	Molybdenum (Mo)-Dissolved (mg/L)	0.000070	0.000378	0.000342	0.000272	
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Dissolved (mg/L)	0.545	2.66	2.70	3.38	
	Rubidium (Rb)-Dissolved (mg/L)	0.00096	0.00232	0.00247	0.00299	
	Selenium (Se)-Dissolved (mg/L)	<0.000050	0.000093	0.000079	<0.000050	
	Silicon (Si)-Dissolved (mg/L)	2.01	3.07	3.16	3.35	
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Dissolved (mg/L)	1.09	6.03	6.18	7.85	
	Strontium (Sr)-Dissolved (mg/L)	0.0113	0.0772	0.0759	0.102	
	Sulfur (S)-Dissolved (mg/L)	0.67	12.9	12.8	19.1	
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	0.00027	<0.00020	<0.00020	
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	0.00026	<0.00010	
	Titanium (Ti)-Dissolved (mg/L)	0.00040	<0.00030	<0.00030	<0.00030	
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Dissolved (mg/L)	0.000024	0.000481	0.000472	0.000939	
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0018	0.0028	<0.0010	
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Strontium (Sr)-Dissolved	B	L2735222-1, -2, -3, -4
Matrix Spike	Dissolved Organic Carbon	MS-B	L2735222-2
Matrix Spike	Boron (B)-Total	MS-B	L2735222-1, -2, -3, -4
Matrix Spike	Calcium (Ca)-Total	MS-B	L2735222-1, -2, -3, -4
Matrix Spike	Lithium (Li)-Total	MS-B	L2735222-1, -2, -3, -4
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2735222-1, -2, -3, -4
Matrix Spike	Manganese (Mn)-Total	MS-B	L2735222-1, -2, -3, -4
Matrix Spike	Potassium (K)-Total	MS-B	L2735222-1, -2, -3, -4
Matrix Spike	Silicon (Si)-Total	MS-B	L2735222-1, -2, -3, -4
Matrix Spike	Sodium (Na)-Total	MS-B	L2735222-1, -2, -3, -4
Matrix Spike	Strontium (Sr)-Total	MS-B	L2735222-1, -2, -3, -4
Matrix Spike	Sulfur (S)-Total	MS-B	L2735222-1, -2, -3, -4
Matrix Spike	Total Kjeldahl Nitrogen	MS-B	L2735222-1, -2, -3
Matrix Spike	Ammonia, Total (as N)	MS-B	L2735222-1, -2, -3, -4

Qualifiers for Individual Parameters Listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-WT	Water	Acidity (as CaCO ₃)	APHA 2310 B - Potentiometric Titration
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO ₃ 2-/L.			
ALK-HCO3HCO3-CALC-WP	Water	Alkalinity, Bicarbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO ₃ -/L.			
ALK-OH-OH-CALC-WP	Water	Alkalinity, Hydroxide	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.			
ALK-TITR-WP	Water	Alkalinity, Total (as CaCO ₃)	APHA 2320B
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO ₃ - and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-N-WP	Water	Bromide in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
C-DOC-HTC-WP	Water	Dissolved Organic Carbon by Combustion	APHA 5310 B-WP
Filtered (0.45 um) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO ₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.			
C-TOC-HTC-WP	Water	Total Organic Carbon by Combustion	APHA 5310 B-WP
Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO ₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.			
CL-L-IC-N-WP	Water	Chloride in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
CN-FREE-L-CFA-WT	Water	Low Level Free Cyanide in water by CFA	ASTM 7237

Reference Information

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-T-L-CFA-WT Water Low Level Total Cyanide in water by CFA ISO 14403-2:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, however it would be less than 1% and could be as low as zero.

CN-WAD-L-CFA-WT Water Low level WAD Cyanide in water by CFA APHA 4500CN I-Weak acid Dist Colorimet

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

CR-CR6-PWQO-IC-WT Water Chromium +6 EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-SCREEN-WP Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc

EC-SCREEN-WT Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F-IC-N-WP Water Fluoride in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

HARDNESS-CALC-WP Water Hardness Calculated APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

HG-T-CVAA-WP Water Mercury Total EPA 1631E (mod)

Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

MET-D-CCMS-WP Water Dissolved Metals in Water by CRC ICPMS APHA 3030B/6020B (mod)

Water samples are filtered (0.45 µm), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-T-CCMS-WP Water Total Metals in Water by CRC ICPMS EPA 200.2/6020B (mod.)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

N-TOTKJ-WP Water Total Kjeldahl Nitrogen APHA 4500 NorgD (modified)

Aqueous samples are digested in a block digester with sulfuric acid and copper sulfate as a catalyst. Total Kjeldahl Nitrogen is then analyzed using a discrete analyzer with colorimetric detection.

NH3-COL-WP Water Ammonia by colour APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

NO2+NO3-CALC-L-WP Water Nitrate+Nitrite CALCULATION

Reference Information

NO2-L-IC-N-WP	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-L-IC-N-WP	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.			
SO4-IC-N-WP	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
SOLIDS-TOTSUS-LR-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 105°C.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L2735222

Report Date: 27-OCT-22

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Client: Alamos Gold Inc.
C/O Stantec Consulting 500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Contact: KAREN MATHERS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-WT Water								
Batch	R5871283							
WG3767038-2	LCS							
Acidity (as CaCO3)			103.9		%		85-115	08-OCT-22
WG3767038-1	MB							
Acidity (as CaCO3)			<2.0		mg/L		3	08-OCT-22
ALK-TITR-WP Water								
Batch	R5875080							
WG3768371-20	LCS							
Alkalinity, Total (as CaCO3)			101.0		%		85-115	17-OCT-22
WG3768371-9	MB							
Alkalinity, Total (as CaCO3)			<1.0		mg/L		1	17-OCT-22
BR-IC-N-WP Water								
Batch	R5869197							
WG3766212-11	DUP	L2735222-1						
Bromide (Br)		<0.10	<0.10	RPD-NA	mg/L	N/A	20	03-OCT-22
WG3766212-10	LCS							
Bromide (Br)			94.9		%		85-115	03-OCT-22
WG3766212-9	MB							
Bromide (Br)			<0.10		mg/L		0.1	03-OCT-22
WG3766212-12	MS	L2735222-1						
Bromide (Br)			110.4		%		75-125	03-OCT-22
Batch	R5869577							
WG3766353-3	DUP	L2735222-3						
Bromide (Br)		<0.10	<0.10	RPD-NA	mg/L	N/A	20	04-OCT-22
WG3766353-2	LCS							
Bromide (Br)			100.7		%		85-115	04-OCT-22
WG3766353-1	MB							
Bromide (Br)			<0.10		mg/L		0.1	04-OCT-22
WG3766353-4	MS	L2735222-3						
Bromide (Br)			99.96		%		75-125	04-OCT-22
C-DOC-HTC-WP Water								
Batch	R5876179							
WG3768683-2	LCS							
Dissolved Organic Carbon			103.7		%		80-120	17-OCT-22
WG3768683-1	MB							
Dissolved Organic Carbon			<0.50		mg/L		0.5	17-OCT-22
WG3768683-4	MS	L2735222-2						
Dissolved Organic Carbon			N/A	MS-B	%		-	17-OCT-22



Quality Control Report

Workorder: L2735222

Report Date: 27-OCT-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DOC-HTC-WP		Water						
Batch	R5879659							
WG3769597-2	LCS							
Dissolved Organic Carbon			104.1		%		80-120	21-OCT-22
WG3769597-6	LCS							
Dissolved Organic Carbon			100.4		%		80-120	21-OCT-22
WG3769597-1	MB							
Dissolved Organic Carbon			<0.50		mg/L		0.5	21-OCT-22
WG3769597-5	MB							
Dissolved Organic Carbon			<0.50		mg/L		0.5	21-OCT-22
Batch	R5881436							
WG3770001-2	LCS							
Dissolved Organic Carbon			94.1		%		80-120	26-OCT-22
WG3770001-1	MB							
Dissolved Organic Carbon			<0.50		mg/L		0.5	26-OCT-22
C-TOC-HTC-WP		Water						
Batch	R5876177							
WG3768692-3	DUP	L2735222-3						
Total Organic Carbon		11.9	11.7		mg/L	2.1	20	17-OCT-22
WG3768692-2	LCS							
Total Organic Carbon			103.8		%		80-120	17-OCT-22
WG3768692-1	MB							
Total Organic Carbon			<0.50		mg/L		0.5	17-OCT-22
WG3768692-4	MS	L2735222-4						
Total Organic Carbon			97.6		%		70-130	17-OCT-22
Batch	R5879658							
WG3769603-2	LCS							
Total Organic Carbon			104.0		%		80-120	21-OCT-22
WG3769603-1	MB							
Total Organic Carbon			<0.50		mg/L		0.5	21-OCT-22
CL-L-IC-N-WP		Water						
Batch	R5869197							
WG3766212-11	DUP	L2735222-1						
Chloride (Cl)		0.24	0.21		mg/L	14	20	03-OCT-22
WG3766212-10	LCS							
Chloride (Cl)			99.98		%		90-110	03-OCT-22
WG3766212-9	MB							
Chloride (Cl)			<0.10		mg/L		0.1	03-OCT-22
WG3766212-12	MS	L2735222-1						
Chloride (Cl)			115.8		%		75-125	03-OCT-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F-IC-N-WP		Water						
Batch	R5869197							
WG3766212-10	LCS							
Fluoride (F)			94.2		%		90-110	03-OCT-22
WG3766212-9	MB							
Fluoride (F)			<0.020		mg/L		0.02	03-OCT-22
WG3766212-12	MS	L2735222-1	109.7		%		75-125	03-OCT-22
Fluoride (F)								
Batch	R5869577							
WG3766353-3	DUP	L2735222-3	0.078		mg/L	1.5	20	04-OCT-22
Fluoride (F)		0.080						
WG3766353-2	LCS							
Fluoride (F)			105.5		%		90-110	04-OCT-22
WG3766353-1	MB							
Fluoride (F)			<0.020		mg/L		0.02	04-OCT-22
WG3766353-4	MS	L2735222-3	104.2		%		75-125	04-OCT-22
Fluoride (F)								
HG-T-CVAA-WP		Water						
Batch	R5872102							
WG3767516-2	LCS							
Mercury (Hg)-Total			103.7		%		80-120	11-OCT-22
WG3767516-1	MB							
Mercury (Hg)-Total			<0.000005C		mg/L		0.000005	11-OCT-22
WG3767516-4	MS	L2735222-1	114.1		%		70-130	11-OCT-22
Mercury (Hg)-Total								
MET-D-CCMS-WP		Water						
Batch	R5873038							
WG3767393-4	DUP	L2735222-1	0.0294		mg/L	0.2	20	11-OCT-22
Aluminum (Al)-Dissolved		0.0294						
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-OCT-22
Arsenic (As)-Dissolved		0.00019	0.00014	J	mg/L	0.00004	0.0002	11-OCT-22
Barium (Ba)-Dissolved		0.00655	0.00660		mg/L	0.8	20	11-OCT-22
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-OCT-22
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	11-OCT-22
Boron (B)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	11-OCT-22
Cadmium (Cd)-Dissolved		<0.0000050	<0.000005C	RPD-NA	mg/L	N/A	20	11-OCT-22
Calcium (Ca)-Dissolved		3.35	3.32		mg/L	0.7	20	11-OCT-22
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	11-OCT-22
Chromium (Cr)-Dissolved		0.00012	0.00014		mg/L	14	20	11-OCT-22



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MET-D-CCMS-WP		Water						
Batch	R5873038							
WG3767393-4 DUP		L2735222-1						
Cobalt (Co)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-OCT-22
Copper (Cu)-Dissolved		0.00031	0.00032		mg/L	2.4	20	11-OCT-22
Iron (Fe)-Dissolved		0.117	0.117		mg/L	0.3	20	11-OCT-22
Lead (Pb)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	11-OCT-22
Lithium (Li)-Dissolved		0.0011	0.0011		mg/L	0.3	20	11-OCT-22
Magnesium (Mg)-Dissolved		0.936	0.923		mg/L	1.4	20	11-OCT-22
Manganese (Mn)-Dissolved		0.00498	0.00485		mg/L	2.7	20	11-OCT-22
Molybdenum (Mo)-Dissolved		0.000070	0.000066		mg/L	5.7	20	11-OCT-22
Nickel (Ni)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	11-OCT-22
Phosphorus (P)-Dissolved		<0.030	<0.030	RPD-NA	mg/L	N/A	20	11-OCT-22
Potassium (K)-Dissolved		0.545	0.537		mg/L	1.5	20	11-OCT-22
Rubidium (Rb)-Dissolved		0.00096	0.00088		mg/L	8.9	20	11-OCT-22
Selenium (Se)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	11-OCT-22
Silicon (Si)-Dissolved		2.01	2.01		mg/L	0.1	20	11-OCT-22
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	11-OCT-22
Sodium (Na)-Dissolved		1.09	1.07		mg/L	1.5	20	11-OCT-22
Strontium (Sr)-Dissolved		0.0113	0.0113		mg/L	0.1	20	11-OCT-22
Sulfur (S)-Dissolved		0.67	0.55		mg/L	19	20	11-OCT-22
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	11-OCT-22
Thallium (Tl)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	11-OCT-22
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-OCT-22
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-OCT-22
Titanium (Ti)-Dissolved		0.00040	0.00042		mg/L	4.1	20	11-OCT-22
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-OCT-22
Uranium (U)-Dissolved		0.000024	0.000025		mg/L	5.4	20	11-OCT-22
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	11-OCT-22
Zinc (Zn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-OCT-22
Zirconium (Zr)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	11-OCT-22
WG3767393-2 LCS								
Aluminum (Al)-Dissolved			107.2		%		80-120	11-OCT-22
Antimony (Sb)-Dissolved			87.5		%		80-120	11-OCT-22
Arsenic (As)-Dissolved			99.7		%		80-120	11-OCT-22
Barium (Ba)-Dissolved			104.3		%		80-120	11-OCT-22
Beryllium (Be)-Dissolved			86.4		%		80-120	11-OCT-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5873038							
WG3767393-2		LCS						
Bismuth (Bi)-Dissolved			109.7		%		80-120	11-OCT-22
Boron (B)-Dissolved			92.1		%		80-120	11-OCT-22
Cadmium (Cd)-Dissolved			98.9		%		80-120	11-OCT-22
Calcium (Ca)-Dissolved			105.1		%		80-120	11-OCT-22
Cesium (Cs)-Dissolved			89.5		%		80-120	11-OCT-22
Chromium (Cr)-Dissolved			99.9		%		80-120	11-OCT-22
Cobalt (Co)-Dissolved			99.1		%		80-120	11-OCT-22
Copper (Cu)-Dissolved			97.4		%		80-120	11-OCT-22
Iron (Fe)-Dissolved			97.4		%		80-120	11-OCT-22
Lead (Pb)-Dissolved			92.9		%		80-120	11-OCT-22
Lithium (Li)-Dissolved			98.0		%		80-120	11-OCT-22
Magnesium (Mg)-Dissolved			106.1		%		80-120	11-OCT-22
Manganese (Mn)-Dissolved			97.4		%		80-120	11-OCT-22
Molybdenum (Mo)-Dissolved			86.0		%		80-120	11-OCT-22
Nickel (Ni)-Dissolved			97.1		%		80-120	11-OCT-22
Phosphorus (P)-Dissolved			98.9		%		80-120	11-OCT-22
Potassium (K)-Dissolved			101.7		%		80-120	11-OCT-22
Rubidium (Rb)-Dissolved			99.8		%		80-120	11-OCT-22
Selenium (Se)-Dissolved			95.6		%		80-120	11-OCT-22
Silicon (Si)-Dissolved			93.4		%		80-120	11-OCT-22
Silver (Ag)-Dissolved			87.1		%		80-120	11-OCT-22
Sodium (Na)-Dissolved			114.7		%		80-120	11-OCT-22
Strontium (Sr)-Dissolved			90.4		%		80-120	11-OCT-22
Sulfur (S)-Dissolved			100.9		%		80-120	11-OCT-22
Tellurium (Te)-Dissolved			83.6		%		80-120	11-OCT-22
Thallium (Tl)-Dissolved			89.5		%		80-120	11-OCT-22
Thorium (Th)-Dissolved			92.2		%		80-120	11-OCT-22
Tin (Sn)-Dissolved			86.5		%		80-120	11-OCT-22
Titanium (Ti)-Dissolved			99.0		%		80-120	11-OCT-22
Tungsten (W)-Dissolved			88.2		%		80-120	11-OCT-22
Uranium (U)-Dissolved			98.8		%		80-120	11-OCT-22
Vanadium (V)-Dissolved			102.4		%		80-120	11-OCT-22
Zinc (Zn)-Dissolved			100.3		%		80-120	11-OCT-22
Zirconium (Zr)-Dissolved			86.4		%		80-120	11-OCT-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP	Water							
Batch	R5873038							
WG3767393-1 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	11-OCT-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	11-OCT-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	11-OCT-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	11-OCT-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	11-OCT-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	11-OCT-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	11-OCT-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	11-OCT-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	11-OCT-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	11-OCT-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	11-OCT-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	11-OCT-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	11-OCT-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	11-OCT-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	11-OCT-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	11-OCT-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	11-OCT-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	11-OCT-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	11-OCT-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	11-OCT-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	11-OCT-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	11-OCT-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	11-OCT-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	11-OCT-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	11-OCT-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	11-OCT-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	11-OCT-22
Strontium (Sr)-Dissolved			0.00013	B	mg/L		0.0001	11-OCT-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	11-OCT-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	11-OCT-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	11-OCT-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	11-OCT-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	11-OCT-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	11-OCT-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP	Water							
Batch	R5873038							
WG3767393-1 MB								
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	11-OCT-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	11-OCT-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	11-OCT-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	11-OCT-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	11-OCT-22
WG3767393-5 MS		L2735222-1						
Aluminum (Al)-Dissolved			93.6		%		70-130	11-OCT-22
Antimony (Sb)-Dissolved			84.8		%		70-130	11-OCT-22
Arsenic (As)-Dissolved			95.0		%		70-130	11-OCT-22
Barium (Ba)-Dissolved			98.9		%		70-130	11-OCT-22
Beryllium (Be)-Dissolved			85.1		%		70-130	11-OCT-22
Bismuth (Bi)-Dissolved			86.9		%		70-130	11-OCT-22
Boron (B)-Dissolved			88.2		%		70-130	11-OCT-22
Cadmium (Cd)-Dissolved			94.7		%		70-130	11-OCT-22
Calcium (Ca)-Dissolved			100.7		%		70-130	11-OCT-22
Cesium (Cs)-Dissolved			85.9		%		70-130	11-OCT-22
Chromium (Cr)-Dissolved			93.8		%		70-130	11-OCT-22
Cobalt (Co)-Dissolved			94.2		%		70-130	11-OCT-22
Copper (Cu)-Dissolved			92.1		%		70-130	11-OCT-22
Iron (Fe)-Dissolved			109.5		%		70-130	11-OCT-22
Lead (Pb)-Dissolved			87.9		%		70-130	11-OCT-22
Lithium (Li)-Dissolved			104.1		%		70-130	11-OCT-22
Magnesium (Mg)-Dissolved			93.9		%		70-130	11-OCT-22
Manganese (Mn)-Dissolved			92.1		%		70-130	11-OCT-22
Molybdenum (Mo)-Dissolved			80.5		%		70-130	11-OCT-22
Nickel (Ni)-Dissolved			93.1		%		70-130	11-OCT-22
Phosphorus (P)-Dissolved			90.6		%		70-130	11-OCT-22
Potassium (K)-Dissolved			111.9		%		70-130	11-OCT-22
Rubidium (Rb)-Dissolved			93.7		%		70-130	11-OCT-22
Selenium (Se)-Dissolved			94.9		%		70-130	11-OCT-22
Silicon (Si)-Dissolved			87.3		%		70-130	11-OCT-22
Silver (Ag)-Dissolved			83.1		%		70-130	11-OCT-22
Sodium (Na)-Dissolved			115.5		%		70-130	11-OCT-22
Strontium (Sr)-Dissolved			106.1		%		70-130	11-OCT-22



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MET-D-CCMS-WP		Water						
Batch	R5873038							
WG3767393-5	MS	L2735222-1						
Sulfur (S)-Dissolved			87.1		%		70-130	11-OCT-22
Tellurium (Te)-Dissolved			75.6		%		70-130	11-OCT-22
Thallium (Tl)-Dissolved			83.5		%		70-130	11-OCT-22
Thorium (Th)-Dissolved			98.5		%		70-130	11-OCT-22
Tin (Sn)-Dissolved			82.1		%		70-130	11-OCT-22
Titanium (Ti)-Dissolved			93.4		%		70-130	11-OCT-22
Tungsten (W)-Dissolved			82.7		%		70-130	11-OCT-22
Uranium (U)-Dissolved			94.0		%		70-130	11-OCT-22
Vanadium (V)-Dissolved			97.1		%		70-130	11-OCT-22
Zinc (Zn)-Dissolved			92.0		%		70-130	11-OCT-22
Zirconium (Zr)-Dissolved			97.2		%		70-130	11-OCT-22
MET-T-CCMS-WP		Water						
Batch	R5871957							
WG3766824-2	LCS							
Aluminum (Al)-Total			99.6		%		80-120	07-OCT-22
Antimony (Sb)-Total			106.6		%		80-120	07-OCT-22
Arsenic (As)-Total			104.5		%		80-120	07-OCT-22
Barium (Ba)-Total			101.1		%		80-120	07-OCT-22
Beryllium (Be)-Total			99.0		%		80-120	07-OCT-22
Bismuth (Bi)-Total			107.0		%		80-120	07-OCT-22
Boron (B)-Total			94.1		%		80-120	07-OCT-22
Cadmium (Cd)-Total			103.7		%		80-120	07-OCT-22
Calcium (Ca)-Total			98.7		%		80-120	07-OCT-22
Cesium (Cs)-Total			103.9		%		80-120	07-OCT-22
Chromium (Cr)-Total			100.7		%		80-120	07-OCT-22
Cobalt (Co)-Total			102.0		%		80-120	07-OCT-22
Copper (Cu)-Total			101.7		%		80-120	07-OCT-22
Iron (Fe)-Total			99.9		%		80-120	07-OCT-22
Lead (Pb)-Total			100.6		%		80-120	07-OCT-22
Lithium (Li)-Total			94.4		%		80-120	07-OCT-22
Magnesium (Mg)-Total			101.0		%		80-120	07-OCT-22
Manganese (Mn)-Total			98.4		%		80-120	07-OCT-22
Molybdenum (Mo)-Total			100.4		%		80-120	07-OCT-22
Nickel (Ni)-Total			102.9		%		80-120	07-OCT-22



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MET-T-CCMS-WP		Water						
Batch	R5871957							
WG3766824-2	LCS							
Potassium (K)-Total			97.9		%		80-120	07-OCT-22
Phosphorus (P)-Total			104.9		%		80-120	07-OCT-22
Rubidium (Rb)-Total			95.3		%		80-120	07-OCT-22
Selenium (Se)-Total			100.2		%		80-120	07-OCT-22
Silicon (Si)-Total			102.6		%		80-120	07-OCT-22
Silver (Ag)-Total			101.3		%		80-120	07-OCT-22
Sodium (Na)-Total			104.0		%		80-120	07-OCT-22
Strontium (Sr)-Total			101.0		%		80-120	07-OCT-22
Sulfur (S)-Total			108.0		%		80-120	07-OCT-22
Tellurium (Te)-Total			98.9		%		80-120	07-OCT-22
Thallium (Tl)-Total			99.8		%		80-120	07-OCT-22
Thorium (Th)-Total			96.6		%		80-120	07-OCT-22
Tin (Sn)-Total			98.4		%		80-120	07-OCT-22
Titanium (Ti)-Total			95.9		%		80-120	07-OCT-22
Tungsten (W)-Total			96.6		%		80-120	07-OCT-22
Uranium (U)-Total			97.8		%		80-120	07-OCT-22
Vanadium (V)-Total			101.0		%		80-120	07-OCT-22
Zinc (Zn)-Total			101.0		%		80-120	07-OCT-22
Zirconium (Zr)-Total			91.7		%		80-120	07-OCT-22
WG3766824-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	07-OCT-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	07-OCT-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	07-OCT-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	07-OCT-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	07-OCT-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	07-OCT-22
Boron (B)-Total			<0.010		mg/L		0.01	07-OCT-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	07-OCT-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	07-OCT-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	07-OCT-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	07-OCT-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	07-OCT-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	07-OCT-22
Iron (Fe)-Total			<0.010		mg/L		0.01	07-OCT-22



Quality Control Report

Workorder: L2735222

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP								
Batch R5871957								
WG3766824-1 MB								
Lead (Pb)-Total			<0.000050		mg/L		0.00005	07-OCT-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	07-OCT-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	07-OCT-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	07-OCT-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	07-OCT-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	07-OCT-22
Potassium (K)-Total			<0.050		mg/L		0.05	07-OCT-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	07-OCT-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	07-OCT-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	07-OCT-22
Silicon (Si)-Total			<0.10		mg/L		0.1	07-OCT-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	07-OCT-22
Sodium (Na)-Total			<0.050		mg/L		0.05	07-OCT-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	07-OCT-22
Sulfur (S)-Total			<0.50		mg/L		0.5	07-OCT-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	07-OCT-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	07-OCT-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	07-OCT-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	07-OCT-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	07-OCT-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	07-OCT-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	07-OCT-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	07-OCT-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	07-OCT-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	07-OCT-22
N-TOTKJ-WP								
Batch R5874539								
WG3767822-3 DUP		L2735222-4						
Total Kjeldahl Nitrogen		0.25	<0.20	RPD-NA	mg/L	N/A	20	14-OCT-22
WG3767822-2 LCS								
Total Kjeldahl Nitrogen			105.9		%		75-125	14-OCT-22
WG3767822-6 LCS								
Total Kjeldahl Nitrogen			99.6		%		75-125	14-OCT-22
WG3767822-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	14-OCT-22



Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-L-IC-N-WP								
Batch R5869197								
WG3766212-11	DUP	L2735222-1						
Nitrate (as N)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-OCT-22
WG3766212-10	LCS							
Nitrate (as N)			101.6		%		90-110	03-OCT-22
WG3766212-9	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	03-OCT-22
WG3766212-12	MS	L2735222-1						
Nitrate (as N)			115.1		%		75-125	03-OCT-22
Batch R5869577								
WG3766353-3	DUP	L2735222-3						
Nitrate (as N)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	04-OCT-22
WG3766353-2	LCS							
Nitrate (as N)			101.9		%		90-110	04-OCT-22
WG3766353-1	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	04-OCT-22
WG3766353-4	MS	L2735222-3						
Nitrate (as N)			100.5		%		75-125	04-OCT-22
P-T-COL-WP								
Batch R5870756								
WG3766897-26	LCS							
Phosphorus (P)-Total			95.8		%		80-120	07-OCT-22
WG3766897-25	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	07-OCT-22
Batch R5872041								
WG3767184-10	LCS							
Phosphorus (P)-Total			95.5		%		80-120	11-OCT-22
WG3767184-9	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	11-OCT-22
SO4-IC-N-WP								
Batch R5869197								
WG3766212-11	DUP	L2735222-1						
Sulfate (SO4)		0.47	0.44		mg/L	5.8	20	03-OCT-22
WG3766212-10	LCS							
Sulfate (SO4)			102.8		%		90-110	03-OCT-22
WG3766212-9	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	03-OCT-22
WG3766212-12	MS	L2735222-1						
Sulfate (SO4)			119.3		%		75-125	03-OCT-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-N-WP								
Batch R5869577								
WG3766353-3	DUP	L2735222-3						
Sulfate (SO4)		40.4	40.4		mg/L	0.1	20	04-OCT-22
WG3766353-2	LCS							
Sulfate (SO4)			102.8		%		90-110	04-OCT-22
WG3766353-1	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	04-OCT-22
WG3766353-4	MS	L2735222-3						
Sulfate (SO4)			99.4		%		75-125	04-OCT-22
SOLIDS-TOTSUS-LR-WP								
Batch R5870619								
WG3766360-2	LCS							
Total Suspended Solids			99.8		%		85-115	05-OCT-22
WG3766360-1	MB							
Total Suspended Solids			<1.0		mg/L		1	05-OCT-22

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L2735222

Report Date: 27-OCT-22

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Alkalinity, Total (as CaCO ₃)							
	1	29-SEP-22 09:00	17-OCT-22 13:17	14	18	days	EHT
	2	29-SEP-22 12:45	17-OCT-22 13:17	14	18	days	EHT
	3	29-SEP-22 12:48	17-OCT-22 13:17	14	18	days	EHT
	4	29-SEP-22 13:13	17-OCT-22 13:17	14	18	days	EHT
Nitrate in Water by IC (Low Level)							
	1	29-SEP-22 09:00	03-OCT-22 13:00	3	4	days	EHTR
	2	29-SEP-22 12:45	04-OCT-22 11:00	3	5	days	EHTR
	3	29-SEP-22 12:48	04-OCT-22 11:00	3	5	days	EHTR
	4	29-SEP-22 13:13	04-OCT-22 11:00	3	5	days	EHTR
Nitrite in Water by IC (Low Level)							
	1	29-SEP-22 09:00	03-OCT-22 13:00	3	4	days	EHTR
	2	29-SEP-22 12:45	04-OCT-22 11:00	3	5	days	EHTR
	3	29-SEP-22 12:48	04-OCT-22 11:00	3	5	days	EHTR
	4	29-SEP-22 13:13	04-OCT-22 11:00	3	5	days	EHTR

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.

Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2735222 were received on 03-OCT-22 11:36.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



Chain of



L2735222-COFC

COC Number: 22 -

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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YELLOW - CLIENT COPY

FEB 2022 FROM

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Alamos Gold Inc.
ATTN: KAREN MATHERS
C/O Stantec Consulting
500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Date Received: 31-OCT-22
Report Date: 25-NOV-22 08:59 (MT)
Version: FINAL

Client Phone: 204-924-5735

Certificate of Analysis

Lab Work Order #: L2738661
Project P.O. #: NOT SUBMITTED
Job Reference: ALAMOS
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2738661-1 W 27-OCT-22 09:57 AQF45	L2738661-2 W 27-OCT-22 05:00 AQF40	L2738661-3 W 28-OCT-22 11:24 AQM71	L2738661-4 W 28-OCT-22 11:53 AQM28	L2738661-5 W 28-OCT-22 12:10 AQM29C
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	12.0	10.7	51.2	21.2	10.1
	Total Suspended Solids (mg/L)	1.2	2.1	1.0	1.7	1.8
Anions and Nutrients	Acidity (as CaCO ₃) (mg/L)	2.9	3.0	5.3	2.5	2.4
	Alkalinity, Total (as CaCO ₃) (mg/L)	11.2	10.5	35.0	10.7	7.8
	Ammonia, Total (as N) (mg/L)	<0.010	<0.010	0.022	<0.010	<0.010
	Bicarbonate (HCO ₃) (mg/L)	13.7	12.8	42.7	13.1	9.5
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.27	0.21	1.00	0.78	0.38
	Fluoride (F) (mg/L)	0.059	0.061	0.035	0.055	0.052
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	0.0183	0.0258	0.0272	<0.0051	0.0065
	Nitrate (as N) (mg/L)	0.0183	0.0258	0.0272	<0.0050	0.0065
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.26	<0.20	<0.20	0.26	<0.20
	Phosphorus (P)-Total (mg/L)	0.0128	0.0167	0.0070	0.0160	0.0155
	Sulfate (SO ₄) (mg/L)	0.55	0.47	12.7	9.43	2.12
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	9.25	8.98	14.2	12.2	8.51
	Total Organic Carbon (mg/L)	9.26	9.28	14.3	13.4	8.04
Total Metals	Aluminum (Al)-Total (mg/L)	0.0646	0.0662	0.0415	0.202	0.0617
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00020	0.00018	0.00022	0.00026	0.00018
	Barium (Ba)-Total (mg/L)	0.00539 ^{RRV}	0.00527 ^{RRV}	0.00857	0.00754	0.00562
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	0.0000159	0.0000068
	Calcium (Ca)-Total (mg/L)	3.39	2.96	17.5	6.44	2.91
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00023	0.00019	0.00017	0.00032	0.00014
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	0.00090	0.00016
	Copper (Cu)-Total (mg/L)	<0.00050 ^{RRV}	<0.00050 ^{RRV}	<0.00050	0.00473	0.00106
	Iron (Fe)-Total (mg/L)	0.234	0.279	0.170	0.855	0.294

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2738661-6 W 28-OCT-22 12:05 AQM72	L2738661-7 W 28-OCT-22 12:53 AQM73	L2738661-8 W 28-OCT-22 13:13 AQM74	L2738661-9 W 28-OCT-22 13:34 AQF7S	L2738661-10 W 28-OCT-22 14:24 AQF38
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	7.23	20.0	12.2	15.2	14.0
	Total Suspended Solids (mg/L)	3.4	214	3460	1.5	12.5
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	4.4	10.4	14.1	2.8	5.0
	Alkalinity, Total (as CaCO3) (mg/L)	6.2	14.2	64.2	16.0	14.5
	Ammonia, Total (as N) (mg/L)	0.017	0.062	0.103	<0.010	<0.010
	Bicarbonate (HCO3) (mg/L)	7.6	17.3	78.3	19.5	17.7
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.15	0.47	0.37	0.11	0.20
	Fluoride (F) (mg/L)	0.030	0.046	0.050	0.041	0.044
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	<0.0051	<0.0051	0.0172	0.0139	0.0180
	Nitrate (as N) (mg/L)	<0.0050	<0.0050	0.0172	0.0139	0.0180
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.25	5.65	40.0	0.30	<0.20
	Phosphorus (P)-Total (mg/L)	0.0226	0.717	2.55	0.0134	0.0193
	Sulfate (SO4) (mg/L)	<0.30	<0.30	0.70	0.74	0.88
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	0.0011	0.0038	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	0.0014	0.0059	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	0.0013	0.0035	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	12.9	28.2	24.8	8.61	7.25
	Total Organic Carbon (mg/L)	12.3	40.0	49.5	8.96	7.27
Total Metals	Aluminum (Al)-Total (mg/L)	0.106	0.270	11.0	0.0420	0.210
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	0.00019	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00023	0.00080	0.00482	0.00021	0.00018
	Barium (Ba)-Total (mg/L)	0.00528 ^{RRV}	0.0337	0.374	0.00863 ^{RRV}	0.00916 ^{RRV}
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	0.00049	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	0.000225	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	0.037	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	0.0000352	0.000585	<0.0000050	0.0000118
	Calcium (Ca)-Total (mg/L)	2.39	7.42	38.5	4.03	3.87
	Cesium (Cs)-Total (mg/L)	0.000011	0.000085	0.000643	<0.000010	0.000012
	Chromium (Cr)-Total (mg/L)	0.00030	0.00061	0.00989	0.00026	0.00046
	Cobalt (Co)-Total (mg/L)	0.00021	0.00056	0.0200	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050 ^{RRV}	0.00116	0.0389	<0.00050 ^{RRV}	0.00076 ^{RRV}
	Iron (Fe)-Total (mg/L)	2.75	1.98	36.2	0.084	0.219

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2738661-11 W 28-OCT-22 15:04 AQF41	L2738661-12 W 28-OCT-22 15:22 AQF42	L2738661-13 W 28-OCT-22 15:40 AQF43	L2738661-14 W 28-OCT-22 15:56 AQF44	L2738661-15 W 28-OCT-22 16:27 AQF46
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO ₃) (mg/L)	10.7	10.8	10.8	11.6	27.6
	Total Suspended Solids (mg/L)	1.0	<1.0	1.3	1.5	1.5
Anions and Nutrients	Acidity (as CaCO ₃) (mg/L)	2.3	3.8	2.3	2.2	5.1
	Alkalinity, Total (as CaCO ₃) (mg/L)	10.2	10.3	10.1	10.9	28.2
	Ammonia, Total (as N) (mg/L)	<0.010	<0.010	<0.010	<0.010	0.042
	Bicarbonate (HCO ₃) (mg/L)	12.4	12.6	12.3	13.3	34.4
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO ₃) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.20	0.21	0.20	0.20	0.25
	Fluoride (F) (mg/L)	0.062	0.062	0.063	0.063	0.044
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	0.0189	0.0186	0.0196	0.0191	0.0374
	Nitrate (as N) (mg/L)	0.0189	0.0186	0.0196	0.0191	0.0374
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.26	0.26	<0.20	<0.20	1.85
	Phosphorus (P)-Total (mg/L)	0.0153	0.0151	0.0145	0.0182	0.119
	Sulfate (SO ₄) (mg/L)	0.46	0.47	0.46	0.52	0.47
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0011
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	9.18	9.05	8.90	9.01	15.3
	Total Organic Carbon (mg/L)	9.32	9.99	9.37	9.17	13.1
Total Metals	Aluminum (Al)-Total (mg/L)	0.0385	0.0420	0.0671	0.109	0.0281
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00019	0.00019	0.00019	0.00020	0.00027
	Barium (Ba)-Total (mg/L)	0.00548	0.00539	0.00537 ^{RRV}	0.00652	0.00854 ^{RRV}
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)	3.08	3.05	3.13	3.44	8.83
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	0.000013	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00017	0.00014	0.00023	0.00033	0.00013
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050 ^{RRV}	<0.00050	<0.00050 ^{RRV}
	Iron (Fe)-Total (mg/L)	0.232	0.234	0.259	0.354	0.078

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2738661-16 W 29-OCT-22 08:07 FIELD BLANK	L2738661-17 W 28-OCT-22 QC-01	L2738661-18 W 28-OCT-22 TRIP BLANK		
Grouping	Analyte						
WATER							
Physical Tests	Hardness (as CaCO3) (mg/L)	<0.20	9.69	<0.20			
	Total Suspended Solids (mg/L)	<1.0	2.1	<1.0			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<2.0	2.4	2.1			
	Alkalinity, Total (as CaCO3) (mg/L)	<1.0	7.7	<1.0			
	Ammonia, Total (as N) (mg/L)	<0.010	<0.010	0.011			
	Bicarbonate (HCO3) (mg/L)	<1.2	9.4	<1.2			
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10			
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60			
	Chloride (Cl) (mg/L)	<0.10	0.38	<0.10			
	Fluoride (F) (mg/L)	<0.020	0.052	<0.020			
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34			
	Nitrate and Nitrite as N (mg/L)	<0.0051	0.0060	<0.0051			
	Nitrate (as N) (mg/L)	<0.0050	0.0060	<0.0050			
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010			
	Total Kjeldahl Nitrogen (mg/L)	<0.20	0.22	<0.20			
	Phosphorus (P)-Total (mg/L)	<0.0010	0.0159	<0.0010			
	Sulfate (SO4) (mg/L)	<0.30	2.13	<0.30			
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010			
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010			
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010			
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	<0.50	8.66	<0.50			
	Total Organic Carbon (mg/L)	<0.50	8.61	<0.50			
Total Metals	Aluminum (Al)-Total (mg/L)	<0.0030	0.0589	<0.0030			
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010			
	Arsenic (As)-Total (mg/L)	<0.00010	0.00016 ^{RRV}	<0.00010			
	Barium (Ba)-Total (mg/L)	<0.00010	0.00577 ^{RRV}	<0.00010			
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010			
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050			
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010			
	Cadmium (Cd)-Total (mg/L)	<0.0000050	0.0000079	<0.0000050			
	Calcium (Ca)-Total (mg/L)	<0.050	2.97	<0.050			
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010			
	Chromium (Cr)-Total (mg/L)	0.00019	0.00031	0.00014			
	Cobalt (Co)-Total (mg/L)	<0.00010	0.00018	<0.00010			
	Copper (Cu)-Total (mg/L)	<0.00050	0.00126 ^{RRV}	<0.00050			
	Iron (Fe)-Total (mg/L)	<0.010	0.304	<0.010			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2738661-1 W 27-OCT-22 09:57 AQF45	L2738661-2 W 27-OCT-22 05:00 AQF40	L2738661-3 W 28-OCT-22 11:24 AQM71	L2738661-4 W 28-OCT-22 11:53 AQM28	L2738661-5 W 28-OCT-22 12:10 AQM29C
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	0.000064	<0.000050	0.000067	<0.000050	
	Lithium (Li)-Total (mg/L)	0.0011	0.0011	0.0012	0.0011	0.0011	
	Magnesium (Mg)-Total (mg/L)	1.01	0.895	1.86	1.46	0.764	
	Manganese (Mn)-Total (mg/L)	0.0119	0.0173	0.0143	0.0349	0.0142	
	Mercury (Hg)-Total (ug/L)	0.00113	0.00120	0.00087	0.00121	0.00079	
	Molybdenum (Mo)-Total (mg/L)	0.000112	0.000142	0.000546	0.000076	<0.000050	
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	<0.00050	0.0734	0.0117	
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	0.508	0.498	0.767	0.675	0.514	
	Rubidium (Rb)-Total (mg/L)	0.00093	0.00100	0.00078	0.00092	0.00093	
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	<0.000050	0.000056	<0.000050	
	Silicon (Si)-Total (mg/L)	2.48	2.53	5.13	2.95	2.70	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	1.19	1.12	1.75	1.51	1.11	
	Strontium (Sr)-Total (mg/L)	0.0129	0.0122	0.0250	0.0191	0.0117	
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	4.70	3.44	0.57	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Total (mg/L)	0.00234	0.00210	0.00096	0.00162	0.00089	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	0.000030	0.000032	0.000010	0.000027	0.000023	
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	0.0137	<0.0030	
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0207	0.0196	0.0286	0.133	0.0291	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00017 ^{RRV}	0.00018 ^{RRV}	0.00020	0.00022	0.00015	
	Barium (Ba)-Dissolved (mg/L)	0.0113	0.0113	0.00852	0.00676	0.00492	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	0.0000183	<0.0000050	
	Calcium (Ca)-Dissolved (mg/L)	3.26	2.91	17.6	6.23	2.85	

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Sample ID Description Sampled Date Sampled Time Client ID		L2738661-6	L2738661-7	L2738661-8	L2738661-9	L2738661-10
		W	W	W	W	W
		28-OCT-22	28-OCT-22	28-OCT-22	28-OCT-22	28-OCT-22
		12:05	12:53	13:13	13:34	14:24
		AQM72	AQM73	AQM74	AQF7S	AQF38
Grouping	Analyte					
WATER						
Total Metals	Lead (Pb)-Total (mg/L)	0.000062	0.000432	0.0159	<0.000050	<0.000050
	Lithium (Li)-Total (mg/L)	<0.0010	0.0020	0.0054	<0.0010	<0.0010
	Magnesium (Mg)-Total (mg/L)	0.507	1.34	5.93	1.43	1.01
	Manganese (Mn)-Total (mg/L)	0.0357	0.144	5.75	0.00776	0.0190
	Mercury (Hg)-Total (ug/L)	0.00091	0.00091	0.0071 ^{DLM}	0.00108	0.00270
	Molybdenum (Mo)-Total (mg/L)	0.000241	0.000257	0.00909	0.000124	0.00120
	Nickel (Ni)-Total (mg/L)	0.00056	0.00127	0.0206	<0.00050	<0.00050
	Phosphorus (P)-Total (mg/L)	<0.030	0.461	3.68	<0.030	<0.030
	Potassium (K)-Total (mg/L)	0.096	1.18	4.99	0.518	0.546
	Rubidium (Rb)-Total (mg/L)	0.00024	0.00273	0.0148	0.00105	0.00098
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	0.00101	0.000062	<0.000050
	Silicon (Si)-Total (mg/L)	3.17	5.31	15.2	1.40	3.31
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	0.000065	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	0.653	1.24	1.70	1.06	1.80
	Strontium (Sr)-Total (mg/L)	0.00748	0.0183	0.120	0.0117	0.0126
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	6.37	<0.50	<0.50
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	0.00041	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	0.000011	0.000135	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	0.00071	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00432	0.0102	0.217	0.00116	0.00741
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	0.00021	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.000014	0.000019	0.00204	0.000012	0.000085
	Vanadium (V)-Total (mg/L)	0.00065	0.00081	0.0388	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	0.0030	0.0128	0.0796	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00020	0.00025	0.00116	<0.00020	<0.00020
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0430	0.0922	0.210	0.0216	0.0395
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00017	0.00042	0.00025	0.00018	0.00011
	Barium (Ba)-Dissolved (mg/L)	0.0107 ^{RRV}	0.00596	0.0126	0.0163 ^{RRV}	0.0149 ^{RRV}
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	0.0000099	0.0000051	<0.0000050	0.0000108
	Calcium (Ca)-Dissolved (mg/L)	2.16	6.09	3.45	3.86	3.98

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		Sample ID Description Sampled Date Sampled Time Client ID	L2738661-11 W 28-OCT-22 15:04 AQF41	L2738661-12 W 28-OCT-22 15:22 AQF42	L2738661-13 W 28-OCT-22 15:40 AQF43	L2738661-14 W 28-OCT-22 15:56 AQF44	L2738661-15 W 28-OCT-22 16:27 AQF46
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050 ^{RRV}
	Lithium (Li)-Total (mg/L)	0.0012	0.0011	0.0011	0.0012	0.0012	<0.0010
	Magnesium (Mg)-Total (mg/L)	0.856	0.908	0.948	1.01	1.01	1.92
	Manganese (Mn)-Total (mg/L)	0.0148	0.0146	0.0156	0.0248	0.0248	0.0358
	Mercury (Hg)-Total (ug/L)	0.00108	0.00112	0.00109	0.00109	0.00109	0.00235
	Molybdenum (Mo)-Total (mg/L)	0.000093	0.000107	0.000140	0.000113	0.000113	0.000078
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Total (mg/L)	0.478	0.517	0.538	0.544	0.544	1.39
	Rubidium (Rb)-Total (mg/L)	0.00099	0.00102	0.00110	0.00120	0.00120	0.00128
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	0.000057	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Total (mg/L)	2.44	2.61	2.67	2.69	2.69	1.08
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	1.10	1.08	1.14	1.16	1.16	1.19
	Strontium (Sr)-Total (mg/L)	0.0117	0.0125	0.0129	0.0129	0.0129	0.0148
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00108	0.00110	0.00226	0.00502	0.00502	0.00068
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.000024	0.000037	0.000035	0.000038	0.000038	<0.000010
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	0.0046	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0190	0.0192	0.0215	0.0237	0.0237	0.0172
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00015	0.00016	0.00018	0.00017	0.00017	0.00024
	Barium (Ba)-Dissolved (mg/L)	0.00459	0.00472	0.0109 ^{RRV}	0.00532	0.00532	0.0143 ^{RRV}
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Dissolved (mg/L)	2.88	2.92	2.93	3.14	3.14	8.14

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2738661-16 W 29-OCT-22 08:07 FIELD BLANK	L2738661-17 W 28-OCT-22 QC-01	L2738661-18 W 28-OCT-22 TRIP BLANK		
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050			
	Lithium (Li)-Total (mg/L)	<0.0010	0.0011	<0.0010			
	Magnesium (Mg)-Total (mg/L)	<0.0050	0.775	<0.0050			
	Manganese (Mn)-Total (mg/L)	<0.00010	0.0145	<0.00010			
	Mercury (Hg)-Total (ug/L)		0.00079				
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000057	<0.000050			
	Nickel (Ni)-Total (mg/L)	<0.00050	0.0117	<0.00050			
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	<0.030			
	Potassium (K)-Total (mg/L)	<0.050	0.532	<0.050			
	Rubidium (Rb)-Total (mg/L)	<0.00020	0.00093	<0.00020			
	Selenium (Se)-Total (mg/L)	<0.000050	0.000051	<0.000050			
	Silicon (Si)-Total (mg/L)	<0.10	2.75	<0.10			
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010			
	Sodium (Na)-Total (mg/L)	<0.050	1.14	<0.050			
	Strontium (Sr)-Total (mg/L)	<0.00020	0.0122	<0.00020			
	Sulfur (S)-Total (mg/L)	<0.50	0.88	<0.50			
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020			
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010			
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010			
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010			
	Titanium (Ti)-Total (mg/L)	<0.00030	0.00102	<0.00030			
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010			
	Uranium (U)-Total (mg/L)	<0.000010	0.000027	<0.000010			
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050			
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030			
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020			
Dissolved Metals	Dissolved Mercury Filtration Location		FIELD				
	Dissolved Metals Filtration Location	FIELD	FIELD	LAB			
	Aluminum (Al)-Dissolved (mg/L)	<0.0010	0.0349	0.0026			
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010			
	Arsenic (As)-Dissolved (mg/L)	<0.00010	0.00016	<0.00010			
	Barium (Ba)-Dissolved (mg/L)	<0.00010	0.0124 ^{RRV}	<0.00010			
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010			
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050			
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010			
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050			
	Calcium (Ca)-Dissolved (mg/L)	<0.050	2.72	<0.050			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2738661-1 W 27-OCT-22 09:57 AQF45	L2738661-2 W 27-OCT-22 05:00 AQF40	L2738661-3 W 28-OCT-22 11:24 AQM71	L2738661-4 W 28-OCT-22 11:53 AQM28	L2738661-5 W 28-OCT-22 12:10 AQM29C
Grouping	Analyte					
WATER						
Dissolved Metals	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	0.00011	0.00011	0.00012	0.00024	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	0.00062	0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00252 ^{RRV}	0.00291 ^{RRV}	0.00032	0.00378	0.00087
	Iron (Fe)-Dissolved (mg/L)	0.116	0.118	0.113	0.562	0.143
	Lead (Pb)-Dissolved (mg/L)	0.000059	0.000119	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	0.0010	0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	0.945	0.822	1.78	1.37	0.720
	Manganese (Mn)-Dissolved (mg/L)	0.00353	0.00292	0.0122	0.0211	0.00675
	Mercury (Hg)-Dissolved (ug/L)	0.00090	0.00085	0.00068	0.00094	0.00057
	Molybdenum (Mo)-Dissolved (mg/L)	0.000096	0.000096	0.000053	0.000050	<0.000050
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	0.0674	0.0106
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.463	0.448	0.714	0.606	0.461
	Rubidium (Rb)-Dissolved (mg/L)	0.00082	0.00092	0.00075	0.00080	0.00083
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	0.000056
	Silicon (Si)-Dissolved (mg/L)	2.28	2.35	4.88	2.69	2.46
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.08	1.03	1.61	1.34	0.995
	Strontium (Sr)-Dissolved (mg/L)	0.0115	0.0111	0.0221	0.0169	0.0104
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	4.30	2.95	0.58
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00040	<0.00030	0.00047	0.00075	<0.00030
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000023	0.000019	<0.000010	0.000024	0.000020
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0016	0.0028	<0.0010	0.0126	0.0025
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Methylmercury (as MeHg)-Total (ug/L)	0.000035	0.000037	0.000163	0.000044	0.000026

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2738661-6 W 28-OCT-22 12:05 AQM72	L2738661-7 W 28-OCT-22 12:53 AQM73	L2738661-8 W 28-OCT-22 13:13 AQM74	L2738661-9 W 28-OCT-22 13:34 AQF7S	L2738661-10 W 28-OCT-22 14:24 AQF38
Grouping	Analyte					
WATER						
Dissolved Metals	Cesium (Cs)-Dissolved (mg/L)	<0.000010	0.000019	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	0.00015	0.00026	0.00043	0.00010	0.00025
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00038	0.00017	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00374 ^{RRV}	0.00035	0.00344	0.00273 ^{RRV}	0.00360 ^{RRV}
	Iron (Fe)-Dissolved (mg/L)	0.872	0.848	0.342	0.043	0.019
	Lead (Pb)-Dissolved (mg/L)	0.000137	0.000054	0.000181	0.000121	0.000124
	Lithium (Li)-Dissolved (mg/L)	<0.0010	0.0015	0.0011	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	0.447	1.17	0.874	1.36	0.979
	Manganese (Mn)-Dissolved (mg/L)	0.0186	0.111	0.0226	0.00390	0.00296
	Mercury (Hg)-Dissolved (ug/L)	0.00080	0.00100	0.00099	0.00068	0.00143
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	<0.000050	0.000272	0.000087	0.00115
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	0.00059	0.00079	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	0.047	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.069	0.702	0.548	0.486	0.494
	Rubidium (Rb)-Dissolved (mg/L)	<0.00020	0.00126	0.00068	0.00095	0.00071
	Selenium (Se)-Dissolved (mg/L)	<0.000050	0.000056	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	2.85	4.79	4.33	1.38	3.13
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	0.521	1.17	1.01	0.976	1.07
	Strontium (Sr)-Dissolved (mg/L)	0.00585	0.0114	0.00850	0.0110	0.0119
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00094	0.00118	0.00299	<0.00030	<0.00030
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	<0.000010	<0.000010	0.000024	0.000010	0.000032
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0031	0.0061	0.0039	0.0021	0.0037
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	0.00023	0.00037	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Methylmercury (as MeHg)-Total (ug/L)	0.000084	0.000124	0.000138	0.000067	0.000099

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2738661-11 W 28-OCT-22 15:04 AQF41	L2738661-12 W 28-OCT-22 15:22 AQF42	L2738661-13 W 28-OCT-22 15:40 AQF43	L2738661-14 W 28-OCT-22 15:56 AQF44	L2738661-15 W 28-OCT-22 16:27 AQF46
Grouping	Analyte					
WATER						
Dissolved Metals	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Dissolved (mg/L)	0.00012	<0.00010	0.00013	0.00013	0.00016
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00031	0.00045	0.00370 ^{RRV}	0.00025	0.00295 ^{RRV}
	Iron (Fe)-Dissolved (mg/L)	0.119	0.122	0.127	0.127	0.047
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	0.000150	<0.000050	0.000162 ^{RRV}
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	0.841	0.860	0.839	0.913	1.76
	Manganese (Mn)-Dissolved (mg/L)	0.00263	0.00369	0.00393	0.00387	0.0222
	Mercury (Hg)-Dissolved (ug/L)	0.00096	0.00081	0.00081	0.00103	0.00118
	Molybdenum (Mo)-Dissolved (mg/L)	0.000129	0.000101	0.000134	0.000078	0.000079
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.462	0.457	0.483	0.497	1.13
	Rubidium (Rb)-Dissolved (mg/L)	0.00087	0.00090	0.00092	0.00095	0.00112
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	2.30	2.31	2.35	2.30	0.971
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.03	1.03	1.03	1.06	1.06
	Strontium (Sr)-Dissolved (mg/L)	0.0109	0.0111	0.0124	0.0130	0.0145
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	0.00041	<0.00030	0.00034
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000021	0.000024	0.000025	0.000022	<0.000010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0011	0.0022	<0.0010	0.0027
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	0.58	<0.50	<0.50	<0.50
	Methylmercury (as MeHg)-Total (ug/L)	0.000154	0.000046	0.000046	0.000135	0.000094

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2738661-16 W 29-OCT-22 08:07 FIELD BLANK	L2738661-17 W 28-OCT-22 QC-01	L2738661-18 W 28-OCT-22 TRIP BLANK		
Grouping	Analyte					
WATER						
Dissolved Metals	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00010	<0.00010		
	Copper (Cu)-Dissolved (mg/L)	<0.00020	0.00400 ^{RRV}	<0.00020		
	Iron (Fe)-Dissolved (mg/L)	<0.010	0.145	<0.010		
	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000148	<0.000050		
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Magnesium (Mg)-Dissolved (mg/L)	<0.0050	0.703	<0.0050		
	Manganese (Mn)-Dissolved (mg/L)	<0.00010	0.00665	<0.00010		
	Mercury (Hg)-Dissolved (ug/L)		0.00071			
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	0.000055	<0.000050		
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	0.0104	<0.00050		
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030		
	Potassium (K)-Dissolved (mg/L)	<0.050	0.500	<0.050		
	Rubidium (Rb)-Dissolved (mg/L)	<0.00020	0.00084	<0.00020		
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050		
	Silicon (Si)-Dissolved (mg/L)	<0.050	2.50	<0.050		
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Sodium (Na)-Dissolved (mg/L)	<0.050	0.992	<0.050		
	Strontium (Sr)-Dissolved (mg/L)	<0.00010	0.0117	<0.00010		
	Sulfur (S)-Dissolved (mg/L)	<0.50	0.97	<0.50		
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020		
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030		
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.000018	<0.000010		
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0045	<0.0010		
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020		
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50		
	Methylmercury (as MeHg)-Total (ug/L)		0.000024			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Dissolved Organic Carbon	MS-B	L2738661-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Total Organic Carbon	MS-B	L2738661-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -6, -7, -8, -9
Matrix Spike	Total Organic Carbon	MS-B	L2738661-5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2738661-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Boron (B)-Dissolved	MS-B	L2738661-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2738661-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2738661-13, -14, -15, -16, -17, -18
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2738661-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2738661-13, -14, -15, -16, -17, -18
Matrix Spike	Potassium (K)-Dissolved	MS-B	L2738661-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2738661-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2738661-13, -14, -15, -16, -17, -18
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2738661-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2738661-13, -14, -15, -16, -17, -18
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L2738661-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aluminum (Al)-Total	MS-B	L2738661-11, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L2738661-11, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L2738661-1, -2, -3, -4, -5, -6
Matrix Spike	Calcium (Ca)-Total	MS-B	L2738661-11, -7, -8, -9
Matrix Spike	Copper (Cu)-Total	MS-B	L2738661-1, -2, -3, -4, -5, -6
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2738661-1, -2, -3, -4, -5, -6
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2738661-11, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L2738661-11, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L2738661-1, -2, -3, -4, -5, -6
Matrix Spike	Strontium (Sr)-Total	MS-B	L2738661-1, -2, -3, -4, -5, -6
Matrix Spike	Sulfur (S)-Total	MS-B	L2738661-1, -2, -3, -4, -5, -6

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-TITR-TB	Water	Acidity	APHA 2310 B modified
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO ₃ 2-/L.			
ALK-HCO3HCO3-CALC-WP	Water	Alkalinity, Bicarbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO ₃ -/L			
ALK-OHOH-CALC-WP	Water	Alkalinity, Hydroxide	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.			
ALK-TITR-WP	Water	Alkalinity, Total (as CaCO ₃)	APHA 2320B
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO ₃ - and H ₂ CO ₃ endpoints indicated			

Reference Information

electrometrically.

BR-IC-N-WP Water Bromide in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

C-DOC-HTC-WP Water Dissolved Organic Carbon by Combustion APHA 5310 B-WP

Filtered (0.45 um) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

C-TOC-HTC-WP Water Total Organic Carbon by Combustion APHA 5310 B-WP

Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

CL-L-IC-N-WP Water Chloride in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

CN-FREE-L-CFA-WT Water Low Level Free Cyanide in water by CFA ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-T-L-CFA-WT Water Low Level Total Cyanide in water by CFA ISO 14403-2:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, however it would be less than 1% and could be as low as zero.

CN-WAD-L-CFA-WT Water Low level WAD Cyanide in water by CFA APHA 4500CN I-Weak acid Dist Colorimet

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

CR-CR6-PWQO-IC-WT Water Chromium +6 EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-SCREEN-WP Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc

F-IC-N-WP Water Fluoride in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

HARDNESS-CALC-WP Water Hardness Calculated APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

HG-D-U-CVAF-VA Water Diss. Mercury in Water by CVAFS (Ultra) APHA 3030 B / EPA 1631 REV. E

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure may involve preliminary sample treatment by filtration (APHA 3030B) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.

HG-T-U-CVAF-VA Water Total Mercury in Water by CVAFS (Ultra) EPA 1631 REV. E

This analysis is carried out using procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.

MEHG-T-GCAF-VA Water Total Methylmercury in Water by GCAFS EPA 1630 (mod)

Reference Information

This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".

MET-D-CCMS-WP Water Dissolved Metals in Water by CRC ICPMS APHA 3030B/6020B (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-T-CCMS-WP Water Total Metals in Water by CRC ICPMS EPA 200.2/6020B (mod.)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

N-TOTKJ-WP Water Total Kjeldahl Nitrogen APHA 4500 NorgD (modified)

Aqueous samples are digested in a block digester with sulfuric acid and copper sulfate as a catalyst. Total Kjeldahl Nitrogen is then analyzed using a discrete analyzer with colorimetric detection.

NH3-COL-WP Water Ammonia by colour APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

NO2+NO3-CALC-L-WP Water Nitrate+Nitrite CALCULATION

NO2-L-IC-N-WP Water Nitrite in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

NO3-L-IC-N-WP Water Nitrate in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

P-T-COL-WP Water Phosphorus, Total APHA 4500 P PHOSPHORUS-L

This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.

P-T-L-COL-WP Water Phosphorus, Total APHA 4500 P PHOSPHORUS-L

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourmetrically after persulphate digestion of the sample.

SO4-IC-N-WP Water Sulfate in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

SOLIDS-TOTSUS-LR-WP Water Total Suspended Solids APHA 2540 D (modified)

Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 105°C.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

Reference Information

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lw - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

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Client: Alamos Gold Inc.
C/O Stantec Consulting 500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Contact: KAREN MATHERS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-TITR-TB								
Water								
Batch	R5888496							
WG3771219-3 DUP		L2738661-1						
Acidity (as CaCO ₃)		2.9	3.2		mg/L	9.3	20	05-NOV-22
WG3771219-2 LCS								
Acidity (as CaCO ₃)			107.7		%		85-115	05-NOV-22
WG3771219-1 MB								
Acidity (as CaCO ₃)			<2.0		mg/L		3	05-NOV-22
ALK-TITR-WP								
Water								
Batch	R5889136							
WG3771978-14 LCS								
Alkalinity, Total (as CaCO ₃)			98.1		%		85-115	08-NOV-22
WG3771978-9 LCS								
Alkalinity, Total (as CaCO ₃)			97.0		%		85-115	08-NOV-22
WG3771978-11 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	08-NOV-22
WG3771978-6 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	08-NOV-22
BR-IC-N-WP								
Water								
Batch	R5886256							
WG3770717-7 DUP		L2738661-9						
Bromide (Br)		<0.10	<0.10	RPD-NA	mg/L	N/A	20	01-NOV-22
WG3770717-2 LCS								
Bromide (Br)			98.6		%		85-115	01-NOV-22
WG3770717-6 LCS								
Bromide (Br)			98.3		%		85-115	01-NOV-22
WG3770717-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	01-NOV-22
WG3770717-5 MB								
Bromide (Br)			<0.10		mg/L		0.1	01-NOV-22
WG3770717-8 MS		L2738661-9						
Bromide (Br)			101.4		%		75-125	01-NOV-22
C-DOC-HTC-WP								
Water								
Batch	R5892982							
WG3772957-3 DUP		L2738661-14						
Dissolved Organic Carbon		9.01	9.19		mg/L	2.0	20	16-NOV-22
WG3772957-2 LCS								
Dissolved Organic Carbon			101.9		%		80-120	16-NOV-22
WG3772957-1 MB								
Dissolved Organic Carbon			<0.50		mg/L		0.5	16-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DOC-HTC-WP								
Batch R5892982								
WG3772957-4	MS	L2738661-15						
Dissolved Organic Carbon			N/A	MS-B	%		-	16-NOV-22
C-TOC-HTC-WP								
Batch R5892983								
WG3772958-3	DUP	L2738661-14						
Total Organic Carbon		9.17	9.35		mg/L	2.0	20	16-NOV-22
WG3772958-2	LCS							
Total Organic Carbon			105.6		%		80-120	16-NOV-22
WG3772958-1	MB							
Total Organic Carbon			<0.50		mg/L		0.5	16-NOV-22
WG3772958-4	MS	L2738661-15						
Total Organic Carbon			N/A	MS-B	%		-	16-NOV-22
Batch R5894864								
WG3773401-2	LCS							
Total Organic Carbon			109.9		%		80-120	18-NOV-22
WG3773401-1	MB							
Total Organic Carbon			<0.50		mg/L		0.5	18-NOV-22
CL-L-IC-N-WP								
Batch R5886256								
WG3770717-7	DUP	L2738661-9						
Chloride (Cl)		0.11	0.11		mg/L	0.0	20	01-NOV-22
WG3770717-2	LCS							
Chloride (Cl)			99.2		%		90-110	01-NOV-22
WG3770717-6	LCS							
Chloride (Cl)			98.6		%		90-110	01-NOV-22
WG3770717-1	MB							
Chloride (Cl)			<0.10		mg/L		0.1	01-NOV-22
WG3770717-5	MB							
Chloride (Cl)			<0.10		mg/L		0.1	01-NOV-22
WG3770717-8	MS	L2738661-9						
Chloride (Cl)			106.0		%		75-125	01-NOV-22
CN-FREE-L-CFA-WT								
Batch R5890544								
WG3772301-8	DUP	L2738661-17						
Cyanide, Free		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-NOV-22
WG3772301-7	LCS							
Cyanide, Free			111.2		%		80-120	10-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MEHG-T-GCAF-VA								
Water								
Batch	R5897457							
WG3774095-3	LCS							
Methylmercury (as MeHg)-Total			80.5		%		70-130	24-NOV-22
WG3774095-1	MB							
Methylmercury (as MeHg)-Total			<0.000020		ug/L		0.00002	24-NOV-22
WG3774095-4	MS	L2738661-4						
Methylmercury (as MeHg)-Total			90.7		%		60-140	24-NOV-22
MET-D-CCMS-WP								
Water								
Batch	R5888944							
WG3771581-2	LCS							
Aluminum (Al)-Dissolved			98.0		%		80-120	07-NOV-22
Antimony (Sb)-Dissolved			107.1		%		80-120	07-NOV-22
Arsenic (As)-Dissolved			101.9		%		80-120	07-NOV-22
Barium (Ba)-Dissolved			101.8		%		80-120	07-NOV-22
Beryllium (Be)-Dissolved			96.5		%		80-120	07-NOV-22
Bismuth (Bi)-Dissolved			97.9		%		80-120	07-NOV-22
Boron (B)-Dissolved			97.1		%		80-120	07-NOV-22
Cadmium (Cd)-Dissolved			103.7		%		80-120	07-NOV-22
Calcium (Ca)-Dissolved			99.9		%		80-120	07-NOV-22
Cesium (Cs)-Dissolved			95.5		%		80-120	07-NOV-22
Chromium (Cr)-Dissolved			102.2		%		80-120	07-NOV-22
Cobalt (Co)-Dissolved			101.3		%		80-120	07-NOV-22
Copper (Cu)-Dissolved			102.5		%		80-120	07-NOV-22
Iron (Fe)-Dissolved			93.5		%		80-120	07-NOV-22
Lead (Pb)-Dissolved			98.9		%		80-120	07-NOV-22
Lithium (Li)-Dissolved			96.9		%		80-120	07-NOV-22
Magnesium (Mg)-Dissolved			111.6		%		80-120	07-NOV-22
Manganese (Mn)-Dissolved			100.3		%		80-120	07-NOV-22
Molybdenum (Mo)-Dissolved			99.0		%		80-120	07-NOV-22
Nickel (Ni)-Dissolved			100.1		%		80-120	07-NOV-22
Phosphorus (P)-Dissolved			101.2		%		80-120	07-NOV-22
Potassium (K)-Dissolved			101.3		%		80-120	07-NOV-22
Rubidium (Rb)-Dissolved			97.0		%		80-120	07-NOV-22
Selenium (Se)-Dissolved			102.0		%		80-120	07-NOV-22
Silicon (Si)-Dissolved			99.7		%		80-120	07-NOV-22
Silver (Ag)-Dissolved			95.3		%		80-120	07-NOV-22
Sodium (Na)-Dissolved			100.7		%		80-120	07-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5888944							
WG3771581-2	LCS							
Strontium (Sr)-Dissolved			92.6		%		80-120	07-NOV-22
Sulfur (S)-Dissolved			96.3		%		80-120	07-NOV-22
Tellurium (Te)-Dissolved			92.8		%		80-120	07-NOV-22
Thallium (Tl)-Dissolved			98.3		%		80-120	07-NOV-22
Thorium (Th)-Dissolved			91.6		%		80-120	07-NOV-22
Tin (Sn)-Dissolved			101.6		%		80-120	07-NOV-22
Titanium (Ti)-Dissolved			97.6		%		80-120	07-NOV-22
Tungsten (W)-Dissolved			101.6		%		80-120	07-NOV-22
Uranium (U)-Dissolved			95.9		%		80-120	07-NOV-22
Vanadium (V)-Dissolved			101.1		%		80-120	07-NOV-22
Zinc (Zn)-Dissolved			101.0		%		80-120	07-NOV-22
Zirconium (Zr)-Dissolved			82.9		%		80-120	07-NOV-22
WG3771581-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	07-NOV-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	07-NOV-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	07-NOV-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	07-NOV-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	07-NOV-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	07-NOV-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	07-NOV-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	07-NOV-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	07-NOV-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	07-NOV-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	07-NOV-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	07-NOV-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	07-NOV-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	07-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch R5888944								
WG3771581-1 MB								
Potassium (K)-Dissolved			<0.050		mg/L		0.05	07-NOV-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	07-NOV-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	07-NOV-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	07-NOV-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	07-NOV-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	07-NOV-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	07-NOV-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	07-NOV-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	07-NOV-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	07-NOV-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	07-NOV-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	07-NOV-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	07-NOV-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	07-NOV-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	07-NOV-22
Batch R5889776								
WG3771817-2 LCS								
Aluminum (Al)-Dissolved			99.4		%		80-120	08-NOV-22
Antimony (Sb)-Dissolved			101.0		%		80-120	08-NOV-22
Arsenic (As)-Dissolved			102.4		%		80-120	08-NOV-22
Barium (Ba)-Dissolved			100.3		%		80-120	08-NOV-22
Beryllium (Be)-Dissolved			100.2		%		80-120	08-NOV-22
Bismuth (Bi)-Dissolved			95.9		%		80-120	08-NOV-22
Boron (B)-Dissolved			96.6		%		80-120	08-NOV-22
Cadmium (Cd)-Dissolved			98.3		%		80-120	08-NOV-22
Calcium (Ca)-Dissolved			96.8		%		80-120	08-NOV-22
Cesium (Cs)-Dissolved			101.6		%		80-120	08-NOV-22
Chromium (Cr)-Dissolved			96.9		%		80-120	08-NOV-22
Cobalt (Co)-Dissolved			96.5		%		80-120	08-NOV-22
Copper (Cu)-Dissolved			94.2		%		80-120	08-NOV-22
Iron (Fe)-Dissolved			97.2		%		80-120	08-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5889776							
WG3771817-2	LCS							
Lead (Pb)-Dissolved			94.5		%		80-120	08-NOV-22
Lithium (Li)-Dissolved			94.5		%		80-120	08-NOV-22
Magnesium (Mg)-Dissolved			96.8		%		80-120	08-NOV-22
Manganese (Mn)-Dissolved			97.6		%		80-120	08-NOV-22
Molybdenum (Mo)-Dissolved			101.2		%		80-120	08-NOV-22
Nickel (Ni)-Dissolved			95.1		%		80-120	08-NOV-22
Phosphorus (P)-Dissolved			104.7		%		80-120	08-NOV-22
Potassium (K)-Dissolved			95.4		%		80-120	08-NOV-22
Rubidium (Rb)-Dissolved			96.4		%		80-120	08-NOV-22
Selenium (Se)-Dissolved			94.1		%		80-120	08-NOV-22
Silicon (Si)-Dissolved			98.1		%		80-120	08-NOV-22
Silver (Ag)-Dissolved			99.0		%		80-120	08-NOV-22
Sodium (Na)-Dissolved			100.1		%		80-120	08-NOV-22
Strontium (Sr)-Dissolved			100.9		%		80-120	08-NOV-22
Sulfur (S)-Dissolved			102.1		%		80-120	08-NOV-22
Tellurium (Te)-Dissolved			99.9		%		80-120	08-NOV-22
Thallium (Tl)-Dissolved			95.5		%		80-120	08-NOV-22
Thorium (Th)-Dissolved			92.5		%		80-120	08-NOV-22
Tin (Sn)-Dissolved			99.98		%		80-120	08-NOV-22
Titanium (Ti)-Dissolved			98.3		%		80-120	08-NOV-22
Tungsten (W)-Dissolved			94.9		%		80-120	08-NOV-22
Uranium (U)-Dissolved			96.3		%		80-120	08-NOV-22
Vanadium (V)-Dissolved			99.2		%		80-120	08-NOV-22
Zinc (Zn)-Dissolved			103.5		%		80-120	08-NOV-22
Zirconium (Zr)-Dissolved			93.1		%		80-120	08-NOV-22
WG3771817-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	08-NOV-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	08-NOV-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	08-NOV-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	08-NOV-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5889776							
WG3771817-1 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	08-NOV-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	08-NOV-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	08-NOV-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	08-NOV-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	08-NOV-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	08-NOV-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	08-NOV-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	08-NOV-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	08-NOV-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	08-NOV-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	08-NOV-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	08-NOV-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	08-NOV-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	08-NOV-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	08-NOV-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	08-NOV-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	08-NOV-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	08-NOV-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	08-NOV-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	08-NOV-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	08-NOV-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	08-NOV-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	08-NOV-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	08-NOV-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	08-NOV-22

MET-T-CCMS-WP

Water



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5889776							
WG3771799-2	LCS							
Aluminum (Al)-Total			100.8		%		80-120	08-NOV-22
Antimony (Sb)-Total			105.5		%		80-120	08-NOV-22
Arsenic (As)-Total			99.7		%		80-120	08-NOV-22
Barium (Ba)-Total			100.2		%		80-120	08-NOV-22
Beryllium (Be)-Total			103.0		%		80-120	08-NOV-22
Bismuth (Bi)-Total			96.7		%		80-120	08-NOV-22
Boron (B)-Total			101.8		%		80-120	08-NOV-22
Cadmium (Cd)-Total			100.2		%		80-120	08-NOV-22
Calcium (Ca)-Total			97.3		%		80-120	08-NOV-22
Cesium (Cs)-Total			100.2		%		80-120	08-NOV-22
Chromium (Cr)-Total			100.8		%		80-120	08-NOV-22
Cobalt (Co)-Total			101.8		%		80-120	08-NOV-22
Copper (Cu)-Total			102.7		%		80-120	08-NOV-22
Iron (Fe)-Total			99.1		%		80-120	08-NOV-22
Lead (Pb)-Total			98.6		%		80-120	08-NOV-22
Lithium (Li)-Total			107.2		%		80-120	08-NOV-22
Magnesium (Mg)-Total			104.8		%		80-120	08-NOV-22
Manganese (Mn)-Total			99.7		%		80-120	08-NOV-22
Molybdenum (Mo)-Total			96.2		%		80-120	08-NOV-22
Nickel (Ni)-Total			101.5		%		80-120	08-NOV-22
Potassium (K)-Total			97.5		%		80-120	08-NOV-22
Phosphorus (P)-Total			106.1		%		80-120	08-NOV-22
Rubidium (Rb)-Total			97.1		%		80-120	08-NOV-22
Selenium (Se)-Total			102.2		%		80-120	08-NOV-22
Silicon (Si)-Total			100.7		%		80-120	08-NOV-22
Silver (Ag)-Total			99.1		%		80-120	08-NOV-22
Sodium (Na)-Total			103.1		%		80-120	08-NOV-22
Strontium (Sr)-Total			98.2		%		80-120	08-NOV-22
Sulfur (S)-Total			92.0		%		80-120	08-NOV-22
Tellurium (Te)-Total			96.6		%		80-120	08-NOV-22
Thallium (Tl)-Total			98.3		%		80-120	08-NOV-22
Thorium (Th)-Total			90.1		%		80-120	08-NOV-22
Tin (Sn)-Total			100.9		%		80-120	08-NOV-22
Titanium (Ti)-Total			99.7		%		80-120	08-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5889776							
WG3771799-2	LCS							
Tungsten (W)-Total			99.9		%		80-120	08-NOV-22
Uranium (U)-Total			98.6		%		80-120	08-NOV-22
Vanadium (V)-Total			99.96		%		80-120	08-NOV-22
Zinc (Zn)-Total			99.9		%		80-120	08-NOV-22
Zirconium (Zr)-Total			87.5		%		80-120	08-NOV-22
WG3771800-2	LCS							
Aluminum (Al)-Total			98.8		%		80-120	08-NOV-22
Antimony (Sb)-Total			106.9		%		80-120	08-NOV-22
Arsenic (As)-Total			100.1		%		80-120	08-NOV-22
Barium (Ba)-Total			101.0		%		80-120	08-NOV-22
Beryllium (Be)-Total			98.7		%		80-120	08-NOV-22
Bismuth (Bi)-Total			97.6		%		80-120	08-NOV-22
Boron (B)-Total			98.9		%		80-120	08-NOV-22
Cadmium (Cd)-Total			101.3		%		80-120	08-NOV-22
Calcium (Ca)-Total			97.5		%		80-120	08-NOV-22
Cesium (Cs)-Total			99.9		%		80-120	08-NOV-22
Chromium (Cr)-Total			99.4		%		80-120	08-NOV-22
Cobalt (Co)-Total			100.6		%		80-120	08-NOV-22
Copper (Cu)-Total			101.1		%		80-120	08-NOV-22
Iron (Fe)-Total			97.5		%		80-120	08-NOV-22
Lead (Pb)-Total			96.9		%		80-120	08-NOV-22
Lithium (Li)-Total			102.9		%		80-120	08-NOV-22
Magnesium (Mg)-Total			106.9		%		80-120	08-NOV-22
Manganese (Mn)-Total			97.9		%		80-120	08-NOV-22
Molybdenum (Mo)-Total			98.0		%		80-120	08-NOV-22
Nickel (Ni)-Total			100.0		%		80-120	08-NOV-22
Potassium (K)-Total			96.5		%		80-120	08-NOV-22
Phosphorus (P)-Total			94.2		%		80-120	08-NOV-22
Rubidium (Rb)-Total			96.1		%		80-120	08-NOV-22
Selenium (Se)-Total			103.3		%		80-120	08-NOV-22
Silicon (Si)-Total			101.0		%		80-120	08-NOV-22
Silver (Ag)-Total			101.3		%		80-120	08-NOV-22
Sodium (Na)-Total			103.2		%		80-120	08-NOV-22
Strontium (Sr)-Total			98.1		%		80-120	08-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5889776							
WG3771800-2	LCS							
Sulfur (S)-Total			89.5		%		80-120	08-NOV-22
Tellurium (Te)-Total			99.1		%		80-120	08-NOV-22
Thallium (Tl)-Total			97.7		%		80-120	08-NOV-22
Thorium (Th)-Total			94.2		%		80-120	08-NOV-22
Tin (Sn)-Total			101.5		%		80-120	08-NOV-22
Titanium (Ti)-Total			95.3		%		80-120	08-NOV-22
Tungsten (W)-Total			99.1		%		80-120	08-NOV-22
Uranium (U)-Total			96.4		%		80-120	08-NOV-22
Vanadium (V)-Total			99.4		%		80-120	08-NOV-22
Zinc (Zn)-Total			102.6		%		80-120	08-NOV-22
Zirconium (Zr)-Total			90.1		%		80-120	08-NOV-22
WG3771799-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	08-NOV-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	08-NOV-22
Boron (B)-Total			<0.010		mg/L		0.01	08-NOV-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	08-NOV-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	08-NOV-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	08-NOV-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	08-NOV-22
Iron (Fe)-Total			<0.010		mg/L		0.01	08-NOV-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	08-NOV-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	08-NOV-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	08-NOV-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	08-NOV-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	08-NOV-22
Potassium (K)-Total			<0.050		mg/L		0.05	08-NOV-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	08-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5889776							
WG3771799-1 MB								
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	08-NOV-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	08-NOV-22
Silicon (Si)-Total			<0.10		mg/L		0.1	08-NOV-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	08-NOV-22
Sodium (Na)-Total			<0.050		mg/L		0.05	08-NOV-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	08-NOV-22
Sulfur (S)-Total			<0.50		mg/L		0.5	08-NOV-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	08-NOV-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	08-NOV-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	08-NOV-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	08-NOV-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	08-NOV-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	08-NOV-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	08-NOV-22
WG3771800-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	08-NOV-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	08-NOV-22
Boron (B)-Total			<0.010		mg/L		0.01	08-NOV-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	08-NOV-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	08-NOV-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	08-NOV-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	08-NOV-22
Iron (Fe)-Total			<0.010		mg/L		0.01	08-NOV-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	08-NOV-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	08-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch R5889776								
WG3771800-1 MB								
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	08-NOV-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	08-NOV-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	08-NOV-22
Potassium (K)-Total			<0.050		mg/L		0.05	08-NOV-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	08-NOV-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	08-NOV-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	08-NOV-22
Silicon (Si)-Total			<0.10		mg/L		0.1	08-NOV-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	08-NOV-22
Sodium (Na)-Total			<0.050		mg/L		0.05	08-NOV-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	08-NOV-22
Sulfur (S)-Total			<0.50		mg/L		0.5	08-NOV-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	08-NOV-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	08-NOV-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	08-NOV-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	08-NOV-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	08-NOV-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	08-NOV-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	08-NOV-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	08-NOV-22
Batch R5891478								
WG3771800-4 DUP		L2738661-7						
Aluminum (Al)-Total		0.270	0.277		mg/L	2.6	20	10-NOV-22
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-NOV-22
Arsenic (As)-Total		0.00080	0.00079		mg/L	1.5	20	10-NOV-22
Barium (Ba)-Total		0.0337	0.0337		mg/L	0.2	20	10-NOV-22
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-NOV-22
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	10-NOV-22
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	10-NOV-22
Cadmium (Cd)-Total		0.0000352	0.0000377		mg/L	6.8	20	10-NOV-22
Calcium (Ca)-Total		7.42	7.56		mg/L	1.9	20	10-NOV-22



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MET-T-CCMS-WP		Water						
Batch	R5891478							
WG3771800-4	DUP	L2738661-7						
Cesium (Cs)-Total		0.000085	0.000076		mg/L	11	20	10-NOV-22
Chromium (Cr)-Total		0.00061	0.00067		mg/L	10	20	10-NOV-22
Cobalt (Co)-Total		0.00056	0.00058		mg/L	5.0	20	10-NOV-22
Copper (Cu)-Total		0.00116	0.00108		mg/L	7.9	20	10-NOV-22
Iron (Fe)-Total		1.98	2.00		mg/L	1.1	20	10-NOV-22
Lead (Pb)-Total		0.000432	0.000424		mg/L	1.8	20	10-NOV-22
Lithium (Li)-Total		0.0020	0.0020		mg/L	0.1	20	10-NOV-22
Magnesium (Mg)-Total		1.34	1.38		mg/L	2.7	20	10-NOV-22
Manganese (Mn)-Total		0.144	0.144		mg/L	0.0	20	10-NOV-22
Molybdenum (Mo)-Total		0.000257	0.000242		mg/L	5.8	20	10-NOV-22
Nickel (Ni)-Total		0.00127	0.00155	J	mg/L	0.00028	0.001	10-NOV-22
Potassium (K)-Total		1.18	1.18		mg/L	0.4	20	10-NOV-22
Phosphorus (P)-Total		0.461	0.454		mg/L	1.4	20	10-NOV-22
Rubidium (Rb)-Total		0.00273	0.00273		mg/L	0.0	20	10-NOV-22
Selenium (Se)-Total		<0.000050	0.000062	RPD-NA	mg/L	N/A	20	10-NOV-22
Silicon (Si)-Total		5.31	5.48		mg/L	3.1	20	10-NOV-22
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	10-NOV-22
Sodium (Na)-Total		1.24	1.30		mg/L	5.3	20	10-NOV-22
Strontium (Sr)-Total		0.0183	0.0176		mg/L	3.9	20	10-NOV-22
Sulfur (S)-Total		<0.50	<0.50	RPD-NA	mg/L	N/A	20	10-NOV-22
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	10-NOV-22
Thallium (Tl)-Total		0.000011	<0.000010	RPD-NA	mg/L	N/A	20	10-NOV-22
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-NOV-22
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-NOV-22
Titanium (Ti)-Total		0.0102	0.0105		mg/L	2.9	20	10-NOV-22
Tungsten (W)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-NOV-22
Uranium (U)-Total		0.000019	0.000021		mg/L	11	20	10-NOV-22
Vanadium (V)-Total		0.00081	0.00080		mg/L	1.3	20	10-NOV-22
Zinc (Zn)-Total		0.0128	0.0144		mg/L	12	20	10-NOV-22
Zirconium (Zr)-Total		0.00025	0.00023		mg/L	7.7	20	10-NOV-22
WG3771800-5	MS	L2738661-7						
Aluminum (Al)-Total			N/A	MS-B	%		-	10-NOV-22
Antimony (Sb)-Total			103.8		%		70-130	10-NOV-22
Arsenic (As)-Total			103.2		%		70-130	10-NOV-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5891478							
WG3771800-5 MS		L2738661-7						
Barium (Ba)-Total			N/A	MS-B	%	-		10-NOV-22
Beryllium (Be)-Total			108.7		%		70-130	10-NOV-22
Bismuth (Bi)-Total			114.4		%		70-130	10-NOV-22
Boron (B)-Total			102.9		%		70-130	10-NOV-22
Cadmium (Cd)-Total			106.9		%		70-130	10-NOV-22
Calcium (Ca)-Total			N/A	MS-B	%	-		10-NOV-22
Cesium (Cs)-Total			104.0		%		70-130	10-NOV-22
Chromium (Cr)-Total			102.6		%		70-130	10-NOV-22
Cobalt (Co)-Total			103.0		%		70-130	10-NOV-22
Copper (Cu)-Total			101.7		%		70-130	10-NOV-22
Iron (Fe)-Total			99.8		%		70-130	10-NOV-22
Lead (Pb)-Total			99.7		%		70-130	10-NOV-22
Lithium (Li)-Total			112.8		%		70-130	10-NOV-22
Magnesium (Mg)-Total			N/A	MS-B	%	-		10-NOV-22
Manganese (Mn)-Total			N/A	MS-B	%	-		10-NOV-22
Molybdenum (Mo)-Total			95.8		%		70-130	10-NOV-22
Nickel (Ni)-Total			102.6		%		70-130	10-NOV-22
Potassium (K)-Total			104.4		%		70-130	10-NOV-22
Phosphorus (P)-Total			99.3		%		70-130	10-NOV-22
Rubidium (Rb)-Total			104.6		%		70-130	10-NOV-22
Selenium (Se)-Total			109.7		%		70-130	10-NOV-22
Silicon (Si)-Total			107.6		%		70-130	10-NOV-22
Silver (Ag)-Total			98.8		%		70-130	10-NOV-22
Sodium (Na)-Total			103.8		%		70-130	10-NOV-22
Strontium (Sr)-Total			97.8		%		70-130	10-NOV-22
Sulfur (S)-Total			105.1		%		70-130	10-NOV-22
Tellurium (Te)-Total			101.0		%		70-130	10-NOV-22
Thallium (Tl)-Total			101.2		%		70-130	10-NOV-22
Thorium (Th)-Total			99.9		%		70-130	10-NOV-22
Tin (Sn)-Total			102.2		%		70-130	10-NOV-22
Titanium (Ti)-Total			101.6		%		70-130	10-NOV-22
Tungsten (W)-Total			99.7		%		70-130	10-NOV-22
Uranium (U)-Total			96.5		%		70-130	10-NOV-22
Vanadium (V)-Total			103.4		%		70-130	10-NOV-22



Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-L-IC-N-WP		Water						
Batch	R5886256							
WG3770717-7	DUP	L2738661-9						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-NOV-22
WG3770717-2	LCS							
Nitrite (as N)			99.1		%		90-110	01-NOV-22
WG3770717-6	LCS							
Nitrite (as N)			99.2		%		90-110	01-NOV-22
WG3770717-1	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	01-NOV-22
WG3770717-5	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	01-NOV-22
WG3770717-8	MS	L2738661-9						
Nitrite (as N)			106.2		%		75-125	01-NOV-22
NO3-L-IC-N-WP		Water						
Batch	R5886256							
WG3770717-7	DUP	L2738661-9						
Nitrate (as N)		0.0139	0.0134		mg/L	3.7	20	01-NOV-22
WG3770717-2	LCS							
Nitrate (as N)			99.4		%		90-110	01-NOV-22
WG3770717-6	LCS							
Nitrate (as N)			100.1		%		90-110	01-NOV-22
WG3770717-1	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	01-NOV-22
WG3770717-5	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	01-NOV-22
WG3770717-8	MS	L2738661-9						
Nitrate (as N)			106.9		%		75-125	01-NOV-22
P-T-COL-WP		Water						
Batch	R5888121							
WG3771469-10	LCS							
Phosphorus (P)-Total			95.5		%		80-120	07-NOV-22
WG3771469-14	LCS							
Phosphorus (P)-Total			94.6		%		80-120	07-NOV-22
WG3771469-13	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	07-NOV-22
WG3771469-9	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	07-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-WP		Water						
Batch	R5889281							
WG3771814-7 DUP		L2738661-15						
Phosphorus (P)-Total		0.119	0.116		mg/L	3.0	20	09-NOV-22
WG3771814-2 LCS								
Phosphorus (P)-Total			96.8		%		80-120	09-NOV-22
WG3771814-6 LCS								
Phosphorus (P)-Total			97.3		%		80-120	09-NOV-22
WG3771814-1 MB								
Phosphorus (P)-Total			<0.0030		mg/L		0.003	09-NOV-22
WG3771814-5 MB								
Phosphorus (P)-Total			<0.0030		mg/L		0.003	09-NOV-22
WG3771814-8 MS		L2738661-14						
Phosphorus (P)-Total			95.6		%		70-130	09-NOV-22
Batch	R5891777							
WG3772250-3 DUP		L2738661-11						
Phosphorus (P)-Total		0.0153	0.0151		mg/L	1.4	20	15-NOV-22
WG3772250-2 LCS								
Phosphorus (P)-Total			97.0		%		80-120	15-NOV-22
WG3772250-1 MB								
Phosphorus (P)-Total			<0.0030		mg/L		0.003	15-NOV-22
WG3772250-4 MS		L2738661-12						
Phosphorus (P)-Total			99.7		%		70-130	15-NOV-22
P-T-L-COL-WP		Water						
Batch	R5890116							
WG3772078-2 LCS								
Phosphorus (P)-Total			81.5		%		80-120	10-NOV-22
WG3772078-1 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	10-NOV-22
SO4-IC-N-WP		Water						
Batch	R5886256							
WG3770717-7 DUP		L2738661-9						
Sulfate (SO4)		0.74	0.73		mg/L	0.4	20	01-NOV-22
WG3770717-2 LCS								
Sulfate (SO4)			101.2		%		90-110	01-NOV-22
WG3770717-6 LCS								
Sulfate (SO4)			100.3		%		90-110	01-NOV-22
WG3770717-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	01-NOV-22
WG3770717-5 MB								



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-N-WP								
Batch R5886256								
WG3770717-5 MB	Water	L2738661-9	<0.30		mg/L		0.3	01-NOV-22
Sulfate (SO4)								
WG3770717-8 MS			107.3		%		75-125	01-NOV-22
Sulfate (SO4)								
SOLIDS-TOTSUS-LR-WP								
Batch R5885717								
WG3770835-2 LCS	Water	L2738661-17	96.8		%		85-115	01-NOV-22
Total Suspended Solids								
WG3770835-1 MB			<1.0		mg/L		1	01-NOV-22
Total Suspended Solids								
Batch R5886484								
WG3771032-3 DUP			1.8		mg/L	14	20	02-NOV-22
Total Suspended Solids								
WG3771032-2 LCS			88.5		%		85-115	02-NOV-22
Total Suspended Solids								
WG3771032-1 MB			<1.0		mg/L		1	02-NOV-22
Total Suspended Solids								
Batch R5887398								
WG3771181-3 DUP			1.9	J	mg/L	0.4	2	03-NOV-22
Total Suspended Solids								
WG3771181-2 LCS			99.3		%		85-115	03-NOV-22
Total Suspended Solids								
WG3771181-1 MB			<1.0		mg/L		1	03-NOV-22
Total Suspended Solids								

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Nitrate in Water by IC (Low Level)							
	1	27-OCT-22 09:57	01-NOV-22 10:30	3	5	days	EHTR
	2	27-OCT-22 05:00	01-NOV-22 10:30	3	5	days	EHTR
	3	28-OCT-22 11:24	01-NOV-22 10:30	3	4	days	EHTR
	4	28-OCT-22 11:53	01-NOV-22 10:30	3	4	days	EHTR
	5	28-OCT-22 12:10	01-NOV-22 10:30	3	4	days	EHTR
	6	28-OCT-22 12:05	01-NOV-22 10:30	3	4	days	EHTR
	7	28-OCT-22 12:53	01-NOV-22 10:30	3	4	days	EHTR
	8	28-OCT-22 13:13	01-NOV-22 10:30	3	4	days	EHTR
	9	28-OCT-22 13:34	01-NOV-22 10:30	3	4	days	EHTL
	10	28-OCT-22 14:24	01-NOV-22 10:30	3	4	days	EHTL
	11	28-OCT-22 15:04	01-NOV-22 10:30	3	4	days	EHTL
	12	28-OCT-22 15:22	01-NOV-22 10:30	3	4	days	EHTL
	13	28-OCT-22 15:40	01-NOV-22 10:30	3	4	days	EHTL
	14	28-OCT-22 15:56	01-NOV-22 10:30	3	4	days	EHTL
	15	28-OCT-22 16:27	01-NOV-22 10:30	3	4	days	EHTL
	17	28-OCT-22	01-NOV-22 10:30	3	4	days	EHTR
	18	28-OCT-22	01-NOV-22 10:30	3	4	days	EHTR
Nitrite in Water by IC (Low Level)							
	1	27-OCT-22 09:57	01-NOV-22 10:30	3	5	days	EHTR
	2	27-OCT-22 05:00	01-NOV-22 10:30	3	5	days	EHTR
	3	28-OCT-22 11:24	01-NOV-22 10:30	3	4	days	EHTR
	4	28-OCT-22 11:53	01-NOV-22 10:30	3	4	days	EHTR
	5	28-OCT-22 12:10	01-NOV-22 10:30	3	4	days	EHTR
	6	28-OCT-22 12:05	01-NOV-22 10:30	3	4	days	EHTR
	7	28-OCT-22 12:53	01-NOV-22 10:30	3	4	days	EHTR
	8	28-OCT-22 13:13	01-NOV-22 10:30	3	4	days	EHTR
	9	28-OCT-22 13:34	01-NOV-22 10:30	3	4	days	EHTL
	10	28-OCT-22 14:24	01-NOV-22 10:30	3	4	days	EHTL
	11	28-OCT-22 15:04	01-NOV-22 10:30	3	4	days	EHTL
	12	28-OCT-22 15:22	01-NOV-22 10:30	3	4	days	EHTL
	13	28-OCT-22 15:40	01-NOV-22 10:30	3	4	days	EHTL
	14	28-OCT-22 15:56	01-NOV-22 10:30	3	4	days	EHTL
	15	28-OCT-22 16:27	01-NOV-22 10:30	3	4	days	EHTL
	17	28-OCT-22	01-NOV-22 10:30	3	4	days	EHTR
	18	28-OCT-22	01-NOV-22 10:30	3	4	days	EHTR

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.

Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2738661 were received on 31-OCT-22 13:45.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

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The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



L2738661-COFC

COC Number: 17 - 744469

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Report To Contact and company name below will appear on the final report Company: STANTEC CONSULTING Contact: Karen Mathers Phone: 804-938-7621 Company address below will appear on the final report Street: 500-911 Portage Ave City/Province: Winn MB Postal Code: R3B 3B9		Report Format / Distribution Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL) Quality Control (QC) Report with Report ☐ YES ☐ NO ☐ Compare Results to Criteria on Report - provide details below if box checked Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: Karen Mathers@stantec.com Email 2: Brad.Horne@stantec.com Email 3: Jeremy.Sackson@stantec.com		Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply) Regular [R] ☒ Standard TAT if received by 3 pm - business days - no surcharges apply PRIORITY (Business Days) 4 day [P4-20%] ☐ 3 day [P3-25%] ☐ 2 day [P2-50%] ☐ EMERGENCY 1 Business day [E - 100%] ☐ Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐ Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm For tests that can not be performed according to the service level selected, you will be contacted.																															
Invoice To Same as Report To ☐ YES ☒ NO Copy of Invoice with Report ☐ YES ☒ NO Company: Contact:		Invoice Distribution Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: Email 2:		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="writing-mode: vertical-rl; transform: rotate(180deg);">NUMBER OF CONTAINERS</th> <th>ALK-SPEC-UP-ACV-TTR-TB</th> <th>ANIONS-6-L-IC-UP</th> <th>C-DC-HIC-UP-C-DC-HIC-UP</th> <th>HG-V-U-QAF-VA</th> <th>HG-T-U-QAF-VA</th> <th>MET-D-CCHS-UP-HANIPES</th> <th>MET-T-CCHS-UP</th> <th>NUB-COL-UP</th> <th>P-T-DOL-UP</th> <th>N-TOTK-UP</th> <th>SOLIDS-TOTSS-LR-UP</th> <th>MEK-D-GAF-VA-MEK-TGAF</th> <th>CUT-TL-CN-FREE-L-CAHND-L</th> <th>CR-CR6-PAAD-IC-L-UT</th> </tr> <tr> <td>11</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> </table>		NUMBER OF CONTAINERS	ALK-SPEC-UP-ACV-TTR-TB	ANIONS-6-L-IC-UP	C-DC-HIC-UP-C-DC-HIC-UP	HG-V-U-QAF-VA	HG-T-U-QAF-VA	MET-D-CCHS-UP-HANIPES	MET-T-CCHS-UP	NUB-COL-UP	P-T-DOL-UP	N-TOTK-UP	SOLIDS-TOTSS-LR-UP	MEK-D-GAF-VA-MEK-TGAF	CUT-TL-CN-FREE-L-CAHND-L	CR-CR6-PAAD-IC-L-UT	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NUMBER OF CONTAINERS	ALK-SPEC-UP-ACV-TTR-TB	ANIONS-6-L-IC-UP	C-DC-HIC-UP-C-DC-HIC-UP	HG-V-U-QAF-VA	HG-T-U-QAF-VA	MET-D-CCHS-UP-HANIPES	MET-T-CCHS-UP	NUB-COL-UP	P-T-DOL-UP	N-TOTK-UP	SOLIDS-TOTSS-LR-UP	MEK-D-GAF-VA-MEK-TGAF	CUT-TL-CN-FREE-L-CAHND-L	CR-CR6-PAAD-IC-L-UT																					
11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																					
Project Information ALS Account # / Quote #: Q88846 Job #: ALAMOS PO / AFE: LSD:		Oil and Gas Required Fields (client use) AFE/Cost Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location:		SAMPLES ON HOLD SUSPECTED HAZARD (see Special Instructions)																															
ALS Lab Work Order # (lab use only):		ALS Contact: J.D.		Sampler: BB, AR																															
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																															
1	AQF45	27-10-22	0957	W																															
2	AQF40	27-10-22	1050	W																															
3	AQM71	28-10-22	1124	W																															
4	AQM38		1153																																
5	AQM39		1210																																
6	AQM72		1253																																
7	AQM73		1313																																
8	AQM74		1334																																
9	AQF75		1424																																
10	AQF88		1441																																
11	AQF41		1504																																
12	ADF42		1522																																
Drinking Water (DW) Samples¹ (client use) Are samples taken from a Regulated DW System? ☐ YES ☐ NO Are samples for human consumption/ use? ☐ YES ☐ NO		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only) all dissolved bottles field filtered, both diss/total metals bottles preserved. Please sample TRIP+ FIELD BLANKS for proper analysis, unsure of what to check		SAMPLE CONDITION AS RECEIVED (lab use only) Frozen ☐ SIF Observations Yes ☐ No ☐ Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐ Cooling Initiated ☐ INITIAL COOLER TEMPERATURES °C: 5.8 FINAL COOLER TEMPERATURES °C:																															
SHIPMENT RELEASE (client use) Released by: B. Byrd Date: Oct 20/22 Time:		INITIAL SHIPMENT RECEPTION (lab use only) Received by:  Date: OCT 31 2022 Time: 1:45		FINAL SHIPMENT RECEPTION (lab use only) Received by: Date: Time:																															



Canada Toll Free: 1 800 668 9878



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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

JUNE 2018 FRONT

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.



Alamos Gold Inc.
ATTN: KAREN MATHERS
C/O Stantec Consulting
500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Date Received: 18-NOV-22
Report Date: 08-DEC-22 13:51 (MT)
Version: FINAL

Client Phone: 204-924-5735

Certificate of Analysis

Lab Work Order #: L2740826
Project P.O. #: NOT SUBMITTED
Job Reference: ALAMOS
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2740826-1 W 16-NOV-22 09:19 AQM28	L2740826-2 W 16-NOV-22 09:45 AQM29C	L2740826-3 W 16-NOV-22 10:04 AQM71	L2740826-4 W 16-NOV-22 10:20 AQM72	L2740826-5 W 16-NOV-22 10:46 AQM73
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	22.1	11.7	68.4	9.78	17.7
	Total Suspended Solids (mg/L)	<1.0	2.6	<1.0	2.0	3.0
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	4.3	3.4	10.6	12.2	4.2
	Alkalinity, Total (as CaCO3) (mg/L)	11.1	9.3	47.6	10.2	16.5
	Ammonia, Total (as N) (mg/L)	<0.010	0.012	0.022	0.017	0.021
	Bicarbonate (HCO3) (mg/L)	13.5	11.3	58.1	12.4	20.1
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	1.32	0.48	1.25	0.11	0.31
	Fluoride (F) (mg/L)	0.054	0.053	0.035	0.028	0.043
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	0.0106	0.0141	0.0143	<0.0051	0.0117
	Nitrate (as N) (mg/L)	0.0106	0.0141	0.0143	<0.0050	0.0117
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.35	0.24	0.32	0.31	0.45
	Phosphorus (P)-Total (mg/L)	0.0161	0.0161	0.0150	0.0200	0.0221
	Sulfate (SO4) (mg/L)	8.94	2.99	16.1	<0.30	0.72
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	11.8	8.69	14.9	15.2	13.1
	Total Organic Carbon (mg/L)	12.4	9.86	15.7	14.8	14.1
Total Metals	Aluminum (Al)-Total (mg/L)	0.179	0.0686	0.0550	0.108	0.0788
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	0.00014	0.00017	<0.00010
	Arsenic (As)-Total (mg/L)	0.00023	0.00017	0.00023	0.00029	0.00025
	Barium (Ba)-Total (mg/L)	0.00779	0.00624	0.0123	0.0124	0.00828
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000179	0.0000075	0.0000058	0.000248	0.0000059
	Calcium (Ca)-Total (mg/L)	6.02	3.14	22.5	3.36	5.14
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00037	0.00015		0.00056	0.00021
	Cobalt (Co)-Total (mg/L)	0.00079	0.00021	0.00023	0.00028	<0.00010
	Copper (Cu)-Total (mg/L)	0.00396	0.00157	0.00125	0.00500	0.00145
	Iron (Fe)-Total (mg/L)	0.863	0.339	0.316	1.85	0.213

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2740826-6	L2740826-7	L2740826-8	L2740826-9	L2740826-10
		Description	W	W	W	W	W
		Sampled Date	16-NOV-22	16-NOV-22	16-NOV-22	16-NOV-22	16-NOV-22
		Sampled Time	11:06	11:54	12:14	12:33	12:57
		Client ID	AQM74	AQF7S	AQF38	AQF41	AQF40
Grouping	Analyte						
WATER							
Physical Tests	Hardness (as CaCO3) (mg/L)		16.1	17.2	21.6	10.3	10.5
	Total Suspended Solids (mg/L)		<1.0	1.0	1.2	1.0	2.7
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		9.0	2.8	4.2	3.1	3.1
	Alkalinity, Total (as CaCO3) (mg/L)		11.1	17.3	22.6	11.4	11.0
	Ammonia, Total (as N) (mg/L)		0.058	0.046	0.014	<0.010	0.013
	Bicarbonate (HCO3) (mg/L)		13.5	21.1	27.6	13.9	13.4
	Bromide (Br) (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)		<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)		0.26	0.14	0.12	0.24	0.21
	Fluoride (F) (mg/L)		0.042	0.045	0.081	0.061	0.061
	Hydroxide (OH) (mg/L)		<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)		0.0064	0.0385	<0.0051	0.0324	0.0243
	Nitrate (as N) (mg/L)		0.0064	0.0385	<0.0050	0.0324	0.0243
	Nitrite (as N) (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)		0.47	0.27	0.35	0.22	0.23
	Phosphorus (P)-Total (mg/L)		0.0302	0.0129	0.0167	0.0167	0.0192
	Sulfate (SO4) (mg/L)		<0.30	0.82	<0.30	0.55	0.50
Cyanides	Cyanide, Weak Acid Diss (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Total (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cyanide, Free (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)		25.2	9.97	11.0	8.91	9.07
	Total Organic Carbon (mg/L)		27.4	10.8	12.1	9.15	10.2
Total Metals	Aluminum (Al)-Total (mg/L)		0.0816	0.0261	0.0365	0.0365	0.0824
	Antimony (Sb)-Total (mg/L)		0.00013	0.00012	0.00011	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)		0.00043	0.00024	0.00022	0.00018	0.00019
	Barium (Ba)-Total (mg/L)		0.00487	0.00875	0.00982	0.00518	0.00831
	Beryllium (Be)-Total (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)		0.0000056	0.0000069	0.0000144	<0.0000050	0.0000124
	Calcium (Ca)-Total (mg/L)		5.24	4.76	6.44	3.08	3.12
	Cesium (Cs)-Total (mg/L)		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)		0.00026	0.00022	0.00018	0.00014	0.00030
	Cobalt (Co)-Total (mg/L)		0.00028	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)		<0.00050	<0.00050	0.00117	<0.00050	0.00067
	Iron (Fe)-Total (mg/L)		0.728	0.078	0.071	0.194	0.299

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2740826-11 W 16-NOV-22 13:18 AQF42	L2740826-12 W 16-NOV-22 13:37 AQF45	L2740826-13 W 16-NOV-22 13:37 QC-01	L2740826-14 W 17-NOV-22 09:08 AQF46	L2740826-15 W 17-NOV-22 09:27 AQF43
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	11.2	12.5	20.1	35.0	10.8
	Total Suspended Solids (mg/L)	35.3	1.5 ^{HTD}	2.5	<1.0	1.1
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	3.3	3.2	4.3	6.0	3.5
	Alkalinity, Total (as CaCO3) (mg/L)	11.5	12.9	11.6	34.2	11.1
	Ammonia, Total (as N) (mg/L)	0.019	<0.010	<0.010	0.055	0.031
	Bicarbonate (HCO3) (mg/L)	14.0	15.7	14.2	41.7	13.5
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	<0.60
	Chloride (Cl) (mg/L)	0.28	0.25	0.85	0.20	0.21
	Fluoride (F) (mg/L)	0.061	0.063	0.053	0.045	0.062
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	<0.34
	Nitrate and Nitrite as N (mg/L)	0.0248	0.0296	0.0116	0.0412	0.0268
	Nitrate (as N) (mg/L)	0.0248	0.0296	0.0116	0.0412	0.0268
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Kjeldahl Nitrogen (mg/L)	0.28	<0.20	0.22	0.41	0.20
	Phosphorus (P)-Total (mg/L)	0.0192	0.0134	0.0142	0.0121	0.0151
	Sulfate (SO4) (mg/L)	0.71	0.63	8.79	0.69	0.51
	Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
Cyanide, Total (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cyanide, Free (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	9.35	9.77	13.5	14.1	9.72
	Total Organic Carbon (mg/L)	9.59	9.92	12.9	14.2	9.94
Total Metals	Aluminum (Al)-Total (mg/L)	0.158	0.0473	0.173	0.0269	0.0402
	Antimony (Sb)-Total (mg/L)	0.00013	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00021	0.00019	0.00025	0.00027	0.00016
	Barium (Ba)-Total (mg/L)	0.0144	0.00549	0.00753	0.0100	0.00527
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000306	<0.0000050	0.0000164	0.0000051	<0.0000050
	Calcium (Ca)-Total (mg/L)	3.30	3.55	6.20	10.9	3.13
	Cesium (Cs)-Total (mg/L)	0.000019	<0.000010	<0.000010	<0.000010	<0.000010
	Chromium (Cr)-Total (mg/L)	0.00076	0.00017	0.00038	0.00014	0.00016
	Cobalt (Co)-Total (mg/L)	0.00012	<0.00010	0.00070	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	0.00091	<0.00050	0.00398	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	0.421	0.207	0.900	0.101	0.206

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2740826-16 W 17-NOV-22 09:48 AQF44	L2740826-17 W 17-NOV-22 10:24 FEILD BLANK		
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)		12.2	<0.20		
	Total Suspended Solids (mg/L)		1.9	<1.0		
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		2.7	2.6		
	Alkalinity, Total (as CaCO3) (mg/L)		13.2	<1.0		
	Ammonia, Total (as N) (mg/L)		<0.010	<0.010		
	Bicarbonate (HCO3) (mg/L)		16.1	<1.2		
	Bromide (Br) (mg/L)		<0.10	<0.10		
	Carbonate (CO3) (mg/L)		<0.60	<0.60		
	Chloride (Cl) (mg/L)		0.23	<0.10		
	Fluoride (F) (mg/L)		0.062	<0.020		
	Hydroxide (OH) (mg/L)		<0.34	<0.34		
	Nitrate and Nitrite as N (mg/L)		0.0285	<0.0051		
	Nitrate (as N) (mg/L)		0.0285	<0.0050		
	Nitrite (as N) (mg/L)		<0.0010	<0.0010		
	Total Kjeldahl Nitrogen (mg/L)		0.25	<0.20		
	Phosphorus (P)-Total (mg/L)		0.0148	<0.0010		
	Sulfate (SO4) (mg/L)		0.59	<0.30		
Cyanides	Cyanide, Weak Acid Diss (mg/L)		<0.0010	<0.0010		
	Cyanide, Total (mg/L)		<0.0010	<0.0010		
	Cyanide, Free (mg/L)		<0.0010	<0.0010		
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)		10.1	0.88		
	Total Organic Carbon (mg/L)		9.92	<0.50 ^{RRV}		
Total Metals	Aluminum (Al)-Total (mg/L)		0.0836	<0.0030		
	Antimony (Sb)-Total (mg/L)		<0.00010	<0.00010		
	Arsenic (As)-Total (mg/L)		0.00020	<0.00010		
	Barium (Ba)-Total (mg/L)		0.00584	<0.00010		
	Beryllium (Be)-Total (mg/L)		<0.00010	<0.00010		
	Bismuth (Bi)-Total (mg/L)		<0.000050	<0.000050		
	Boron (B)-Total (mg/L)		<0.010	<0.010		
	Cadmium (Cd)-Total (mg/L)		0.0000106	<0.0000050		
	Calcium (Ca)-Total (mg/L)		3.42	<0.050		
	Cesium (Cs)-Total (mg/L)		<0.000010	<0.000010		
	Chromium (Cr)-Total (mg/L)		0.00028	<0.00010		
	Cobalt (Co)-Total (mg/L)		<0.00010	<0.00010		
	Copper (Cu)-Total (mg/L)		<0.00050	<0.00050		
	Iron (Fe)-Total (mg/L)		0.265	<0.010		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2740826-1 W 16-NOV-22 09:19 AQM28	L2740826-2 W 16-NOV-22 09:45 AQM29C	L2740826-3 W 16-NOV-22 10:04 AQM71	L2740826-4 W 16-NOV-22 10:20 AQM72	L2740826-5 W 16-NOV-22 10:46 AQM73
Grouping	Analyte					
WATER						
Total Metals	Lead (Pb)-Total (mg/L)	0.000063	<0.000050	0.000082	0.000473	0.000120
	Lithium (Li)-Total (mg/L)	0.0012	0.0011	0.0013	0.0012	<0.0010
	Magnesium (Mg)-Total (mg/L)	1.41	0.858	2.43	0.762	1.20
	Manganese (Mn)-Total (mg/L)	0.0320	0.0145	0.243	0.0664	0.0345
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	0.000075	<0.000050	0.000052	0.000091	0.000123
	Nickel (Ni)-Total (mg/L)	0.0622	0.0159	<0.00050	0.00080	<0.00050
	Phosphorus (P)-Total (mg/L)	0.032	<0.030	<0.030	<0.030	0.039
	Potassium (K)-Total (mg/L)	0.757	0.585	1.02	0.144	0.627
	Rubidium (Rb)-Total (mg/L)	0.00095	0.00099	0.00109	0.00033	0.00082
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Total (mg/L)	3.33	2.95	6.65	2.93	0.90
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	1.51	1.12	2.04	0.701	1.12
	Strontium (Sr)-Total (mg/L)	0.0198	0.0136	0.0329	0.00945	0.0126
	Sulfur (S)-Total (mg/L)	3.38	1.05	6.37	<0.50	<0.50
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	0.00011	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00156	0.00126	0.00147	0.00297	0.00170
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.000027	0.000025	0.000014	0.000019	0.000022
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	0.0152	0.0044	<0.0030	0.0101	0.0039
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.126	0.0402	0.0373	0.0535	0.0367
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00030	0.00025	0.00036	0.00028	0.00029
	Barium (Ba)-Dissolved (mg/L)	0.00706	0.00559	0.0113	0.00514	0.00641
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.0000149	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Dissolved (mg/L)	6.14	3.31	22.9	2.91	5.14
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2740826-6 W 16-NOV-22 11:06 AQM74	L2740826-7 W 16-NOV-22 11:54 AQF7S	L2740826-8 W 16-NOV-22 12:14 AQF38	L2740826-9 W 16-NOV-22 12:33 AQF41	L2740826-10 W 16-NOV-22 12:57 AQF40
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	0.000060	<0.000050	0.000072	<0.000050	0.000098	
	Lithium (Li)-Total (mg/L)	0.0014	<0.0010	<0.0010	<0.0010	<0.0010	
	Magnesium (Mg)-Total (mg/L)	1.01	1.67	1.64	0.870	0.932	
	Manganese (Mn)-Total (mg/L)	0.0574	0.00700	0.0211	0.00927	0.0203	
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000093	0.00196	0.000084	0.000102	
	Nickel (Ni)-Total (mg/L)	0.00055	<0.00050	<0.00050	<0.00050	<0.00050	
	Phosphorus (P)-Total (mg/L)	0.031	<0.030	<0.030	0.031	0.043	
	Potassium (K)-Total (mg/L)	0.078	0.650	0.570	0.506	0.547	
	Rubidium (Rb)-Total (mg/L)	<0.00020	0.00111	0.00077	0.00101	0.00116	
	Selenium (Se)-Total (mg/L)	<0.000050	0.000051	<0.000050	<0.000050	<0.000050	
	Silicon (Si)-Total (mg/L)	5.32	1.10	1.65	2.60	2.78	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	0.966	1.14	1.18	1.06	1.09	
	Strontium (Sr)-Total (mg/L)	0.0119	0.0148	0.0165	0.0126	0.0130	
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Total (mg/L)	0.00080	0.00050	0.00061	0.00091	0.00394	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	<0.000010	0.000011	0.000014	0.000025	0.000041	
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	0.0046	
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0779	0.0183	0.0153	0.0192	0.0223	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00038	0.00020	0.00020	0.00015	0.00016	
	Barium (Ba)-Dissolved (mg/L)	0.00494	0.00786	0.00817	0.00468	0.00471	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	0.0000070	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Calcium (Ca)-Dissolved (mg/L)	4.96	4.41	6.20	2.79	2.87	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2740826-11 W 16-NOV-22 13:18 AQF42	L2740826-12 W 16-NOV-22 13:37 AQF45	L2740826-13 W 16-NOV-22 13:37 QC-01	L2740826-14 W 17-NOV-22 09:08 AQF46	L2740826-15 W 17-NOV-22 09:27 AQF43
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	0.000142	<0.000050	0.000060	<0.000050	<0.000050	
	Lithium (Li)-Total (mg/L)	0.0011	<0.0010	0.0010	<0.0010	<0.0010	
	Magnesium (Mg)-Total (mg/L)	0.992	1.06	1.45	2.14	0.944	
	Manganese (Mn)-Total (mg/L)	0.0742	0.0108	0.0294	0.0176	0.0102	
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Molybdenum (Mo)-Total (mg/L)	0.000138	0.000103	0.000069	0.000077	0.000094	
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	0.0633	<0.00050	<0.00050	
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030	0.033	<0.030	<0.030	
	Potassium (K)-Total (mg/L)	0.578	0.558	0.789	0.806	0.536	
	Rubidium (Rb)-Total (mg/L)	0.00127	0.00095	0.00094	0.00107	0.00099	
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	0.000053	
	Silicon (Si)-Total (mg/L)	2.75	2.65	3.23	1.26	2.83	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	1.10	1.16	1.53	1.22	1.12	
	Strontium (Sr)-Total (mg/L)	0.0140	0.0146	0.0191	0.0188	0.0135	
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	3.18	<0.50	<0.50	
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Total (mg/L)	0.00017	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Total (mg/L)	0.00788	0.00128	0.00138	0.00069	0.00098	
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Total (mg/L)	0.000089	0.000028	0.000025	0.000013	0.000025	
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Total (mg/L)	0.0044	<0.0030	0.0152	<0.0030	<0.0030	
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0319	0.0197	0.120	0.0213	0.0181	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00015	0.00015	0.00021	0.00026	0.00015	
	Barium (Ba)-Dissolved (mg/L)	0.0149	0.00486	0.00685	0.00915	0.00476	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	0.0000154	<0.0000050	<0.0000050	
	Calcium (Ca)-Dissolved (mg/L)	3.04	3.39	5.87	10.7	2.94	
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2740826-16	L2740826-17			
		Description	W	W			
		Sampled Date	17-NOV-22	17-NOV-22			
		Sampled Time	09:48	10:24			
		Client ID	AQF44	FEILD BLANK			
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050				
	Lithium (Li)-Total (mg/L)	0.0010	<0.0010				
	Magnesium (Mg)-Total (mg/L)	1.08	<0.0050				
	Manganese (Mn)-Total (mg/L)	0.0152	<0.00010				
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050				
	Molybdenum (Mo)-Total (mg/L)	0.000098	<0.000050				
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050				
	Phosphorus (P)-Total (mg/L)	<0.030	<0.030				
	Potassium (K)-Total (mg/L)	0.567	<0.050				
	Rubidium (Rb)-Total (mg/L)	0.00101	<0.00020				
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050				
	Silicon (Si)-Total (mg/L)	2.97	<0.10				
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010				
	Sodium (Na)-Total (mg/L)	1.16	<0.050				
	Strontium (Sr)-Total (mg/L)	0.0140	<0.00020				
	Sulfur (S)-Total (mg/L)	<0.50	<0.50				
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020				
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010				
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010				
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010				
	Titanium (Ti)-Total (mg/L)	0.00267	<0.00030				
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010				
	Uranium (U)-Total (mg/L)	0.000030	<0.000010				
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050				
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030				
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020				
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD				
	Aluminum (Al)-Dissolved (mg/L)	0.0334	<0.0010				
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010				
	Arsenic (As)-Dissolved (mg/L)	0.00016	<0.00010				
	Barium (Ba)-Dissolved (mg/L)	0.00509	<0.00010				
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010				
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050				
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010				
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050				
	Calcium (Ca)-Dissolved (mg/L)	3.30	<0.050				
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	<0.000010				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2740826-1 W 16-NOV-22 09:19 AQM28	L2740826-2 W 16-NOV-22 09:45 AQM29C	L2740826-3 W 16-NOV-22 10:04 AQM71	L2740826-4 W 16-NOV-22 10:20 AQM72	L2740826-5 W 16-NOV-22 10:46 AQM73
Grouping	Analyte					
WATER						
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	0.00018	0.00011	0.00011	0.00017	0.00013
	Cobalt (Co)-Dissolved (mg/L)	0.00053	0.00015	0.00021	0.00022	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00327	0.00247	0.00213	0.00029	0.00060
	Iron (Fe)-Dissolved (mg/L)	0.589	0.192	0.240	1.37	0.087
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	0.000089	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.0010	0.0010	0.0011	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	1.63	0.843	2.71	0.610	1.19
	Manganese (Mn)-Dissolved (mg/L)	0.0201	0.00793	0.236	0.0618	0.0190
	Molybdenum (Mo)-Dissolved (mg/L)	0.000078	<0.000050	0.000118	<0.000050	0.000120
	Nickel (Ni)-Dissolved (mg/L)	0.0614	0.0157	0.00053	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.672	0.544	0.944	0.115	0.571
	Rubidium (Rb)-Dissolved (mg/L)	0.00086	0.00091	0.00105	0.00026	0.00079
	Selenium (Se)-Dissolved (mg/L)	0.000053	0.000052	0.000056	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	3.17	2.83	6.81	2.87	0.762
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.57	1.20	2.07	0.763	1.21
	Strontium (Sr)-Dissolved (mg/L)	0.0176	0.0116	0.0309	0.00793	0.0115
	Sulfur (S)-Dissolved (mg/L)	3.35	1.06	6.10	<0.50	0.62
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	0.00018	0.00011
	Titanium (Ti)-Dissolved (mg/L)	0.00066	0.00033	0.00061	0.00109	0.00050
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000020	0.000017	<0.000010	<0.000010	0.000017
	Vanadium (V)-Dissolved (mg/L)	0.00076	0.00070	0.00065	0.00072	0.00059
	Zinc (Zn)-Dissolved (mg/L)	0.0139	0.0064	0.0033	0.0020	0.0023
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	0.77	0.50	<0.50	0.52	<0.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2740826-6 W 16-NOV-22 11:06 AQM74	L2740826-7 W 16-NOV-22 11:54 AQF7S	L2740826-8 W 16-NOV-22 12:14 AQF38	L2740826-9 W 16-NOV-22 12:33 AQF41	L2740826-10 W 16-NOV-22 12:57 AQF40
Grouping	Analyte					
WATER						
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	0.00019	<0.00010	<0.00010	<0.00010	0.00015
	Cobalt (Co)-Dissolved (mg/L)	0.00023	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00712 ^{RRV}	0.00412 ^{RRV}	0.00540 ^{RRV}	0.00410 ^{RRV}	0.00504 ^{RRV}
	Iron (Fe)-Dissolved (mg/L)	0.660	0.056	0.057	0.120	0.138
	Lead (Pb)-Dissolved (mg/L)	0.000337 ^{RRV}	0.000165 ^{RRV}	0.000166	0.000146	0.000180
	Lithium (Li)-Dissolved (mg/L)	0.0013	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	0.906	1.51	1.48	0.810	0.815
	Manganese (Mn)-Dissolved (mg/L)	0.0532	0.00414	0.00167	0.00266	0.00449
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	0.000144	0.00199	0.000076	0.000090
	Nickel (Ni)-Dissolved (mg/L)	0.00058	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.074	0.595	0.523	0.484	0.525
	Rubidium (Rb)-Dissolved (mg/L)	<0.00020	0.00099	0.00080	0.00096	0.00095
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	4.74	1.02	1.51	2.39	2.41
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	0.874	1.03	1.07	0.979	1.00
	Strontium (Sr)-Dissolved (mg/L)	0.0112	0.0140	0.0164	0.0121	0.0128
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	0.00015	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00059	<0.00030	<0.00030	<0.00030	0.00034
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	0.000015	0.000018
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0079	0.0052	0.0065	0.0043	0.0103
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	0.67	0.87	<0.50	<0.50	<0.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2740826-11 W 16-NOV-22 13:18 AQF42	L2740826-12 W 16-NOV-22 13:37 AQF45	L2740826-13 W 16-NOV-22 13:37 QC-01	L2740826-14 W 17-NOV-22 09:08 AQF46	L2740826-15 W 17-NOV-22 09:27 AQF43
Grouping	Analyte					
WATER						
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	0.00078	<0.00010	0.00015	<0.00010	0.00011
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	0.00049	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00152	0.00418 ^{RRV}	0.00312	0.00033	0.00509 ^{RRV}
	Iron (Fe)-Dissolved (mg/L)	0.193	0.114	0.555	0.079	0.105
	Lead (Pb)-Dissolved (mg/L)	0.000066	0.000159 ^{RRV}	0.000051	<0.000050	0.00626 ^{RRV}
	Lithium (Li)-Dissolved (mg/L)	0.0010	0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	0.866	0.969	1.31	2.04	0.848
	Manganese (Mn)-Dissolved (mg/L)	0.0200	0.00279	0.0194	0.0160	0.00224
	Molybdenum (Mo)-Dissolved (mg/L)	0.000903 ^{RRV}	0.000150	<0.000050	0.000054	0.000087
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	0.0571	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Potassium (K)-Dissolved (mg/L)	0.512	0.522	0.667	0.775	0.490
	Rubidium (Rb)-Dissolved (mg/L)	0.00098	0.00089	0.00095	0.00099	0.00088
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	2.28	2.40	2.85	1.13	2.41
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.00	1.05	1.29	1.14	1.00
	Strontium (Sr)-Dissolved (mg/L)	0.0130	0.0137	0.0187	0.0178	0.0133
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	2.73	2.87 ^{RRV}	<0.50
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00102	<0.00030	0.00059	0.00039	0.00031
	Tungsten (W)-Dissolved (mg/L)	0.00092 ^{RRV}	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Dissolved (mg/L)	0.000059	0.000019	0.000015	<0.000010	0.000017
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0033	0.0060	0.0120	<0.0010	0.0048
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	0.52	0.57	0.58	<0.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2740826-16 W 17-NOV-22 09:48 AQF44	L2740826-17 W 17-NOV-22 10:24 FEILD BLANK		
Grouping	Analyte				
WATER					
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	0.00013	<0.00010		
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010		
	Copper (Cu)-Dissolved (mg/L)	0.00457 ^{RRV}	0.00197 ^{RRV}		
	Iron (Fe)-Dissolved (mg/L)	0.135	0.014		
	Lead (Pb)-Dissolved (mg/L)	0.000167 ^{RRV}	<0.000050		
	Lithium (Li)-Dissolved (mg/L)	0.0011	<0.0010		
	Magnesium (Mg)-Dissolved (mg/L)	0.964	<0.0050		
	Manganese (Mn)-Dissolved (mg/L)	0.00534	0.00023		
	Molybdenum (Mo)-Dissolved (mg/L)	0.000092	<0.000050		
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050		
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030		
	Potassium (K)-Dissolved (mg/L)	0.506	<0.050		
	Rubidium (Rb)-Dissolved (mg/L)	0.00098	<0.00020		
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050		
	Silicon (Si)-Dissolved (mg/L)	2.47	<0.050		
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010		
	Sodium (Na)-Dissolved (mg/L)	1.03	<0.050		
	Strontium (Sr)-Dissolved (mg/L)	0.0131	<0.00010		
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50		
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020		
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010		
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010		
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010		
	Titanium (Ti)-Dissolved (mg/L)	0.00050	<0.00030		
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010		
	Uranium (U)-Dissolved (mg/L)	0.000018	<0.000010		
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050		
	Zinc (Zn)-Dissolved (mg/L)	0.0050	0.0027		
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020		
Speciated Metals	Chromium, Hexavalent (ug/L)	0.51	<0.50		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Dissolved Organic Carbon	MS-B	L2740826-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Boron (B)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2740826-10, -11, -12, -13, -14, -15, -16, -17, -6, -7, -8, -9
Matrix Spike	Lithium (Li)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2740826-10, -11, -12, -13, -14, -15, -16, -17, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Uranium (U)-Dissolved	MS-B	L2740826-1, -2, -3, -4, -5
Matrix Spike	Calcium (Ca)-Total	MS-B	L2740826-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Copper (Cu)-Total	MS-B	L2740826-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2740826-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L2740826-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L2740826-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Ammonia, Total (as N)	MS-B	L2740826-15, -3

Qualifiers for Individual Parameters Listed:

Qualifier	Description
HTD	Hold time exceeded for re-analysis or dilution, but initial testing was conducted within hold time.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-TITR-TB	Water	Acidity	APHA 2310 B modified
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO3 2-/L.			
ALK-HCO3HCO3-CALC-WP	Water	Alkalinity, Bicarbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO3-/L.			
ALK-OHOH-CALC-WP	Water	Alkalinity, Hydroxide	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.			
ALK-TITR-WP	Water	Alkalinity, Total (as CaCO3)	APHA 2320B
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO3- and H2CO3 endpoints indicated electrometrically.			

Reference Information

BR-IC-N-WP	Water	Bromide in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
C-DOC-HTC-WP	Water	Dissolved Organic Carbon by Combustion	APHA 5310 B-WP
Filtered (0.45 um) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO ₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.			
C-TOC-HTC-WP	Water	Total Organic Carbon by Combustion	APHA 5310 B-WP
Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO ₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.			
CL-L-IC-N-WP	Water	Chloride in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
CN-FREE-L-CFA-WT	Water	Low Level Free Cyanide in water by CFA	ASTM 7237
This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.			
CN-T-L-CFA-WT	Water	Low Level Total Cyanide in water by CFA	ISO 14403-2:2002
This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, however it would be less than 1% and could be as low as zero.			
CN-WAD-L-CFA-WT	Water	Low level WAD Cyanide in water by CFA	APHA 4500CN I-Weak acid Dist Colorimet
This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.			
CR-CR6-PWQO-IC-WT	Water	Chromium +6	EPA 7199
This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.			
Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).			
EC-SCREEN-WP	Water	Conductivity Screen (Internal Use Only)	APHA 2510
Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc			
F-IC-N-WP	Water	Fluoride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
HARDNESS-CALC-WP	Water	Hardness Calculated	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
HG-T-CVAA-WP	Water	Mercury Total	EPA 1631E (mod)
Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.			
MET-D-CCMS-WP	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020B (mod)
Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
MET-T-CCMS-WP	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020B (mod.)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			

Reference Information

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	APHA 4500 NorgD (modified)
Aqueous samples are digested in a block digester with sulfuric acid and copper sulfate as a catalyst. Total Kjeldahl Nitrogen is then analyzed using a discrete analyzer with colorimetric detection.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-N-WP	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-L-IC-N-WP	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.			
P-T-L-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
SO4-IC-N-WP	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
SOLIDS-TOTSUS-LR-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 105°C.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2740826

Report Date: 08-DEC-22

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Client: Alamos Gold Inc.
C/O Stantec Consulting 500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Contact: KAREN MATHERS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-TITR-TB		Water						
Batch	R5897902							
WG3773962-3 DUP		L2740826-1						
Acidity (as CaCO ₃)		4.3	4.2		mg/L	4.2	20	24-NOV-22
WG3773962-2 LCS								
Acidity (as CaCO ₃)			95.5		%		85-115	24-NOV-22
WG3773962-1 MB								
Acidity (as CaCO ₃)			<2.0		mg/L		3	24-NOV-22
ALK-TITR-WP		Water						
Batch	R5895566							
WG3773605-14 LCS								
Alkalinity, Total (as CaCO ₃)			97.3		%		85-115	21-NOV-22
WG3773605-9 LCS								
Alkalinity, Total (as CaCO ₃)			99.1		%		85-115	21-NOV-22
WG3773605-11 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	21-NOV-22
WG3773605-6 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	21-NOV-22
Batch	R5897036							
WG3773933-4 LCS								
Alkalinity, Total (as CaCO ₃)			99.2		%		85-115	23-NOV-22
WG3773933-1 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	23-NOV-22
BR-IC-N-WP		Water						
Batch	R5895497							
WG3773354-3 DUP		L2740826-1						
Bromide (Br)		<0.10	<0.10	RPD-NA	mg/L	N/A	20	19-NOV-22
WG3773354-2 LCS								
Bromide (Br)			102.3		%		85-115	19-NOV-22
WG3773354-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	19-NOV-22
WG3773354-4 MS		L2740826-1						
Bromide (Br)			102.5		%		75-125	19-NOV-22
C-DOC-HTC-WP		Water						
Batch	R5900190							
WG3774715-3 DUP		L2740826-15						
Dissolved Organic Carbon		9.72	9.73		mg/L	0.1	20	29-NOV-22
WG3774715-2 LCS								
Dissolved Organic Carbon			96.9		%		80-120	29-NOV-22
WG3774715-1 MB								



Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DOC-HTC-WP								
Batch R5900190								
WG3774715-1 MB								
Dissolved Organic Carbon			<0.50		mg/L		0.5	29-NOV-22
WG3774715-4 MS		L2740826-16						
Dissolved Organic Carbon			N/A	MS-B	%		-	29-NOV-22
Batch R5902877								
WG3775352-2 LCS								
Dissolved Organic Carbon			103.9		%		80-120	06-DEC-22
WG3775352-1 MB								
Dissolved Organic Carbon			<0.50		mg/L		0.5	06-DEC-22
C-TOC-HTC-WP								
Batch R5900189								
WG3774716-3 DUP		L2740826-15						
Total Organic Carbon		9.94	10.2		mg/L	2.9	20	28-NOV-22
WG3774716-2 LCS								
Total Organic Carbon			96.7		%		80-120	28-NOV-22
WG3774716-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	28-NOV-22
WG3774716-4 MS		L2740826-16						
Total Organic Carbon			92.8		%		70-130	28-NOV-22
Batch R5903599								
WG3775513-2 LCS								
Total Organic Carbon			108.7		%		80-120	08-DEC-22
WG3775513-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	08-DEC-22
CL-L-IC-N-WP								
Batch R5895497								
WG3773354-3 DUP		L2740826-1						
Chloride (Cl)		1.32	1.31		mg/L	0.5	20	19-NOV-22
WG3773354-2 LCS								
Chloride (Cl)			101.0		%		90-110	19-NOV-22
WG3773354-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	19-NOV-22
WG3773354-4 MS		L2740826-1						
Chloride (Cl)			102.9		%		75-125	19-NOV-22
CN-FREE-L-CFA-WT								
Batch R5895497								



Quality Control Report

Workorder: L2740826

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-L-CFA-WT								
Batch R5898480								
WG3774197-3	DUP	L2740826-1						
Cyanide, Free		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-NOV-22
WG3774197-2	LCS		97.5		%		80-120	25-NOV-22
Cyanide, Free								
WG3774197-1	MB		<0.0010		mg/L		0.001	25-NOV-22
Cyanide, Free								
WG3774197-4	MS	L2740826-1	109.0		%		75-125	25-NOV-22
Cyanide, Free								
CN-T-L-CFA-WT								
Batch R5898480								
WG3774197-3	DUP	L2740826-1						
Cyanide, Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-NOV-22
WG3774197-2	LCS		91.5		%		80-120	25-NOV-22
Cyanide, Total								
WG3774197-1	MB		<0.0010		mg/L		0.001	25-NOV-22
Cyanide, Total								
WG3774197-4	MS	L2740826-1	94.9		%		70-130	25-NOV-22
Cyanide, Total								
CN-WAD-L-CFA-WT								
Batch R5898480								
WG3774197-3	DUP	L2740826-1						
Cyanide, Weak Acid Diss		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-NOV-22
WG3774197-2	LCS		103.8		%		80-120	25-NOV-22
Cyanide, Weak Acid Diss								
WG3774197-1	MB		<0.0010		mg/L		0.001	25-NOV-22
Cyanide, Weak Acid Diss								
WG3774197-4	MS	L2740826-1	110.9		%		70-130	25-NOV-22
Cyanide, Weak Acid Diss								
CR-CR6-PWQO-IC-WT								
Batch R5897536								
WG3774129-2	LCS		102.6		%		80-120	24-NOV-22
Chromium, Hexavalent								
WG3774129-1	MB		<0.50		ug/L		0.5	24-NOV-22
Chromium, Hexavalent								
Batch R5897537								
WG3774130-2	LCS		101.6		%		80-120	24-NOV-22
Chromium, Hexavalent								
WG3774130-1	MB							



Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-PWQO-IC-WT								
Batch R5897537								
WG3774130-1 MB	Water							
Chromium, Hexavalent			<0.50		ug/L		0.5	24-NOV-22
F-IC-N-WP								
Batch R5895497								
WG3773354-3 DUP		L2740826-1						
Fluoride (F)		0.054	0.054		mg/L	0.4	20	19-NOV-22
WG3773354-2 LCS								
Fluoride (F)			105.3		%		90-110	19-NOV-22
WG3773354-1 MB								
Fluoride (F)			<0.020		mg/L		0.02	19-NOV-22
WG3773354-4 MS		L2740826-1						
Fluoride (F)			108.2		%		75-125	19-NOV-22
HG-T-CVAA-WP								
Batch R5896823								
WG3773876-2 LCS								
Mercury (Hg)-Total			101.1		%		80-120	23-NOV-22
WG3773876-1 MB								
Mercury (Hg)-Total			<0.000005C		mg/L		0.000005	23-NOV-22
Batch R5897382								
WG3774039-3 DUP		L2740826-4						
Mercury (Hg)-Total		<0.0000050	<0.000005C	RPD-NA	mg/L	N/A	20	24-NOV-22
WG3774039-2 LCS								
Mercury (Hg)-Total			96.8		%		80-120	24-NOV-22
WG3774039-1 MB								
Mercury (Hg)-Total			<0.000005C		mg/L		0.000005	24-NOV-22
WG3774039-4 MS		L2740826-5						
Mercury (Hg)-Total			105.2		%		70-130	24-NOV-22
MET-D-CCMS-WP								
Batch R5896036								
WG3773439-6 LCS								
Aluminum (Al)-Dissolved			102.3		%		80-120	21-NOV-22
Antimony (Sb)-Dissolved			98.9		%		80-120	21-NOV-22
Arsenic (As)-Dissolved			102.0		%		80-120	21-NOV-22
Barium (Ba)-Dissolved			99.8		%		80-120	21-NOV-22
Beryllium (Be)-Dissolved			100.8		%		80-120	21-NOV-22
Bismuth (Bi)-Dissolved			100.7		%		80-120	21-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5896036							
WG3773439-5 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	21-NOV-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	21-NOV-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	21-NOV-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	21-NOV-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	21-NOV-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	21-NOV-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	21-NOV-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	21-NOV-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	21-NOV-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	21-NOV-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	21-NOV-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	21-NOV-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	21-NOV-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	21-NOV-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	21-NOV-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	21-NOV-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	21-NOV-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	21-NOV-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	21-NOV-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	21-NOV-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	21-NOV-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	21-NOV-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	21-NOV-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	21-NOV-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch R5896036								
WG3773439-5 MB								
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	21-NOV-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	21-NOV-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	21-NOV-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	21-NOV-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	21-NOV-22
Batch R5897897								
WG3773804-9 DUP		L2740826-6						
Aluminum (Al)-Dissolved		0.0779	0.0814		mg/L	4.3	20	23-NOV-22
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	23-NOV-22
Arsenic (As)-Dissolved		0.00038	0.00039		mg/L	1.9	20	23-NOV-22
Barium (Ba)-Dissolved		0.00494	0.00480		mg/L	3.0	20	23-NOV-22
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	23-NOV-22
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	23-NOV-22
Boron (B)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	23-NOV-22
Cadmium (Cd)-Dissolved		0.0000070	0.0000061		mg/L	13	20	23-NOV-22
Calcium (Ca)-Dissolved		4.96	5.15		mg/L	3.7	20	23-NOV-22
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	23-NOV-22
Chromium (Cr)-Dissolved		0.00019	0.00020		mg/L	8.2	20	23-NOV-22
Cobalt (Co)-Dissolved		0.00023	0.00023		mg/L	0.1	20	23-NOV-22
Iron (Fe)-Dissolved		0.660	0.664		mg/L	0.6	20	23-NOV-22
Lithium (Li)-Dissolved		0.0013	0.0014		mg/L	2.4	20	23-NOV-22
Magnesium (Mg)-Dissolved		0.906	0.914		mg/L	0.9	20	23-NOV-22
Manganese (Mn)-Dissolved		0.0532	0.0542		mg/L	1.8	20	23-NOV-22
Molybdenum (Mo)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	23-NOV-22
Nickel (Ni)-Dissolved		0.00058	0.00059		mg/L	0.7	20	23-NOV-22
Phosphorus (P)-Dissolved		<0.030	<0.030	RPD-NA	mg/L	N/A	20	23-NOV-22
Potassium (K)-Dissolved		0.074	0.073		mg/L	1.2	20	23-NOV-22
Rubidium (Rb)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	23-NOV-22
Selenium (Se)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	23-NOV-22
Silicon (Si)-Dissolved		4.74	4.78		mg/L	0.9	20	23-NOV-22
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	23-NOV-22
Sodium (Na)-Dissolved		0.874	0.891		mg/L	1.9	20	23-NOV-22
Strontium (Sr)-Dissolved		0.0112	0.0118		mg/L	4.7	20	23-NOV-22
Sulfur (S)-Dissolved		<0.50	<0.50	RPD-NA	mg/L	N/A	20	23-NOV-22



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MET-D-CCMS-WP		Water						
Batch	R5897897							
WG3773804-9 DUP		L2740826-6						
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	23-NOV-22
Thallium (Tl)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	23-NOV-22
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	23-NOV-22
Tin (Sn)-Dissolved		0.00015	0.00014		mg/L	4.7	20	23-NOV-22
Titanium (Ti)-Dissolved		0.00059	0.00052		mg/L	14	20	23-NOV-22
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	23-NOV-22
Uranium (U)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	23-NOV-22
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	23-NOV-22
Zinc (Zn)-Dissolved		0.0079	0.0082		mg/L	3.9	20	23-NOV-22
Zirconium (Zr)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	23-NOV-22
WG3773804-2 LCS								
Aluminum (Al)-Dissolved			95.3		%		80-120	23-NOV-22
Antimony (Sb)-Dissolved			103.4		%		80-120	23-NOV-22
Arsenic (As)-Dissolved			97.6		%		80-120	23-NOV-22
Barium (Ba)-Dissolved			100.9		%		80-120	23-NOV-22
Beryllium (Be)-Dissolved			101.9		%		80-120	23-NOV-22
Bismuth (Bi)-Dissolved			107.9		%		80-120	23-NOV-22
Boron (B)-Dissolved			103.7		%		80-120	23-NOV-22
Cadmium (Cd)-Dissolved			99.4		%		80-120	23-NOV-22
Calcium (Ca)-Dissolved			100.4		%		80-120	23-NOV-22
Cesium (Cs)-Dissolved			103.6		%		80-120	23-NOV-22
Chromium (Cr)-Dissolved			97.7		%		80-120	23-NOV-22
Cobalt (Co)-Dissolved			97.6		%		80-120	23-NOV-22
Copper (Cu)-Dissolved			98.5		%		80-120	23-NOV-22
Iron (Fe)-Dissolved			91.5		%		80-120	23-NOV-22
Lead (Pb)-Dissolved			105.7		%		80-120	23-NOV-22
Lithium (Li)-Dissolved			104.0		%		80-120	23-NOV-22
Magnesium (Mg)-Dissolved			98.8		%		80-120	23-NOV-22
Manganese (Mn)-Dissolved			102.3		%		80-120	23-NOV-22
Molybdenum (Mo)-Dissolved			98.6		%		80-120	23-NOV-22
Nickel (Ni)-Dissolved			96.7		%		80-120	23-NOV-22
Phosphorus (P)-Dissolved			100.2		%		80-120	23-NOV-22
Potassium (K)-Dissolved			97.8		%		80-120	23-NOV-22
Rubidium (Rb)-Dissolved			96.5		%		80-120	23-NOV-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5897897							
WG3773804-2		LCS						
Selenium (Se)-Dissolved			93.6		%		80-120	23-NOV-22
Silicon (Si)-Dissolved			97.2		%		80-120	23-NOV-22
Silver (Ag)-Dissolved			101.7		%		80-120	23-NOV-22
Sodium (Na)-Dissolved			100.1		%		80-120	23-NOV-22
Strontium (Sr)-Dissolved			102.4		%		80-120	23-NOV-22
Sulfur (S)-Dissolved			95.0		%		80-120	23-NOV-22
Tellurium (Te)-Dissolved			101.1		%		80-120	23-NOV-22
Thallium (Tl)-Dissolved			105.0		%		80-120	23-NOV-22
Thorium (Th)-Dissolved			102.0		%		80-120	23-NOV-22
Tin (Sn)-Dissolved			102.3		%		80-120	23-NOV-22
Titanium (Ti)-Dissolved			95.8		%		80-120	23-NOV-22
Tungsten (W)-Dissolved			103.2		%		80-120	23-NOV-22
Uranium (U)-Dissolved			103.6		%		80-120	23-NOV-22
Vanadium (V)-Dissolved			98.2		%		80-120	23-NOV-22
Zinc (Zn)-Dissolved			94.3		%		80-120	23-NOV-22
Zirconium (Zr)-Dissolved			96.8		%		80-120	23-NOV-22
WG3773804-1		MB						
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	23-NOV-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	23-NOV-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	23-NOV-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	23-NOV-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	23-NOV-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	23-NOV-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	23-NOV-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	23-NOV-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	23-NOV-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	23-NOV-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	23-NOV-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP								
Water								
Batch	R5897897							
WG3773804-1 MB								
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	23-NOV-22
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	23-NOV-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	23-NOV-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	23-NOV-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	23-NOV-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	23-NOV-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	23-NOV-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	23-NOV-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	23-NOV-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	23-NOV-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	23-NOV-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	23-NOV-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	23-NOV-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	23-NOV-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	23-NOV-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	23-NOV-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	23-NOV-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	23-NOV-22
WG3773804-8 MS		L2740826-6						
Aluminum (Al)-Dissolved			72.6		%		70-130	23-NOV-22
Antimony (Sb)-Dissolved			86.4		%		70-130	23-NOV-22
Arsenic (As)-Dissolved			76.0		%		70-130	23-NOV-22
Barium (Ba)-Dissolved			79.4		%		70-130	23-NOV-22
Beryllium (Be)-Dissolved			85.9		%		70-130	23-NOV-22
Bismuth (Bi)-Dissolved			89.9		%		70-130	23-NOV-22
Boron (B)-Dissolved			85.9		%		70-130	23-NOV-22
Cadmium (Cd)-Dissolved			76.9		%		70-130	23-NOV-22
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	23-NOV-22
Cesium (Cs)-Dissolved			86.8		%		70-130	23-NOV-22
Chromium (Cr)-Dissolved			76.0		%		70-130	23-NOV-22

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MET-D-CCMS-WP		Water						
Batch	R5897897							
WG3773804-8	MS	L2740826-6						
Cobalt (Co)-Dissolved			75.1		%		70-130	23-NOV-22
Iron (Fe)-Dissolved			72.8		%		70-130	23-NOV-22
Lithium (Li)-Dissolved			85.9		%		70-130	23-NOV-22
Magnesium (Mg)-Dissolved			71.4		%		70-130	23-NOV-22
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	23-NOV-22
Molybdenum (Mo)-Dissolved			83.4		%		70-130	23-NOV-22
Nickel (Ni)-Dissolved			74.9		%		70-130	23-NOV-22
Phosphorus (P)-Dissolved			73.9		%		70-130	23-NOV-22
Potassium (K)-Dissolved			74.5		%		70-130	23-NOV-22
Rubidium (Rb)-Dissolved			78.8		%		70-130	23-NOV-22
Selenium (Se)-Dissolved			76.0		%		70-130	23-NOV-22
Silicon (Si)-Dissolved			74.8		%		70-130	23-NOV-22
Silver (Ag)-Dissolved			86.8		%		70-130	23-NOV-22
Sodium (Na)-Dissolved			74.9		%		70-130	23-NOV-22
Strontium (Sr)-Dissolved			87.8		%		70-130	23-NOV-22
Sulfur (S)-Dissolved			70.3		%		70-130	23-NOV-22
Tellurium (Te)-Dissolved			88.4		%		70-130	23-NOV-22
Thallium (Tl)-Dissolved			88.6		%		70-130	23-NOV-22
Thorium (Th)-Dissolved			92.2		%		70-130	23-NOV-22
Tin (Sn)-Dissolved			77.7		%		70-130	23-NOV-22
Titanium (Ti)-Dissolved			76.2		%		70-130	23-NOV-22
Tungsten (W)-Dissolved			87.2		%		70-130	23-NOV-22
Uranium (U)-Dissolved			89.4		%		70-130	23-NOV-22
Vanadium (V)-Dissolved			75.5		%		70-130	23-NOV-22
Zinc (Zn)-Dissolved			73.2		%		70-130	23-NOV-22
Zirconium (Zr)-Dissolved			86.4		%		70-130	23-NOV-22
MET-T-CCMS-WP		Water						
Batch	R5898621							
WG3773944-2	LCS							
Aluminum (Al)-Total			104.9		%		80-120	24-NOV-22
Antimony (Sb)-Total			106.0		%		80-120	24-NOV-22
Arsenic (As)-Total			102.4		%		80-120	24-NOV-22
Barium (Ba)-Total			101.4		%		80-120	24-NOV-22
Beryllium (Be)-Total			106.8		%		80-120	24-NOV-22



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MET-T-CCMS-WP		Water						
Batch	R5898621							
WG3773944-2	LCS							
Bismuth (Bi)-Total			101.8		%		80-120	24-NOV-22
Boron (B)-Total			106.4		%		80-120	24-NOV-22
Cadmium (Cd)-Total			102.5		%		80-120	24-NOV-22
Calcium (Ca)-Total			104.0		%		80-120	24-NOV-22
Cesium (Cs)-Total			101.5		%		80-120	24-NOV-22
Chromium (Cr)-Total			104.8		%		80-120	24-NOV-22
Cobalt (Co)-Total			102.5		%		80-120	24-NOV-22
Copper (Cu)-Total			102.9		%		80-120	24-NOV-22
Iron (Fe)-Total			97.6		%		80-120	24-NOV-22
Lead (Pb)-Total			96.9		%		80-120	24-NOV-22
Lithium (Li)-Total			103.7		%		80-120	24-NOV-22
Magnesium (Mg)-Total			103.9		%		80-120	24-NOV-22
Manganese (Mn)-Total			104.0		%		80-120	24-NOV-22
Molybdenum (Mo)-Total			101.8		%		80-120	24-NOV-22
Nickel (Ni)-Total			101.4		%		80-120	24-NOV-22
Potassium (K)-Total			104.5		%		80-120	24-NOV-22
Phosphorus (P)-Total			108.8		%		80-120	24-NOV-22
Rubidium (Rb)-Total			102.7		%		80-120	24-NOV-22
Selenium (Se)-Total			97.3		%		80-120	24-NOV-22
Silicon (Si)-Total			104.2		%		80-120	24-NOV-22
Silver (Ag)-Total			101.7		%		80-120	24-NOV-22
Sodium (Na)-Total			105.8		%		80-120	24-NOV-22
Strontium (Sr)-Total			102.0		%		80-120	24-NOV-22
Sulfur (S)-Total			108.7		%		80-120	24-NOV-22
Tellurium (Te)-Total			100.7		%		80-120	24-NOV-22
Thallium (Tl)-Total			94.7		%		80-120	24-NOV-22
Thorium (Th)-Total			99.2		%		80-120	24-NOV-22
Tin (Sn)-Total			102.4		%		80-120	24-NOV-22
Titanium (Ti)-Total			99.0		%		80-120	24-NOV-22
Tungsten (W)-Total			100.7		%		80-120	24-NOV-22
Uranium (U)-Total			99.3		%		80-120	24-NOV-22
Vanadium (V)-Total			103.7		%		80-120	24-NOV-22
Zinc (Zn)-Total			99.2		%		80-120	24-NOV-22
Zirconium (Zr)-Total			101.7		%		80-120	24-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5898621							
WG3773944-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	24-NOV-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	24-NOV-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	24-NOV-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	24-NOV-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	24-NOV-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	24-NOV-22
Boron (B)-Total			<0.010		mg/L		0.01	24-NOV-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	24-NOV-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	24-NOV-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	24-NOV-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	24-NOV-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	24-NOV-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	24-NOV-22
Iron (Fe)-Total			<0.010		mg/L		0.01	24-NOV-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	24-NOV-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	24-NOV-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	24-NOV-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	24-NOV-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	24-NOV-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	24-NOV-22
Potassium (K)-Total			<0.050		mg/L		0.05	24-NOV-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	24-NOV-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	24-NOV-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	24-NOV-22
Silicon (Si)-Total			<0.10		mg/L		0.1	24-NOV-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	24-NOV-22
Sodium (Na)-Total			<0.050		mg/L		0.05	24-NOV-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	24-NOV-22
Sulfur (S)-Total			<0.50		mg/L		0.5	24-NOV-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	24-NOV-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	24-NOV-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	24-NOV-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	24-NOV-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	24-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch R5898621								
WG3773944-1 MB								
Tungsten (W)-Total			<0.00010		mg/L		0.0001	24-NOV-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	24-NOV-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	24-NOV-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	24-NOV-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	24-NOV-22
Batch R5900162								
WG3774146-4 DUP		L2740826-17						
Aluminum (Al)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	25-NOV-22
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-NOV-22
Arsenic (As)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-NOV-22
Barium (Ba)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-NOV-22
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-NOV-22
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	25-NOV-22
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	25-NOV-22
Cadmium (Cd)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	25-NOV-22
Calcium (Ca)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	25-NOV-22
Cesium (Cs)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	25-NOV-22
Chromium (Cr)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-NOV-22
Cobalt (Co)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-NOV-22
Copper (Cu)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	25-NOV-22
Iron (Fe)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	25-NOV-22
Lead (Pb)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	25-NOV-22
Lithium (Li)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-NOV-22
Magnesium (Mg)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-NOV-22
Manganese (Mn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-NOV-22
Molybdenum (Mo)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	25-NOV-22
Nickel (Ni)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	25-NOV-22
Potassium (K)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	25-NOV-22
Phosphorus (P)-Total		<0.030	<0.030	RPD-NA	mg/L	N/A	20	25-NOV-22
Rubidium (Rb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	25-NOV-22
Selenium (Se)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	25-NOV-22
Silicon (Si)-Total		<0.10	<0.10	RPD-NA	mg/L	N/A	20	25-NOV-22
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	25-NOV-22
Sodium (Na)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	25-NOV-22



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MET-T-CCMS-WP		Water						
Batch	R5900162							
WG3774146-4 DUP		L2740826-17						
Strontium (Sr)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	25-NOV-22
Sulfur (S)-Total		<0.50	<0.50	RPD-NA	mg/L	N/A	20	25-NOV-22
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	25-NOV-22
Thallium (Tl)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	25-NOV-22
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-NOV-22
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-NOV-22
Titanium (Ti)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	25-NOV-22
Tungsten (W)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-NOV-22
Uranium (U)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	25-NOV-22
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	25-NOV-22
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	25-NOV-22
Zirconium (Zr)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	25-NOV-22
WG3774146-2 LCS								
Aluminum (Al)-Total			103.0		%		80-120	25-NOV-22
Antimony (Sb)-Total			110.9		%		80-120	25-NOV-22
Arsenic (As)-Total			98.9		%		80-120	25-NOV-22
Barium (Ba)-Total			100.7		%		80-120	25-NOV-22
Beryllium (Be)-Total			103.2		%		80-120	25-NOV-22
Bismuth (Bi)-Total			107.0		%		80-120	25-NOV-22
Boron (B)-Total			105.9		%		80-120	25-NOV-22
Cadmium (Cd)-Total			97.9		%		80-120	25-NOV-22
Calcium (Ca)-Total			101.0		%		80-120	25-NOV-22
Cesium (Cs)-Total			106.9		%		80-120	25-NOV-22
Chromium (Cr)-Total			98.6		%		80-120	25-NOV-22
Cobalt (Co)-Total			96.3		%		80-120	25-NOV-22
Copper (Cu)-Total			101.1		%		80-120	25-NOV-22
Iron (Fe)-Total			96.5		%		80-120	25-NOV-22
Lead (Pb)-Total			106.8		%		80-120	25-NOV-22
Lithium (Li)-Total			105.4		%		80-120	25-NOV-22
Magnesium (Mg)-Total			99.9		%		80-120	25-NOV-22
Manganese (Mn)-Total			98.6		%		80-120	25-NOV-22
Molybdenum (Mo)-Total			102.4		%		80-120	25-NOV-22
Nickel (Ni)-Total			97.0		%		80-120	25-NOV-22
Potassium (K)-Total			100.6		%		80-120	25-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5900162							
WG3774146-2	LCS							
Phosphorus (P)-Total			102.5		%		80-120	25-NOV-22
Rubidium (Rb)-Total			101.3		%		80-120	25-NOV-22
Selenium (Se)-Total			101.8		%		80-120	25-NOV-22
Silicon (Si)-Total			101.3		%		80-120	25-NOV-22
Silver (Ag)-Total			103.9		%		80-120	25-NOV-22
Sodium (Na)-Total			103.3		%		80-120	25-NOV-22
Strontium (Sr)-Total			106.3		%		80-120	25-NOV-22
Sulfur (S)-Total			109.2		%		80-120	25-NOV-22
Tellurium (Te)-Total			105.7		%		80-120	25-NOV-22
Thallium (Tl)-Total			102.6		%		80-120	25-NOV-22
Thorium (Th)-Total			103.3		%		80-120	25-NOV-22
Tin (Sn)-Total			102.2		%		80-120	25-NOV-22
Titanium (Ti)-Total			95.6		%		80-120	25-NOV-22
Tungsten (W)-Total			102.6		%		80-120	25-NOV-22
Uranium (U)-Total			106.6		%		80-120	25-NOV-22
Vanadium (V)-Total			99.3		%		80-120	25-NOV-22
Zinc (Zn)-Total			95.2		%		80-120	25-NOV-22
Zirconium (Zr)-Total			106.0		%		80-120	25-NOV-22
WG3774146-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	25-NOV-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	25-NOV-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	25-NOV-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	25-NOV-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	25-NOV-22
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	25-NOV-22
Boron (B)-Total			<0.010		mg/L		0.01	25-NOV-22
Cadmium (Cd)-Total			<0.000005C		mg/L		0.000005	25-NOV-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	25-NOV-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	25-NOV-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	25-NOV-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	25-NOV-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	25-NOV-22
Iron (Fe)-Total			<0.010		mg/L		0.01	25-NOV-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	25-NOV-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP								
Batch R5900162								
WG3774146-1 MB								
Lithium (Li)-Total	Water		<0.0010		mg/L		0.001	25-NOV-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	25-NOV-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	25-NOV-22
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	25-NOV-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	25-NOV-22
Potassium (K)-Total			<0.050		mg/L		0.05	25-NOV-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	25-NOV-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	25-NOV-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	25-NOV-22
Silicon (Si)-Total			<0.10		mg/L		0.1	25-NOV-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	25-NOV-22
Sodium (Na)-Total			<0.050		mg/L		0.05	25-NOV-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	25-NOV-22
Sulfur (S)-Total			<0.50		mg/L		0.5	25-NOV-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	25-NOV-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	25-NOV-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	25-NOV-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	25-NOV-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	25-NOV-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	25-NOV-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	25-NOV-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	25-NOV-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	25-NOV-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	25-NOV-22
WG3774146-5 MS		L2740826-17						
Aluminum (Al)-Total			106.9		%		70-130	25-NOV-22
Antimony (Sb)-Total			109.4		%		70-130	25-NOV-22
Arsenic (As)-Total			104.1		%		70-130	25-NOV-22
Barium (Ba)-Total			101.7		%		70-130	25-NOV-22
Beryllium (Be)-Total			106.2		%		70-130	25-NOV-22
Bismuth (Bi)-Total			111.4		%		70-130	25-NOV-22
Boron (B)-Total			108.8		%		70-130	25-NOV-22
Cadmium (Cd)-Total			105.1		%		70-130	25-NOV-22
Calcium (Ca)-Total			104.6		%		70-130	25-NOV-22



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MET-T-CCMS-WP	Water							
Batch	R5900162							
WG3774146-5 MS		L2740826-17						
Cesium (Cs)-Total			104.4		%		70-130	25-NOV-22
Chromium (Cr)-Total			107.7		%		70-130	25-NOV-22
Cobalt (Co)-Total			104.1		%		70-130	25-NOV-22
Copper (Cu)-Total			106.7		%		70-130	25-NOV-22
Iron (Fe)-Total			106.3		%		70-130	25-NOV-22
Lead (Pb)-Total			107.7		%		70-130	25-NOV-22
Lithium (Li)-Total			104.3		%		70-130	25-NOV-22
Magnesium (Mg)-Total			106.2		%		70-130	25-NOV-22
Manganese (Mn)-Total			103.1		%		70-130	25-NOV-22
Molybdenum (Mo)-Total			104.7		%		70-130	25-NOV-22
Nickel (Ni)-Total			107.4		%		70-130	25-NOV-22
Potassium (K)-Total			105.8		%		70-130	25-NOV-22
Phosphorus (P)-Total			101.7		%		70-130	25-NOV-22
Rubidium (Rb)-Total			104.0		%		70-130	25-NOV-22
Selenium (Se)-Total			116.0		%		70-130	25-NOV-22
Silicon (Si)-Total			109.0		%		70-130	25-NOV-22
Silver (Ag)-Total			106.4		%		70-130	25-NOV-22
Sodium (Na)-Total			107.0		%		70-130	25-NOV-22
Strontium (Sr)-Total			105.5		%		70-130	25-NOV-22
Sulfur (S)-Total			114.3		%		70-130	25-NOV-22
Tellurium (Te)-Total			106.2		%		70-130	25-NOV-22
Thallium (Tl)-Total			101.8		%		70-130	25-NOV-22
Thorium (Th)-Total			110.6		%		70-130	25-NOV-22
Tin (Sn)-Total			106.2		%		70-130	25-NOV-22
Titanium (Ti)-Total			105.3		%		70-130	25-NOV-22
Tungsten (W)-Total			104.2		%		70-130	25-NOV-22
Uranium (U)-Total			108.5		%		70-130	25-NOV-22
Vanadium (V)-Total			105.9		%		70-130	25-NOV-22
Zinc (Zn)-Total			103.0		%		70-130	25-NOV-22
Zirconium (Zr)-Total			107.2		%		70-130	25-NOV-22
N-TOTKJ-WP	Water							



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOTKJ-WP								
Batch R5897817								
WG3773766-10 LCS								
Total Kjeldahl Nitrogen			105.2		%		75-125	24-NOV-22
Batch R5901259								
WG3773931-3 DUP		L2740826-15						
Total Kjeldahl Nitrogen		0.20	<0.20	RPD-NA	mg/L	N/A	20	25-NOV-22
WG3773931-2 LCS								
Total Kjeldahl Nitrogen			100.5		%		75-125	25-NOV-22
WG3773931-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	25-NOV-22
WG3773931-4 MS		L2740826-15						
Total Kjeldahl Nitrogen			98.2		%		70-130	25-NOV-22
NH3-COL-WP								
Batch R5898636								
WG3774248-7 DUP		L2740826-1						
Ammonia, Total (as N)		<0.010	<0.010	RPD-NA	mg/L	N/A	20	25-NOV-22
WG3774248-10 LCS								
Ammonia, Total (as N)			98.0		%		85-115	25-NOV-22
WG3774248-6 LCS								
Ammonia, Total (as N)			98.5		%		85-115	25-NOV-22
WG3774248-5 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	25-NOV-22
WG3774248-9 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	25-NOV-22
WG3774248-8 MS		L2740826-1						
Ammonia, Total (as N)			87.5		%		75-125	25-NOV-22
Batch R5899976								
WG3774577-2 LCS								
Ammonia, Total (as N)			102.9		%		85-115	29-NOV-22
WG3774577-1 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	29-NOV-22
NO2-L-IC-N-WP								
Batch R5895497								
WG3773354-3 DUP		L2740826-1						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	19-NOV-22
WG3773354-2 LCS								
Nitrite (as N)			100.5		%		90-110	19-NOV-22
WG3773354-1 MB								



Quality Control Report

Workorder: L2740826

Report Date: 08-DEC-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-L-IC-N-WP								
Water								
Batch	R5895497							
WG3773354-1 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	19-NOV-22
WG3773354-4 MS		L2740826-1						
Nitrite (as N)			101.3		%		75-125	19-NOV-22
NO3-L-IC-N-WP								
Water								
Batch	R5895497							
WG3773354-3 DUP		L2740826-1						
Nitrate (as N)		0.0106	0.0105		mg/L	1.2	20	19-NOV-22
WG3773354-2 LCS								
Nitrate (as N)			101.9		%		90-110	19-NOV-22
WG3773354-1 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	19-NOV-22
WG3773354-4 MS		L2740826-1						
Nitrate (as N)			103.6		%		75-125	19-NOV-22
P-T-COL-WP								
Water								
Batch	R5896538							
WG3773622-7 DUP		L2740826-11						
Phosphorus (P)-Total		0.0192	0.0200		mg/L	3.8	20	23-NOV-22
WG3773622-2 LCS								
Phosphorus (P)-Total			97.9		%		80-120	23-NOV-22
WG3773622-6 LCS								
Phosphorus (P)-Total			98.6		%		80-120	23-NOV-22
WG3773622-1 MB								
Phosphorus (P)-Total			<0.0030		mg/L		0.003	23-NOV-22
WG3773622-5 MB								
Phosphorus (P)-Total			<0.0030		mg/L		0.003	23-NOV-22
WG3773622-8 MS		L2740826-12						
Phosphorus (P)-Total			95.3		%		70-130	23-NOV-22
P-T-L-COL-WP								
Water								
Batch	R5897129							
WG3773842-3 DUP		L2740826-17						
Phosphorus (P)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-NOV-22
WG3773842-2 LCS								
Phosphorus (P)-Total			91.9		%		80-120	24-NOV-22
WG3773842-1 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	24-NOV-22
WG3773842-4 MS		L2740826-17						
Phosphorus (P)-Total			91.9		%		70-130	24-NOV-22



Quality Control Report

Workorder: L2740826

Report Date: 08-DEC-22

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-N-WP								
Batch R5895497								
WG3773354-3	DUP	L2740826-1						
Sulfate (SO4)		8.94	8.87		mg/L	0.8	20	19-NOV-22
WG3773354-2	LCS							
Sulfate (SO4)			102.6		%		90-110	19-NOV-22
WG3773354-1	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	19-NOV-22
WG3773354-4	MS	L2740826-1						
Sulfate (SO4)			104.0		%		75-125	19-NOV-22
SOLIDS-TOTSUS-LR-WP								
Batch R5897076								
WG3773695-3	DUP	L2740826-13						
Total Suspended Solids		2.5	1.9	J	mg/L	0.5	2	23-NOV-22
WG3773695-2	LCS							
Total Suspended Solids			96.3		%		85-115	23-NOV-22
WG3773695-1	MB							
Total Suspended Solids			<1.0		mg/L		1	23-NOV-22
Batch R5897676								
WG3773879-3	DUP	L2740826-14						
Total Suspended Solids		<1.0	<1.0	RPD-NA	mg/L	N/A	20	24-NOV-22
WG3773879-2	LCS							
Total Suspended Solids			89.7		%		85-115	24-NOV-22
WG3773879-1	MB							
Total Suspended Solids			<1.0		mg/L		1	24-NOV-22

Quality Control Report

Workorder: L2740826

Report Date: 08-DEC-22

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L2740826

Report Date: 08-DEC-22

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Suspended Solids	12	16-NOV-22 13:37	24-NOV-22 08:00	7	8	days	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2740826 were received on 18-NOV-22 12:16.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC No:

Page



L2740826-COFC

Report To		Contact and company name below will appear on the final report		Reports / Recipients		Turnaround Time (TAT) Requested		AFFIX ALS BARCODE LABEL HERE (ALS use only)		
Company:	Stantec Consulting	Select Report Format:	☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)	☒ Routine [R] if received by 3pm M-F - no surcharges apply						
Contact:	Karen Mathers	Merge QC/QCI Reports with COA	☐ YES ☐ NO ☐ N/A	☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum						
Phone:	204-928-7621	☐ Compare Results to Criteria on Report - provide details below if box checked		☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum						
Company address below will appear on the final report		Select Distribution:	☒ EMAIL ☐ MAIL ☐ FAX	☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum						
Street:	500 - 311 Portage Ave	Email 1 or Fax	Karen.Mathers@stantec.com	☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum						
City/Province:	Winnipeg, MB	Email 2	Brad.Home@stantec.com	☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.						
Postal Code:	R3B 2B9	Email 3	Jeremy.Jackson@stantec.com	Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.						
Invoice To	Same as Report To ☐ YES ☒ NO	Invoice Recipients		Date and Time Required for all E&P TATs: 63 12 11 11 11 11 11 11 11 11						
	Copy of Invoice with Report ☐ YES ☒ NO	Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX		For all tests with rush TATs requested, please contact your AM to confirm availability.						
Company:	Alamos Gold	Email 1 or Fax		Analysis Request						
Contact:		Email 2		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below						
Project Information		Oil and Gas Required Fields (client use)		NUMBER OF CONTAINERS						
ALS Account # / Quote #:	Q88846	AFE/Cost Center:	PO#	ALK-SPEC-WP, ACY-TITR-TB						
Job #:	ALAMOS	Major/Minor Code:	Routing Code:	ANIONS-6-L-IC-WP						
PO / AFE:		Requisitioner:		C-DOC-HTC-WP, C-TOC-HTC-WP						
LSD:		Location:		CN-T-L, CN-FREE-L, CN-WAD-L						
ALS Lab Work Order # (ALS use only):		ALS Contact:	DD	CR-CR6-PWGO-IC-WT						
		Sampler:	BS, AR	MET-D-CCHMS-WP, HARDNESS						
				MET-T-CCHMS-WP						
				NH3-COL-WP						
				P-T-COL-WP						
				N-TOTKJ-WP						
				SOLIDS-TOTSUS-LR-WP						
				HG-T-CVAA-WP						
				SAMPLES ON HOLD						
				EXTENDED STORAGE REQUIRED						
				SUSPECTED HAZARD (see notes)						
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type						
	AQM38	16-11-22	0919	W						
	AQM39C		0945							
	AQM71		1004							
	AQM72		1020							
	AQM73		1046							
	AQM74		1106							
	AQF75		1154							
	AQF38		1214							
	AQF41		1233							
	AQF40		1257							
	AQF42		1318							
	AQF45		1337							
Drinking Water (DW) Samples ¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		SAMPLE RECEIPT DETAILS (ALS use only)						
Are samples taken from a Regulated DW System?		dissolved metals + dissolved nutrients field filtered		Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED						
☐ YES ☐ NO				Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO						
Are samples for human consumption/ use?				Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A						
☐ YES ☐ NO				INITIAL COOLER TEMPERATURES °C						
				FINAL COOLER TEMPERATURES °C						
				5.7						
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)		FINAL SHIPMENT RECEPTION (ALS use only)						
Released by: <i>B. J. J.</i>	Date: <i>Nov. 17/22</i>	Time: <i>10:45</i>	Received by: <i>[Signature]</i>	Date: <i>NOV 18 2022</i>	Time: <i>12:16</i>	Received by:		Date:	Time:	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

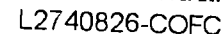
FEB 2022 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

COC Number: **2**

Page 2 of 2



Canada Toll Free: 1 800 668 9878

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

FEB 2022 FROM

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Alamos Gold Inc.
ATTN: KAREN MATHERS
C/O Stantec Consulting
500 - 311 Portage Avenue
Winnipeg MB R3B 2B9

Date Received: 19-DEC-22
Report Date: 30-DEC-22 14:52 (MT)
Version: FINAL

Client Phone: 204-924-5735

Certificate of Analysis

Lab Work Order #: L2743404
Project P.O. #: NOT SUBMITTED
Job Reference: ALAMOS
C of C Numbers:
Legal Site Desc:



Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2743404-1 W 13-DEC-22 09:30 FIELD BLANK	L2743404-2 W 13-DEC-22 10:50 AQF45	L2743404-3 W 13-DEC-22 QC-01	L2743404-4 W 13-DEC-22 TRIP BLANK	
Grouping	Analyte					
WATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	<0.20	13.5	13.3	<0.20	
	Total Suspended Solids (mg/L)	<1.0	1.4	1.4	<1.0	
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	<1.0	11.9	12.1	<1.0	
	Ammonia, Total (as N) (mg/L)	<0.010	0.015	0.024	0.149	
	Bicarbonate (HCO3) (mg/L)	<1.2	14.5	14.8	<1.2	
	Bromide (Br) (mg/L)	<0.10	<0.10	<0.10	<0.10	
	Carbonate (CO3) (mg/L)	<0.60	<0.60	<0.60	<0.60	
	Chloride (Cl) (mg/L)	<0.10	0.28	0.27	<0.10	
	Fluoride (F) (mg/L)	<0.020	0.070	0.067	<0.020	
	Hydroxide (OH) (mg/L)	<0.34	<0.34	<0.34	<0.34	
	Nitrate and Nitrite as N (mg/L)	<0.0051	0.0409	0.0557	<0.0051	
	Nitrate (as N) (mg/L)	<0.0050	0.0409	0.0461	<0.0050	
	Nitrite (as N) (mg/L)	0.0034	<0.0010	0.0096	0.0044	
	Total Kjeldahl Nitrogen (mg/L)	<0.20	0.31	0.23	<0.20	
	Phosphorus (P)-Total (mg/L)	<0.0010	0.0130	0.0139	<0.0010	
	Sulfate (SO4) (mg/L)	<0.30	0.68	0.67	<0.30	
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cyanide, Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cyanide, Free (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	<0.50	9.81	8.65	<0.50	
	Total Organic Carbon (mg/L)	0.51	9.52	9.98	<0.50	
Inorganic Parameters	Acidity (as CaCO3) (mg/L)	<2.0	2.0	2.1	<2.0	
Total Metals	Aluminum (Al)-Total (mg/L)	<0.0030	0.0585	0.0628	<0.0030	
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Total (mg/L)	<0.00010	0.00026	0.00024	<0.00010	
	Barium (Ba)-Total (mg/L)	<0.00010	0.00817	0.00817	<0.00010	
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
	Calcium (Ca)-Total (mg/L)	<0.050	4.54	4.54	<0.050	
	Cesium (Cs)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Chromium (Cr)-Total (mg/L)	<0.00010	0.00022	0.00021	<0.00010	
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Iron (Fe)-Total (mg/L)	<0.010	0.262	0.271	<0.010	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2743404-1 W 13-DEC-22 09:30 FIELD BLANK	L2743404-2 W 13-DEC-22 10:50 AQF45	L2743404-3 W 13-DEC-22 QC-01	L2743404-4 W 13-DEC-22 TRIP BLANK	
Grouping	Analyte						
WATER							
Total Metals	Lead (Pb)-Total (mg/L)	<0.000050	0.000060	<0.000050	<0.000050		
	Lithium (Li)-Total (mg/L)	<0.0010	0.0014	0.0014	<0.0010		
	Magnesium (Mg)-Total (mg/L)	<0.0050	1.36	1.37	<0.0050		
	Manganese (Mn)-Total (mg/L)	<0.00010	0.0113	0.0115	<0.00010		
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050		
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000084	0.000091	<0.000050		
	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050	0.00061	<0.00050		
	Phosphorus (P)-Total (mg/L)	<0.030	0.038	0.034	<0.030		
	Potassium (K)-Total (mg/L)	<0.050	0.684	0.692	<0.050		
	Rubidium (Rb)-Total (mg/L)	<0.00020	0.00131	0.00128	<0.00020		
	Selenium (Se)-Total (mg/L)	<0.000050	0.000062	0.000060	<0.000050		
	Silicon (Si)-Total (mg/L)	<0.10	3.43	3.42	<0.10		
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010		
	Sodium (Na)-Total (mg/L)	<0.050	1.63	1.66	<0.050		
	Strontium (Sr)-Total (mg/L)	<0.00020	0.0179	0.0184	<0.00020		
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	<0.50	<0.50		
	Tellurium (Te)-Total (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020		
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010		
	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Titanium (Ti)-Total (mg/L)	<0.00030	0.00168	0.00165	<0.00030		
	Tungsten (W)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Uranium (U)-Total (mg/L)	<0.000010	0.000042	0.000041	<0.000010		
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050		
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030		
	Zirconium (Zr)-Total (mg/L)	<0.00020	<0.00020	0.00024	<0.00020		
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD		
	Aluminum (Al)-Dissolved (mg/L)	<0.0010	0.0197	0.0193	<0.0010		
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Arsenic (As)-Dissolved (mg/L)	<0.00010	0.00014	0.00016	<0.00010		
	Barium (Ba)-Dissolved (mg/L)	0.00042 ^{RRV}	0.00573	0.00573	<0.00010		
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010		
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050		
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010		
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050		
	Calcium (Ca)-Dissolved (mg/L)	<0.050	3.66	3.59	<0.050		
	Cesium (Cs)-Dissolved (mg/L)	<0.000010	0.000030	0.000027	<0.000010		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2743404-1 W 13-DEC-22 09:30 FIELD BLANK	L2743404-2 W 13-DEC-22 10:50 AQF45	L2743404-3 W 13-DEC-22 QC-01	L2743404-4 W 13-DEC-22 TRIP BLANK	
Grouping	Analyte					
WATER						
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Copper (Cu)-Dissolved (mg/L)	0.00041	0.00022	0.00025	<0.00020	
	Iron (Fe)-Dissolved (mg/L)	<0.010	0.126	0.125	<0.010	
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Lithium (Li)-Dissolved (mg/L)	0.0012	0.0018	0.0018	<0.0010	
	Magnesium (Mg)-Dissolved (mg/L)	<0.0050	1.05	1.04	<0.0050	
	Manganese (Mn)-Dissolved (mg/L)	<0.00010	0.00366	0.00362	<0.00010	
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	0.000082	0.000074	<0.000050	
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Phosphorus (P)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	
	Potassium (K)-Dissolved (mg/L)	<0.050	0.565	0.566	<0.050	
	Rubidium (Rb)-Dissolved (mg/L)	<0.00020	0.00102	0.00098	<0.00020	
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Silicon (Si)-Dissolved (mg/L)	<0.050	2.61	2.59	<0.050	
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Dissolved (mg/L)	<0.050	1.22	1.22	<0.050	
	Strontium (Sr)-Dissolved (mg/L)	<0.00010	0.0148	0.0147	<0.00010	
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	<0.50	<0.50	
	Tellurium (Te)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Thorium (Th)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	0.00034	0.00032	<0.00030	
	Tungsten (W)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.000023	0.000025	<0.000010	
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Zirconium (Zr)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	
Speciated Metals	Chromium, Hexavalent (ug/L)	<0.50	<0.50	<0.50	<0.50	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Molybdenum (Mo)-Total	B	L2743404-1, -4
Matrix Spike	Arsenic (As)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Cesium (Cs)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Copper (Cu)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Lithium (Li)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Phosphorus (P)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Potassium (K)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Rubidium (Rb)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Aluminum (Al)-Total	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Calcium (Ca)-Total	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Copper (Cu)-Total	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Sodium (Na)-Total	MS-B	L2743404-1, -2, -3, -4
Matrix Spike	Strontium (Sr)-Total	MS-B	L2743404-1, -2, -3, -4

Qualifiers for Individual Parameters Listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-WT	Water	Acidity (as CaCO ₃)	APHA 2310 B - Potentiometric Titration
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO ₃ 2-/L.			
ALK-HCO3HCO3-CALC-WP	Water	Alkalinity, Bicarbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO ₃ -/L.			
ALK-OHOH-CALC-WP	Water	Alkalinity, Hydroxide	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.			
ALK-TITR-WP	Water	Alkalinity, Total (as CaCO ₃)	APHA 2320B
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO ₃ - and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-N-WP	Water	Bromide in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
C-DOC-HTC-WP	Water	Dissolved Organic Carbon by Combustion	APHA 5310 B-WP
Filtered (0.45 um) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO ₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.			
C-TOC-HTC-WP	Water	Total Organic Carbon by Combustion	APHA 5310 B-WP

Reference Information

Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO₂ which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

CL-L-IC-N-WP Water Chloride in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

CN-FREE-L-CFA-WT Water Low Level Free Cyanide in water by CFA ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-T-L-CFA-WT Water Low Level Total Cyanide in water by CFA ISO 14403-2:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, however it would be less than 1% and could be as low as zero.

CN-WAD-L-CFA-WT Water Low level WAD Cyanide in water by CFA APHA 4500CN I-Weak acid Dist Colorimet

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

CR-CR6-PWQO-IC-WT Water Chromium +6 EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-SCREEN-WP Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc

EC-SCREEN-WT Water Conductivity Screen (Internal Use Only) APHA 2510

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F-IC-N-WP Water Fluoride in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

HARDNESS-CALC-WP Water Hardness Calculated APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

HG-T-CVAA-WP Water Mercury Total EPA 1631E (mod)

Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

MET-D-CCMS-WP Water Dissolved Metals in Water by CRC ICPMS APHA 3030B/6020B (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-T-CCMS-WP Water Total Metals in Water by CRC ICPMS EPA 200.2/6020B (mod.)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

N-TOTKJ-WP Water Total Kjeldahl Nitrogen APHA 4500 NorgD (modified)

Reference Information

Aqueous samples are digested in a block digester with sulfuric acid and copper sulfate as a catalyst. Total Kjeldahl Nitrogen is then analyzed using a discrete analyzer with colorimetric detection.

NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION

NO2-L-IC-N-WP	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

NO3-L-IC-N-WP	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L

This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.

P-T-L-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.

SO4-IC-N-WP	Water	Sulfate in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

SOLIDS-TOTSUS-LR-WP	Water	Total Suspended Solids	APHA 2540 D (modified)

Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 105°C.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location

WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-TOC-HTC-WP								
Batch R5911137								
WG3777049-6	LCS							
Total Organic Carbon			93.6		%		80-120	22-DEC-22
WG3777049-5	MB							
Total Organic Carbon			<0.50		mg/L		0.5	22-DEC-22
CL-L-IC-N-WP								
Batch R5909696								
WG3776664-7	DUP	L2743404-3						
Chloride (Cl)		0.27	0.27		mg/L	0.3	20	20-DEC-22
WG3776664-6	LCS							
Chloride (Cl)			100.1		%		90-110	20-DEC-22
WG3776664-5	MB							
Chloride (Cl)			<0.10		mg/L		0.1	20-DEC-22
WG3776664-8	MS	L2743404-3						
Chloride (Cl)			104.8		%		75-125	20-DEC-22
Batch R5911256								
WG3776776-2	LCS							
Chloride (Cl)			100.8		%		90-110	22-DEC-22
WG3776776-1	MB							
Chloride (Cl)			<0.10		mg/L		0.1	22-DEC-22
CN-FREE-L-CFA-WT								
Batch R5911437								
WG3777036-3	DUP	L2743404-1						
Cyanide, Free		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	23-DEC-22
WG3777036-2	LCS							
Cyanide, Free			92.2		%		80-120	23-DEC-22
WG3777036-1	MB							
Cyanide, Free			<0.0010		mg/L		0.001	23-DEC-22
WG3777036-4	MS	L2743404-1						
Cyanide, Free			87.0		%		75-125	23-DEC-22
CN-T-L-CFA-WT								
Batch R5911437								
WG3777036-3	DUP	L2743404-1						
Cyanide, Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	23-DEC-22
WG3777036-2	LCS							
Cyanide, Total			91.8		%		80-120	23-DEC-22
WG3777036-1	MB							
Cyanide, Total			<0.0010		mg/L		0.001	23-DEC-22
WG3777036-4	MS	L2743404-1						



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAA-WP								
Batch R5911236								
WG3777060-3 DUP		L2743404-1						
Mercury (Hg)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	23-DEC-22
WG3777060-2 LCS								
Mercury (Hg)-Total			82.5		%		80-120	23-DEC-22
WG3777060-1 MB								
Mercury (Hg)-Total			<0.0000050		mg/L		0.000005	23-DEC-22
WG3777060-4 MS		L2743404-2						
Mercury (Hg)-Total			98.2		%		70-130	23-DEC-22
MET-D-CCMS-WP								
Batch R5909630								
WG3776687-2 LCS								
Aluminum (Al)-Dissolved			102.7		%		80-120	20-DEC-22
Antimony (Sb)-Dissolved			101.7		%		80-120	20-DEC-22
Arsenic (As)-Dissolved			102.5		%		80-120	20-DEC-22
Barium (Ba)-Dissolved			100.4		%		80-120	20-DEC-22
Beryllium (Be)-Dissolved			102.9		%		80-120	20-DEC-22
Bismuth (Bi)-Dissolved			101.0		%		80-120	20-DEC-22
Boron (B)-Dissolved			102.7		%		80-120	20-DEC-22
Cadmium (Cd)-Dissolved			101.4		%		80-120	20-DEC-22
Calcium (Ca)-Dissolved			101.7		%		80-120	20-DEC-22
Cesium (Cs)-Dissolved			104.3		%		80-120	20-DEC-22
Chromium (Cr)-Dissolved			100.2		%		80-120	20-DEC-22
Cobalt (Co)-Dissolved			99.9		%		80-120	20-DEC-22
Copper (Cu)-Dissolved			99.5		%		80-120	20-DEC-22
Iron (Fe)-Dissolved			97.8		%		80-120	20-DEC-22
Lead (Pb)-Dissolved			100.9		%		80-120	20-DEC-22
Lithium (Li)-Dissolved			102.3		%		80-120	20-DEC-22
Magnesium (Mg)-Dissolved			107.6		%		80-120	20-DEC-22
Manganese (Mn)-Dissolved			101.6		%		80-120	20-DEC-22
Molybdenum (Mo)-Dissolved			103.4		%		80-120	20-DEC-22
Nickel (Ni)-Dissolved			98.5		%		80-120	20-DEC-22
Phosphorus (P)-Dissolved			104.7		%		80-120	20-DEC-22
Potassium (K)-Dissolved			101.6		%		80-120	20-DEC-22
Rubidium (Rb)-Dissolved			102.9		%		80-120	20-DEC-22
Selenium (Se)-Dissolved			98.6		%		80-120	20-DEC-22
Silicon (Si)-Dissolved			101.4		%		80-120	20-DEC-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5909630							
WG3776687-2	LCS							
Silver (Ag)-Dissolved			104.3		%		80-120	20-DEC-22
Sodium (Na)-Dissolved			101.0		%		80-120	20-DEC-22
Strontium (Sr)-Dissolved			106.8		%		80-120	20-DEC-22
Sulfur (S)-Dissolved			89.8		%		80-120	20-DEC-22
Tellurium (Te)-Dissolved			102.4		%		80-120	20-DEC-22
Thallium (Tl)-Dissolved			100.3		%		80-120	20-DEC-22
Thorium (Th)-Dissolved			89.5		%		80-120	20-DEC-22
Tin (Sn)-Dissolved			102.5		%		80-120	20-DEC-22
Titanium (Ti)-Dissolved			101.2		%		80-120	20-DEC-22
Tungsten (W)-Dissolved			100.0		%		80-120	20-DEC-22
Uranium (U)-Dissolved			97.5		%		80-120	20-DEC-22
Vanadium (V)-Dissolved			102.3		%		80-120	20-DEC-22
Zinc (Zn)-Dissolved			101.0		%		80-120	20-DEC-22
Zirconium (Zr)-Dissolved			94.6		%		80-120	20-DEC-22
WG3776687-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	20-DEC-22
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	20-DEC-22
Boron (B)-Dissolved			<0.010		mg/L		0.01	20-DEC-22
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	20-DEC-22
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	20-DEC-22
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	20-DEC-22
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	20-DEC-22
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	20-DEC-22
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	20-DEC-22
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	20-DEC-22
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	20-DEC-22
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	20-DEC-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WP		Water						
Batch	R5909630							
WG3776687-1 MB								
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	20-DEC-22
Phosphorus (P)-Dissolved			<0.030		mg/L		0.03	20-DEC-22
Potassium (K)-Dissolved			<0.050		mg/L		0.05	20-DEC-22
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	20-DEC-22
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	20-DEC-22
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	20-DEC-22
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	20-DEC-22
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	20-DEC-22
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	20-DEC-22
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	20-DEC-22
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	20-DEC-22
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	20-DEC-22
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	20-DEC-22
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	20-DEC-22
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	20-DEC-22
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	20-DEC-22
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	20-DEC-22
MET-T-CCMS-WP		Water						
Batch	R5911682							
WG3776772-2 LCS								
Aluminum (Al)-Total			112.9		%		80-120	21-DEC-22
Antimony (Sb)-Total			111.6		%		80-120	21-DEC-22
Arsenic (As)-Total			108.8		%		80-120	21-DEC-22
Barium (Ba)-Total			111.1		%		80-120	21-DEC-22
Beryllium (Be)-Total			109.0		%		80-120	21-DEC-22
Bismuth (Bi)-Total			108.5		%		80-120	21-DEC-22
Boron (B)-Total			106.2		%		80-120	21-DEC-22
Cadmium (Cd)-Total			111.7		%		80-120	21-DEC-22
Calcium (Ca)-Total			104.0		%		80-120	21-DEC-22
Cesium (Cs)-Total			108.7		%		80-120	21-DEC-22
Chromium (Cr)-Total			110.2		%		80-120	21-DEC-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP		Water						
Batch	R5911682							
WG3776772-2	LCS							
Cobalt (Co)-Total			110.4		%		80-120	21-DEC-22
Copper (Cu)-Total			111.1		%		80-120	21-DEC-22
Iron (Fe)-Total			105.9		%		80-120	21-DEC-22
Lead (Pb)-Total			108.1		%		80-120	21-DEC-22
Lithium (Li)-Total			108.2		%		80-120	21-DEC-22
Magnesium (Mg)-Total			119.7		%		80-120	21-DEC-22
Manganese (Mn)-Total			108.7		%		80-120	21-DEC-22
Molybdenum (Mo)-Total			106.4		%		80-120	21-DEC-22
Nickel (Ni)-Total			110.0		%		80-120	21-DEC-22
Potassium (K)-Total			105.7		%		80-120	21-DEC-22
Phosphorus (P)-Total			107.5		%		80-120	21-DEC-22
Rubidium (Rb)-Total			108.7		%		80-120	21-DEC-22
Selenium (Se)-Total			103.8		%		80-120	21-DEC-22
Silicon (Si)-Total			110.1		%		80-120	21-DEC-22
Silver (Ag)-Total			106.3		%		80-120	21-DEC-22
Sodium (Na)-Total			114.3		%		80-120	21-DEC-22
Strontium (Sr)-Total			107.0		%		80-120	21-DEC-22
Sulfur (S)-Total			116.5		%		80-120	21-DEC-22
Tellurium (Te)-Total			105.3		%		80-120	21-DEC-22
Thallium (Tl)-Total			108.0		%		80-120	21-DEC-22
Thorium (Th)-Total			99.9		%		80-120	21-DEC-22
Tin (Sn)-Total			108.7		%		80-120	21-DEC-22
Titanium (Ti)-Total			106.1		%		80-120	21-DEC-22
Tungsten (W)-Total			107.1		%		80-120	21-DEC-22
Uranium (U)-Total			110.1		%		80-120	21-DEC-22
Vanadium (V)-Total			110.1		%		80-120	21-DEC-22
Zinc (Zn)-Total			109.2		%		80-120	21-DEC-22
Zirconium (Zr)-Total			96.1		%		80-120	21-DEC-22
WG3776772-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	21-DEC-22
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	21-DEC-22
Arsenic (As)-Total			<0.00010		mg/L		0.0001	21-DEC-22
Barium (Ba)-Total			<0.00010		mg/L		0.0001	21-DEC-22
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	21-DEC-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	Water							
Batch	R5911682							
WG3776772-1 MB								
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	21-DEC-22
Boron (B)-Total			<0.010		mg/L		0.01	21-DEC-22
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	21-DEC-22
Calcium (Ca)-Total			<0.050		mg/L		0.05	21-DEC-22
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	21-DEC-22
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	21-DEC-22
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	21-DEC-22
Copper (Cu)-Total			<0.00050		mg/L		0.0005	21-DEC-22
Iron (Fe)-Total			<0.010		mg/L		0.01	21-DEC-22
Lead (Pb)-Total			<0.000050		mg/L		0.00005	21-DEC-22
Lithium (Li)-Total			<0.0010		mg/L		0.001	21-DEC-22
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	21-DEC-22
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	21-DEC-22
Molybdenum (Mo)-Total			0.000075	B	mg/L		0.00005	21-DEC-22
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	21-DEC-22
Potassium (K)-Total			<0.050		mg/L		0.05	21-DEC-22
Phosphorus (P)-Total			<0.030		mg/L		0.03	21-DEC-22
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	21-DEC-22
Selenium (Se)-Total			<0.000050		mg/L		0.00005	21-DEC-22
Silicon (Si)-Total			<0.10		mg/L		0.1	21-DEC-22
Silver (Ag)-Total			<0.000010		mg/L		0.00001	21-DEC-22
Sodium (Na)-Total			<0.050		mg/L		0.05	21-DEC-22
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	21-DEC-22
Sulfur (S)-Total			<0.50		mg/L		0.5	21-DEC-22
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	21-DEC-22
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	21-DEC-22
Thorium (Th)-Total			<0.00010		mg/L		0.0001	21-DEC-22
Tin (Sn)-Total			<0.00010		mg/L		0.0001	21-DEC-22
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	21-DEC-22
Tungsten (W)-Total			<0.00010		mg/L		0.0001	21-DEC-22
Uranium (U)-Total			<0.000010		mg/L		0.00001	21-DEC-22
Vanadium (V)-Total			<0.00050		mg/L		0.0005	21-DEC-22
Zinc (Zn)-Total			<0.0030		mg/L		0.003	21-DEC-22
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	21-DEC-22



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-WP								
Batch R5909717								
WG3776708-6	LCS							
Phosphorus (P)-Total			103.3		%		80-120	21-DEC-22
WG3776708-5	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	21-DEC-22
WG3776708-8	MS	L2743404-2						
Phosphorus (P)-Total			103.6		%		70-130	21-DEC-22
P-T-L-COL-WP								
Batch R5911836								
WG3777138-2	LCS							
Phosphorus (P)-Total			93.2		%		80-120	29-DEC-22
WG3777138-1	MB							
Phosphorus (P)-Total			<0.0010		mg/L		0.001	29-DEC-22
SO4-IC-N-WP								
Batch R5909696								
WG3776664-7	DUP	L2743404-3						
Sulfate (SO4)		0.67	0.66		mg/L	0.6	20	20-DEC-22
WG3776664-6	LCS							
Sulfate (SO4)			102.0		%		90-110	20-DEC-22
WG3776664-5	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	20-DEC-22
WG3776664-8	MS	L2743404-3						
Sulfate (SO4)			106.3		%		75-125	20-DEC-22
Batch R5911256								
WG3776776-2	LCS							
Sulfate (SO4)			102.7		%		90-110	22-DEC-22
WG3776776-1	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	22-DEC-22
SOLIDS-TOTSUS-LR-WP								
Batch R5909478								
WG3776621-3	DUP	L2743404-1						
Total Suspended Solids		<1.0	<1.0	RPD-NA	mg/L	N/A	20	20-DEC-22
WG3776621-2	LCS							
Total Suspended Solids			100.4		%		85-115	20-DEC-22
WG3776621-1	MB							
Total Suspended Solids			<1.0		mg/L		1	20-DEC-22

Quality Control Report

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Nitrate in Water by IC (Low Level)							
	1	13-DEC-22 09:30	20-DEC-22 15:00	3	7	days	EHTR
	2	13-DEC-22 10:50	22-DEC-22 17:00	3	9	days	EHTR
	3	13-DEC-22	20-DEC-22 15:00	3	7	days	EHTR
	4	13-DEC-22	20-DEC-22 15:00	3	7	days	EHTR
Nitrite in Water by IC (Low Level)							
	1	13-DEC-22 09:30	22-DEC-22 17:00	3	9	days	EHTR
	2	13-DEC-22 10:50	22-DEC-22 17:00	3	9	days	EHTR
	3	13-DEC-22	22-DEC-22 17:00	3	9	days	EHTR
	4	13-DEC-22	22-DEC-22 17:00	3	9	days	EHTR

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:

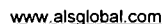
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.

Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2743404 were received on 19-DEC-22 15:26.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



L2743404-COFC

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FEB 2022 FROM

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

CERTIFICATE OF ANALYSIS

Work Order : **WP2302565**
Client : **Stantec Consulting Ltd.**
Contact : Karen Mathers
Address : 500 - 311 Portage Ave
Winnipeg MB Canada R3B 2B9
Telephone : (204)489-5900
Project : ALAMOS
PO : ----
C-O-C number : ----
Sampler : ----
Site : ----
Quote number : Budgetary Quote
No. of samples received : 18
No. of samples analysed : 18

Page : 1 of 18
Laboratory : Winnipeg - Environmental
Account Manager : Judy Dalmaijer
Address : 1329 Niakwa Road East, Unit 12
Winnipeg MB Canada R2J 3T4
Telephone : +1 204 255 9720
Date Samples Received : 06-Mar-2023 13:10
Date Analysis Commenced : 06-Mar-2023
Issue Date : 31-Mar-2023 13:44

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Christine Mason	Department Manager - Chemistry	Inorganics, Winnipeg, Manitoba
Christine Mason	Department Manager - Chemistry	Metals, Winnipeg, Manitoba
Greg Pokocky	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Metals, Waterloo, Ontario
Jayden Piattelli	Analyst	Metals, Burnaby, British Columbia
Jon Fisher	Department Manager - Inorganics	Inorganics, Waterloo, Ontario
Kinny Wu	Lab Analyst	Metals, Burnaby, British Columbia
Lee McTavish		Inorganics, Winnipeg, Manitoba
Matthew Bouch		Metals, Winnipeg, Manitoba
Oleksandr Busel		Inorganics, Winnipeg, Manitoba
Parnian Sane	Analyst	Metals, Burnaby, British Columbia
Zandrea Grabinski		Inorganics, Winnipeg, Manitoba



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
µg/L	micrograms per litre
mg/L	milligrams per litre
ng/L	nanograms per litre

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

<i>Qualifier</i>	<i>Description</i>
RRV	Reported result verified by repeat analysis.



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 09:49	28-Feb-2023 10:23	28-Feb-2023 11:05	28-Feb-2023 11:39	28-Feb-2023 12:15	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-001	WP2302565-002	WP2302565-003	WP2302565-004	WP2302565-005	
					Result	Result	Result	Result	Result	
Physical Tests										
Acidity (as CaCO3)	----	E283	2.0	mg/L	<2.0	2.6	3.3	28.2	5.4	
Alkalinity, bicarbonate (as CaCO3)	----	E290	2.0	mg/L	12.8	9.2	150	25.4	21.3	
Alkalinity, carbonate (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	
Alkalinity, hydroxide (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	
Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	12.8	9.2	150	25.4	21.3	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A	0.50	mg/L	21.7	13.2	142	37.2	33.8	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	<1.0	3.3	5.8	<1.0	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.040	0.021	0.339	0.052	0.011	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	
Chloride	16887-00-6	E235.Cl	0.50	mg/L	1.09	<0.50	3.30	2.06	0.97	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.060	0.061	0.046	0.090	0.049	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.43	0.30	1.30	2.06	1.31	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.138	0.114	0.064	0.103	0.037	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Phosphorus, total	7723-14-0	E372	0.020	mg/L	0.023	<0.020	0.051	0.086	0.088	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	8.48	1.50	0.61	4.97	1.60	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	0.0056	<0.0050	<0.0050	<0.0050	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	12.6	10.0	24.0	64.6	51.5	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	12.8	9.95	23.3	64.4	52.1	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.119	0.0310	0.0862	0.316	0.167	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0.00028	0.00039	<0.00010	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00030	0.00020	0.00057	0.00091	0.00080	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.0100	0.00760	0.0264	0.0238	0.00919	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
(Matrix: Water)										
Client sampling date / time										
Analyte	CAS Number	Method	LOR	Unit	WP2302565-001	WP2302565-002	WP2302565-003	WP2302565-004	WP2302565-005	
					Result	Result	Result	Result	Result	
Total Metals										
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	0.000026	<0.000020	
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	0.011	<0.010	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000186	0.0000067	0.0000231	0.0000446	0.0000196	
Calcium, total	7440-70-2	E420	0.050	mg/L	6.44	3.80	45.0	10.4	9.72	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	0.000020	0.000027	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0.00055	0.00143	<0.00050	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00048	<0.00010	0.00199	0.00038	0.00054	
Copper, total	7440-50-8	E420	0.00050	mg/L	0.00357	0.00068	0.00112	0.00229	<0.00050	
Iron, total	7439-89-6	E420	0.010	mg/L	1.35	0.302	3.43	5.82	1.60	
Lead, total	7439-92-1	E420	0.000050	mg/L	0.000075	<0.000050	0.000105	0.000343	0.000092	
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0017	0.0013	0.0020	0.0044	0.0026	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.36	0.898	7.30	2.73	2.31	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0310	0.00944	1.77	0.100	0.190	
Mercury, total	7439-97-6	E508-L	0.50	ng/L	1.34	0.65	4.38	4.94	6.60	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000072	<0.000050	0.000280	0.000126	0.000069	
Nickel, total	7440-02-0	E420	0.00050	mg/L	0.0366	0.00350	0.00138	0.00188	0.00144	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0.052	0.078	0.087	
Potassium, total	7440-09-7	E420	0.050	mg/L	0.798	0.744	2.08	5.51	2.32	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00106	0.00118	0.00260	0.00869	0.00352	
Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000057	<0.000050	0.000082	0.000223	0.000097	
Silicon, total	7440-21-3	E420	0.10	mg/L	4.04	3.76	13.4	13.8	10.1	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, total	7440-23-5	E420	0.050	mg/L	1.69	1.38	4.33	4.10	2.02	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0214	0.0155	0.0714	0.0327	0.0214	
Sulfur, total	7704-34-9	E420	0.50	mg/L	2.09	2.09	1.38	34.5	<0.50	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	0.000019	<0.000010	
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	0.00016	<0.00010	
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	0.00051	0.00050	0.0125	<0.00010	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
(Matrix: Water)										
Client sampling date / time										
Analyte	CAS Number	Method	LOR	Unit	WP2302565-001	WP2302565-002	WP2302565-003	WP2302565-004	WP2302565-005	
					Result	Result	Result	Result	Result	
Total Metals										
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00185	0.00061	0.00301	0.00751	0.00293	
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000024	0.000024	0.000108	0.000074	<0.000010	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0.00059	0.00112	<0.00050	
Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0165	0.0115	0.0092	0.0315	0.0070	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0.00040	0.00078	0.00029	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0807	0.0142	0.0600	0.228	0.148	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	0.00017	<0.00010	
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00022	0.00016	0.00054	0.00078	0.00079	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00949	0.00714	0.0238	0.0219	0.00993	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	0.000021	<0.000020	
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	0.010	<0.010	
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000124	<0.0000050	0.0000122	0.0000321	0.0000218	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	6.55	3.06	39.7	10.1	9.69	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	0.000011	0.000024	
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00105	<0.00050	
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00022	<0.00010	0.00192	0.00035	0.00054	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00224	0.00051	0.00064	0.00206	0.00061	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.954	0.186	3.23	4.26	1.45	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000055	<0.000050	0.000067	0.000234	0.000074	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0013	0.0012	0.0016	0.0038	0.0023	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.48	0.830	7.05	2.78	2.36	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0234	0.00700	1.74	0.0890	0.178	
Mercury, dissolved	7439-97-6	E509-L	0.50	ng/L	1.46	<0.50	2.58	4.86	6.13	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000068	<0.000050	0.000250	0.000104	0.000060	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0322	0.00329	0.00142	0.00172	0.00156	
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	0.068	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.806	0.656	1.90	5.24	2.21	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 09:49	28-Feb-2023 10:23	28-Feb-2023 11:05	28-Feb-2023 11:39	28-Feb-2023 12:15	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-001	WP2302565-002	WP2302565-003	WP2302565-004	WP2302565-005	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00109	0.00112	0.00252	0.00820	0.00337	
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000090	<0.000050	0.000097	0.000185	0.000120	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.90	3.31	12.4	12.4	9.80	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.83	1.28	4.09	4.04	2.05	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0229	0.0141	0.0691	0.0311	0.0218	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	2.38	0.99	1.53	2.74	<0.50	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	0.000014	<0.000010	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	0.00014	<0.00010	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0.00040	0.00054	<0.00010	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00085	<0.00030	0.00214	0.00532	0.00247	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000023	0.000020	0.000098	0.000064	<0.000010	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00071	<0.00050	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0166	0.0025	0.0093	0.0120	0.0071	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0.00045	0.00078	0.00038	
Dissolved MeHg filtration location	----	EP537	-	-	Field	Field	Field	Field	Field	
Dissolved mercury filtration location	----	EP509-L	-	-	Field	Field	Field	Field	Field	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00056	0.00156 ^{RRV}	
Methylmercury (as MeHg), total	22967-92-6	E536	0.000020	µg/L	0.000074	0.000043	0.00176	0.000309	0.000261	
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000020	µg/L	<0.000020	0.000052	0.000365	0.000233	0.000178	

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF7S	AQF7D	AQF38	AQF46	AQF42
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 01:03	28-Feb-2023 14:41	28-Feb-2023 15:05	28-Feb-2023 15:05	28-Feb-2023 15:33	28-Feb-2023 16:06
Analyte	CAS Number	Method	LOR	Unit	WP2302565-006	WP2302565-007	WP2302565-008	WP2302565-008	WP2302565-009	WP2302565-010
					Result	Result	Result	Result	Result	Result
Physical Tests										
Acidity (as CaCO ₃)	----	E283	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	5.7	<2.0
Alkalinity, bicarbonate (as CaCO ₃)	----	E290	2.0	mg/L	17.1	16.3	24.6	32.7	6.0	
Alkalinity, carbonate (as CaCO ₃)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Alkalinity, hydroxide (as CaCO ₃)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Alkalinity, total (as CaCO ₃)	----	E290	2.0	mg/L	17.1	16.3	24.6	32.7	6.0	
Hardness (as CaCO ₃), from total Ca/Mg	----	EC100A	0.50	mg/L	20.1	19.0	35.7	44.3	13.2	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	<1.0	<1.0	3.1	2.5	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	<0.010	<0.010	0.014	0.237	0.033	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	<0.50	0.86	1.22	0.56	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.049	0.044	0.105	0.051	0.071	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.29	0.29	0.45	0.82	0.39	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.078	0.114	0.156	0.105	0.121	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phosphorus, total	7723-14-0	E372	0.020	mg/L	<0.020	<0.020	<0.020	0.023	0.025	
Sulfate (as SO ₄)	14808-79-8	E235.SO4	0.30	mg/L	1.27	0.88	9.02	11.2	9.60	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	10.1	9.68	14.8	13.4	9.50	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	12.0	9.02	13.5	14.9	10.1	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0207	0.0224	0.0214	0.0295	0.0675	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	0.00043	0.00029	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00027	0.00022	0.00026	0.00044	0.00023	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.00871	0.00980	0.0160	0.0142	0.00832	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020

Sub-Matrix: Water					Client sample ID	AQF7S	AQF7D	AQF38	AQF46	AQF42
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 01:03	28-Feb-2023 14:41	28-Feb-2023 15:05	28-Feb-2023 15:33	28-Feb-2023 16:06	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-006	WP2302565-007	WP2302565-008	WP2302565-009	WP2302565-010	
					Result	Result	Result	Result	Result	
Total Metals										
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000096	0.0000107	
Calcium, total	7440-70-2	E420	0.050	mg/L	4.91	4.70	9.95	13.3	3.62	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00064	0.00099	
Iron, total	7439-89-6	E420	0.010	mg/L	0.054	0.070	0.081	0.583	0.353	
Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	0.000065	0.000082	
Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0.0011	0.0011	0.0012	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.91	1.76	2.63	2.70	1.00	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00241	0.0354	0.0142	0.109	0.0206	
Mercury, total	7439-97-6	E508-L	0.50	ng/L	0.76	0.71	0.53	0.97	1.01	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000076	0.000052	0.00203	0.000067	0.000070	
Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
Potassium, total	7440-09-7	E420	0.050	mg/L	0.630	0.559	0.776	1.06	0.716	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00112	0.00103	0.00120	0.00128	0.00117	
Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	0.000051	0.000068	<0.000050	<0.000050	
Silicon, total	7440-21-3	E420	0.10	mg/L	1.15	1.27	2.12	1.78	3.44	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, total	7440-23-5	E420	0.050	mg/L	1.28	1.14	1.64	1.61	1.40	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0152	0.0151	0.0263	0.0227	0.0151	
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	0.58	2.47	8.56	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	0.00036	0.00019	0.00071	0.00209	
Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	<0.00030	0.00069	0.00229	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF7S	AQF7D	AQF38	AQF46	AQF42
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 01:03	28-Feb-2023 14:41	28-Feb-2023 15:05	28-Feb-2023 15:33	28-Feb-2023 15:33	28-Feb-2023 16:06
Analyte	CAS Number	Method	LOR	Unit	WP2302565-006	WP2302565-007	WP2302565-008	WP2302565-009	WP2302565-009	WP2302565-010
					Result	Result	Result	Result	Result	Result
Total Metals										
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420	0.000010	mg/L	<0.000010	<0.000010	0.000011	<0.000010	<0.000010	0.000044
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0.0056	0.0448	0.0448	0.0256
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0190	0.0191	0.0178	0.0157	0.0157	0.0241
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00023	0.00022	0.00022	0.00034	0.00034	0.00019
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00860	0.0221	0.0157	0.0269	0.0269	0.0204
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000054	0.0000054	<0.0000050
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	4.70	5.03	9.81	12.4	12.4	3.36
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00022	0.00124	<0.00020	0.00194	0.00194	0.00197
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.044	0.047	0.060	0.448	0.448	0.200
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	0.000073	0.000073	0.000077
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	<0.0010	0.0011	0.0011	0.0010
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.70	1.59	2.67	2.82	2.82	1.01
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00190	0.0232	0.00837	0.0594	0.0594	0.0143
Mercury, dissolved	7439-97-6	E509-L	0.50	ng/L	1.04	0.83	0.60	0.65	0.65	<0.50
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000072	0.000065	0.00196	0.000060	0.000060	0.000074
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.576	0.524	0.737	1.02	1.02	0.752
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00112	0.00093	0.00110	0.00122	0.00122	0.00112



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF7S	AQF7D	AQF38	AQF46	AQF42
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 01:03	28-Feb-2023 14:41	28-Feb-2023 15:05	28-Feb-2023 15:05	28-Feb-2023 15:33	28-Feb-2023 16:06
Analyte	CAS Number	Method	LOR	Unit	WP2302565-006	WP2302565-007	WP2302565-008	WP2302565-009	WP2302565-010	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000052	<0.000050	0.000063	0.000067	<0.000050	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	1.08	1.16	2.07	1.70	3.26	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.23	1.15	1.65	1.59	1.40	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0144	0.0148	0.0258	0.0236	0.0151	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	1.26	0.57	0.55	<0.50	0.55	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	0.00016	0.00076	<0.00010	0.00016	0.00018	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	0.00041	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	<0.000010	<0.000010	0.000011	<0.000010	0.000031	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0025	0.0033	0.0025	0.0048	0.0049	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Dissolved MeHg filtration location	----	EP537	-	-	Field	Field	Field	Field	Field	
Dissolved mercury filtration location	----	EP509-L	-	-	Field	Field	Field	Field	Field	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Methylmercury (as MeHg), total	22967-92-6	E536	0.000020	µg/L	0.000063	0.000190	0.000021	0.000259	0.000029	
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000020	µg/L	0.000094	0.000044	0.000042	0.000059	0.000040	

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	QC-01	AQF45	AQF44	AQF43	AQF40
Client sampling date / time					28-Feb-2023	01-Mar-2023 09:16	01-Mar-2023 09:45	01-Mar-2023 10:15	01-Mar-2023 10:53	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-011	WP2302565-012	WP2302565-013	WP2302565-014	WP2302565-015	
					Result	Result	Result	Result	Result	
Physical Tests										
Acidity (as CaCO3)	----	E283	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	
Alkalinity, bicarbonate (as CaCO3)	----	E290	2.0	mg/L	20.1	7.7	12.9	9.3	3.6	
Alkalinity, carbonate (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	
Alkalinity, hydroxide (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	
Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	20.1	7.7	12.9	9.3	3.6	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A	0.50	mg/L	19.6	15.6	13.5	12.6	12.9	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	1.1	<1.0	<1.0	<1.0	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.017	0.012	0.014	<0.010	0.013	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	
Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	3.82	3.22	<0.50	0.69	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.050	0.074	0.072	0.074	0.074	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.35	0.28	0.29	0.27	0.31	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.075	0.101	0.112	0.120	0.102	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Phosphorus, total	7723-14-0	E372	0.020	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	1.00	6.54	8.26	2.15	8.08	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	9.65	8.95	8.95	9.09	9.63	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	10.1	10.7	9.22	8.78	9.66	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0208	0.0499	0.0364	0.0359	0.0357	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00014	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00026	0.00019	0.00021	0.00018	0.00018	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.00888	0.00704	0.00694	0.00690	0.00702	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	



Analytical Results

Sub-Matrix: Water					Client sample ID	QC-01	AQF45	AQF44	AQF43	AQF40
(Matrix: Water)										
Client sampling date / time						28-Feb-2023	01-Mar-2023 09:16	01-Mar-2023 09:45	01-Mar-2023 10:15	01-Mar-2023 10:53
Analyte	CAS Number	Method	LOR	Unit	WP2302565-011	WP2302565-012	WP2302565-013	WP2302565-014	WP2302565-015	
					Result	Result	Result	Result	Result	
Total Metals										
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium, total	7440-70-2	E420	0.050	mg/L	4.73	4.41	3.72	3.41	3.52	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Iron, total	7439-89-6	E420	0.010	mg/L	0.053	0.296	0.295	0.291	0.282	
Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	0.0012	0.0013	0.0012	0.0013	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.88	1.12	1.03	0.983	0.998	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00232	0.0108	0.0106	0.0108	0.0107	
Mercury, total	7439-97-6	E508-L	0.50	ng/L	0.74	0.99	0.76	0.81	0.85	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000071	0.000066	0.000056	<0.000050	0.000051	
Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, total	7440-09-7	E420	0.050	mg/L	0.608	0.617	0.656	0.598	0.637	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00114	0.00110	0.00114	0.00113	0.00110	
Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Silicon, total	7440-21-3	E420	0.10	mg/L	1.17	3.32	3.34	3.34	3.38	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, total	7440-23-5	E420	0.050	mg/L	1.28	1.38	1.40	1.33	1.36	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0148	0.0161	0.0156	0.0149	0.0153	
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	0.82	4.43	<0.50	1.95	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	0.00011	0.00116	<0.00010	0.00055	
Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	0.00124	0.00106	0.00088	0.00086	



Analytical Results

Sub-Matrix: Water					Client sample ID	QC-01	AQF45	AQF44	AQF43	AQF40
(Matrix: Water)										
Client sampling date / time					28-Feb-2023	01-Mar-2023 09:16	01-Mar-2023 09:45	01-Mar-2023 10:15	01-Mar-2023 10:53	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-011	WP2302565-012	WP2302565-013	WP2302565-014	WP2302565-015	
					Result	Result	Result	Result	Result	
Total Metals										
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000010	0.000028	0.000028	0.000025	0.000024	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	0.0043	0.0083	0.0034	0.0108	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00032	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0183	0.0212	0.0220	0.0205	0.0209	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00022	0.00016	0.00017	0.00015	0.00017	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00870	0.00662	0.0169	0.00660	0.0203	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	4.79	3.73	3.37	3.24	3.20	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	<0.00020	0.00043	0.00189	0.00025	0.00171	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.041	0.173	0.180	0.181	0.175	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000072	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.73	1.07	1.00	0.951	0.951	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00191	0.00647	0.00688	0.00678	0.00708	
Mercury, dissolved	7439-97-6	E509-L	0.50	ng/L	0.81	0.82	0.89	0.98	0.94	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000068	0.000059	0.000063	<0.000050	0.000055	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.595	0.580	0.619	0.562	0.600	
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00106	0.00100	0.00114	0.00100	0.00108	



Analytical Results

Sub-Matrix: Water					Client sample ID	QC-01	AQF45	AQF44	AQF43	AQF40
(Matrix: Water)										
Client sampling date / time					28-Feb-2023	01-Mar-2023 09:16	01-Mar-2023 09:45	01-Mar-2023 10:15	01-Mar-2023 10:53	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-011	WP2302565-012	WP2302565-013	WP2302565-014	WP2302565-015	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000051	<0.000050	<0.000050	<0.000050	<0.000050	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	1.09	3.06	3.17	3.11	3.08	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.26	1.36	1.33	1.29	1.33	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0146	0.0152	0.0149	0.0146	0.0142	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	0.59	1.90	0.50	<0.50	0.61	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	0.00018	0.00011	<0.00010	0.00015	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000010	0.000024	0.000022	0.000022	0.000022	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0023	0.0024	0.0025	<0.0010	0.0031	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Dissolved MeHg filtration location	----	EP537	-	-	Field	Field	Field	Field	Field	
Dissolved mercury filtration location	----	EP509-L	-	-	Field	Field	Field	Field	Field	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Methylmercury (as MeHg), total	22967-92-6	E536	0.000020	µg/L	0.000038	0.000039	0.000038	0.000035	0.000035	
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000020	µg/L	0.000040	0.000051	0.000029	0.000066	0.000022	

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	AQF41	FIELD BLANK	TRIP BLANK	----	----
					Client sampling date / time	01-Mar-2023 11:32	01-Mar-2023 15:15	01-Mar-2023	----	----
Analyte	CAS Number	Method	LOR	Unit	WP2302565-016	WP2302565-017	WP2302565-018	-----	-----	
					Result	Result	Result	----	----	
Physical Tests										
Acidity (as CaCO3)	----	E283	2.0	mg/L	<2.0	<2.0	<2.0	----	----	
Alkalinity, bicarbonate (as CaCO3)	----	E290	2.0	mg/L	10.9	<2.0	<2.0	----	----	
Alkalinity, carbonate (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	----	----	
Alkalinity, hydroxide (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	----	----	
Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	10.9	<2.0	<2.0	----	----	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A	0.50	mg/L	12.6	<0.50	<0.50	----	----	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	5.3	<1.0	<1.0	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.038	<0.010	0.042	----	----	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	----	----	
Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	<0.50	<0.50	----	----	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.076	<0.020	<0.020	----	----	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.35	<0.15	<0.15	----	----	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.122	<0.020	<0.020	----	----	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	----	----	
Phosphorus, total	7723-14-0	E372	0.020	mg/L	0.027	<0.020	<0.020	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	1.04	<0.30	<0.30	----	----	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	----	----	
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	----	----	
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	<0.0050	----	----	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	9.21	<0.50	0.76	----	----	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	10.5	<0.50	<0.50	----	----	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.105	<0.0030	<0.0030	----	----	
Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00012	<0.00010	<0.00010	----	----	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00022	<0.00010	<0.00010	----	----	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.00882	<0.00010	<0.00010	----	----	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	----	----	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF41	FIELD BLANK	TRIP BLANK	----	----
(Matrix: Water)										
Client sampling date / time					01-Mar-2023 11:32	01-Mar-2023 15:15	01-Mar-2023	----	----	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-016	WP2302565-017	WP2302565-018	-----	-----	
					Result	Result	Result	----	----	
Total Metals										
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	----	----	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000111	<0.0000050	<0.0000050	----	----	
Calcium, total	7440-70-2	E420	0.050	mg/L	3.37	<0.050	<0.050	----	----	
Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000011	<0.000010	<0.000010	----	----	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00010	<0.00010	<0.00010	----	----	
Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Iron, total	7439-89-6	E420	0.010	mg/L	0.586	<0.010	<0.010	----	----	
Lead, total	7439-92-1	E420	0.000050	mg/L	0.000094	<0.000050	<0.000050	----	----	
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0013	<0.0010	<0.0010	----	----	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.02	<0.0050	<0.0050	----	----	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0670	<0.00010	<0.00010	----	----	
Mercury, total	7439-97-6	E508-L	0.50	ng/L	1.16	<0.50	<0.50	----	----	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000058	<0.000050	<0.000050	----	----	
Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	----	----	
Potassium, total	7440-09-7	E420	0.050	mg/L	0.708	<0.050	<0.050	----	----	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00131	<0.00020	<0.00020	----	----	
Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Silicon, total	7440-21-3	E420	0.10	mg/L	3.44	<0.10	<0.10	----	----	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Sodium, total	7440-23-5	E420	0.050	mg/L	1.34	<0.050	<0.050	----	----	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0154	<0.00020	<0.00020	----	----	
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	<0.50	----	----	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00459	<0.00030	<0.00030	----	----	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF41	FIELD BLANK	TRIP BLANK	----	----
(Matrix: Water)										
Client sampling date / time					01-Mar-2023 11:32	01-Mar-2023 15:15	01-Mar-2023	----	----	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-016	WP2302565-017	WP2302565-018	-----	-----	
					Result	Result	Result	----	----	
Total Metals										
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000037	<0.000010	<0.000010	----	----	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0052	<0.0030	<0.0030	----	----	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0229	<0.0010	<0.0010	----	----	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00016	<0.00010	<0.00010	----	----	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00720	0.00359	<0.00010	----	----	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	----	----	
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	----	----	
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	----	----	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	3.36	<0.050	<0.050	----	----	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00030	0.00096	<0.00020	----	----	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.194	<0.010	<0.010	----	----	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0010	<0.0010	<0.0010	----	----	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	0.976	<0.0050	<0.0050	----	----	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00968	<0.00010	<0.00010	----	----	
Mercury, dissolved	7439-97-6	E509-L	0.50	ng/L	1.13	<0.50	<0.50	----	----	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000053	<0.000050	<0.000050	----	----	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	----	----	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.617	<0.050	<0.050	----	----	
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00107	<0.00020	<0.00020	----	----	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF41	FIELD BLANK	TRIP BLANK	----	----
(Matrix: Water)										
Client sampling date / time					01-Mar-2023 11:32	01-Mar-2023 15:15	01-Mar-2023	----	----	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-016	WP2302565-017	WP2302565-018	-----	-----	
					Result	Result	Result	----	----	
Dissolved Metals										
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.13	<0.050	<0.050	----	----	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.34	<0.050	<0.050	----	----	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0150	<0.00020	<0.00020	----	----	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	<0.50	----	----	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00036	<0.00030	<0.00030	----	----	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000022	<0.000010	<0.000010	----	----	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0014	0.0013	<0.0010	----	----	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	----	----	
Dissolved MeHg filtration location	----	EP537	-	-	Field	Field	Field	----	----	
Dissolved mercury filtration location	----	EP509-L	-	-	Field	Field	Field	----	----	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Laboratory	----	----	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Methylmercury (as MeHg), total	22967-92-6	E536	0.000020	µg/L	0.000064	<0.000020	<0.000020	----	----	
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000020	µg/L	0.000036	0.000040 ^{RRV}	<0.000020	----	----	

Please refer to the General Comments section for an explanation of any qualifiers detected.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: WP2302565	Page	: 1 of 59
Client	: Stantec Consulting Ltd.	Laboratory	: Winnipeg - Environmental
Contact	: Karen Mathers	Account Manager	: Judy Dalmajjer
Address	: 500 - 311 Portage Ave Winnipeg MB Canada R3B 2B9	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	: (204)489-5900	Telephone	: +1 204 255 9720
Project	: ALAMOS	Date Samples Received	: 06-Mar-2023 13:10
PO	: ----	Issue Date	: 31-Mar-2023 13:46
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: Budgetary Quote		
No. of samples received	: 18		
No. of samples analysed	: 18		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples
Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Selenium, dissolved	7782-49-2	E421	132 % ^{MES}	70.0-130%	Recovery greater than upper data quality objective

Result Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF40	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF41	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF43	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF44	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF45	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) FIELD BLANK	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) TRIP BLANK	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF38	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF42	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF46	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF7D	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM28	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM29C	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM71	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM72	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM73	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) QC-01	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF7S	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF40	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF41	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF43	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF44	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF45	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE FIELD BLANK	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE TRIP BLANK	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF38	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF42	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF46	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF7D	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF7S	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM28	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM29C	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM71	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM72	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM73	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE QC-01	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF40	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF41	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF43	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF44	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF45	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE FIELD BLANK	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE TRIP BLANK	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF38	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF42	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF46	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF7D	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF7S	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQM28	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQM29C	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQM71	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQM72	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water**

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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC										
HDPE AQM73	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE QC-01	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF40	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF41	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF43	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF44	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF45	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE FIELD BLANK	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE TRIP BLANK	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: **Water**

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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF38	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF42	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF46	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF7D	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF7S	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM28	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM29C	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM71	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM72	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM73	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE QC-01	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF40	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF41	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF43	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF44	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF45	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE FIELD BLANK	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE TRIP BLANK	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM



Matrix: **Water**

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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF38	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF42	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF46	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF7D	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF7S	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM28	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM29C	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM71	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM72	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM73	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE QC-01	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF40	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF41	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF43	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF44	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF45	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE FIELD BLANK	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE TRIP BLANK	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF38	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF42	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF46	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF7D	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF7S	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM28	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM29C	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM71	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM72	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM73	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE QC-01	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF40	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF41	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF43	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF44	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF45	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE FIELD BLANK	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE TRIP BLANK	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF38	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF42	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF46	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF7D	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF7S	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM28	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM29C	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM71	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM72	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM73	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE QC-01	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF40	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF41	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF43	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF44	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF45	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) FIELD BLANK	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) TRIP BLANK	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF38	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF42	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF46	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF7D	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF7S	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM28	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM29C	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM71	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM72	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM73	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) QC-01	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF40	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF41	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF43	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF44	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF45	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) FIELD BLANK	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) TRIP BLANK	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF38	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF42	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF46	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF7D	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF7S	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM28	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM29C	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM71	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM72	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM73	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) QC-01	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7D	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7S	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) QC-01	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7D	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7S	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) QC-01	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓



Matrix: **Water**

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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7D	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7S	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓



Matrix: **Water**

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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) QC-01	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓



Matrix: **Water**

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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF38	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF42	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF46	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF7D	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQM28	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQM29C	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQM71	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✓



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQM72	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQM73	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) QC-01	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF7S	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	11 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF40	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF41	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF43	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF44	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF45	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✔



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) FIELD BLANK	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) TRIP BLANK	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF40	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF41	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF43	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF44	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF45	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) FIELD BLANK	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) TRIP BLANK	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF38	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF42	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF46	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF7D	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF7S	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM28	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM29C	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM71	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM72	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM73	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) QC-01	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF38	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF40	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF41	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF43	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF44	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF45	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF7D	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF7S	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM28	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM29C	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM71	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM72	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM73	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) FIELD BLANK	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) TRIP BLANK	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF42	E358-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF46	E358-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) QC-01	E358-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) FIELD BLANK	E355-L	01-Mar-2023	13-Mar-2023	----	----		13-Mar-2023	28 days	12 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) TRIP BLANK	E355-L	01-Mar-2023	13-Mar-2023	----	----		13-Mar-2023	28 days	12 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF40	E355-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF41	E355-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF43	E355-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF44	E355-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF45	E355-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF38	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF42	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF46	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF7D	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF7S	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM28	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM29C	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM71	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM72	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM73	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) QC-01	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF40	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF41	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF43	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF44	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF45	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE FIELD BLANK	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE TRIP BLANK	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Acidity by Titration										
HDPE AQF38	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF42	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF46	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF7D	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM28	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM29C	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM71	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM72	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM73	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Acidity by Titration										
HDPE QC-01	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF7S	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	15 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF40	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF41	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF43	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF44	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF45	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE FIELD BLANK	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE TRIP BLANK	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Alkalinity Species by Titration										
HDPE AQF38	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF42	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF46	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF7D	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF7S	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM28	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM29C	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM71	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM72	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Alkalinity Species by Titration										
HDPE AQM73	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE QC-01	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF40	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF41	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF43	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF44	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF45	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] FIELD BLANK	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] TRIP BLANK	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF38	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF42	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF46	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF7D	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF7S	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM28	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM29C	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM71	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM72	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM73	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] QC-01	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF38	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF7D	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF7S	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQM28	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQM29C	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQM71	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQM72	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQM73	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF40	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF41	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF43	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF44	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF45	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) FIELD BLANK	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) TRIP BLANK	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF42	E537	28-Feb-2023	17-Mar-2023	180 days	17 days	✓	21-Mar-2023	180 days	4 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF46	E537	28-Feb-2023	17-Mar-2023	180 days	17 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) QC-01	E537	28-Feb-2023	17-Mar-2023	180 days	17 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF40	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF41	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF43	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF44	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF45	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) FIELD BLANK	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) TRIP BLANK	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF38	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF42	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF46	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF7D	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF7S	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM28	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM29C	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM71	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM72	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM73	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) QC-01	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF40	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF41	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF43	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF44	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF45	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) FIELD BLANK	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) TRIP BLANK	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF38	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF42	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF46	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF7D	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQM28	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQM29C	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQM71	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQM72	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQM73	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) QC-01	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF7S	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	12 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF38	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF42	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF46	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF7D	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF7S	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQM28	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQM29C	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQM71	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQM72	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQM73	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) QC-01	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF40	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF41	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF43	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF44	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF45	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) FIELD BLANK	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) TRIP BLANK	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF40	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF41	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF43	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF44	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF45	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM28	E420	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) FIELD BLANK	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) TRIP BLANK	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF38	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF42	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF46	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF7D	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF7S	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM29C	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM71	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM72	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓

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 Project : ALAMOS



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM73	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✔
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) QC-01	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✔

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Acidity by Titration	E283	856311	1	18	5.5	5.0	✓
Alkalinity Species by Titration	E290	853851	1	20	5.0	5.0	✓
Ammonia in Water by Colour	E303	853867	1	18	5.5	5.0	✓
Bromide in Water by IC	E235.Br	854724	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	854722	2	26	7.6	5.0	✓
Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E509-L	859431	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	854521	1	20	5.0	5.0	✓
Dissolved Methylmercury in Water by GCAFS	E537	862432	2	33	6.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	854523	2	32	6.2	5.0	✓
Fluoride in Water by IC	E235.F	854723	2	29	6.9	5.0	✓
Free Cyanide	E339	859043	2	30	6.6	5.0	✓
Nitrate in Water by IC	E235.NO3	854719	2	37	5.4	5.0	✓
Nitrite in Water by IC	E235.NO2	854720	2	37	5.4	5.0	✓
Sulfate in Water by IC	E235.SO4	854721	2	28	7.1	5.0	✓
Total Cyanide	E333	859041	2	33	6.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	857259	1	18	5.5	5.0	✓
Total Kjeldahl Nitrogen by Colourimetry	E319	854740	1	20	5.0	5.0	✓
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	859213	1	18	5.5	5.0	✓
Total metals in Water by CRC ICPMS	E420	854517	2	40	5.0	5.0	✓
Total Methylmercury in Water by GCAFS	E536	858920	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	855745	2	40	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	854707	1	20	5.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	855079	1	19	5.2	5.0	✓
WAD Cyanide	E336	859044	2	22	9.0	5.0	✓
Laboratory Control Samples (LCS)							
Acidity by Titration	E283	856311	1	18	5.5	5.0	✓
Alkalinity Species by Titration	E290	853851	1	20	5.0	5.0	✓
Ammonia in Water by Colour	E303	853867	1	18	5.5	5.0	✓
Bromide in Water by IC	E235.Br	854724	2	20	10.0	5.0	✓
Chloride in Water by IC	E235.Cl	854722	2	26	7.6	5.0	✓
Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E509-L	859431	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	854521	1	20	5.0	5.0	✓
Dissolved Methylmercury in Water by GCAFS	E537	862432	3	33	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	854523	2	32	6.2	5.0	✓
Fluoride in Water by IC	E235.F	854723	2	29	6.9	5.0	✓
Free Cyanide	E339	859043	2	30	6.6	5.0	✓



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS) - Continued							
Nitrate in Water by IC	E235.NO3	854719	2	37	5.4	5.0	✔
Nitrite in Water by IC	E235.NO2	854720	2	37	5.4	5.0	✔
Sulfate in Water by IC	E235.SO4	854721	2	28	7.1	5.0	✔
Total Cyanide	E333	859041	2	33	6.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	857259	1	18	5.5	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	854740	1	20	5.0	5.0	✔
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	859213	1	18	5.5	5.0	✔
Total metals in Water by CRC ICPMS	E420	854517	2	40	5.0	5.0	✔
Total Methylmercury in Water by GCAFS	E536	858920	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	855745	2	40	5.0	5.0	✔
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	854707	1	20	5.0	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	855079	1	19	5.2	5.0	✔
WAD Cyanide	E336	859044	2	22	9.0	5.0	✔
Method Blanks (MB)							
Acidity by Titration	E283	856311	1	18	5.5	5.0	✔
Alkalinity Species by Titration	E290	853851	1	20	5.0	5.0	✔
Ammonia in Water by Colour	E303	853867	1	18	5.5	5.0	✔
Bromide in Water by IC	E235.Br	854724	2	20	10.0	5.0	✔
Chloride in Water by IC	E235.Cl	854722	2	26	7.6	5.0	✔
Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E509-L	859431	1	18	5.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	854521	1	20	5.0	5.0	✔
Dissolved Methylmercury in Water by GCAFS	E537	862432	3	33	9.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	854523	2	32	6.2	5.0	✔
Fluoride in Water by IC	E235.F	854723	2	29	6.9	5.0	✔
Free Cyanide	E339	859043	2	30	6.6	5.0	✔
Nitrate in Water by IC	E235.NO3	854719	2	37	5.4	5.0	✔
Nitrite in Water by IC	E235.NO2	854720	2	37	5.4	5.0	✔
Sulfate in Water by IC	E235.SO4	854721	2	28	7.1	5.0	✔
Total Cyanide	E333	859041	2	33	6.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	857259	1	18	5.5	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	854740	1	20	5.0	5.0	✔
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	859213	1	18	5.5	5.0	✔
Total metals in Water by CRC ICPMS	E420	854517	2	40	5.0	5.0	✔
Total Methylmercury in Water by GCAFS	E536	858920	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	855745	2	40	5.0	5.0	✔
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	854707	1	20	5.0	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	855079	1	19	5.2	5.0	✔
WAD Cyanide	E336	859044	2	22	9.0	5.0	✔
Matrix Spikes (MS)							



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Matrix Spikes (MS) - Continued							
Ammonia in Water by Colour	E303	853867	1	18	5.5	5.0	✔
Bromide in Water by IC	E235.Br	854724	1	20	5.0	5.0	✔
Chloride in Water by IC	E235.Cl	854722	2	26	7.6	5.0	✔
Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E509-L	859431	1	18	5.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	854521	1	20	5.0	5.0	✔
Dissolved Methylmercury in Water by GCAFS	E537	862432	2	33	6.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	854523	2	32	6.2	5.0	✔
Fluoride in Water by IC	E235.F	854723	2	29	6.9	5.0	✔
Free Cyanide	E339	859043	2	30	6.6	5.0	✔
Nitrate in Water by IC	E235.NO3	854719	2	37	5.4	5.0	✔
Nitrite in Water by IC	E235.NO2	854720	2	37	5.4	5.0	✔
Sulfate in Water by IC	E235.SO4	854721	2	28	7.1	5.0	✔
Total Cyanide	E333	859041	2	33	6.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	857259	1	18	5.5	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	854740	1	20	5.0	5.0	✔
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	859213	1	18	5.5	5.0	✔
Total metals in Water by CRC ICPMS	E420	854517	2	40	5.0	5.0	✔
Total Methylmercury in Water by GCAFS	E536	858920	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	855745	2	40	5.0	5.0	✔
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	854707	1	20	5.0	5.0	✔
WAD Cyanide	E336	859044	2	22	9.0	5.0	✔



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry (Low Level)	E160-L Winnipeg - Environmental	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Bromide in Water by IC	E235.Br Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC	E235.Cl Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC	E235.NO3 Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Acidity by Titration	E283 Waterloo - Environmental	Water	APHA 2310 B (mod)	Acidity is determined by potentiometric titration to pH endpoint of 8.3
Alkalinity Species by Titration	E290 Winnipeg - Environmental	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ammonia in Water by Colour	E303 Winnipeg - Environmental	Water	APHA 4500 NH3-NITROGEN (AMMONIA)	This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.
Total Kjeldahl Nitrogen by Colourimetry	E319 Winnipeg - Environmental	Water	APHA 4500-Norg D (mod)	Total Kjeldahl Nitrogen is determined using block digestion followed by colourimetric analysis.
Total Cyanide	E333 Waterloo - Environmental	Water	ISO 14403 (mod)	Total or Strong Acid Dissociable (SAD) Cyanide is determined by Continuous Flow Analyzer (CFA) with in-line UV digestion followed by colourimetric analysis. Method Limitation: High levels of thiocyanate (SCN) may cause positive interference (up to 0.5% of SCN concentration).
WAD Cyanide	E336 Waterloo - Environmental	Water	APHA 4500-CN I (mod)	Weak Acid Dissociable (WAD) cyanide is determined by Continuous Flow Analyzer (CFA) with in-line distillation followed by colourimetric analysis.
Free Cyanide	E339 Waterloo - Environmental	Water	ASTM D7237 (mod)	Free Cyanide is determined by Continuous Flow Analyzer (CFA) with in-line gas diffusion followed by colourimetric analysis.
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L Winnipeg - Environmental	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of total carbon (TC) is comprised of IC (which is common), this method is more accurate and more reliable than the TOC by subtraction method (i.e. TC minus TIC).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L Winnipeg - Environmental	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.02 mg/L)	E372 Winnipeg - Environmental	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total metals in Water by CRC ICPMS	E420 Winnipeg - Environmental	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals in Water by CRC ICPMS	E421 Winnipeg - Environmental	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L Vancouver - Environmental	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAFS.
Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E509-L Vancouver - Environmental	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAFS.
Total Hexavalent Chromium (Cr VI) by IC	E532 Waterloo - Environmental	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. Results are based on an un-filtered, field-preserved sample.
Total Methylmercury in Water by GCAFS	E536 Vancouver - Environmental	Water	EPA 1630 (mod)	This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".
Dissolved Methylmercury in Water by GCAFS	E537 Vancouver - Environmental	Water	EPA 1630 (mod)	This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".
Hardness (Calculated) from Total Ca/Mg	EC100A Winnipeg - Environmental	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 Winnipeg - Environmental	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 Winnipeg - Environmental	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.



Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Total Organic Carbon by Combustion	EP355 Winnipeg - Environmental	Water		Preparation for Total Organic Carbon by Combustion
Preparation for Dissolved Organic Carbon for Combustion	EP358 Winnipeg - Environmental	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Phosphorus in water	EP372 Winnipeg - Environmental	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 Winnipeg - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO ₃ .
Dissolved Mercury Water Filtration (Low Level)	EP509-L Vancouver - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
Total Methylmercury Water Preparation	EP536 Vancouver - Environmental	Water	EPA 1630	This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".
Dissolved Methylmercury Water Preparation	EP537 Vancouver - Environmental	Water	EPA 1630	This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".

QUALITY CONTROL REPORT

Work Order	: WP2302565	Page	: 1 of 26
Client	: Stantec Consulting Ltd.	Laboratory	: Winnipeg - Environmental
Contact	: Karen Mathers	Account Manager	: Judy Dalmaijer
Address	: 500 - 311 Portage Ave Winnipeg MB Canada R3B 2B9	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	:	Telephone	: +1 204 255 9720
Project	: ALAMOS	Date Samples Received	: 06-Mar-2023 13:10
PO	: ----	Date Analysis Commenced	: 06-Mar-2023
C-O-C number	: ----	Issue Date	: 31-Mar-2023 13:45
Sampler	: ---- (204)489-5900		
Site	: ----		
Quote number	: Budgetary Quote		
No. of samples received	: 18		
No. of samples analysed	: 18		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Christine Mason	Department Manager - Chemistry	Winnipeg Inorganics, Winnipeg, Manitoba
Christine Mason	Department Manager - Chemistry	Winnipeg Metals, Winnipeg, Manitoba
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Matthew Bouch		Winnipeg Metals, Winnipeg, Manitoba
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Parnian Sane	Analyst	Vancouver Metals, Burnaby, British Columbia
Zandrea Grabinski		Winnipeg Inorganics, Winnipeg, Manitoba



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 853851)											
WP2302559-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	21.2	18.7	12.5%	20%	----
Physical Tests (QC Lot: 855079)											
WP2302636-001	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	2.3	2.5	0.3	Diff <2x LOR	----
Physical Tests (QC Lot: 856311)											
WP2302565-001	AQM28	Acidity (as CaCO3)	----	E283	2.0	mg/L	<2.0	<2.0	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 853867)											
WP2302565-001	AQM28	Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.040	0.039	0.001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854707)											
WP2302565-001	AQM28	Phosphorus, total	7723-14-0	E372	0.020	mg/L	0.023	0.022	0.0009	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854719)											
WP2302565-001	AQM28	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.138	0.140	0.002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854720)											
WP2302565-001	AQM28	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854721)											
WP2302565-001	AQM28	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	8.48	8.53	0.502%	20%	----
Anions and Nutrients (QC Lot: 854722)											
WP2302565-001	AQM28	Chloride	16887-00-6	E235.Cl	0.50	mg/L	1.09	1.09	0.002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854723)											
WP2302565-001	AQM28	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.060	0.060	0.0007	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854724)											
WP2302565-001	AQM28	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854740)											
WP2302565-001	AQM28	Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.43	0.42	0.01	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854990)											
WP2302586-003	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	5.89	5.93	0.642%	20%	----
Anions and Nutrients (QC Lot: 854991)											
WP2302586-003	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.389	0.390	0.370%	20%	----
Anions and Nutrients (QC Lot: 854992)											
WP2302586-003	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854993)											



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients (QC Lot: 854993) - continued											
WP2302586-003	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854994)											
WP2302586-003	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	72.5	72.6	0.137%	20%	----
Cyanides (QC Lot: 859041)											
WP2302565-001	AQM28	Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 859043)											
WP2302565-001	AQM28	Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 859044)											
WP2302565-001	AQM28	Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 859047)											
WP2302565-018	TRIP BLANK	Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 859048)											
WP2302565-018	TRIP BLANK	Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 859049)											
WP2302565-018	TRIP BLANK	Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 854523)											
WP2302368-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	13.4	14.2	5.62%	20%	----
Organic / Inorganic Carbon (QC Lot: 855745)											
WP2302453-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	0.59	<0.50	0.09	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 855747)											
WP2302565-009	AQF46	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	13.4	13.4	0.252%	20%	----
Organic / Inorganic Carbon (QC Lot: 861079)											
WP2302815-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	15.2	15.8	3.82%	20%	----
Total Metals (QC Lot: 854517)											
WP2302454-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	<0.0030	0.0043	0.0013	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0159	0.0157	1.21%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.076	0.074	0.002	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	19.0	18.9	0.854%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 854517) - continued											
WP2302454-001	Anonymous	Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0203	0.0205	1.12%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	25.0	24.1	3.74%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00014	0.00015	0.00001	Diff <2x LOR	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000360	0.000374	0.000014	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	1.81	1.80	0.952%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00082	0.00078	0.00004	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000669	0.000661	1.16%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	2.28	2.28	0.214%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	26.4	25.3	4.00%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.130	0.129	0.359%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	6.40	6.76	5.38%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00276	0.00286	3.40%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 855816)											
WP2302552-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00024	0.00022	0.00002	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00268	0.00272	1.46%	20%	----



Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 855816) - continued											
WP2302552-001	Anonymous	Barium, total	7440-39-3	E420	0.00010	mg/L	0.0137	0.0134	2.05%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	0.000030	0.000025	0.000006	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.875	0.916	4.57%	20%	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000276	0.0000241	0.0000035	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	81.8	83.9	2.56%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000015	0.000018	0.000002	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00107	0.00110	2.82%	20%	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00203	0.00202	0.000006	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.044	0.043	0.001	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000128	0.000128	0.0000006	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.189	0.190	0.561%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	25.6	26.1	2.10%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	1.84	1.86	1.23%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.00444	0.00445	0.255%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00253	0.00256	0.00003	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	0.390	0.386	0.004	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	7.72	7.62	1.23%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00414	0.00420	1.46%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.00153	0.00155	1.23%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	13.9	14.3	2.73%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	227	227	0.246%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.709	0.679	4.38%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	153	157	2.79%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000016	0.000017	0.0000008	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00154	0.00158	2.93%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00052	<0.00050	0.00002	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 855816) - continued											
WP2302552-001	Anonymous	Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0150	0.0146	0.0004	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 859213)											
WP2302565-001	AQM28	Mercury, total	7439-97-6	E508-L	0.50	ng/L	1.34	1.25	0.09	Diff <2x LOR	----
Dissolved Metals (QC Lot: 854521)											
WP2302559-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0768	0.0740	3.78%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00963	0.00968	0.524%	20%	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.191	0.190	0.563%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.114	0.116	1.86%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	0.000071	0.000071	0.00000001	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.419	0.402	4.23%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0573	0.0583	1.75%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.500	mg/L	686	660	4.00%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.00108	0.00108	0.508%	20%	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	9.93	9.93	0.00317%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	2.01	1.98	1.28%	20%	----
		Iron, dissolved	7439-89-6	E421	0.100	mg/L	553	550	0.654%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.355	0.310	13.6%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0500	mg/L	422	412	2.28%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00100	mg/L	36.9	36.7	0.710%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00717	0.00713	0.566%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00500	mg/L	32.8	32.1	2.26%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	110	105	4.47%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.112	0.109	2.72%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.0210	0.0216	2.92%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	34.1	33.2	2.68%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	0.000016	0.000015	0.0000006	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	394	397	0.879%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	2.57	2.62	2.05%	20%	----
		Sulfur, dissolved	7704-34-9	E421	5.00	mg/L	1540	1520	0.957%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 854521) - continued											
WP2302559-001	Anonymous	Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000036	0.000035	0.0000006	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	0.00018	<0.00010	0.00008	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000214	0.000214	0.126%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0100	mg/L	16.3	16.0	1.38%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 859431)											
WP2302565-001	AQM28	Mercury, dissolved	7439-97-6	E509-L	0.50	ng/L	1.46	1.40	0.06	Diff <2x LOR	----
Speciated Metals (QC Lot: 857259)											
WP2302565-001	AQM28	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 858920)											
WP2302565-001	AQM28	Methylmercury (as MeHg), total	22967-92-6	E536	0.000020	µg/L	0.000074	0.000085	0.000010	Diff <2x LOR	----
Speciated Metals (QC Lot: 862432)											
VA23A3446-001	Anonymous	Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000800	µg/L	0.00154	0.00111	0.000427	Diff <2x LOR	----
Speciated Metals (QC Lot: 876269)											
FC2300559-001	Anonymous	Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000020	µg/L	0.000074	0.000091	0.000017	Diff <2x LOR	----



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 853851)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 855079)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 856311)						
Acidity (as CaCO3)	----	E283	2	mg/L	<2.0	----
Anions and Nutrients (QCLot: 853867)						
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 854707)						
Phosphorus, total	7723-14-0	E372	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 854719)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 854720)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 854721)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 854722)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 854723)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 854724)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 854740)						
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	<0.15	----
Anions and Nutrients (QCLot: 854989)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 854990)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 854991)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 854992)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 854993)						



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 854993) - continued						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 854994)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Cyanides (QCLot: 859041)						
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 859043)						
Cyanide, free	----	E339	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 859044)						
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 859047)						
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 859048)						
Cyanide, free	----	E339	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 859049)						
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 854523)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 855745)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 855747)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 861079)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Metals (QCLot: 854517)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 854517) - continued						
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 855816)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 855816) - continued						
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 859213)						
Mercury, total	7439-97-6	E508-L	0.5	ng/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 854521)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 854521) - continued						
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 859431)						
Mercury, dissolved	7439-97-6	E509-L	0.5	ng/L	<0.50	----
Speciated Metals (QCLot: 857259)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Speciated Metals (QCLot: 858920)						
Methylmercury (as MeHg), total	22967-92-6	E536	0.00002	µg/L	<0.000020	----
Speciated Metals (QCLot: 862432)						
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	<0.000020	----
Speciated Metals (QCLot: 866122)						
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	<0.000020	----
Speciated Metals (QCLot: 876269)						
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	<0.000020	----



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 853851)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	100 mg/L	98.1	85.0	115	----
Physical Tests (QCLot: 855079)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	150 mg/L	97.0	85.0	115	----
Physical Tests (QCLot: 856311)									
Acidity (as CaCO3)	----	E283	2	mg/L	50 mg/L	112	85.0	115	----
Anions and Nutrients (QCLot: 853867)									
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	0.25 mg/L	98.5	85.0	115	----
Anions and Nutrients (QCLot: 854707)									
Phosphorus, total	7723-14-0	E372	0.02	mg/L	0.5 mg/L	101	80.0	120	----
Anions and Nutrients (QCLot: 854719)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 854720)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.7	90.0	110	----
Anions and Nutrients (QCLot: 854721)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 854722)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	98.5	90.0	110	----
Anions and Nutrients (QCLot: 854723)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 854724)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	100	85.0	115	----
Anions and Nutrients (QCLot: 854740)									
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	4 mg/L	99.7	75.0	125	----
Anions and Nutrients (QCLot: 854989)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	98.7	85.0	115	----
Anions and Nutrients (QCLot: 854990)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	98.0	90.0	110	----
Anions and Nutrients (QCLot: 854991)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 854992)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	97.3	90.0	110	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Anions and Nutrients (QCLot: 854993)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	99.0	90.0	110	----
Anions and Nutrients (QCLot: 854994)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Cyanides (QCLot: 859041)									
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	0.25 mg/L	106	80.0	120	----
Cyanides (QCLot: 859043)									
Cyanide, free	----	E339	0.002	mg/L	0.125 mg/L	96.5	80.0	120	----
Cyanides (QCLot: 859044)									
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	0.125 mg/L	99.9	80.0	120	----
Cyanides (QCLot: 859047)									
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	0.25 mg/L	108	80.0	120	----
Cyanides (QCLot: 859048)									
Cyanide, free	----	E339	0.002	mg/L	0.125 mg/L	93.8	80.0	120	----
Cyanides (QCLot: 859049)									
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	0.125 mg/L	97.3	80.0	120	----
Organic / Inorganic Carbon (QCLot: 854523)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	96.3	80.0	120	----
Organic / Inorganic Carbon (QCLot: 855745)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	105	80.0	120	----
Organic / Inorganic Carbon (QCLot: 855747)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	97.9	80.0	120	----
Organic / Inorganic Carbon (QCLot: 861079)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	94.9	80.0	120	----
Total Metals (QCLot: 854517)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	93.4	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	101	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	95.0	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	93.1	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	94.6	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	101	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	93.8	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	89.3	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit					
Total Metals (QCLot: 854517) - continued									
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	91.0	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	90.3	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	91.9	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	92.1	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	89.8	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	95.4	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	96.3	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	92.4	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	101	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	90.0	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	102	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	92.2	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	97.9	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	99.4	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	104	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	86.0	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	93.0	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	95.5	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	114	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	94.0	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	94.3	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	88.8	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	99.4	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	98.1	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	104	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	94.4	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	92.8	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	92.5	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	93.3	80.0	120	----
Total Metals (QCLot: 855816)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	94.7	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	105	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	95.1	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	92.8	80.0	120	----



Sub-Matrix: Water

Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 855816) - continued									
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	95.0	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	98.8	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	95.1	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	90.8	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	95.4	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	95.2	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	94.6	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	95.6	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	93.3	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	93.1	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	91.8	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	102	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	95.0	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	103	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	93.3	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	107	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	97.9	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	99.5	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	103	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	107	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	89.2	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	97.6	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	96.8	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	103	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	93.8	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	90.6	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	102	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	102	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	102	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	94.3	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	95.4	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	95.3	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	95.9	80.0	120	----
Total Metals (QCLot: 859213)									
Mercury, total	7439-97-6	E508-L	0.5	ng/L	5 ng/L	95.9	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit					
Dissolved Metals (QCLot: 854521)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	95.9	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	98.5	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	101	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	93.1	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	95.6	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	97.3	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	98.5	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	93.2	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	91.3	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	90.1	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	91.2	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	91.8	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	91.0	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	85.1	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	95.4	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	92.2	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	103	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	94.0	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	99.7	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	91.3	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	99.8	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	89.1	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	98.1	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	96.4	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	98.1	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	83.4	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	91.3	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	93.2	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	96.2	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	95.8	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	95.2	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	92.6	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	99.4	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	96.4	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	100	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Concentration	LCS	Low	High	Qualifier
Analyte	CAS Number	Method	LOR	Unit					
Dissolved Metals (QCLot: 854521) - continued									
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	97.0	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	92.5	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	92.8	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	92.6	80.0	120	----
Mercury, dissolved	7439-97-6	E509-L	0.5	ng/L	5 ng/L	95.9	80.0	120	----
Speciated Metals (QCLot: 857259)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.025 mg/L	98.6	80.0	120	----
Speciated Metals (QCLot: 858920)									
Methylmercury (as MeHg), total	22967-92-6	E536	0.00002	µg/L	0.0025 µg/L	79.6	70.0	130	----
Speciated Metals (QCLot: 862432)									
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	0.0025 µg/L	84.9	70.0	130	----
Speciated Metals (QCLot: 866122)									
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	0.0025 µg/L	82.6	70.0	130	----
Speciated Metals (QCLot: 876269)									
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	0.0025 µg/L	74.5	70.0	130	----



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	Target	MS	Low	High	
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method						
Anions and Nutrients (QCLot: 853867)										
WP2302565-001	AQM28	Ammonia, total (as N)	7664-41-7	E303	0.230 mg/L	0.25 mg/L	91.9	75.0	125	----
Anions and Nutrients (QCLot: 854707)										
WP2302565-002	AQM29C	Phosphorus, total	7723-14-0	E372	0.246 mg/L	0.25 mg/L	98.2	70.0	130	----
Anions and Nutrients (QCLot: 854719)										
WP2302565-001	AQM28	Nitrate (as N)	14797-55-8	E235.NO3	2.56 mg/L	2.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 854720)										
WP2302565-001	AQM28	Nitrite (as N)	14797-65-0	E235.NO2	0.500 mg/L	0.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 854721)										
WP2302565-001	AQM28	Sulfate (as SO4)	14808-79-8	E235.SO4	102 mg/L	100 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 854722)										
WP2302565-001	AQM28	Chloride	16887-00-6	E235.Cl	101 mg/L	100 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 854723)										
WP2302565-001	AQM28	Fluoride	16984-48-8	E235.F	1.05 mg/L	1 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 854724)										
WP2302565-001	AQM28	Bromide	24959-67-9	E235.Br	0.51 mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 854740)										
WP2302565-001	AQM28	Kjeldahl nitrogen, total [TKN]	----	E319	4.70 mg/L	5 mg/L	93.9	70.0	130	----
Anions and Nutrients (QCLot: 854990)										
WP2302586-003	Anonymous	Chloride	16887-00-6	E235.Cl	99.9 mg/L	100 mg/L	99.9	75.0	125	----
Anions and Nutrients (QCLot: 854991)										
WP2302586-003	Anonymous	Fluoride	16984-48-8	E235.F	1.00 mg/L	1 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 854992)										
WP2302586-003	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.493 mg/L	0.5 mg/L	98.5	75.0	125	----
Anions and Nutrients (QCLot: 854993)										
WP2302586-003	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.52 mg/L	2.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 854994)										
WP2302586-003	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	99.3 mg/L	100 mg/L	99.3	75.0	125	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Cyanides (QCLot: 859041)										
WP2302565-001	AQM28	Cyanide, strong acid dissociable (Total)	----	E333	0.259 mg/L	0.25 mg/L	104	75.0	125	----
Cyanides (QCLot: 859043)										
WP2302565-001	AQM28	Cyanide, free	----	E339	0.130 mg/L	0.125 mg/L	104	75.0	125	----
Cyanides (QCLot: 859044)										
WP2302565-001	AQM28	Cyanide, weak acid dissociable	----	E336	0.134 mg/L	0.125 mg/L	107	75.0	125	----
Cyanides (QCLot: 859047)										
WP2302565-018	TRIP BLANK	Cyanide, strong acid dissociable (Total)	----	E333	0.278 mg/L	0.25 mg/L	111	75.0	125	----
Cyanides (QCLot: 859048)										
WP2302565-018	TRIP BLANK	Cyanide, free	----	E339	0.129 mg/L	0.125 mg/L	103	75.0	125	----
Cyanides (QCLot: 859049)										
WP2302565-018	TRIP BLANK	Cyanide, weak acid dissociable	----	E336	0.133 mg/L	0.125 mg/L	106	75.0	125	----
Organic / Inorganic Carbon (QCLot: 854523)										
WP2302368-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	5 mg/L	ND	70.0	130	----
Organic / Inorganic Carbon (QCLot: 855745)										
WP2302454-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	4.53 mg/L	5 mg/L	90.7	70.0	130	----
Organic / Inorganic Carbon (QCLot: 855747)										
WP2302565-010	AQF42	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	5 mg/L	ND	70.0	130	----
Organic / Inorganic Carbon (QCLot: 861079)										
WP2302815-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	ND mg/L	5 mg/L	ND	70.0	130	----
Total Metals (QCLot: 854517)										
WP2302454-001	Anonymous	Aluminum, total	7429-90-5	E420	0.218 mg/L	0.2 mg/L	109	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0234 mg/L	0.02 mg/L	117	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0224 mg/L	0.02 mg/L	112	70.0	130	----
		Barium, total	7440-39-3	E420	0.0225 mg/L	0.02 mg/L	113	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0424 mg/L	0.04 mg/L	106	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0111 mg/L	0.01 mg/L	111	70.0	130	----
		Boron, total	7440-42-8	E420	0.071 mg/L	0.1 mg/L	70.8	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00450 mg/L	0.004 mg/L	112	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	4 mg/L	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0109 mg/L	0.01 mg/L	109	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0436 mg/L	0.04 mg/L	109	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0213 mg/L	0.02 mg/L	107	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 854517) - continued										
WP2302454-001	Anonymous	Copper, total	7440-50-8	E420	0.0212 mg/L	0.02 mg/L	106	70.0	130	----
		Iron, total	7439-89-6	E420	2.17 mg/L	2 mg/L	108	70.0	130	----
		Lead, total	7439-92-1	E420	0.0211 mg/L	0.02 mg/L	105	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0802 mg/L	0.1 mg/L	80.2	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0217 mg/L	0.02 mg/L	109	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0232 mg/L	0.02 mg/L	116	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0417 mg/L	0.04 mg/L	104	70.0	130	----
		Phosphorus, total	7723-14-0	E420	11.2 mg/L	10 mg/L	112	70.0	130	----
		Potassium, total	7440-09-7	E420	4.32 mg/L	4 mg/L	108	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0220 mg/L	0.02 mg/L	110	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0443 mg/L	0.04 mg/L	111	70.0	130	----
		Silicon, total	7440-21-3	E420	11.3 mg/L	10 mg/L	113	70.0	130	----
		Silver, total	7440-22-4	E420	0.00436 mg/L	0.004 mg/L	109	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	2 mg/L	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	23.0 mg/L	20 mg/L	115	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0458 mg/L	0.04 mg/L	114	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00420 mg/L	0.004 mg/L	105	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0223 mg/L	0.02 mg/L	112	70.0	130	----
		Tin, total	7440-31-5	E420	0.0230 mg/L	0.02 mg/L	115	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0467 mg/L	0.04 mg/L	117	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0233 mg/L	0.02 mg/L	117	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00426 mg/L	0.004 mg/L	106	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.112 mg/L	0.1 mg/L	112	70.0	130	----
		Zinc, total	7440-66-6	E420	0.438 mg/L	0.4 mg/L	109	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0472 mg/L	0.04 mg/L	118	70.0	130	----
Total Metals (QCLot: 855816)										
WP2302552-001	Anonymous	Aluminum, total	7429-90-5	E420	0.204 mg/L	0.2 mg/L	102	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Barium, total	7440-39-3	E420	0.0197 mg/L	0.02 mg/L	98.3	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0413 mg/L	0.04 mg/L	103	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00990 mg/L	0.01 mg/L	99.0	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	0.1 mg/L	ND	70.0	130	----



Sub-Matrix: **Water**

Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 855816) - continued										
WP2302552-001	Anonymous	Cadmium, total	7440-43-9	E420	0.00408 mg/L	0.004 mg/L	102	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	4 mg/L	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0100 mg/L	0.01 mg/L	100	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0408 mg/L	0.04 mg/L	102	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0199 mg/L	0.02 mg/L	99.6	70.0	130	----
		Copper, total	7440-50-8	E420	0.0194 mg/L	0.02 mg/L	96.8	70.0	130	----
		Iron, total	7439-89-6	E420	2.03 mg/L	2 mg/L	102	70.0	130	----
		Lead, total	7439-92-1	E420	0.0184 mg/L	0.02 mg/L	92.3	70.0	130	----
		Lithium, total	7439-93-2	E420	ND mg/L	0.1 mg/L	ND	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0386 mg/L	0.04 mg/L	96.5	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.9 mg/L	10 mg/L	109	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	4 mg/L	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0201 mg/L	0.02 mg/L	101	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0434 mg/L	0.04 mg/L	108	70.0	130	----
		Silicon, total	7440-21-3	E420	ND mg/L	10 mg/L	ND	70.0	130	----
		Silver, total	7440-22-4	E420	0.00373 mg/L	0.004 mg/L	93.3	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	2 mg/L	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	ND mg/L	20 mg/L	ND	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0388 mg/L	0.04 mg/L	96.9	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00375 mg/L	0.004 mg/L	93.8	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Tin, total	7440-31-5	E420	0.0201 mg/L	0.02 mg/L	100	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0420 mg/L	0.04 mg/L	105	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00382 mg/L	0.004 mg/L	95.5	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.105 mg/L	0.1 mg/L	105	70.0	130	----
		Zinc, total	7440-66-6	E420	0.390 mg/L	0.4 mg/L	97.6	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0404 mg/L	0.04 mg/L	101	70.0	130	----
Total Metals (QCLot: 859213)										
WP2302565-002	AQM29C	Mercury, total	7439-97-6	E508-L	5.49 ng/L	5 ng/L	110	70.0	130	----
Dissolved Metals (QCLot: 854521)										



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Dissolved Metals (QCLot: 854521) - continued										
WP2302559-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.186 mg/L	0.2 mg/L	92.8	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0346 mg/L	0.04 mg/L	86.6	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00848 mg/L	0.01 mg/L	84.8	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	0.1 mg/L	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	ND mg/L	0.004 mg/L	ND	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	4 mg/L	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00922 mg/L	0.01 mg/L	92.2	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0369 mg/L	0.04 mg/L	92.2	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Copper, dissolved	7440-50-8	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Iron, dissolved	7439-89-6	E421	ND mg/L	2 mg/L	ND	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0172 mg/L	0.02 mg/L	85.9	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	ND mg/L	0.1 mg/L	ND	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	ND mg/L	0.04 mg/L	ND	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.0 mg/L	10 mg/L	100	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	4 mg/L	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0529 mg/L	0.04 mg/L	132	70.0	130	MES
		Silicon, dissolved	7440-21-3	E421	ND mg/L	10 mg/L	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00326 mg/L	0.004 mg/L	81.5	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	2 mg/L	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	20 mg/L	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0422 mg/L	0.04 mg/L	106	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00338 mg/L	0.004 mg/L	84.6	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0188 mg/L	0.02 mg/L	93.9	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0200 mg/L	0.02 mg/L	99.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0418 mg/L	0.04 mg/L	104	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0200 mg/L	0.02 mg/L	100	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 854521) - continued										
WP2302559-001	Anonymous	Uranium, dissolved	7440-61-1	E421	0.00355 mg/L	0.004 mg/L	88.7	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0990 mg/L	0.1 mg/L	99.0	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	ND mg/L	0.4 mg/L	ND	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0438 mg/L	0.04 mg/L	109	70.0	130	----
Dissolved Metals (QCLot: 859431)										
WP2302565-002	AQM29C	Mercury, dissolved	7439-97-6	E509-L	4.83 ng/L	5 ng/L	96.7	70.0	130	----
Speciated Metals (QCLot: 857259)										
WP2302565-001	AQM28	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0389 mg/L	0.04 mg/L	97.4	70.0	130	----
Speciated Metals (QCLot: 858920)										
WP2302565-002	AQM29C	Methylmercury (as MeHg), total	22967-92-6	E536	0.00477 µg/L	0.0025 µg/L	95.4	60.0	140	----
Speciated Metals (QCLot: 862432)										
VA23A3446-002	Anonymous	Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.0713 µg/L	0.0025 µg/L	71.3	60.0	140	----
Speciated Metals (QCLot: 876269)										
WP2302565-017	FIELD BLANK	Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00169 µg/L	0.0025 µg/L	67.6	60.0	140	----

Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).



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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 22 -

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Environmental Division
Winnipeg
Work Order Reference
WP2302565



Telephone: +1 204 255 9720

Report To Contact and company name below will appear on the final report		Reports / Recipients		Turnaround Time (TAT) Requested	
Company:	Stantec Consulting	Select Report Format:	☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)	☒ Routine [R] if received by 3pm M-F - no surcharges apply	
Contact:	Karen Mathers	Merge QC/QCI Reports with COA	☐ YES ☐ NO ☐ N/A	☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum	
Phone:	204-928-7621	☐ Compare Results to Criteria on Report - provide details below if box checked		☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum	
Company address below will appear on the final report		Select Distribution:	☒ EMAIL ☐ MAIL ☐ FAX	☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum	
Street:	500 - 311 Portage Ave	Email 1 or Fax	Karen.Mathers@Stantec.com	☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum	
City/Province:	Winnipeg, MB	Email 2	Brad.Horne@stantec.com	☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.	
Postal Code:	R3B 2B9	Email 3	Jeremy.Jackson@stantec.com	Additional fees may apply to rush requests on weekends, st	
Invoice To	Same as Report To ☐ YES ☒ NO	Invoice Recipients		Date and Time Required for all E&P TATs:	
	Copy of Invoice with Report ☐ YES ☒ NO	Select Invoice Distribution:	☒ EMAIL ☐ MAIL ☐ FAX	For all tests with rush TATs requested, please contact your AM to confirm availability.	
Company:	Alamos Gold	Email 1 or Fax		Analysis Request	
Contact:		Email 2		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below	
Project Information		Oil and Gas Required Fields (client use)			
ALS Account # / Quote #:	Q88846	AFE/Cost Center:	PO#		
Job #:	ALAMOS	Major/Minor Code:	Routing Code:		
PO / AFE:		Requisitioner:			
LSD:		Location:			
ALS Lab Work Order # (ALS use only):		ALS Contact:	SD	Sampler:	BE, AR
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	
12	AQM28	28-03-23	0949	W	
	AQM89C		1023		
	AQM71		1105		
	AQM73		1139		
	AQM73		1215		
	AQF7S		1423		
	AQF7D		1441		
	AQF38		1505		
	AQF46		1533		
	AQF43		1606		
	QC-01				
	AQF45	01-03-23	0916		
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		SAMPLE RECEIPT DETAILS (ALS use only)	
Are samples taken from a Regulated DW System? ☐ YES ☐ NO		All described bottles field filtered		Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED	
Are samples for human consumption/ use? ☐ YES ☐ NO				Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO	
				Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A	
				INITIAL COOLER TEMPERATURES °C: 6.4 FINAL COOLER TEMPERATURES °C:	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)		FINAL SHIPMENT RECEPTION (ALS use only)	
Released by:	Date:	Received by:	Date:	Received by:	Date:
Blaney	March 2/23	Blaney	MAR 06 2023		

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

FEB 2322 FROM

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

2565

Report To Contact and company name below will appear on the final report		Reports / Recipients		Turnaround Time (TAT) Requested		AFFIX ALS BARCODE LABEL HERE (ALS use only)																																																																																																																																				
Company:	Stantec Consulting	Select Report Format:	☐ PDF ☒ EXCEL ☒ EDD (DIGITAL) ☐ Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A ☐ Compare Results to Criteria on Report - provide details below if box checked		☒ Routine [R] if received by 3pm M-F - no surcharges apply ☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.																																																																																																																																					
Contact: Karen Mathers		Merge QC/QCI Reports with COA																																																																																																																																								
Phone: 204-928-7621		Select Distribution:		☒ EMAIL ☐ MAIL ☐ FAX																																																																																																																																						
Company address below will appear on the final report		Select Distribution:		Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.																																																																																																																																						
Street: 500 - 311 Portage Ave		Email 1 or Fax: Karen.Mathers@stantec.com		Date and Time Required for all E&P TATs:		dd-mm-yy hh:mm am/pm																																																																																																																																				
City/Province: Winnipeg, MB		Email 2: Brad.Horne@stantec.com																																																																																																																																								
Postal Code: R3B 2B9		Email 3: Jeremy.Jackson@stantec.com																																																																																																																																								
Invoice To		Invoice Recipients		For all tests with rush TATs requested, please contact your AM to confirm availability.																																																																																																																																						
Same as Report To ☐ YES ☒ NO		Select Invoice Distribution:		☒ EMAIL ☐ MAIL ☐ FAX																																																																																																																																						
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Project Information		Oil and Gas Required Fields (client use)		Analysis Request																																																																																																																																						
ALS Account # / Quote #: Q88846		AFE/Cost Center:		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below <table border="1" style="width:100%; border-collapse: collapse; font-size: 8px;"> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <th>ALK-SPEC-WP, ACY-TITR-TB</th> <th>ANIONS-6-L-IC-WP</th> <th>C-DOC-HTC-WP, C-TOC-HTC-WP</th> <th>CN-T-L, CN-FREE-L, CN-WAD-L</th> <th>CR-CR6-PWQO-IC-WT</th> <th>MET-D-CCMS-WP, HARDNESS</th> <th>MET-T-CCMS-WP</th> <th>NH3-COL-WP</th> <th>P-T-COL-WP</th> <th>N-TOTU-WP</th> <th>SOLIDS-TOTSUS-LR-WP</th> <th>HG-T-U-CVAF, HG-D-U-CVAG</th> <th>MEHG-T-GCAF, MEHG-D-GCAF</th> <th rowspan="2">SAMPLES ON HOLD</th> <th rowspan="2">EXTENDED STORAGE REQUIRED</th> <th rowspan="2">SUSPECTED HAZARD (see notes)</th> </tr> <tr> <th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th> </tr> <tr> <td>13</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td><td></td><td></td><td></td> </tr> <tr> <td>14</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td><td></td><td></td><td></td> </tr> <tr> <td>15</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td><td></td><td></td><td></td> </tr> <tr> <td>16</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td><td></td><td></td><td></td> </tr> <tr> <td>17</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td><td></td><td></td><td></td> </tr> <tr> <td>18</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td><td></td><td></td><td></td> </tr> </table>				NUMBER OF CONTAINERS	ALK-SPEC-WP, ACY-TITR-TB	ANIONS-6-L-IC-WP	C-DOC-HTC-WP, C-TOC-HTC-WP	CN-T-L, CN-FREE-L, CN-WAD-L	CR-CR6-PWQO-IC-WT	MET-D-CCMS-WP, HARDNESS	MET-T-CCMS-WP	NH3-COL-WP	P-T-COL-WP	N-TOTU-WP	SOLIDS-TOTSUS-LR-WP	HG-T-U-CVAF, HG-D-U-CVAG	MEHG-T-GCAF, MEHG-D-GCAF	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)													13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
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Time: 0930		Time: [Signature]		Time: [Signature]																																																																																																																																						

CERTIFICATE OF ANALYSIS

Work Order	: WP2302565	Page	: 1 of 19
Amendment	: 1		
Client	: Alamos Gold Inc.	Laboratory	: Winnipeg - Environmental
Contact	: Karen Mathers	Account Manager	: Judy Dalmaijer
Address	: C/O Stantec Consulting 500 - 311 Portage Avenue Winnipeg MB Canada R3B 2B9	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg MB Canada R2J 3T4
Telephone	: 416 368 9932	Telephone	: +1 204 255 9720
Project	: ----	Date Samples Received	: 06-Mar-2023 13:10
PO	: ----	Date Analysis Commenced	: 06-Mar-2023
C-O-C number	: ----	Issue Date	: 06-Apr-2023 13:43
Sampler	: ----		
Site	: ----		
Quote number	: ALAMOS Gold Inc. - (Q88846)_V2		
No. of samples received	: 18		
No. of samples analysed	: 18		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Christine Mason	Department Manager - Chemistry	Inorganics, Winnipeg, Manitoba
Christine Mason	Department Manager - Chemistry	Metals, Winnipeg, Manitoba
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Metals, Waterloo, Ontario
Jayden Piattelli	Analyst	Metals, Burnaby, British Columbia
Jon Fisher	Production Manager, Environmental	Inorganics, Waterloo, Ontario
Kinny Wu	Lab Analyst	Metals, Burnaby, British Columbia
Lee McTavish		Inorganics, Winnipeg, Manitoba
Matthew Bouch		Metals, Winnipeg, Manitoba
Oleksandr Busel		Inorganics, Winnipeg, Manitoba
Parnian Sane	Analyst	Metals, Burnaby, British Columbia
Zandrea Grabinski		Inorganics, Winnipeg, Manitoba



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

Unit	Description
-	no units
µg/L	micrograms per litre
mg/L	milligrams per litre
ng/L	nanograms per litre

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

Qualifier	Description
RRV	Reported result verified by repeat analysis.



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
Client sampling date / time					28-Feb-2023 09:49	28-Feb-2023 10:23	28-Feb-2023 11:05	28-Feb-2023 11:39	28-Feb-2023 12:15	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-001	WP2302565-002	WP2302565-003	WP2302565-004	WP2302565-005	
					Result	Result	Result	Result	Result	
Physical Tests										
Acidity (as CaCO3)	----	E283	2.0	mg/L	<2.0	2.6	3.3	28.2	5.4	
Alkalinity, bicarbonate (as CaCO3)	----	E290	2.0	mg/L	12.8	9.2	150	25.4	21.3	
Alkalinity, carbonate (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	
Alkalinity, hydroxide (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	
Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	12.8	9.2	150	25.4	21.3	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A	0.50	mg/L	21.7	13.2	142	37.2	33.8	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	<1.0	3.3	5.8	<1.0	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.040	0.021	0.339	0.052	0.011	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	
Chloride	16887-00-6	E235.Cl	0.50	mg/L	1.09	<0.50	3.30	2.06	0.97	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.060	0.061	0.046	0.090	0.049	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.43	0.30	1.30	2.06	1.31	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.138	0.114	0.064	0.103	0.037	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Phosphorus, total	7723-14-0	E372	0.020	mg/L	0.023	<0.020	0.051	0.086	0.088	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	8.48	1.50	0.61	4.97	1.60	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	0.0056	<0.0050	<0.0050	<0.0050	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	12.6	10.0	24.0	64.6	51.5	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	12.8	9.95	23.3	64.4	52.1	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.119	0.0310	0.0862	0.316	0.167	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0.00028	0.00039	<0.00010	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00030	0.00020	0.00057	0.00091	0.00080	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.0100	0.00760	0.0264	0.0238	0.00919	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
(Matrix: Water)										
Client sampling date / time										
Analyte	CAS Number	Method	LOR	Unit	WP2302565-001	WP2302565-002	WP2302565-003	WP2302565-004	WP2302565-005	
					Result	Result	Result	Result	Result	
Total Metals										
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	0.000026	<0.000020	
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	0.011	<0.010	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000186	0.0000067	0.0000231	0.0000446	0.0000196	
Calcium, total	7440-70-2	E420	0.050	mg/L	6.44	3.80	45.0	10.4	9.72	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	0.000020	0.000027	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0.00055	0.00143	<0.00050	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00048	<0.00010	0.00199	0.00038	0.00054	
Copper, total	7440-50-8	E420	0.00050	mg/L	0.00357	0.00068	0.00112	0.00229	<0.00050	
Iron, total	7439-89-6	E420	0.010	mg/L	1.35	0.302	3.43	5.82	1.60	
Lead, total	7439-92-1	E420	0.000050	mg/L	0.000075	<0.000050	0.000105	0.000343	0.000092	
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0017	0.0013	0.0020	0.0044	0.0026	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.36	0.898	7.30	2.73	2.31	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0310	0.00944	1.77	0.100	0.190	
Mercury, total	7439-97-6	E508-L	0.50	ng/L	1.34	0.65	4.38	4.94	6.60	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000072	<0.000050	0.000280	0.000126	0.000069	
Nickel, total	7440-02-0	E420	0.00050	mg/L	0.0366	0.00350	0.00138	0.00188	0.00144	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0.052	0.078	0.087	
Potassium, total	7440-09-7	E420	0.050	mg/L	0.798	0.744	2.08	5.51	2.32	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00106	0.00118	0.00260	0.00869	0.00352	
Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000057	<0.000050	0.000082	0.000223	0.000097	
Silicon, total	7440-21-3	E420	0.10	mg/L	4.04	3.76	13.4	13.8	10.1	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, total	7440-23-5	E420	0.050	mg/L	1.69	1.38	4.33	4.10	2.02	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0214	0.0155	0.0714	0.0327	0.0214	
Sulfur, total	7704-34-9	E420	0.50	mg/L	2.09	2.09	1.38	34.5	<0.50	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	0.000019	<0.000010	
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	0.00016	<0.00010	
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	0.00051	0.00050	0.0125	<0.00010	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 09:49	28-Feb-2023 10:23	28-Feb-2023 11:05	28-Feb-2023 11:39	28-Feb-2023 12:15	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-001	WP2302565-002	WP2302565-003	WP2302565-004	WP2302565-005	
					Result	Result	Result	Result	Result	
Total Metals										
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00185	0.00061	0.00301	0.00751	0.00293	
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000024	0.000024	0.000108	0.000074	<0.000010	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0.00059	0.00112	<0.00050	
Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0165	0.0115	0.0092	0.0315	0.0070	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0.00040	0.00078	0.00029	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0807	0.0142	0.0600	0.228	0.148	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	0.00017	<0.00010	
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00022	0.00016	0.00054	0.00078	0.00079	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00949	0.00714	0.0238	0.0219	0.00993	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	0.000021	<0.000020	
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	0.010	<0.010	
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000124	<0.0000050	0.0000122	0.0000321	0.0000218	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	6.55	3.06	39.7	10.1	9.69	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	0.000011	0.000024	
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00105	<0.00050	
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00022	<0.00010	0.00192	0.00035	0.00054	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00224	0.00051	0.00064	0.00206	0.00061	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.954	0.186	3.23	4.26	1.45	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000055	<0.000050	0.000067	0.000234	0.000074	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0013	0.0012	0.0016	0.0038	0.0023	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.48	0.830	7.05	2.78	2.36	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0234	0.00700	1.74	0.0890	0.178	
Mercury, dissolved	7439-97-6	E509-L	0.50	ng/L	1.46	<0.50	2.58	4.86	6.13	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000068	<0.000050	0.000250	0.000104	0.000060	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0322	0.00329	0.00142	0.00172	0.00156	
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	0.068	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.806	0.656	1.90	5.24	2.21	

Sub-Matrix: Water					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 09:49	28-Feb-2023 10:23	28-Feb-2023 11:05	28-Feb-2023 11:39	28-Feb-2023 12:15	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-001	WP2302565-002	WP2302565-003	WP2302565-004	WP2302565-005	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00109	0.00112	0.00252	0.00820	0.00337	
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000090	<0.000050	0.000097	0.000185	0.000120	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.90	3.31	12.4	12.4	9.80	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.83	1.28	4.09	4.04	2.05	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0229	0.0141	0.0691	0.0311	0.0218	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	2.38	0.99	1.53	2.74	<0.50	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	0.000014	<0.000010	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	0.00014	<0.00010	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0.00040	0.00054	<0.00010	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00085	<0.00030	0.00214	0.00532	0.00247	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000023	0.000020	0.000098	0.000064	<0.000010	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00071	<0.00050	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0166	0.0025	0.0093	0.0120	0.0071	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0.00045	0.00078	0.00038	
Dissolved MeHg filtration location	----	EP537	-	-	Field	Field	Field	Field	Field	
Dissolved mercury filtration location	----	EP509-L	-	-	Field	Field	Field	Field	Field	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00056	0.00156 ^{RRV}	
Methylmercury (as MeHg), total	22967-92-6	E536	0.000020	µg/L	0.000074	0.000043	0.00176	0.000309	0.000261	
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000020	µg/L	<0.000020	0.000052	0.000365	0.000233	0.000178	

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Analytical Results

Sub-Matrix: Water					Client sample ID	AQF7S	AQF7D	AQF38	AQF46	AQF42
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 01:03	28-Feb-2023 14:41	28-Feb-2023 15:05	28-Feb-2023 15:05	28-Feb-2023 15:33	28-Feb-2023 16:06
Analyte	CAS Number	Method	LOR	Unit	WP2302565-006	WP2302565-007	WP2302565-008	WP2302565-008	WP2302565-009	WP2302565-010
					Result	Result	Result	Result	Result	Result
Physical Tests										
Acidity (as CaCO ₃)	----	E283	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	5.7	<2.0
Alkalinity, bicarbonate (as CaCO ₃)	----	E290	2.0	mg/L	17.1	16.3	24.6	32.7	6.0	
Alkalinity, carbonate (as CaCO ₃)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Alkalinity, hydroxide (as CaCO ₃)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Alkalinity, total (as CaCO ₃)	----	E290	2.0	mg/L	17.1	16.3	24.6	32.7	6.0	
Hardness (as CaCO ₃), from total Ca/Mg	----	EC100A	0.50	mg/L	20.1	19.0	35.7	44.3	13.2	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	<1.0	<1.0	3.1	2.5	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	<0.010	<0.010	0.014	0.237	0.033	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	<0.50	0.86	1.22	0.56	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.049	0.044	0.105	0.051	0.071	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.29	0.29	0.45	0.82	0.39	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.078	0.114	0.156	0.105	0.121	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phosphorus, total	7723-14-0	E372	0.020	mg/L	<0.020	<0.020	<0.020	0.023	0.025	
Sulfate (as SO ₄)	14808-79-8	E235.SO4	0.30	mg/L	1.27	0.88	9.02	11.2	9.60	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	10.1	9.68	14.8	13.4	9.50	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	12.0	9.02	13.5	14.9	10.1	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0207	0.0224	0.0214	0.0295	0.0675	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	0.00043	0.00029	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00027	0.00022	0.00026	0.00044	0.00023	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.00871	0.00980	0.0160	0.0142	0.00832	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF7S	AQF7D	AQF38	AQF46	AQF42
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 01:03	28-Feb-2023 14:41	28-Feb-2023 15:05	28-Feb-2023 15:33	28-Feb-2023 16:06	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-006	WP2302565-007	WP2302565-008	WP2302565-009	WP2302565-010	
					Result	Result	Result	Result	Result	
Total Metals										
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000096	0.0000107	
Calcium, total	7440-70-2	E420	0.050	mg/L	4.91	4.70	9.95	13.3	3.62	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00064	0.00099	
Iron, total	7439-89-6	E420	0.010	mg/L	0.054	0.070	0.081	0.583	0.353	
Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	0.000065	0.000082	
Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0.0011	0.0011	0.0012	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.91	1.76	2.63	2.70	1.00	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00241	0.0354	0.0142	0.109	0.0206	
Mercury, total	7439-97-6	E508-L	0.50	ng/L	0.76	0.71	0.53	0.97	1.01	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000076	0.000052	0.00203	0.000067	0.000070	
Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
Potassium, total	7440-09-7	E420	0.050	mg/L	0.630	0.559	0.776	1.06	0.716	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00112	0.00103	0.00120	0.00128	0.00117	
Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	0.000051	0.000068	<0.000050	<0.000050	
Silicon, total	7440-21-3	E420	0.10	mg/L	1.15	1.27	2.12	1.78	3.44	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, total	7440-23-5	E420	0.050	mg/L	1.28	1.14	1.64	1.61	1.40	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0152	0.0151	0.0263	0.0227	0.0151	
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	0.58	2.47	8.56	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	0.00036	0.00019	0.00071	0.00209	
Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	<0.00030	0.00069	0.00229	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF7S	AQF7D	AQF38	AQF46	AQF42
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 01:03	28-Feb-2023 14:41	28-Feb-2023 15:05	28-Feb-2023 15:05	28-Feb-2023 15:33	28-Feb-2023 16:06
Analyte	CAS Number	Method	LOR	Unit	WP2302565-006	WP2302565-007	WP2302565-008	WP2302565-008	WP2302565-009	WP2302565-010
					Result	Result	Result	Result	Result	Result
Total Metals										
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420	0.000010	mg/L	<0.000010	<0.000010	0.000011	<0.000010	<0.000010	0.000044
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0.0056	0.0448	0.0256	0.0256
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0190	0.0191	0.0178	0.0157	0.0241	0.0241
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00023	0.00022	0.00022	0.00034	0.00019	0.00019
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00860	0.0221	0.0157	0.0269	0.0204	0.0204
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000054	<0.0000050	<0.0000050
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	4.70	5.03	9.81	12.4	3.36	3.36
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00022	0.00124	<0.00020	0.00194	0.00197	0.00197
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.044	0.047	0.060	0.448	0.200	0.200
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	0.000073	0.000077	0.000077
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	<0.0010	0.0011	0.0010	0.0010
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.70	1.59	2.67	2.82	1.01	1.01
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00190	0.0232	0.00837	0.0594	0.0143	0.0143
Mercury, dissolved	7439-97-6	E509-L	0.50	ng/L	1.04	0.83	0.60	0.65	<0.50	<0.50
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000072	0.000065	0.00196	0.000060	0.000074	0.000074
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.576	0.524	0.737	1.02	0.752	0.752
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00112	0.00093	0.00110	0.00122	0.00112	0.00112



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF7S	AQF7D	AQF38	AQF46	AQF42
(Matrix: Water)										
Client sampling date / time					28-Feb-2023 01:03	28-Feb-2023 14:41	28-Feb-2023 15:05	28-Feb-2023 15:05	28-Feb-2023 15:33	28-Feb-2023 16:06
Analyte	CAS Number	Method	LOR	Unit	WP2302565-006	WP2302565-007	WP2302565-008	WP2302565-009	WP2302565-010	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000052	<0.000050	0.000063	0.000067	<0.000050	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	1.08	1.16	2.07	1.70	3.26	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.23	1.15	1.65	1.59	1.40	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0144	0.0148	0.0258	0.0236	0.0151	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	1.26	0.57	0.55	<0.50	0.55	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	0.00016	0.00076	<0.00010	0.00016	0.00018	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	0.00041	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	<0.000010	<0.000010	0.000011	<0.000010	0.000031	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0025	0.0033	0.0025	0.0048	0.0049	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Dissolved MeHg filtration location	----	EP537	-	-	Field	Field	Field	Field	Field	
Dissolved mercury filtration location	----	EP509-L	-	-	Field	Field	Field	Field	Field	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Methylmercury (as MeHg), total	22967-92-6	E536	0.000020	µg/L	0.000063	0.000190	0.000021	0.000259	0.000029	
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000020	µg/L	0.000094	0.000044	0.000042	0.000059	0.000040	

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	QC-01	AQF45	AQF44	AQF43	AQF40
Client sampling date / time					28-Feb-2023	01-Mar-2023 09:16	01-Mar-2023 09:45	01-Mar-2023 10:15	01-Mar-2023 10:53	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-011	WP2302565-012	WP2302565-013	WP2302565-014	WP2302565-015	
					Result	Result	Result	Result	Result	
Physical Tests										
Acidity (as CaCO3)	----	E283	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	
Alkalinity, bicarbonate (as CaCO3)	----	E290	2.0	mg/L	20.1	7.7	12.9	9.3	3.6	
Alkalinity, carbonate (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	
Alkalinity, hydroxide (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	
Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	20.1	7.7	12.9	9.3	3.6	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A	0.50	mg/L	19.6	15.6	13.5	12.6	12.9	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	1.1	<1.0	<1.0	<1.0	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.017	0.012	0.014	<0.010	0.013	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	
Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	3.82	3.22	<0.50	0.69	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.050	0.074	0.072	0.074	0.074	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.35	0.28	0.29	0.27	0.31	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.075	0.101	0.112	0.120	0.102	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Phosphorus, total	7723-14-0	E372	0.020	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	1.00	6.54	8.26	2.15	8.08	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	9.65	8.95	8.95	9.09	9.63	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	10.1	10.7	9.22	8.78	9.66	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0208	0.0499	0.0364	0.0359	0.0357	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00014	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00026	0.00019	0.00021	0.00018	0.00018	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.00888	0.00704	0.00694	0.00690	0.00702	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	



Analytical Results

Sub-Matrix: Water					Client sample ID	QC-01	AQF45	AQF44	AQF43	AQF40
(Matrix: Water)										
Client sampling date / time						28-Feb-2023	01-Mar-2023 09:16	01-Mar-2023 09:45	01-Mar-2023 10:15	01-Mar-2023 10:53
Analyte	CAS Number	Method	LOR	Unit	WP2302565-011	WP2302565-012	WP2302565-013	WP2302565-014	WP2302565-015	
					Result	Result	Result	Result	Result	
Total Metals										
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium, total	7440-70-2	E420	0.050	mg/L	4.73	4.41	3.72	3.41	3.52	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Iron, total	7439-89-6	E420	0.010	mg/L	0.053	0.296	0.295	0.291	0.282	
Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	0.0012	0.0013	0.0012	0.0013	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.88	1.12	1.03	0.983	0.998	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00232	0.0108	0.0106	0.0108	0.0107	
Mercury, total	7439-97-6	E508-L	0.50	ng/L	0.74	0.99	0.76	0.81	0.85	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000071	0.000066	0.000056	<0.000050	0.000051	
Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, total	7440-09-7	E420	0.050	mg/L	0.608	0.617	0.656	0.598	0.637	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00114	0.00110	0.00114	0.00113	0.00110	
Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Silicon, total	7440-21-3	E420	0.10	mg/L	1.17	3.32	3.34	3.34	3.38	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, total	7440-23-5	E420	0.050	mg/L	1.28	1.38	1.40	1.33	1.36	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0148	0.0161	0.0156	0.0149	0.0153	
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	0.82	4.43	<0.50	1.95	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	0.00011	0.00116	<0.00010	0.00055	
Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	0.00124	0.00106	0.00088	0.00086	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	QC-01	AQF45	AQF44	AQF43	AQF40
Client sampling date / time						28-Feb-2023	01-Mar-2023 09:16	01-Mar-2023 09:45	01-Mar-2023 10:15	01-Mar-2023 10:53
Analyte	CAS Number	Method	LOR	Unit	WP2302565-011	WP2302565-012	WP2302565-013	WP2302565-014	WP2302565-015	
					Result	Result	Result	Result	Result	
Total Metals										
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000010	0.000028	0.000028	0.000025	0.000024	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	0.0043	0.0083	0.0034	0.0108	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00032	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0183	0.0212	0.0220	0.0205	0.0209	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00022	0.00016	0.00017	0.00015	0.00017	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00870	0.00662	0.0169	0.00660	0.0203	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	4.79	3.73	3.37	3.24	3.20	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	<0.00020	0.00043	0.00189	0.00025	0.00171	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.041	0.173	0.180	0.181	0.175	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000072	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.73	1.07	1.00	0.951	0.951	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00191	0.00647	0.00688	0.00678	0.00708	
Mercury, dissolved	7439-97-6	E509-L	0.50	ng/L	0.81	0.82	0.89	0.98	0.94	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000068	0.000059	0.000063	<0.000050	0.000055	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.595	0.580	0.619	0.562	0.600	
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00106	0.00100	0.00114	0.00100	0.00108	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	QC-01	AQF45	AQF44	AQF43	AQF40
Client sampling date / time					28-Feb-2023	01-Mar-2023 09:16	01-Mar-2023 09:45	01-Mar-2023 10:15	01-Mar-2023 10:53	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-011	WP2302565-012	WP2302565-013	WP2302565-014	WP2302565-015	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000051	<0.000050	<0.000050	<0.000050	<0.000050	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	1.09	3.06	3.17	3.11	3.08	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.26	1.36	1.33	1.29	1.33	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0146	0.0152	0.0149	0.0146	0.0142	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	0.59	1.90	0.50	<0.50	0.61	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	0.00018	0.00011	<0.00010	0.00015	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000010	0.000024	0.000022	0.000022	0.000022	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0023	0.0024	0.0025	<0.0010	0.0031	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Dissolved MeHg filtration location	----	EP537	-	-	Field	Field	Field	Field	Field	
Dissolved mercury filtration location	----	EP509-L	-	-	Field	Field	Field	Field	Field	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Methylmercury (as MeHg), total	22967-92-6	E536	0.000020	µg/L	0.000038	0.000039	0.000038	0.000035	0.000035	
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000020	µg/L	0.000040	0.000051	0.000029	0.000066	0.000022	

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	AQF41	FIELD BLANK	TRIP BLANK	----	----
					Client sampling date / time	01-Mar-2023 11:32	01-Mar-2023 15:15	01-Mar-2023	----	----
Analyte	CAS Number	Method	LOR	Unit	WP2302565-016	WP2302565-017	WP2302565-018	-----	-----	
					Result	Result	Result	----	----	
Physical Tests										
Acidity (as CaCO3)	----	E283	2.0	mg/L	<2.0	<2.0	<2.0	----	----	
Alkalinity, bicarbonate (as CaCO3)	----	E290	2.0	mg/L	10.9	<2.0	<2.0	----	----	
Alkalinity, carbonate (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	----	----	
Alkalinity, hydroxide (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	----	----	
Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	10.9	<2.0	<2.0	----	----	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A	0.50	mg/L	12.6	<0.50	<0.50	----	----	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	5.3	<1.0	<1.0	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.038	<0.010	0.042	----	----	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	----	----	
Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	<0.50	<0.50	----	----	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.076	<0.020	<0.020	----	----	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.35	<0.15	<0.15	----	----	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.122	<0.020	<0.020	----	----	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	----	----	
Phosphorus, total	7723-14-0	E372	0.020	mg/L	0.027	<0.020	<0.020	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	1.04	<0.30	<0.30	----	----	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	----	----	
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	----	----	
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	<0.0050	----	----	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	9.21	<0.50	0.76	----	----	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	10.5	<0.50	<0.50	----	----	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.105	<0.0030	<0.0030	----	----	
Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00012	<0.00010	<0.00010	----	----	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00022	<0.00010	<0.00010	----	----	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.00882	<0.00010	<0.00010	----	----	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	----	----	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	AQF41	FIELD BLANK	TRIP BLANK	----	----
Client sampling date / time					01-Mar-2023 11:32	01-Mar-2023 15:15	01-Mar-2023	----	----	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-016	WP2302565-017	WP2302565-018	-----	-----	
					Result	Result	Result	----	----	
Total Metals										
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	----	----	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000111	<0.0000050	<0.0000050	----	----	
Calcium, total	7440-70-2	E420	0.050	mg/L	3.37	<0.050	<0.050	----	----	
Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000011	<0.000010	<0.000010	----	----	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00010	<0.00010	<0.00010	----	----	
Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Iron, total	7439-89-6	E420	0.010	mg/L	0.586	<0.010	<0.010	----	----	
Lead, total	7439-92-1	E420	0.000050	mg/L	0.000094	<0.000050	<0.000050	----	----	
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0013	<0.0010	<0.0010	----	----	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.02	<0.0050	<0.0050	----	----	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0670	<0.00010	<0.00010	----	----	
Mercury, total	7439-97-6	E508-L	0.50	ng/L	1.16	<0.50	<0.50	----	----	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000058	<0.000050	<0.000050	----	----	
Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	----	----	
Potassium, total	7440-09-7	E420	0.050	mg/L	0.708	<0.050	<0.050	----	----	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00131	<0.00020	<0.00020	----	----	
Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Silicon, total	7440-21-3	E420	0.10	mg/L	3.44	<0.10	<0.10	----	----	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Sodium, total	7440-23-5	E420	0.050	mg/L	1.34	<0.050	<0.050	----	----	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0154	<0.00020	<0.00020	----	----	
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	<0.50	----	----	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00459	<0.00030	<0.00030	----	----	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF41	FIELD BLANK	TRIP BLANK	----	----
(Matrix: Water)										
Client sampling date / time					01-Mar-2023 11:32	01-Mar-2023 15:15	01-Mar-2023	----	----	
Analyte	CAS Number	Method	LOR	Unit	WP2302565-016	WP2302565-017	WP2302565-018	-----	-----	
					Result	Result	Result	----	----	
Total Metals										
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000037	<0.000010	<0.000010	----	----	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0052	<0.0030	<0.0030	----	----	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0229	<0.0010	<0.0010	----	----	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00016	<0.00010	<0.00010	----	----	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00720	0.00359	<0.00010	----	----	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	----	----	
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	----	----	
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	----	----	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	3.36	<0.050	<0.050	----	----	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00030	0.00096	<0.00020	----	----	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.194	<0.010	<0.010	----	----	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0010	<0.0010	<0.0010	----	----	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	0.976	<0.0050	<0.0050	----	----	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00968	<0.00010	<0.00010	----	----	
Mercury, dissolved	7439-97-6	E509-L	0.50	ng/L	1.13	<0.50	<0.50	----	----	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000053	<0.000050	<0.000050	----	----	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	----	----	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.617	<0.050	<0.050	----	----	
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00107	<0.00020	<0.00020	----	----	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF41	FIELD BLANK	TRIP BLANK	----	----
(Matrix: Water)										
					Client sampling date / time	01-Mar-2023 11:32	01-Mar-2023 15:15	01-Mar-2023	----	----
Analyte	CAS Number	Method	LOR	Unit	WP2302565-016	WP2302565-017	WP2302565-018	-----	-----	
					Result	Result	Result	----	----	
Dissolved Metals										
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.13	<0.050	<0.050	----	----	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.34	<0.050	<0.050	----	----	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0150	<0.00020	<0.00020	----	----	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	<0.50	----	----	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00036	<0.00030	<0.00030	----	----	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000022	<0.000010	<0.000010	----	----	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0014	0.0013	<0.0010	----	----	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	----	----	
Dissolved MeHg filtration location	----	EP537	-	-	Field	Field	Field	----	----	
Dissolved mercury filtration location	----	EP509-L	-	-	Field	Field	Field	----	----	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Laboratory	----	----	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Methylmercury (as MeHg), total	22967-92-6	E536	0.000020	µg/L	0.000064	<0.000020	<0.000020	----	----	
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000020	µg/L	0.000036	0.000040 ^{RRV}	<0.000020	----	----	

Please refer to the General Comments section for an explanation of any qualifiers detected.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: WP2302565	Page	: 1 of 59
Amendment	: 1		
Client	: Alamos Gold Inc.	Laboratory	: Winnipeg - Environmental
Contact	: Karen Mathers	Account Manager	: Judy Dalmajjer
Address	: C/O Stantec Consulting 500 - 311 Portage Avenue Winnipeg MB Canada R3B 2B9	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	: 416 368 9932	Telephone	: +1 204 255 9720
Project	: ----	Date Samples Received	: 06-Mar-2023 13:10
PO	: ----	Issue Date	: 06-Apr-2023 13:43
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: ALAMOS Gold Inc. - (Q88846)_V2		
No. of samples received	: 18		
No. of samples analysed	: 18		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples
Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Selenium, dissolved	7782-49-2	E421	132 % ^{MES}	70.0-130%	Recovery greater than upper data quality objective

Result Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF40	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF41	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF43	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF44	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF45	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) FIELD BLANK	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) TRIP BLANK	E303	01-Mar-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	5 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF38	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF42	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF46	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF7D	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM28	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM29C	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM71	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM72	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM73	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) QC-01	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF7S	E303	28-Feb-2023	06-Mar-2023	----	----		06-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF40	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF41	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF43	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF44	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF45	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE FIELD BLANK	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE TRIP BLANK	E235.Br	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF38	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF42	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF46	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF7D	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF7S	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM28	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM29C	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM71	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM72	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM73	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE QC-01	E235.Br	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF40	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF41	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF43	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF44	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF45	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE FIELD BLANK	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE TRIP BLANK	E235.Cl	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF38	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF42	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF46	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF7D	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQF7S	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQM28	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQM29C	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQM71	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE AQM72	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC										
HDPE AQM73	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE QC-01	E235.Cl	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF40	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF41	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF43	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF44	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF45	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE FIELD BLANK	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE TRIP BLANK	E235.F	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF38	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF42	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF46	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF7D	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF7S	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM28	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM29C	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM71	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM72	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM73	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE QC-01	E235.F	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF40	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF41	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF43	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF44	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF45	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE FIELD BLANK	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE TRIP BLANK	E235.NO3	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF38	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF42	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF46	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF7D	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF7S	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM28	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM29C	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM71	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM72	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM73	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE QC-01	E235.NO3	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF40	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF41	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF43	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF44	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF45	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE FIELD BLANK	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE TRIP BLANK	E235.NO2	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	7 days	✖ EHTR-FM



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF38	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF42	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF46	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF7D	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF7S	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM28	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM29C	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM71	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM72	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM73	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE QC-01	E235.NO2	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF40	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF41	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF43	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF44	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF45	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE FIELD BLANK	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE TRIP BLANK	E235.SO4	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF38	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF42	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF46	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF7D	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF7S	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM28	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM29C	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM71	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM72	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM73	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE QC-01	E235.SO4	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF40	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF41	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF43	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF44	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF45	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) FIELD BLANK	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) TRIP BLANK	E319	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF38	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF42	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF46	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF7D	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF7S	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM28	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM29C	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM71	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM72	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM73	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) QC-01	E319	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF40	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF41	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF43	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF44	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF45	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) FIELD BLANK	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) TRIP BLANK	E372	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF38	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF42	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF46	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF7D	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF7S	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM28	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM29C	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM71	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM72	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM73	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) QC-01	E372	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7D	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7S	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) QC-01	E339	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E339	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7D	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7S	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✔
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✔
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✔
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) QC-01	E333	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✔
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✔
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✔
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✔
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✔
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✔



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E333	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7D	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF7S	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) QC-01	E336	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	10 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✓



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✔
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E336	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	14 days	9 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF38	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF42	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF46	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF7D	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQM28	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQM29C	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQM71	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✔



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQM72	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQM73	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) QC-01	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF7S	E509-L	28-Feb-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	11 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF40	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF41	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF43	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF44	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) AQF45	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) FIELD BLANK	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - dissolved (lab preserved) TRIP BLANK	E509-L	01-Mar-2023	10-Mar-2023	----	----		10-Mar-2023	28 days	9 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF40	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF41	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF43	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF44	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF45	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) FIELD BLANK	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) TRIP BLANK	E421	01-Mar-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF38	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF42	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF46	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF7D	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF7S	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM28	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM29C	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM71	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM72	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓



Matrix: **Water** Evaluation: **x** = Holding time exceedance ; **✓** = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM73	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) QC-01	E421	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF38	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF40	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF41	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF43	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF44	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF45	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF7D	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✓



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF7S	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM28	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM29C	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM71	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM72	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM73	E358-L	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) FIELD BLANK	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) TRIP BLANK	E358-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF42	E358-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✔



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF46	E358-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) QC-01	E358-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) FIELD BLANK	E355-L	01-Mar-2023	13-Mar-2023	----	----		13-Mar-2023	28 days	12 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) TRIP BLANK	E355-L	01-Mar-2023	13-Mar-2023	----	----		13-Mar-2023	28 days	12 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF40	E355-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF41	E355-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF43	E355-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF44	E355-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF45	E355-L	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	7 days	✓



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF38	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF42	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF46	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF7D	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF7S	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM28	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM29C	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM71	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM72	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM73	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) QC-01	E355-L	28-Feb-2023	08-Mar-2023	----	----		08-Mar-2023	28 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF40	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF41	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF43	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF44	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF45	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE FIELD BLANK	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓
Physical Tests : Acidity by Titration										
HDPE TRIP BLANK	E283	01-Mar-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	13 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Acidity by Titration										
HDPE AQF38	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF42	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF46	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF7D	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM28	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM29C	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM71	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM72	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM73	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Acidity by Titration										
HDPE QC-01	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	14 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF7S	E283	28-Feb-2023	08-Mar-2023	----	----		14-Mar-2023	14 days	15 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF40	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF41	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF43	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF44	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF45	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE FIELD BLANK	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE TRIP BLANK	E290	01-Mar-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Alkalinity Species by Titration										
HDPE AQF38	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF42	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF46	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF7D	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF7S	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM28	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM29C	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM71	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM72	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Alkalinity Species by Titration										
HDPE AQM73	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE QC-01	E290	28-Feb-2023	07-Mar-2023	----	----		07-Mar-2023	14 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF40	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF41	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF43	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF44	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF45	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] FIELD BLANK	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] TRIP BLANK	E160-L	01-Mar-2023	----	----	----		07-Mar-2023	7 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF38	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF42	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF46	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF7D	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF7S	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM28	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM29C	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM71	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM72	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM73	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] QC-01	E160-L	28-Feb-2023	----	----	----		07-Mar-2023	7 days	7 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF38	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF7D	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF7S	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQM28	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQM29C	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQM71	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQM72	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQM73	E537	28-Feb-2023	16-Mar-2023	180 days	16 days	✓	16-Mar-2023	180 days	0 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF40	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF41	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF43	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF44	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF45	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) FIELD BLANK	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) TRIP BLANK	E537	01-Mar-2023	17-Mar-2023	180 days	16 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF42	E537	28-Feb-2023	17-Mar-2023	180 days	17 days	✓	21-Mar-2023	180 days	4 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) AQF46	E537	28-Feb-2023	17-Mar-2023	180 days	17 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Dissolved Methylmercury in Water by GCAFS										
Amber glass dissolved (hydrochloric acid) QC-01	E537	28-Feb-2023	17-Mar-2023	180 days	17 days	✓	21-Mar-2023	180 days	4 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF40	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF41	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF43	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF44	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF45	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) FIELD BLANK	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) TRIP BLANK	E532	01-Mar-2023	----	----	----		09-Mar-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF38	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF42	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF46	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF7D	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF7S	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM28	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM29C	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM71	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM72	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM73	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) QC-01	E532	28-Feb-2023	----	----	----		09-Mar-2023	28 days	9 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF40	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF41	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF43	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF44	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF45	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) FIELD BLANK	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) TRIP BLANK	E536	01-Mar-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	10 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF38	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF42	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF46	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF7D	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQM28	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQM29C	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQM71	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQM72	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQM73	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) QC-01	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	11 days	✓
Speciated Metals : Total Methylmercury in Water by GCAFS										
Amber glass total (hydrochloric acid) AQF7S	E536	28-Feb-2023	11-Mar-2023	----	----		11-Mar-2023	180 days	12 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF38	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF42	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF46	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF7D	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF7S	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQM28	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQM29C	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQM71	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQM72	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQM73	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) QC-01	E508-L	28-Feb-2023	10-Mar-2023	28 days	10 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF40	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF41	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF43	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF44	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) AQF45	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) FIELD BLANK	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Pre-cleaned amber glass - total (lab preserved) TRIP BLANK	E508-L	01-Mar-2023	10-Mar-2023	28 days	9 days	✓	10-Mar-2023	28 days	0 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF40	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF41	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF43	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF44	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF45	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM28	E420	28-Feb-2023	07-Mar-2023	----	----		08-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) FIELD BLANK	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) TRIP BLANK	E420	01-Mar-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF38	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF42	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF46	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF7D	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF7S	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM29C	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM71	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM72	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓

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Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM73	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) QC-01	E420	28-Feb-2023	08-Mar-2023	----	----		09-Mar-2023	180 days	9 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
Analytical Methods			QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Acidity by Titration	E283	856311	1	18	5.5	5.0	✓
Alkalinity Species by Titration	E290	853851	1	20	5.0	5.0	✓
Ammonia in Water by Colour	E303	853867	1	18	5.5	5.0	✓
Bromide in Water by IC	E235.Br	854724	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	854722	2	26	7.6	5.0	✓
Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E509-L	859431	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	854521	1	20	5.0	5.0	✓
Dissolved Methylmercury in Water by GCAFS	E537	862432	2	33	6.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	854523	2	32	6.2	5.0	✓
Fluoride in Water by IC	E235.F	854723	2	29	6.9	5.0	✓
Free Cyanide	E339	859043	2	30	6.6	5.0	✓
Nitrate in Water by IC	E235.NO3	854719	2	37	5.4	5.0	✓
Nitrite in Water by IC	E235.NO2	854720	2	37	5.4	5.0	✓
Sulfate in Water by IC	E235.SO4	854721	2	28	7.1	5.0	✓
Total Cyanide	E333	859041	2	33	6.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	857259	1	18	5.5	5.0	✓
Total Kjeldahl Nitrogen by Colourimetry	E319	854740	1	20	5.0	5.0	✓
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	859213	1	18	5.5	5.0	✓
Total metals in Water by CRC ICPMS	E420	854517	2	40	5.0	5.0	✓
Total Methylmercury in Water by GCAFS	E536	858920	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	855745	2	40	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	854707	1	20	5.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	855079	1	19	5.2	5.0	✓
WAD Cyanide	E336	859044	2	22	9.0	5.0	✓
Laboratory Control Samples (LCS)							
Acidity by Titration	E283	856311	1	18	5.5	5.0	✓
Alkalinity Species by Titration	E290	853851	1	20	5.0	5.0	✓
Ammonia in Water by Colour	E303	853867	1	18	5.5	5.0	✓
Bromide in Water by IC	E235.Br	854724	2	20	10.0	5.0	✓
Chloride in Water by IC	E235.Cl	854722	2	26	7.6	5.0	✓
Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E509-L	859431	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	854521	1	20	5.0	5.0	✓
Dissolved Methylmercury in Water by GCAFS	E537	862432	3	33	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	854523	2	32	6.2	5.0	✓
Fluoride in Water by IC	E235.F	854723	2	29	6.9	5.0	✓
Free Cyanide	E339	859043	2	30	6.6	5.0	✓



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS) - Continued							
Nitrate in Water by IC	E235.NO3	854719	2	37	5.4	5.0	✔
Nitrite in Water by IC	E235.NO2	854720	2	37	5.4	5.0	✔
Sulfate in Water by IC	E235.SO4	854721	2	28	7.1	5.0	✔
Total Cyanide	E333	859041	2	33	6.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	857259	1	18	5.5	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	854740	1	20	5.0	5.0	✔
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	859213	1	18	5.5	5.0	✔
Total metals in Water by CRC ICPMS	E420	854517	2	40	5.0	5.0	✔
Total Methylmercury in Water by GCAFS	E536	858920	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	855745	2	40	5.0	5.0	✔
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	854707	1	20	5.0	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	855079	1	19	5.2	5.0	✔
WAD Cyanide	E336	859044	2	22	9.0	5.0	✔
Method Blanks (MB)							
Acidity by Titration	E283	856311	1	18	5.5	5.0	✔
Alkalinity Species by Titration	E290	853851	1	20	5.0	5.0	✔
Ammonia in Water by Colour	E303	853867	1	18	5.5	5.0	✔
Bromide in Water by IC	E235.Br	854724	2	20	10.0	5.0	✔
Chloride in Water by IC	E235.Cl	854722	2	26	7.6	5.0	✔
Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E509-L	859431	1	18	5.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	854521	1	20	5.0	5.0	✔
Dissolved Methylmercury in Water by GCAFS	E537	862432	3	33	9.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	854523	2	32	6.2	5.0	✔
Fluoride in Water by IC	E235.F	854723	2	29	6.9	5.0	✔
Free Cyanide	E339	859043	2	30	6.6	5.0	✔
Nitrate in Water by IC	E235.NO3	854719	2	37	5.4	5.0	✔
Nitrite in Water by IC	E235.NO2	854720	2	37	5.4	5.0	✔
Sulfate in Water by IC	E235.SO4	854721	2	28	7.1	5.0	✔
Total Cyanide	E333	859041	2	33	6.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	857259	1	18	5.5	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	854740	1	20	5.0	5.0	✔
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	859213	1	18	5.5	5.0	✔
Total metals in Water by CRC ICPMS	E420	854517	2	40	5.0	5.0	✔
Total Methylmercury in Water by GCAFS	E536	858920	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	855745	2	40	5.0	5.0	✔
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	854707	1	20	5.0	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	855079	1	19	5.2	5.0	✔
WAD Cyanide	E336	859044	2	22	9.0	5.0	✔
Matrix Spikes (MS)							



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Matrix Spikes (MS) - Continued							
Ammonia in Water by Colour	E303	853867	1	18	5.5	5.0	✔
Bromide in Water by IC	E235.Br	854724	1	20	5.0	5.0	✔
Chloride in Water by IC	E235.Cl	854722	2	26	7.6	5.0	✔
Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E509-L	859431	1	18	5.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	854521	1	20	5.0	5.0	✔
Dissolved Methylmercury in Water by GCAFS	E537	862432	2	33	6.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	854523	2	32	6.2	5.0	✔
Fluoride in Water by IC	E235.F	854723	2	29	6.9	5.0	✔
Free Cyanide	E339	859043	2	30	6.6	5.0	✔
Nitrate in Water by IC	E235.NO3	854719	2	37	5.4	5.0	✔
Nitrite in Water by IC	E235.NO2	854720	2	37	5.4	5.0	✔
Sulfate in Water by IC	E235.SO4	854721	2	28	7.1	5.0	✔
Total Cyanide	E333	859041	2	33	6.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	857259	1	18	5.5	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	854740	1	20	5.0	5.0	✔
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	859213	1	18	5.5	5.0	✔
Total metals in Water by CRC ICPMS	E420	854517	2	40	5.0	5.0	✔
Total Methylmercury in Water by GCAFS	E536	858920	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	855745	2	40	5.0	5.0	✔
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	854707	1	20	5.0	5.0	✔
WAD Cyanide	E336	859044	2	22	9.0	5.0	✔



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry (Low Level)	E160-L Winnipeg - Environmental	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Bromide in Water by IC	E235.Br Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC	E235.Cl Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC	E235.NO3 Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Acidity by Titration	E283 Waterloo - Environmental	Water	APHA 2310 B (mod)	Acidity is determined by potentiometric titration to pH endpoint of 8.3
Alkalinity Species by Titration	E290 Winnipeg - Environmental	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ammonia in Water by Colour	E303 Winnipeg - Environmental	Water	APHA 4500 NH3-NITROGEN (AMMONIA)	This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.
Total Kjeldahl Nitrogen by Colourimetry	E319 Winnipeg - Environmental	Water	APHA 4500-Norg D (mod)	Total Kjeldahl Nitrogen is determined using block digestion followed by colourimetric analysis.
Total Cyanide	E333 Waterloo - Environmental	Water	ISO 14403 (mod)	Total or Strong Acid Dissociable (SAD) Cyanide is determined by Continuous Flow Analyzer (CFA) with in-line UV digestion followed by colourimetric analysis. Method Limitation: High levels of thiocyanate (SCN) may cause positive interference (up to 0.5% of SCN concentration).
WAD Cyanide	E336 Waterloo - Environmental	Water	APHA 4500-CN I (mod)	Weak Acid Dissociable (WAD) cyanide is determined by Continuous Flow Analyzer (CFA) with in-line distillation followed by colourimetric analysis.
Free Cyanide	E339 Waterloo - Environmental	Water	ASTM D7237 (mod)	Free Cyanide is determined by Continuous Flow Analyzer (CFA) with in-line gas diffusion followed by colourimetric analysis.
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L Winnipeg - Environmental	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of total carbon (TC) is comprised of IC (which is common), this method is more accurate and more reliable than the TOC by subtraction method (i.e. TC minus TIC).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L Winnipeg - Environmental	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.02 mg/L)	E372 Winnipeg - Environmental	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total metals in Water by CRC ICPMS	E420 Winnipeg - Environmental	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals in Water by CRC ICPMS	E421 Winnipeg - Environmental	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L Vancouver - Environmental	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAFS.
Dissolved Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E509-L Vancouver - Environmental	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAFS.
Total Hexavalent Chromium (Cr VI) by IC	E532 Waterloo - Environmental	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. Results are based on an un-filtered, field-preserved sample.
Total Methylmercury in Water by GCAFS	E536 Vancouver - Environmental	Water	EPA 1630 (mod)	This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".
Dissolved Methylmercury in Water by GCAFS	E537 Vancouver - Environmental	Water	EPA 1630 (mod)	This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".
Hardness (Calculated) from Total Ca/Mg	EC100A Winnipeg - Environmental	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 Winnipeg - Environmental	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 Winnipeg - Environmental	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.



Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Total Organic Carbon by Combustion	EP355 Winnipeg - Environmental	Water		Preparation for Total Organic Carbon by Combustion
Preparation for Dissolved Organic Carbon for Combustion	EP358 Winnipeg - Environmental	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Phosphorus in water	EP372 Winnipeg - Environmental	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 Winnipeg - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration (Low Level)	EP509-L Vancouver - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
Total Methylmercury Water Preparation	EP536 Vancouver - Environmental	Water	EPA 1630	This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".
Dissolved Methylmercury Water Preparation	EP537 Vancouver - Environmental	Water	EPA 1630	This method follows Method 1630 of the US EPA. Samples are distilled under an inert gas flow to isolate methylmercury and minimize matrix interferences. The distillate is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolyzed to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".

QUALITY CONTROL REPORT

Work Order	: WP2302565	Page	: 1 of 26
Amendment	: 1		
Client	: Alamos Gold Inc.	Laboratory	: Winnipeg - Environmental
Contact	: Karen Mathers	Account Manager	: Judy Dalmaijer
Address	: C/O Stantec Consulting 500 - 311 Portage Avenue Winnipeg MB Canada R3B 2B9	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	:	Telephone	: +1 204 255 9720
Project	: ----	Date Samples Received	: 06-Mar-2023 13:10
PO	: ----	Date Analysis Commenced	: 06-Mar-2023
C-O-C number	: ----	Issue Date	: 06-Apr-2023 13:43
Sampler	: ---- 416 368 9932		
Site	: ----		
Quote number	: ALAMOS Gold Inc. - (Q88846)_V2		
No. of samples received	: 18		
No. of samples analysed	: 18		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Christine Mason	Department Manager - Chemistry	Winnipeg Inorganics, Winnipeg, Manitoba
Christine Mason	Department Manager - Chemistry	Winnipeg Metals, Winnipeg, Manitoba
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Metals, Waterloo, Ontario
Jayden Piattelli	Analyst	Vancouver Metals, Burnaby, British Columbia
Jon Fisher	Production Manager, Environmental	Waterloo Inorganics, Waterloo, Ontario
Kinny Wu	Lab Analyst	Vancouver Metals, Burnaby, British Columbia
Lee McTavish		Winnipeg Inorganics, Winnipeg, Manitoba
Matthew Bouch		Winnipeg Metals, Winnipeg, Manitoba
Oleksandr Busel		Winnipeg Inorganics, Winnipeg, Manitoba
Parnian Sane	Analyst	Vancouver Metals, Burnaby, British Columbia
Zandrea Grabinski		Winnipeg Inorganics, Winnipeg, Manitoba



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 853851)											
WP2302559-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	21.2	18.7	12.5%	20%	----
Physical Tests (QC Lot: 855079)											
WP2302636-001	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	2.3	2.5	0.3	Diff <2x LOR	----
Physical Tests (QC Lot: 856311)											
WP2302565-001	AQM28	Acidity (as CaCO3)	----	E283	2.0	mg/L	<2.0	<2.0	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 853867)											
WP2302565-001	AQM28	Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.040	0.039	0.001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854707)											
WP2302565-001	AQM28	Phosphorus, total	7723-14-0	E372	0.020	mg/L	0.023	0.022	0.0009	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854719)											
WP2302565-001	AQM28	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.138	0.140	0.002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854720)											
WP2302565-001	AQM28	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854721)											
WP2302565-001	AQM28	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	8.48	8.53	0.502%	20%	----
Anions and Nutrients (QC Lot: 854722)											
WP2302565-001	AQM28	Chloride	16887-00-6	E235.Cl	0.50	mg/L	1.09	1.09	0.002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854723)											
WP2302565-001	AQM28	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.060	0.060	0.0007	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854724)											
WP2302565-001	AQM28	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854740)											
WP2302565-001	AQM28	Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.43	0.42	0.01	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854990)											
WP2302586-003	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	5.89	5.93	0.642%	20%	----
Anions and Nutrients (QC Lot: 854991)											
WP2302586-003	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.389	0.390	0.370%	20%	----
Anions and Nutrients (QC Lot: 854992)											
WP2302586-003	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854993)											

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 Work Order : WP2302565 Amendment 1
 Client : Alamos Gold Inc.
 Project : ----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients (QC Lot: 854993) - continued											
WP2302586-003	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 854994)											
WP2302586-003	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	72.5	72.6	0.137%	20%	----
Cyanides (QC Lot: 859041)											
WP2302565-001	AQM28	Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 859043)											
WP2302565-001	AQM28	Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 859044)											
WP2302565-001	AQM28	Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 859047)											
WP2302565-018	TRIP BLANK	Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 859048)											
WP2302565-018	TRIP BLANK	Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 859049)											
WP2302565-018	TRIP BLANK	Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 854523)											
WP2302368-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	13.4	14.2	5.62%	20%	----
Organic / Inorganic Carbon (QC Lot: 855745)											
WP2302453-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	0.59	<0.50	0.09	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 855747)											
WP2302565-009	AQF46	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	13.4	13.4	0.252%	20%	----
Organic / Inorganic Carbon (QC Lot: 861079)											
WP2302815-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	15.2	15.8	3.82%	20%	----
Total Metals (QC Lot: 854517)											
WP2302454-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	<0.0030	0.0043	0.0013	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0159	0.0157	1.21%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.076	0.074	0.002	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	19.0	18.9	0.854%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 854517) - continued											
WP2302454-001	Anonymous	Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0203	0.0205	1.12%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	25.0	24.1	3.74%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00014	0.00015	0.00001	Diff <2x LOR	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000360	0.000374	0.000014	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	1.81	1.80	0.952%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00082	0.00078	0.00004	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000669	0.000661	1.16%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	2.28	2.28	0.214%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	26.4	25.3	4.00%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.130	0.129	0.359%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	6.40	6.76	5.38%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00276	0.00286	3.40%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 855816)											
WP2302552-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00024	0.00022	0.00002	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00268	0.00272	1.46%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 855816) - continued											
WP2302552-001	Anonymous	Barium, total	7440-39-3	E420	0.00010	mg/L	0.0137	0.0134	2.05%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	0.000030	0.000025	0.000006	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.875	0.916	4.57%	20%	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000276	0.0000241	0.0000035	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	81.8	83.9	2.56%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000015	0.000018	0.000002	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00107	0.00110	2.82%	20%	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00203	0.00202	0.000006	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.044	0.043	0.001	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000128	0.000128	0.0000006	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.189	0.190	0.561%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	25.6	26.1	2.10%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	1.84	1.86	1.23%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.00444	0.00445	0.255%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00253	0.00256	0.00003	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	0.390	0.386	0.004	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	7.72	7.62	1.23%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00414	0.00420	1.46%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.00153	0.00155	1.23%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	13.9	14.3	2.73%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	227	227	0.246%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.709	0.679	4.38%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	153	157	2.79%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000016	0.000017	0.0000008	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00154	0.00158	2.93%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00052	<0.00050	0.00002	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 855816) - continued											
WP2302552-001	Anonymous	Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0150	0.0146	0.0004	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 859213)											
WP2302565-001	AQM28	Mercury, total	7439-97-6	E508-L	0.50	ng/L	1.34	1.25	0.09	Diff <2x LOR	----
Dissolved Metals (QC Lot: 854521)											
WP2302559-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0768	0.0740	3.78%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00963	0.00968	0.524%	20%	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.191	0.190	0.563%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.114	0.116	1.86%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	0.000071	0.000071	0.00000001	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.419	0.402	4.23%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0573	0.0583	1.75%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.500	mg/L	686	660	4.00%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.00108	0.00108	0.508%	20%	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	9.93	9.93	0.00317%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	2.01	1.98	1.28%	20%	----
		Iron, dissolved	7439-89-6	E421	0.100	mg/L	553	550	0.654%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.355	0.310	13.6%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0500	mg/L	422	412	2.28%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00100	mg/L	36.9	36.7	0.710%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00717	0.00713	0.566%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00500	mg/L	32.8	32.1	2.26%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	110	105	4.47%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.112	0.109	2.72%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.0210	0.0216	2.92%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	34.1	33.2	2.68%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	0.000016	0.000015	0.0000006	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	394	397	0.879%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	2.57	2.62	2.05%	20%	----
		Sulfur, dissolved	7704-34-9	E421	5.00	mg/L	1540	1520	0.957%	20%	----

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 Work Order : WP2302565 Amendment 1
 Client : Alamos Gold Inc.
 Project : ----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 854521) - continued											
WP2302559-001	Anonymous	Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000036	0.000035	0.0000006	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	0.00018	<0.00010	0.00008	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000214	0.000214	0.126%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0100	mg/L	16.3	16.0	1.38%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 859431)											
WP2302565-001	AQM28	Mercury, dissolved	7439-97-6	E509-L	0.50	ng/L	1.46	1.40	0.06	Diff <2x LOR	----
Speciated Metals (QC Lot: 857259)											
WP2302565-001	AQM28	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 858920)											
WP2302565-001	AQM28	Methylmercury (as MeHg), total	22967-92-6	E536	0.000020	µg/L	0.000074	0.000085	0.000010	Diff <2x LOR	----
Speciated Metals (QC Lot: 862432)											
VA23A3446-001	Anonymous	Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000800	µg/L	0.00154	0.00111	0.000427	Diff <2x LOR	----
Speciated Metals (QC Lot: 876269)											
FC2300559-001	Anonymous	Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.000020	µg/L	0.000074	0.000091	0.000017	Diff <2x LOR	----



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 853851)						
Alkalinity, total (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 855079)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 856311)						
Acidity (as CaCO ₃)	----	E283	2	mg/L	<2.0	----
Anions and Nutrients (QCLot: 853867)						
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 854707)						
Phosphorus, total	7723-14-0	E372	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 854719)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 854720)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 854721)						
Sulfate (as SO ₄)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 854722)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 854723)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 854724)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 854740)						
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	<0.15	----
Anions and Nutrients (QCLot: 854989)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 854990)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 854991)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 854992)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 854993)						



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 854993) - continued						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 854994)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Cyanides (QCLot: 859041)						
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 859043)						
Cyanide, free	----	E339	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 859044)						
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 859047)						
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 859048)						
Cyanide, free	----	E339	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 859049)						
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 854523)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 855745)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 855747)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 861079)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Metals (QCLot: 854517)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 854517) - continued						
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 855816)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 855816) - continued						
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 859213)						
Mercury, total	7439-97-6	E508-L	0.5	ng/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 854521)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----



Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 854521) - continued						
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 859431)						
Mercury, dissolved	7439-97-6	E509-L	0.5	ng/L	<0.50	----
Speciated Metals (QCLot: 857259)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Speciated Metals (QCLot: 858920)						
Methylmercury (as MeHg), total	22967-92-6	E536	0.00002	µg/L	<0.000020	----
Speciated Metals (QCLot: 862432)						
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	<0.000020	----
Speciated Metals (QCLot: 866122)						
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	<0.000020	----
Speciated Metals (QCLot: 876269)						
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	<0.000020	----



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 853851)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	100 mg/L	98.1	85.0	115	----
Physical Tests (QCLot: 855079)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	150 mg/L	97.0	85.0	115	----
Physical Tests (QCLot: 856311)									
Acidity (as CaCO3)	----	E283	2	mg/L	50 mg/L	112	85.0	115	----
Anions and Nutrients (QCLot: 853867)									
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	0.25 mg/L	98.5	85.0	115	----
Anions and Nutrients (QCLot: 854707)									
Phosphorus, total	7723-14-0	E372	0.02	mg/L	0.5 mg/L	101	80.0	120	----
Anions and Nutrients (QCLot: 854719)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 854720)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.7	90.0	110	----
Anions and Nutrients (QCLot: 854721)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 854722)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	98.5	90.0	110	----
Anions and Nutrients (QCLot: 854723)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 854724)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	100	85.0	115	----
Anions and Nutrients (QCLot: 854740)									
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	4 mg/L	99.7	75.0	125	----
Anions and Nutrients (QCLot: 854989)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	98.7	85.0	115	----
Anions and Nutrients (QCLot: 854990)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	98.0	90.0	110	----
Anions and Nutrients (QCLot: 854991)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 854992)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	97.3	90.0	110	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Anions and Nutrients (QCLot: 854993)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	99.0	90.0	110	----
Anions and Nutrients (QCLot: 854994)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Cyanides (QCLot: 859041)									
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	0.25 mg/L	106	80.0	120	----
Cyanides (QCLot: 859043)									
Cyanide, free	----	E339	0.002	mg/L	0.125 mg/L	96.5	80.0	120	----
Cyanides (QCLot: 859044)									
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	0.125 mg/L	99.9	80.0	120	----
Cyanides (QCLot: 859047)									
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	0.25 mg/L	108	80.0	120	----
Cyanides (QCLot: 859048)									
Cyanide, free	----	E339	0.002	mg/L	0.125 mg/L	93.8	80.0	120	----
Cyanides (QCLot: 859049)									
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	0.125 mg/L	97.3	80.0	120	----
Organic / Inorganic Carbon (QCLot: 854523)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	96.3	80.0	120	----
Organic / Inorganic Carbon (QCLot: 855745)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	105	80.0	120	----
Organic / Inorganic Carbon (QCLot: 855747)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	97.9	80.0	120	----
Organic / Inorganic Carbon (QCLot: 861079)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	94.9	80.0	120	----
Total Metals (QCLot: 854517)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	93.4	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	101	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	95.0	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	93.1	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	94.6	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	101	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	93.8	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	89.3	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 854517) - continued									
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	91.0	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	90.3	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	91.9	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	92.1	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	89.8	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	95.4	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	96.3	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	92.4	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	101	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	90.0	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	102	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	92.2	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	97.9	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	99.4	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	104	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	86.0	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	93.0	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	95.5	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	114	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	94.0	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	94.3	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	88.8	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	99.4	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	98.1	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	104	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	94.4	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	92.8	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	92.5	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	93.3	80.0	120	----
Total Metals (QCLot: 855816)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	94.7	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	105	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	95.1	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	92.8	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 855816) - continued									
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	95.0	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	98.8	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	95.1	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	90.8	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	95.4	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	95.2	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	94.6	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	95.6	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	93.3	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	93.1	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	91.8	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	102	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	95.0	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	103	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	93.3	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	107	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	97.9	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	99.5	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	103	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	107	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	89.2	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	97.6	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	96.8	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	103	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	93.8	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	90.6	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	102	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	102	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	102	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	94.3	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	95.4	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	95.3	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	95.9	80.0	120	----
Total Metals (QCLot: 859213)									
Mercury, total	7439-97-6	E508-L	0.5	ng/L	5 ng/L	95.9	80.0	120	----



Sub-Matrix: **Water**

Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 854521)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	95.9	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	98.5	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	101	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	93.1	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	95.6	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	97.3	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	98.5	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	93.2	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	91.3	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	90.1	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	91.2	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	91.8	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	91.0	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	85.1	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	95.4	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	92.2	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	103	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	94.0	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	99.7	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	91.3	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	99.8	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	89.1	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	98.1	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	96.4	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	98.1	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	83.4	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	91.3	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	93.2	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	96.2	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	95.8	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	95.2	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	92.6	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	99.4	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	96.4	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	100	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 854521) - continued									
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	97.0	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	92.5	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	92.8	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	92.6	80.0	120	----
Mercury, dissolved	7439-97-6	E509-L	0.5	ng/L	5 ng/L	95.9	80.0	120	----
Speciated Metals (QCLot: 857259)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.025 mg/L	98.6	80.0	120	----
Speciated Metals (QCLot: 858920)									
Methylmercury (as MeHg), total	22967-92-6	E536	0.00002	µg/L	0.0025 µg/L	79.6	70.0	130	----
Speciated Metals (QCLot: 862432)									
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	0.0025 µg/L	84.9	70.0	130	----
Speciated Metals (QCLot: 866122)									
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	0.0025 µg/L	82.6	70.0	130	----
Speciated Metals (QCLot: 876269)									
Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00002	µg/L	0.0025 µg/L	74.5	70.0	130	----



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Laboratory sample ID					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	Target	MS	Low	High	
Client sample ID	Analyte	CAS Number	Method							
Anions and Nutrients (QCLot: 853867)										
WP2302565-001	AQM28	Ammonia, total (as N)	7664-41-7	E303	0.230 mg/L	0.25 mg/L	91.9	75.0	125	----
Anions and Nutrients (QCLot: 854707)										
WP2302565-002	AQM29C	Phosphorus, total	7723-14-0	E372	0.246 mg/L	0.25 mg/L	98.2	70.0	130	----
Anions and Nutrients (QCLot: 854719)										
WP2302565-001	AQM28	Nitrate (as N)	14797-55-8	E235.NO3	2.56 mg/L	2.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 854720)										
WP2302565-001	AQM28	Nitrite (as N)	14797-65-0	E235.NO2	0.500 mg/L	0.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 854721)										
WP2302565-001	AQM28	Sulfate (as SO4)	14808-79-8	E235.SO4	102 mg/L	100 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 854722)										
WP2302565-001	AQM28	Chloride	16887-00-6	E235.Cl	101 mg/L	100 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 854723)										
WP2302565-001	AQM28	Fluoride	16984-48-8	E235.F	1.05 mg/L	1 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 854724)										
WP2302565-001	AQM28	Bromide	24959-67-9	E235.Br	0.51 mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 854740)										
WP2302565-001	AQM28	Kjeldahl nitrogen, total [TKN]	----	E319	4.70 mg/L	5 mg/L	93.9	70.0	130	----
Anions and Nutrients (QCLot: 854990)										
WP2302586-003	Anonymous	Chloride	16887-00-6	E235.Cl	99.9 mg/L	100 mg/L	99.9	75.0	125	----
Anions and Nutrients (QCLot: 854991)										
WP2302586-003	Anonymous	Fluoride	16984-48-8	E235.F	1.00 mg/L	1 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 854992)										
WP2302586-003	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.493 mg/L	0.5 mg/L	98.5	75.0	125	----
Anions and Nutrients (QCLot: 854993)										
WP2302586-003	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.52 mg/L	2.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 854994)										
WP2302586-003	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	99.3 mg/L	100 mg/L	99.3	75.0	125	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Cyanides (QCLot: 859041)										
WP2302565-001	AQM28	Cyanide, strong acid dissociable (Total)	----	E333	0.259 mg/L	0.25 mg/L	104	75.0	125	----
Cyanides (QCLot: 859043)										
WP2302565-001	AQM28	Cyanide, free	----	E339	0.130 mg/L	0.125 mg/L	104	75.0	125	----
Cyanides (QCLot: 859044)										
WP2302565-001	AQM28	Cyanide, weak acid dissociable	----	E336	0.134 mg/L	0.125 mg/L	107	75.0	125	----
Cyanides (QCLot: 859047)										
WP2302565-018	TRIP BLANK	Cyanide, strong acid dissociable (Total)	----	E333	0.278 mg/L	0.25 mg/L	111	75.0	125	----
Cyanides (QCLot: 859048)										
WP2302565-018	TRIP BLANK	Cyanide, free	----	E339	0.129 mg/L	0.125 mg/L	103	75.0	125	----
Cyanides (QCLot: 859049)										
WP2302565-018	TRIP BLANK	Cyanide, weak acid dissociable	----	E336	0.133 mg/L	0.125 mg/L	106	75.0	125	----
Organic / Inorganic Carbon (QCLot: 854523)										
WP2302368-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	5 mg/L	ND	70.0	130	----
Organic / Inorganic Carbon (QCLot: 855745)										
WP2302454-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	4.53 mg/L	5 mg/L	90.7	70.0	130	----
Organic / Inorganic Carbon (QCLot: 855747)										
WP2302565-010	AQF42	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	5 mg/L	ND	70.0	130	----
Organic / Inorganic Carbon (QCLot: 861079)										
WP2302815-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	ND mg/L	5 mg/L	ND	70.0	130	----
Total Metals (QCLot: 854517)										
WP2302454-001	Anonymous	Aluminum, total	7429-90-5	E420	0.218 mg/L	0.2 mg/L	109	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0234 mg/L	0.02 mg/L	117	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0224 mg/L	0.02 mg/L	112	70.0	130	----
		Barium, total	7440-39-3	E420	0.0225 mg/L	0.02 mg/L	113	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0424 mg/L	0.04 mg/L	106	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0111 mg/L	0.01 mg/L	111	70.0	130	----
		Boron, total	7440-42-8	E420	0.071 mg/L	0.1 mg/L	70.8	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00450 mg/L	0.004 mg/L	112	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	4 mg/L	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0109 mg/L	0.01 mg/L	109	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0436 mg/L	0.04 mg/L	109	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0213 mg/L	0.02 mg/L	107	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 854517) - continued										
WP2302454-001	Anonymous	Copper, total	7440-50-8	E420	0.0212 mg/L	0.02 mg/L	106	70.0	130	----
		Iron, total	7439-89-6	E420	2.17 mg/L	2 mg/L	108	70.0	130	----
		Lead, total	7439-92-1	E420	0.0211 mg/L	0.02 mg/L	105	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0802 mg/L	0.1 mg/L	80.2	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0217 mg/L	0.02 mg/L	109	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0232 mg/L	0.02 mg/L	116	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0417 mg/L	0.04 mg/L	104	70.0	130	----
		Phosphorus, total	7723-14-0	E420	11.2 mg/L	10 mg/L	112	70.0	130	----
		Potassium, total	7440-09-7	E420	4.32 mg/L	4 mg/L	108	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0220 mg/L	0.02 mg/L	110	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0443 mg/L	0.04 mg/L	111	70.0	130	----
		Silicon, total	7440-21-3	E420	11.3 mg/L	10 mg/L	113	70.0	130	----
		Silver, total	7440-22-4	E420	0.00436 mg/L	0.004 mg/L	109	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	2 mg/L	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	23.0 mg/L	20 mg/L	115	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0458 mg/L	0.04 mg/L	114	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00420 mg/L	0.004 mg/L	105	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0223 mg/L	0.02 mg/L	112	70.0	130	----
		Tin, total	7440-31-5	E420	0.0230 mg/L	0.02 mg/L	115	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0467 mg/L	0.04 mg/L	117	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0233 mg/L	0.02 mg/L	117	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00426 mg/L	0.004 mg/L	106	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.112 mg/L	0.1 mg/L	112	70.0	130	----
		Zinc, total	7440-66-6	E420	0.438 mg/L	0.4 mg/L	109	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0472 mg/L	0.04 mg/L	118	70.0	130	----
Total Metals (QCLot: 855816)										
WP2302552-001	Anonymous	Aluminum, total	7429-90-5	E420	0.204 mg/L	0.2 mg/L	102	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Barium, total	7440-39-3	E420	0.0197 mg/L	0.02 mg/L	98.3	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0413 mg/L	0.04 mg/L	103	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00990 mg/L	0.01 mg/L	99.0	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	0.1 mg/L	ND	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 855816) - continued										
WP2302552-001	Anonymous	Cadmium, total	7440-43-9	E420	0.00408 mg/L	0.004 mg/L	102	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	4 mg/L	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0100 mg/L	0.01 mg/L	100	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0408 mg/L	0.04 mg/L	102	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0199 mg/L	0.02 mg/L	99.6	70.0	130	----
		Copper, total	7440-50-8	E420	0.0194 mg/L	0.02 mg/L	96.8	70.0	130	----
		Iron, total	7439-89-6	E420	2.03 mg/L	2 mg/L	102	70.0	130	----
		Lead, total	7439-92-1	E420	0.0184 mg/L	0.02 mg/L	92.3	70.0	130	----
		Lithium, total	7439-93-2	E420	ND mg/L	0.1 mg/L	ND	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0386 mg/L	0.04 mg/L	96.5	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.9 mg/L	10 mg/L	109	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	4 mg/L	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0201 mg/L	0.02 mg/L	101	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0434 mg/L	0.04 mg/L	108	70.0	130	----
		Silicon, total	7440-21-3	E420	ND mg/L	10 mg/L	ND	70.0	130	----
		Silver, total	7440-22-4	E420	0.00373 mg/L	0.004 mg/L	93.3	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	2 mg/L	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	ND mg/L	20 mg/L	ND	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0388 mg/L	0.04 mg/L	96.9	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00375 mg/L	0.004 mg/L	93.8	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Tin, total	7440-31-5	E420	0.0201 mg/L	0.02 mg/L	100	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0420 mg/L	0.04 mg/L	105	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00382 mg/L	0.004 mg/L	95.5	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.105 mg/L	0.1 mg/L	105	70.0	130	----
		Zinc, total	7440-66-6	E420	0.390 mg/L	0.4 mg/L	97.6	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0404 mg/L	0.04 mg/L	101	70.0	130	----
Total Metals (QCLot: 859213)										
WP2302565-002	AQM29C	Mercury, total	7439-97-6	E508-L	5.49 ng/L	5 ng/L	110	70.0	130	----
Dissolved Metals (QCLot: 854521)										



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Dissolved Metals (QCLot: 854521) - continued										
WP2302559-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.186 mg/L	0.2 mg/L	92.8	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0346 mg/L	0.04 mg/L	86.6	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00848 mg/L	0.01 mg/L	84.8	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	0.1 mg/L	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	ND mg/L	0.004 mg/L	ND	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	4 mg/L	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00922 mg/L	0.01 mg/L	92.2	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0369 mg/L	0.04 mg/L	92.2	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Copper, dissolved	7440-50-8	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Iron, dissolved	7439-89-6	E421	ND mg/L	2 mg/L	ND	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0172 mg/L	0.02 mg/L	85.9	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	ND mg/L	0.1 mg/L	ND	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	ND mg/L	0.04 mg/L	ND	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.0 mg/L	10 mg/L	100	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	4 mg/L	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0529 mg/L	0.04 mg/L	132	70.0	130	MES
		Silicon, dissolved	7440-21-3	E421	ND mg/L	10 mg/L	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00326 mg/L	0.004 mg/L	81.5	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	2 mg/L	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	20 mg/L	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0422 mg/L	0.04 mg/L	106	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00338 mg/L	0.004 mg/L	84.6	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0188 mg/L	0.02 mg/L	93.9	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0200 mg/L	0.02 mg/L	99.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0418 mg/L	0.04 mg/L	104	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0200 mg/L	0.02 mg/L	100	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 854521) - continued										
WP2302559-001	Anonymous	Uranium, dissolved	7440-61-1	E421	0.00355 mg/L	0.004 mg/L	88.7	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0990 mg/L	0.1 mg/L	99.0	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	ND mg/L	0.4 mg/L	ND	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0438 mg/L	0.04 mg/L	109	70.0	130	----
Dissolved Metals (QCLot: 859431)										
WP2302565-002	AQM29C	Mercury, dissolved	7439-97-6	E509-L	4.83 ng/L	5 ng/L	96.7	70.0	130	----
Speciated Metals (QCLot: 857259)										
WP2302565-001	AQM28	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0389 mg/L	0.04 mg/L	97.4	70.0	130	----
Speciated Metals (QCLot: 858920)										
WP2302565-002	AQM29C	Methylmercury (as MeHg), total	22967-92-6	E536	0.00477 µg/L	0.0025 µg/L	95.4	60.0	140	----
Speciated Metals (QCLot: 862432)										
VA23A3446-002	Anonymous	Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.0713 µg/L	0.0025 µg/L	71.3	60.0	140	----
Speciated Metals (QCLot: 876269)										
WP2302565-017	FIELD BLANK	Methylmercury (as MeHg), dissolved	22967-92-6	E537	0.00169 µg/L	0.0025 µg/L	67.6	60.0	140	----

Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).



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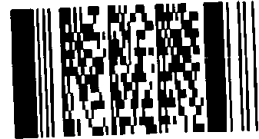
Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 22 -

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Environmental Division
Winnipeg
Work Order Reference
WP2302565



Telephone: +1 204 255 9720

Report To Contact and company name below will appear on the final report		Reports / Recipients		Turnaround Time (TAT) Requested	
Company:	Stantec Consulting	Select Report Format:	☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)	☒ Routine [R] if received by 3pm M-F - no surcharges apply	
Contact:	Karen Mathers	Merge QC/QCI Reports with COA	☐ YES ☐ NO ☐ N/A	☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum	
Phone:	204-928-7621	☐ Compare Results to Criteria on Report - provide details below if box checked		☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum	
Company address below will appear on the final report		Select Distribution:	☒ EMAIL ☐ MAIL ☐ FAX	☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum	
Street:	500 - 311 Portage Ave	Email 1 or Fax	Karen.Mathers@stantec.com	☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum	
City/Province:	Winnipeg, MB	Email 2	Brad.Horne@stantec.com	☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.	
Postal Code:	R3B 2B9	Email 3	Jeremy.Jackson@stantec.com	Additional fees may apply to rush requests on weekends, st	
Invoice To	Same as Report To ☐ YES ☒ NO	Invoice Recipients		Date and Time Required for all E&P TATs:	
	Copy of Invoice with Report ☐ YES ☒ NO	Select Invoice Distribution:	☒ EMAIL ☐ MAIL ☐ FAX	For all tests with rush TATs requested, please contact your AM to confirm availability.	
Company:	Alamos Gold	Email 1 or Fax		Analysis Request	
Contact:		Email 2		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below	
Project Information		Oil and Gas Required Fields (client use)			
ALS Account # / Quote #:	Q88846	AFE/Cost Center:	PO#		
Job #:	ALAMOS	Major/Minor Code:	Routing Code:		
PO / AFE:		Requisitioner:			
LSD:		Location:			
ALS Lab Work Order # (ALS use only):		ALS Contact:	SD	Sampler:	BE, AR
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	
12-8962655N	AQM28	28-03-23	0949	W	
	AQM89C		1023		
	AQM71		1105		
	AQM73		1139		
	AQM73		1215		
	AQF7S		1423		
	AQF7D		1441		
	AQF38		1505		
	AQF46		1533		
	AQF43		1606		
	QC-01				
	AQF45	01-03-23	0916		
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		SAMPLE RECEIPT DETAILS (ALS use only)	
Are samples taken from a Regulated DW System? ☐ YES ☐ NO		All described bottles field filtered		Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED	
Are samples for human consumption/ use? ☐ YES ☐ NO				Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO	
				Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A	
				INITIAL COOLER TEMPERATURES °C: 6.4 FINAL COOLER TEMPERATURES °C:	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)		FINAL SHIPMENT RECEPTION (ALS use only)	
Released by:	Date:	Received by:	Date:	Received by:	Date:
Blaney	March 2/23	Blaney	MAR 06 2023	Blaney	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

FEB 2322 FROM

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

2565

Report To		Reports / Recipients		Turnaround Time (TAT) Requested		AFFIX ALS BARCODE LABEL HERE (ALS use only)																																																																																																																																						
Contact and company name below will appear on the final report		Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)		☒ Routine [R] if received by 3pm M-F - no surcharges apply ☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.																																																																																																																																								
Company:	Stantec Consulting	Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A																																																																																																																																										
Contact:	Karen Mathers	☐ Compare Results to Criteria on Report - provide details below if box checked																																																																																																																																										
Phone:	204-928-7621	Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX																																																																																																																																										
Company address below will appear on the final report		Email 1 or Fax: Karen.Mathers@stantec.com																																																																																																																																										
Street:	500 - 311 Portage Ave	Email 2: Brad.Horne@stantec.com																																																																																																																																										
City/Province:	Winnipeg, MB	Email 3: Jeremy.Jackson@stantec.com																																																																																																																																										
Postal Code:	R3B 2B9			Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.																																																																																																																																								
Invoice To:	Same as Report To ☐ YES ☒ NO			Date and Time Required for all E&P TATs: dd-mm-yy hh:mm am/pm																																																																																																																																								
	Copy of Invoice with Report ☐ YES ☒ NO	Invoice Recipients		For all tests with rush TATs requested, please contact your AM to confirm availability.																																																																																																																																								
Company:	Alamos Gold	Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX		Analysis Request																																																																																																																																								
Contact:		Email 1 or Fax		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																																																																																																								
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Project Information		Oil and Gas Required Fields (client use)		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <th colspan="14">Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below</th> <th rowspan="2">SAMPLES ON HOLD</th> <th rowspan="2">EXTENDED STORAGE REQUIRED</th> <th rowspan="2">SUSPECTED HAZARD (see notes)</th> </tr> <tr> <th>ALK-SPEC-WP, ACY-TITR-TB</th> <th>ANIONS-6-L-IC-WP</th> <th>C-DOC-HTC-WP, C-TOC-HTC-WP</th> <th>CN-T-L, CN-FREE-L, CN-WAD-L</th> <th>CR-CR6-PWQO-IC-WT</th> <th>MET-D-CCMS-WP, HARDNESS</th> <th>MET-T-CCMS-WP</th> <th>NH3-COL-WP</th> <th>P-T-COL-WP</th> <th>N-TOTU-WP</th> <th>SOLIDS-TOTSUS-LR-WP</th> <th>HG-T-U-CVAF, HG-D-U-CVAG</th> <th>MEHG-T-GCAF, MEHG-D-GCAF</th> </tr> <tr> <td>13</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>14</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>15</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>16</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>17</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>18</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> </table>				NUMBER OF CONTAINERS	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below														SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)	ALK-SPEC-WP, ACY-TITR-TB	ANIONS-6-L-IC-WP	C-DOC-HTC-WP, C-TOC-HTC-WP	CN-T-L, CN-FREE-L, CN-WAD-L	CR-CR6-PWQO-IC-WT	MET-D-CCMS-WP, HARDNESS	MET-T-CCMS-WP	NH3-COL-WP	P-T-COL-WP	N-TOTU-WP	SOLIDS-TOTSUS-LR-WP	HG-T-U-CVAF, HG-D-U-CVAG	MEHG-T-GCAF, MEHG-D-GCAF	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
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14	AGF43	1	1015	1	14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																																																																																																																											
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16	AGF41	1	1130	1	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																																																																																																																											
17	FIELD BLANK	1	1315	1	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																																																																																																																											
18	TRIP BLANK	1	-	1	18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																																																																																																																											
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Released by: <i>David</i>	Date: <i>March 2/23</i>	Time: <i>0930</i>	Received by: <i>CV</i>	Date: <i>MAR 06 2023</i>	Time: <i>1310</i>																																																																																																																																							

CERTIFICATE OF ANALYSIS

Work Order : **WP2303966**
Client : **Alamos Gold Inc.**
Contact : Karen Mathers
Address : C/O Stantec Consulting 500 - 311 Portage Avenue
Winnipeg MB Canada R3B 2B9
Telephone : 416 368 9932
Project : ----
PO : ----
C-O-C number : ----
Sampler : ----
Site : ----
Quote number : ALAMOS Gold Inc. - (Q88846)_V2
No. of samples received : 18
No. of samples analysed : 18

Page : 1 of 18
Laboratory : Winnipeg - Environmental
Account Manager : Judy Dalmaijer
Address : 1329 Niakwa Road East, Unit 12
Winnipeg MB Canada R2J 3T4
Telephone : +1 204 255 9720
Date Samples Received : 03-Apr-2023 11:20
Date Analysis Commenced : 03-Apr-2023
Issue Date : 11-Apr-2023 15:33

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Adrienne Tarr		Metals, Winnipeg, Manitoba
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Metals, Waterloo, Ontario
Lee McTavish		Inorganics, Winnipeg, Manitoba
Lee McTavish		Metals, Winnipeg, Manitoba
Oleksandr Busel		Inorganics, Winnipeg, Manitoba
Oleksandr Busel		Metals, Winnipeg, Manitoba
Zandrea Grabinski		Inorganics, Winnipeg, Manitoba



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

Unit	Description
-	no units
mg/L	milligrams per litre

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

SIF REQUESTED LOW RANGE MERCURY BUT THEY PROVIDED HIGH

Qualifiers

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
RRV	Reported result verified by repeat analysis.



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
(Matrix: Water)										
Client sampling date / time										
					28-Mar-2023 09:30	28-Mar-2023 10:09	28-Mar-2023 10:47	28-Mar-2023 11:17	28-Mar-2023 11:54	
Analyte	CAS Number	Method	LOR	Unit	WP2303966-001	WP2303966-002	WP2303966-003	WP2303966-004	WP2303966-005	
					Result	Result	Result	Result	Result	
Physical Tests										
Acidity (as CaCO ₃)	----	E283	2.0	mg/L	6.3	<2.0	21.9	21.6	43.8	
Alkalinity, bicarbonate (as CaCO ₃)	----	E290	1.0	mg/L	13.8	16.3	91.8	27.5	30.6	
Alkalinity, bicarbonate (as HCO ₃)	71-52-3	E290	1.0	mg/L	16.8	19.9	112	33.6	37.3	
Alkalinity, carbonate (as CaCO ₃)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, carbonate (as CO ₃)	3812-32-6	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, hydroxide (as CaCO ₃)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, hydroxide (as OH)	14280-30-9	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, total (as CaCO ₃)	----	E290	1.0	mg/L	13.8	16.3	91.8	27.5	30.6	
Hardness (as CaCO ₃), from total Ca/Mg	----	EC100A	0.50	mg/L	24.8	13.5	94.8	29.0	43.1	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	1.8	4.1	3.6	10.7	14.4	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.076	0.027	0.364	0.711	0.214	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<5.00 ^{DLM}	<2.00 ^{DLM}	<0.10	<0.10	<0.10	
Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	<5.00 ^{DLM}	<2.00 ^{DLM}	3.18	0.36	0.34	
Fluoride	16984-48-8	E235.F	0.020	mg/L	<1.00 ^{DLM}	<0.400 ^{DLM}	0.042	0.050	0.040	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.34	0.41	0.80	1.21	1.35	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<1.00 ^{DLM}	<0.400 ^{DLM}	<0.020	0.026	<0.020	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.500 ^{DLM}	<0.200 ^{DLM}	<0.010	<0.010	<0.010	
Phosphorus, total	7723-14-0	E372	0.020	mg/L	0.030	0.028	0.031	0.050	0.472	
Sulfate (as SO ₄)	14808-79-8	E235.SO4	0.30	mg/L	<15.0 ^{DLM}	<6.00 ^{DLM}	1.27	<0.30	<0.30	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	0.0071	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	13.9	9.40	19.4	23.5	50.6	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	13.7	11.0	18.7	26.5	48.9	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.129	0.0607	0.0833	0.152	0.162	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
(Matrix: Water)										
Client sampling date / time										
Analyte	CAS Number	Method	LOR	Unit	WP2303966-001	WP2303966-002	WP2303966-003	WP2303966-004	WP2303966-005	
					Result	Result	Result	Result	Result	
Total Metals										
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	0.00021	<0.00010	0.00020	<0.00010	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00095	0.00036	0.00056	0.00075	0.00219	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.0111	0.00988	0.0184	0.0186	0.0163	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000210	0.0000100	0.0000060	0.0000067	0.0000270	
Calcium, total	7440-70-2	E420	0.050	mg/L	7.31	3.72	30.0	8.85	12.9	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	0.000015	<0.000010	0.000038	0.000026	
Chromium, total	7440-47-3	E420	0.00050	mg/L	0.00061	<0.00050	<0.00050	0.00081	<0.00050	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00042	0.00051	0.00076	0.00089	0.00248	
Copper, total	7440-50-8	E420	0.00050	mg/L	0.00395	0.00102	<0.00050	<0.00050	<0.00050	
Iron, total	7439-89-6	E420	0.010	mg/L	1.40	0.375	2.72	7.13	4.91	
Lead, total	7439-92-1	E420	0.000050	mg/L	0.000112	0.000060	0.000069	0.000103	0.000181	
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0012	0.0014	0.0016	0.0014	0.0018	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.60	1.03	4.82	1.69	2.65	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0310	0.0548	0.390	0.382	0.966	
Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000090	0.000053	0.000128	<0.000050	0.000076	
Nickel, total	7440-02-0	E420	0.00050	mg/L	0.0383	0.00482	0.00079	0.00078	0.00126	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	0.053	<0.050	<0.050	0.052	0.476	
Potassium, total	7440-09-7	E420	0.050	mg/L	0.932	0.780	1.43	0.949	1.28	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00113	0.00138	0.00209	0.00158	0.00184	
Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Silicon, total	7440-21-3	E420	0.10	mg/L	4.54	4.38	12.3	5.74	8.52	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, total	7440-23-5	E420	0.050	mg/L	1.83	5.62	3.37	1.28	1.36	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0220	0.0167	0.0439	0.0244	0.0272	
Sulfur, total	7704-34-9	E420	0.50	mg/L	2.67	0.61	0.59	<0.50	<0.50	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
Client sampling date / time					28-Mar-2023 09:30	28-Mar-2023 10:09	28-Mar-2023 10:47	28-Mar-2023 11:17	28-Mar-2023 11:54	
Analyte	CAS Number	Method	LOR	Unit	WP2303966-001	WP2303966-002	WP2303966-003	WP2303966-004	WP2303966-005	
					Result	Result	Result	Result	Result	
Total Metals										
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000015	
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00212	0.00224	0.00281	0.00607	0.00383	
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000023	0.000028	0.000059	0.000024	0.000010	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00077	0.00057	
Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0213	0.0089	0.0049	0.0100	0.0124	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0.00024	<0.00020	0.00024	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0791	0.0141	0.0348	0.0639	0.128	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00093	0.00076 ^{RRV}	0.00059	0.00060	0.00214	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0107	0.00854	0.0176	0.0322 ^{RRV}	0.0166	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000188	0.0000067	<0.0000050	0.0000078	0.0000234	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	7.01	3.20	28.7	8.55	12.8	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	0.000011	0.000024	
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00024	0.00057	0.00070	0.00082	0.00232	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00272	0.00064	0.00027	0.00186 ^{RRV}	0.00048	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.969	0.192	2.18	5.39	4.63	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000070	<0.000050	<0.000050	0.000129	0.000164	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0012	0.0013	0.0016	0.0014	0.0019	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.37	0.850	4.48	1.42	2.48	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0218	0.0908 ^{RRV}	0.358	0.332	0.891	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000074	<0.000050	0.000127	<0.000050	0.000070	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0343	0.00430	0.00068	0.00067	0.00116	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM28	AQM29C	AQM71	AQM72	AQM73
(Matrix: Water)										
Client sampling date / time					28-Mar-2023 09:30	28-Mar-2023 10:09	28-Mar-2023 10:47	28-Mar-2023 11:17	28-Mar-2023 11:54	
Analyte	CAS Number	Method	LOR	Unit	WP2303966-001	WP2303966-002	WP2303966-003	WP2303966-004	WP2303966-005	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	0.400	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.830	0.658	1.31	0.860	1.21	
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00100	0.00116	0.00186	0.00133	0.00171	
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000058	0.000070	0.000067	0.000053	0.000115 ^{RRV}	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	4.11	3.61	11.0	5.09	7.72	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.72	1.34	3.29	1.23	1.31	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0212	0.0150	0.0439	0.0232	0.0276	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	2.14	0.52	0.60	<0.50	<0.50	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000015	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	0.00014	<0.00010	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00076	<0.00030	0.00111	0.00177	0.00267	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000020	0.000024	0.000053	0.000014	0.000011	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0131	0.0037	0.0026	0.0051	0.0115	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	0.00031	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	0.00061	0.00095	<0.00050	0.00076	<0.00050	

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF41	AQF45	AQF44	AQF43	QC01
(Matrix: Water)										
Client sampling date / time					28-Mar-2023 13:10	28-Mar-2023 13:45	28-Mar-2023 14:16	28-Mar-2023 14:39	28-Mar-2023 14:39	28-Mar-2023
Analyte	CAS Number	Method	LOR	Unit	WP2303966-006	WP2303966-007	WP2303966-008	WP2303966-009	WP2303966-010	
					Result	Result	Result	Result	Result	
Physical Tests										
Acidity (as CaCO ₃)	----	E283	2.0	mg/L	<2.0	3.8	3.4	3.8	4.2	
Alkalinity, bicarbonate (as CaCO ₃)	----	E290	1.0	mg/L	11.4	12.2	18.1	11.3	9.1	
Alkalinity, bicarbonate (as HCO ₃)	71-52-3	E290	1.0	mg/L	13.9	14.9	22.1	13.8	11.1	
Alkalinity, carbonate (as CaCO ₃)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, carbonate (as CO ₃)	3812-32-6	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, hydroxide (as CaCO ₃)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, hydroxide (as OH)	14280-30-9	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, total (as CaCO ₃)	----	E290	1.0	mg/L	11.4	12.2	18.1	11.3	9.1	
Hardness (as CaCO ₃), from total Ca/Mg	----	EC100A	0.50	mg/L	12.0	14.1	12.9	12.4	14.3	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	2.6	2.5	1.0	<1.0	5.0	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.014	0.051	0.013	0.011	0.032	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	
Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	0.28	0.29	0.25	0.24	2.97	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.074	0.072	0.073	0.073	0.075	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.20	0.19	0.19	0.19	0.28	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.114	0.112	0.108	0.106	0.124	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Phosphorus, total	7723-14-0	E372	0.020	mg/L	<0.020	<0.020	<0.020	<0.020	0.033	
Sulfate (as SO ₄)	14808-79-8	E235.SO4	0.30	mg/L	0.69	0.75	0.67	0.62	1.77	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	11.0	10.2	10.4	9.56	8.71	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	9.98	9.86	9.92	9.59	9.54	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0802	0.0488	0.0398	0.0360	0.0853	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00130	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF41	AQF45	AQF44	AQF43	QC01
(Matrix: Water)										
Client sampling date / time					28-Mar-2023 13:10	28-Mar-2023 13:45	28-Mar-2023 14:16	28-Mar-2023 14:39	28-Mar-2023 14:39	28-Mar-2023
Analyte	CAS Number	Method	LOR	Unit	WP2303966-006	WP2303966-007	WP2303966-008	WP2303966-009	WP2303966-009	WP2303966-010
					Result	Result	Result	Result	Result	Result
Total Metals										
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00028	0.00017	0.00016	0.00017	0.00017	0.00054
Barium, total	7440-39-3	E420	0.00010	mg/L	0.00808	0.00705	0.00684	0.00674	0.00674	0.0125
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000108
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000194
Calcium, total	7440-70-2	E420	0.050	mg/L	3.24	3.82	3.47	3.38	3.38	3.94
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00162
Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00129
Iron, total	7439-89-6	E420	0.010	mg/L	0.520	0.311	0.302	0.292	0.292	0.477
Lead, total	7439-92-1	E420	0.000050	mg/L	0.000061	<0.000050	<0.000050	<0.000050	<0.000050	0.000090
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0012	0.0012	0.0012	0.0012	0.0012	0.0016
Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.958	1.11	1.02	0.964	0.964	1.09
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0570	0.0119	0.0104	0.0105	0.0105	0.113
Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000062	0.000075	0.000076	0.000053	0.000053	0.000075
Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00780
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050
Potassium, total	7440-09-7	E420	0.050	mg/L	0.578	0.605	0.579	0.561	0.561	0.855
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00118	0.00112	0.00114	0.00104	0.00104	0.00144
Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000080
Silicon, total	7440-21-3	E420	0.10	mg/L	3.48	3.51	3.47	3.48	3.48	4.60
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, total	7440-23-5	E420	0.050	mg/L	1.30	2.56	1.36	1.32	1.32	1.65
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0138	0.0146	0.0144	0.0138	0.0138	0.0174
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.77
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000013



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF41	AQF45	AQF44	AQF43	QC01
(Matrix: Water)										
Client sampling date / time										
Analyte	CAS Number	Method	LOR	Unit	WP2303966-006	WP2303966-007	WP2303966-008	WP2303966-009	WP2303966-010	
					Result	Result	Result	Result	Result	
Total Metals										
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00319	0.00159	0.00088	0.00091	0.00267	
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000030	0.000028	0.000024	0.000024	0.000032	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0033	<0.0030	<0.0030	<0.0030	0.0122	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0201	0.0208	0.0192	0.0201	0.0177	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00035	0.00020	0.00020	0.00019	0.00062	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00723	0.00722	0.0202 ^{RRV}	0.0189 ^{RRV}	0.0242 ^{RRV}	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	3.25	3.62	3.41	3.18	3.12	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00055	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00040	0.00030	0.00261 ^{RRV}	0.00175 ^{RRV}	0.00382 ^{RRV}	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.210	0.197	0.194	0.200	0.184	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0.000056	0.000063	0.000077	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0012	0.0012	0.0012	0.0012	0.0013	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	0.901	1.01	0.948	0.880	0.833	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00883	0.00688	0.00717	0.00726	0.0890	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000057	0.000073	0.000066	0.000066	0.000052	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00397	
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF41	AQF45	AQF44	AQF43	QC01
(Matrix: Water)										
					Client sampling date / time	28-Mar-2023 13:10	28-Mar-2023 13:45	28-Mar-2023 14:16	28-Mar-2023 14:39	28-Mar-2023
Analyte	CAS Number	Method	LOR	Unit	WP2303966-006	WP2303966-007	WP2303966-008	WP2303966-009	WP2303966-010	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.551	0.562	0.554	0.538	0.650	
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00102	0.00101	0.00103	0.00102	0.00110	
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	0.000062	<0.000050	0.000062	0.000054	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.14	3.08	3.11	3.19	3.58	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.28	1.34	1.31	1.29	1.31	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0140	0.0150	0.0142	0.0142	0.0146	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0.00012	0.00012	0.00016	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000024	0.000025	0.000022	0.000023	0.000023	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0023	<0.0010	0.0022	0.0025	0.0051	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	0.00064	0.00251	<0.00050	<0.00050	<0.00050	

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF75	AQF70	AQF38	AQF46	AQF42
(Matrix: Water)										
Client sampling date / time					29-Mar-2023 08:51	29-Mar-2023 09:04	29-Mar-2023 09:32	29-Mar-2023 09:56	29-Mar-2023 10:16	
Analyte	CAS Number	Method	LOR	Unit	WP2303966-011	WP2303966-012	WP2303966-013	WP2303966-014	WP2303966-015	
					Result	Result	Result	Result	Result	
Physical Tests										
Acidity (as CaCO ₃)	----	E283	2.0	mg/L	3.4	6.7	8.2	11.2	4.5	
Alkalinity, bicarbonate (as CaCO ₃)	----	E290	1.0	mg/L	15.7	18.4	44.8	41.0	13.7	
Alkalinity, bicarbonate (as HCO ₃)	71-52-3	E290	1.0	mg/L	19.2	22.4	54.6	50.0	16.7	
Alkalinity, carbonate (as CaCO ₃)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, carbonate (as CO ₃)	3812-32-6	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, hydroxide (as CaCO ₃)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, hydroxide (as OH)	14280-30-9	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, total (as CaCO ₃)	----	E290	1.0	mg/L	15.7	18.4	44.8	41.0	13.7	
Hardness (as CaCO ₃), from total Ca/Mg	----	EC100A	0.50	mg/L	17.6	20.7	49.2	41.2	12.9	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	1.1	3.0	3.0	5.5	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.029	<0.010	0.023	0.252	0.053	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	
Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	0.12	0.11	0.25	0.61	0.43	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.044	0.045	0.127	0.053	0.074	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.23	0.18	0.50	0.72	0.45	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.073	0.146	0.250	0.079	0.112	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Phosphorus, total	7723-14-0	E372	0.020	mg/L	<0.020	<0.020	<0.020	<0.020	0.025	
Sulfate (as SO ₄)	14808-79-8	E235.SO4	0.30	mg/L	0.72	0.74	<0.30	0.56	0.71	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	8.53	10.8	18.4	13.6	11.1	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	8.89	9.79	18.4	14.7	10.4	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0192	0.0278	0.0254	0.0230	0.125	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	

Sub-Matrix: **Water**

(Matrix: Water)

Client sample ID

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Analytical Results

Sub-Matrix: Water					Client sample ID	AQF75	AQF70	AQF38	AQF46	AQF42
(Matrix: Water)										
Client sampling date / time					29-Mar-2023 08:51	29-Mar-2023 09:04	29-Mar-2023 09:32	29-Mar-2023 09:56	29-Mar-2023 10:16	
Analyte	CAS Number	Method	LOR	Unit	WP2303966-011	WP2303966-012	WP2303966-013	WP2303966-014	WP2303966-015	
					Result	Result	Result	Result	Result	
Total Metals										
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	0.00045	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	0.00050	0.00040	0.00048	0.00597	
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420	0.000010	mg/L	<0.000010	0.000010	0.000017	<0.000010	0.000044	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0.0031	0.0045	0.0054	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0150	0.0169	0.0142	0.0123	0.0360	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00027	0.00024	0.00037	0.00046	0.00021	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0220 ^{RRV}	0.0117	0.0338 ^{RRV}	0.0259 ^{RRV}	0.00808	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0.011	<0.010	<0.010	<0.010
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	4.18	5.03	13.4	12.4	3.32	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00181 ^{RRV}	0.00034	0.00225 ^{RRV}	0.00175 ^{RRV}	0.00038	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.037	0.074	0.146	0.327	0.219	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000057	<0.000050	<0.000050	0.000060	<0.000050	<0.000050
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	0.0016	0.0012	0.0013	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.44	1.79	3.49	2.54	0.930	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00188	0.104	0.127	0.00715	0.0109	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000084	0.000078	0.00296	0.000069	0.000066	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050



Analytical Results

Sub-Matrix: Water					Client sample ID				
(Matrix: Water)					AQF75	AQF70	AQF38	AQF46	AQF42
Client sampling date / time					29-Mar-2023 08:51	29-Mar-2023 09:04	29-Mar-2023 09:32	29-Mar-2023 09:56	29-Mar-2023 10:16
Analyte	CAS Number	Method	LOR	Unit	WP2303966-011	WP2303966-012	WP2303966-013	WP2303966-014	WP2303966-015
					Result	Result	Result	Result	Result
Dissolved Metals									
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.490	0.526	0.983	0.834	0.558
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00089	0.00103	0.00154	0.00115	0.00108
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	0.000053	0.000071	0.000070	0.000064
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	0.975	1.30	2.70	1.64	3.17
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.10	1.18	2.18	1.54	1.30
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0124	0.0147	0.0340	0.0213	0.0140
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	0.00013	0.00029	0.00011	0.00013	<0.00010
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	0.00041
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	<0.000010	<0.000010	0.000017	<0.000010	0.000027
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0027	<0.0010	0.0034	0.0035	0.0012
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field
Speciated Metals									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	AQF40	FIELD BLANK	TRIP BLANK	----	----
Client sampling date / time					29-Mar-2023 10:53	29-Mar-2023 12:05	03-Apr-2023	----	----	
Analyte	CAS Number	Method	LOR	Unit	WP2303966-016	WP2303966-017	WP2303966-018	-----	-----	
					Result	Result	Result	----	----	
Physical Tests										
Acidity (as CaCO3)	----	E283	2.0	mg/L	4.0	<2.0	<2.0	----	----	
Alkalinity, bicarbonate (as CaCO3)	----	E290	1.0	mg/L	11.3	<1.0	<1.0	----	----	
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290	1.0	mg/L	13.8	<1.0	<1.0	----	----	
Alkalinity, carbonate (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	----	----	
Alkalinity, carbonate (as CO3)	3812-32-6	E290	1.0	mg/L	<1.0	<1.0	<1.0	----	----	
Alkalinity, hydroxide (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	----	----	
Alkalinity, hydroxide (as OH)	14280-30-9	E290	1.0	mg/L	<1.0	<1.0	<1.0	----	----	
Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	11.3	<1.0	<1.0	----	----	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A	0.50	mg/L	12.5	<0.50	<0.50	----	----	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	<1.0	<1.0	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.030	<0.010	0.092	----	----	
Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	<0.10	----	----	
Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	0.27	<0.10	<0.10	----	----	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.074	<0.020	<0.020	----	----	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.24	<0.15	0.35	----	----	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.111	<0.020	<0.020	----	----	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.010	----	----	
Phosphorus, total	7723-14-0	E372	0.020	mg/L	<0.020	<0.020	<0.020	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	0.66	<0.30	<0.30	----	----	
Cyanides										
Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	<0.0050	----	----	
Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	<0.0050	----	----	
Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	<0.0050	----	----	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	10.4	<0.50	<0.50	----	----	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	9.72	<0.50	<0.50	----	----	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0341	<0.0030	<0.0030	----	----	
Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00012	<0.00010	<0.00010	----	----	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF40	FIELD BLANK	TRIP BLANK	----	----
(Matrix: Water)										
					Client sampling date / time	29-Mar-2023 10:53	29-Mar-2023 12:05	03-Apr-2023	----	----
Analyte	CAS Number	Method	LOR	Unit	WP2303966-016	WP2303966-017	WP2303966-018	-----	-----	
					Result	Result	Result	----	----	
Total Metals										
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00019	<0.00010	<0.00010	----	----	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.00696	<0.00010	<0.00010	----	----	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	----	----	
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	----	----	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	----	----	
Calcium, total	7440-70-2	E420	0.050	mg/L	3.42	<0.050	<0.050	----	----	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Iron, total	7439-89-6	E420	0.010	mg/L	0.290	<0.010	<0.010	----	----	
Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0012	<0.0010	<0.0010	----	----	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.961	<0.0050	<0.0050	----	----	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0108	<0.00010	<0.00010	----	----	
Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	----	----	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000058	<0.000050	<0.000050	----	----	
Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	----	----	
Potassium, total	7440-09-7	E420	0.050	mg/L	0.590	<0.050	<0.050	----	----	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00110	<0.00020	<0.00020	----	----	
Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Silicon, total	7440-21-3	E420	0.10	mg/L	3.50	<0.10	<0.10	----	----	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Sodium, total	7440-23-5	E420	0.050	mg/L	1.31	<0.050	<0.050	----	----	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0139	<0.00020	<0.00020	----	----	
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	<0.50	----	----	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF40	FIELD BLANK	TRIP BLANK	----	----
(Matrix: Water)										
Client sampling date / time					29-Mar-2023 10:53	29-Mar-2023 12:05	03-Apr-2023	----	----	
Analyte	CAS Number	Method	LOR	Unit	WP2303966-016	WP2303966-017	WP2303966-018	-----	-----	
					Result	Result	Result	----	----	
Total Metals										
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00085	<0.00030	<0.00030	----	----	
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000022	<0.000010	<0.000010	----	----	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	<0.0030	----	----	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0222	<0.0010	<0.0010	----	----	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00017	<0.00010	<0.00010	----	----	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00694	0.00227 ^{RRV}	<0.00010	----	----	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	----	----	
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	----	----	
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	----	----	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	3.24	<0.050	<0.050	----	----	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00068	0.00195 ^{RRV}	<0.00020	----	----	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.204	<0.010	<0.010	----	----	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	0.000104 ^{RRV}	<0.000050	----	----	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0013	<0.0010	<0.0010	----	----	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	0.906	<0.0050	<0.0050	----	----	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00794	0.00012	<0.00010	----	----	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000159 ^{RRV}	<0.000050	<0.000050	----	----	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	----	----	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF40	FIELD BLANK	TRIP BLANK	----	----
(Matrix: Water)										
					Client sampling date / time	29-Mar-2023 10:53	29-Mar-2023 12:05	03-Apr-2023	----	----
Analyte	CAS Number	Method	LOR	Unit	WP2303966-016	WP2303966-017	WP2303966-018	-----	-----	
					Result	Result	Result	----	----	
Dissolved Metals										
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.538	<0.050	<0.050	----	----	
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00099	<0.00020	<0.00020	----	----	
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000058	<0.000050	<0.000050	----	----	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.13	<0.050	<0.050	----	----	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.28	<0.050	<0.050	----	----	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0140	<0.00020	<0.00020	----	----	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	<0.50	----	----	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	0.00011	<0.00010	----	----	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	----	----	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000021	<0.000010	<0.000010	----	----	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	0.0013	<0.0010	----	----	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	----	----	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	----	----	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	

Please refer to the General Comments section for an explanation of any qualifiers detected.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: WP2303966	Page	: 1 of 53
Client	: Alamos Gold Inc.	Laboratory	: Winnipeg - Environmental
Contact	: Karen Mathers	Account Manager	: Judy Dalmajer
Address	: C/O Stantec Consulting 500 - 311 Portage Avenue Winnipeg MB Canada R3B 2B9	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	: 416 368 9932	Telephone	: +1 204 255 9720
Project	: ----	Date Samples Received	: 03-Apr-2023 11:20
PO	: ----	Issue Date	: 11-Apr-2023 15:34
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: ALAMOS Gold Inc. - (Q88846)_V2		
No. of samples received	: 18		
No. of samples analysed	: 18		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- Duplicate outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.



Outliers : Quality Control Samples
Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Duplicate (DUP) RPDs								
Total Metals	WP2303966-010	QC01	Antimony, total	7440-36-0	E420	0.00110 ^{DUP-H} %	Diff <2x LOR	Low Level DUP DQO exceeded (difference > 2 LOR).

Result Qualifiers

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) TRIP BLANK	E303	03-Apr-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	1 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF38	E303	29-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF40	E303	29-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF42	E303	29-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF46	E303	29-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF70	E303	29-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF75	E303	29-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	5 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) FIELD BLANK	E303	29-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	5 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF41	E303	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF43	E303	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF44	E303	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF45	E303	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM28	E303	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM29C	E303	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM71	E303	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM72	E303	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM73	E303	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) QC01	E303	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE TRIP BLANK	E235.Br	03-Apr-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF38	E235.Br	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF40	E235.Br	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF42	E235.Br	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF46	E235.Br	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF70	E235.Br	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF75	E235.Br	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Bromide in Water by IC										
HDPE FIELD BLANK	E235.Br	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF41	E235.Br	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF43	E235.Br	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF44	E235.Br	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQF45	E235.Br	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM28	E235.Br	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM29C	E235.Br	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM71	E235.Br	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM72	E235.Br	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Bromide in Water by IC										
HDPE AQM73	E235.Br	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE QC01	E235.Br	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE TRIP BLANK	E235.Cl-L	03-Apr-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	2 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF38	E235.Cl-L	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF40	E235.Cl-L	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF42	E235.Cl-L	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF46	E235.Cl-L	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF70	E235.Cl-L	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF75	E235.Cl-L	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE FIELD BLANK	E235.CI-L	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF41	E235.CI-L	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF43	E235.CI-L	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF44	E235.CI-L	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF45	E235.CI-L	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQM28	E235.CI-L	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQM29C	E235.CI-L	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQM71	E235.CI-L	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQM72	E235.CI-L	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQM73	E235.Cl-L	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE QC01	E235.Cl-L	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE TRIP BLANK	E235.F	03-Apr-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	2 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF38	E235.F	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF40	E235.F	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF42	E235.F	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF46	E235.F	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF70	E235.F	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF75	E235.F	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC										
HDPE FIELD BLANK	E235.F	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF41	E235.F	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF43	E235.F	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF44	E235.F	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF45	E235.F	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM28	E235.F	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM29C	E235.F	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM71	E235.F	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM72	E235.F	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM73	E235.F	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE QC01	E235.F	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE TRIP BLANK	E235.NO3	03-Apr-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF38	E235.NO3	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF40	E235.NO3	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF42	E235.NO3	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF46	E235.NO3	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF70	E235.NO3	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF75	E235.NO3	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM



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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC										
HDPE FIELD BLANK	E235.NO3	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF41	E235.NO3	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF43	E235.NO3	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF44	E235.NO3	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQF45	E235.NO3	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM28	E235.NO3	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM29C	E235.NO3	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM71	E235.NO3	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM72	E235.NO3	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC										
HDPE AQM73	E235.NO3	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrate in Water by IC										
HDPE QC01	E235.NO3	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE TRIP BLANK	E235.NO2	03-Apr-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	2 days	✔
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF38	E235.NO2	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF40	E235.NO2	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF42	E235.NO2	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF46	E235.NO2	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF70	E235.NO2	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF75	E235.NO2	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM



Matrix: **Water**

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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC										
HDPE FIELD BLANK	E235.NO2	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	7 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF41	E235.NO2	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF43	E235.NO2	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF44	E235.NO2	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQF45	E235.NO2	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM28	E235.NO2	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM29C	E235.NO2	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM71	E235.NO2	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM72	E235.NO2	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM



Matrix: **Water**

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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC										
HDPE AQM73	E235.NO2	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Nitrite in Water by IC										
HDPE QC01	E235.NO2	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	3 days	8 days	✖ EHTR-FM
Anions and Nutrients : Sulfate in Water by IC										
HDPE TRIP BLANK	E235.SO4	03-Apr-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	2 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF38	E235.SO4	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF40	E235.SO4	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF42	E235.SO4	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF46	E235.SO4	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF70	E235.SO4	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF75	E235.SO4	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Water by IC										
HDPE FIELD BLANK	E235.SO4	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF41	E235.SO4	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF43	E235.SO4	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF44	E235.SO4	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF45	E235.SO4	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM28	E235.SO4	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM29C	E235.SO4	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM71	E235.SO4	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM72	E235.SO4	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM73	E235.SO4	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Sulfate in Water by IC										
HDPE QC01	E235.SO4	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) TRIP BLANK	E319	03-Apr-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	2 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF38	E319	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF40	E319	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF42	E319	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF46	E319	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF70	E319	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF75	E319	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) FIELD BLANK	E319	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF41	E319	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF43	E319	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF44	E319	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF45	E319	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM28	E319	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM29C	E319	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM71	E319	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM72	E319	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM73	E319	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) QC01	E319	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) TRIP BLANK	E372	03-Apr-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	2 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF38	E372	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF40	E372	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF42	E372	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF46	E372	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF70	E372	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF75	E372	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) FIELD BLANK	E372	29-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	7 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF41	E372	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF43	E372	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF44	E372	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQF45	E372	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM28	E372	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM29C	E372	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM71	E372	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM72	E372	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✔



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) AQM73	E372	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.02 mg/L)										
Amber glass total (sulfuric acid) QC01	E372	28-Mar-2023	04-Apr-2023	----	----		05-Apr-2023	28 days	8 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E339	03-Apr-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	3 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E339	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E339	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E339	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E339	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF70	E339	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF75	E339	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E339	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✔
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E339	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✔
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E339	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✔
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E339	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✔
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E339	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✔
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E339	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✔
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E339	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✔
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E339	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✔
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E339	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✔



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E339	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : Free Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) QC01	E339	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	9 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E333	03-Apr-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	3 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E333	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E333	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E333	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E333	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF70	E333	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF75	E333	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E333	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E333	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E333	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E333	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E333	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E333	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E333	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E333	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E333	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E333	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : Total Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) QC01	E333	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	9 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E336	03-Apr-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	3 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E336	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E336	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E336	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E336	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF70	E336	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF75	E336	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E336	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E336	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E336	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E336	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E336	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E336	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E336	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E336	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E336	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E336	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	8 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) QC01	E336	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	14 days	9 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) TRIP BLANK	E421	03-Apr-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	2 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF38	E421	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF40	E421	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF42	E421	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF46	E421	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF70	E421	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF75	E421	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) FIELD BLANK	E421	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	6 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF41	E421	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	7 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF43	E421	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	7 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF44	E421	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	7 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF45	E421	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	7 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM28	E421	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	7 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM29C	E421	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	7 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM71	E421	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	7 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM72	E421	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	7 days	✔



Matrix: Water

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM73	E421	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) QC01	E421	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	180 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) TRIP BLANK	E358-L	03-Apr-2023	04-Apr-2023	3 days	1 days	✓	04-Apr-2023	28 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQF38	E358-L	29-Mar-2023	04-Apr-2023	3 days	6 days	✖ EHTR	04-Apr-2023	28 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQF40	E358-L	29-Mar-2023	04-Apr-2023	3 days	6 days	✖ EHTR	04-Apr-2023	28 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQF42	E358-L	29-Mar-2023	04-Apr-2023	3 days	6 days	✖ EHTR	04-Apr-2023	28 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQF46	E358-L	29-Mar-2023	04-Apr-2023	3 days	6 days	✖ EHTR	04-Apr-2023	28 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQF70	E358-L	29-Mar-2023	04-Apr-2023	3 days	6 days	✖ EHTR	04-Apr-2023	28 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQF75	E358-L	29-Mar-2023	04-Apr-2023	3 days	6 days	✖ EHTR	04-Apr-2023	28 days	0 days	✓



Matrix: Water

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) FIELD BLANK	E358-L	29-Mar-2023	04-Apr-2023	3 days	6 days	✖ EHTR	04-Apr-2023	28 days	0 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQF41	E358-L	28-Mar-2023	04-Apr-2023	3 days	7 days	✖ EHTR	04-Apr-2023	28 days	0 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQF43	E358-L	28-Mar-2023	04-Apr-2023	3 days	7 days	✖ EHTR	04-Apr-2023	28 days	0 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQF44	E358-L	28-Mar-2023	04-Apr-2023	3 days	7 days	✖ EHTR	04-Apr-2023	28 days	0 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQF45	E358-L	28-Mar-2023	04-Apr-2023	3 days	7 days	✖ EHTR	04-Apr-2023	28 days	0 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQM28	E358-L	28-Mar-2023	04-Apr-2023	3 days	7 days	✖ EHTR	04-Apr-2023	28 days	0 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQM29C	E358-L	28-Mar-2023	04-Apr-2023	3 days	7 days	✖ EHTR	04-Apr-2023	28 days	0 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQM71	E358-L	28-Mar-2023	04-Apr-2023	3 days	7 days	✖ EHTR	04-Apr-2023	28 days	0 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQM72	E358-L	28-Mar-2023	04-Apr-2023	3 days	7 days	✖ EHTR	04-Apr-2023	28 days	0 days	✔



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) AQM73	E358-L	28-Mar-2023	04-Apr-2023	3 days	7 days	✖ EHTR	04-Apr-2023	28 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) QC01	E358-L	28-Mar-2023	04-Apr-2023	3 days	7 days	✖ EHTR	04-Apr-2023	28 days	0 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) TRIP BLANK	E355-L	03-Apr-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	1 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF38	E355-L	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF40	E355-L	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF42	E355-L	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF46	E355-L	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF70	E355-L	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF75	E355-L	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) FIELD BLANK	E355-L	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF41	E355-L	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF43	E355-L	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF44	E355-L	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF45	E355-L	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM28	E355-L	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM29C	E355-L	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM71	E355-L	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM72	E355-L	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM73	E355-L	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) QC01	E355-L	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✓
Physical Tests : Acidity by Titration										
HDPE TRIP BLANK	E283	03-Apr-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	3 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF38	E283	29-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF40	E283	29-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF42	E283	29-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF46	E283	29-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF70	E283	29-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF75	E283	29-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	8 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Acidity by Titration										
HDPE FIELD BLANK	E283	29-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF41	E283	28-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	9 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF43	E283	28-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	9 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF44	E283	28-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	9 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF45	E283	28-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	9 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM28	E283	28-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	9 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM29C	E283	28-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	9 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM71	E283	28-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	9 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM72	E283	28-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	9 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Acidity by Titration										
HDPE AQM73	E283	28-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	9 days	✓
Physical Tests : Acidity by Titration										
HDPE QC01	E283	28-Mar-2023	06-Apr-2023	----	----		06-Apr-2023	14 days	9 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE TRIP BLANK	E290	03-Apr-2023	04-Apr-2023	----	----		04-Apr-2023	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF38	E290	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF40	E290	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF41	E290	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF42	E290	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF44	E290	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF45	E290	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	14 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Alkalinity Species by Titration										
HDPE AQF46	E290	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF70	E290	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF75	E290	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM28	E290	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM29C	E290	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM71	E290	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM72	E290	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM73	E290	28-Mar-2023	03-Apr-2023	----	----		03-Apr-2023	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE FIELD BLANK	E290	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	14 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Alkalinity Species by Titration										
HDPE AQF43	E290	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE QC01	E290	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	14 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE TRIP BLANK	E160-L	03-Apr-2023	----	----	----		05-Apr-2023	7 days	3 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQF38	E160-L	29-Mar-2023	----	----	----		05-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQF40	E160-L	29-Mar-2023	----	----	----		05-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQF41	E160-L	28-Mar-2023	----	----	----		04-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQF42	E160-L	29-Mar-2023	----	----	----		05-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQF43	E160-L	28-Mar-2023	----	----	----		04-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQF44	E160-L	28-Mar-2023	----	----	----		04-Apr-2023	7 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQF45	E160-L	28-Mar-2023	----	----	----		04-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQF46	E160-L	29-Mar-2023	----	----	----		05-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQF70	E160-L	29-Mar-2023	----	----	----		05-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQF75	E160-L	29-Mar-2023	----	----	----		05-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQM28	E160-L	28-Mar-2023	----	----	----		04-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQM29C	E160-L	28-Mar-2023	----	----	----		04-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQM71	E160-L	28-Mar-2023	----	----	----		04-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQM72	E160-L	28-Mar-2023	----	----	----		04-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE AQM73	E160-L	28-Mar-2023	----	----	----		04-Apr-2023	7 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE FIELD BLANK	E160-L	29-Mar-2023	----	----	----		05-Apr-2023	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE QC01	E160-L	28-Mar-2023	----	----	----		04-Apr-2023	7 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) TRIP BLANK	E532	03-Apr-2023	----	----	----		05-Apr-2023	28 days	3 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF38	E532	29-Mar-2023	----	----	----		05-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF40	E532	29-Mar-2023	----	----	----		05-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF42	E532	29-Mar-2023	----	----	----		05-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF46	E532	29-Mar-2023	----	----	----		05-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF70	E532	29-Mar-2023	----	----	----		05-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF75	E532	29-Mar-2023	----	----	----		05-Apr-2023	28 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) FIELD BLANK	E532	29-Mar-2023	----	----	----		05-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF41	E532	28-Mar-2023	----	----	----		05-Apr-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF43	E532	28-Mar-2023	----	----	----		05-Apr-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF44	E532	28-Mar-2023	----	----	----		05-Apr-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF45	E532	28-Mar-2023	----	----	----		05-Apr-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM28	E532	28-Mar-2023	----	----	----		05-Apr-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM29C	E532	28-Mar-2023	----	----	----		05-Apr-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM71	E532	28-Mar-2023	----	----	----		05-Apr-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM72	E532	28-Mar-2023	----	----	----		05-Apr-2023	28 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM73	E532	28-Mar-2023	----	----	----		05-Apr-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) QC01	E532	28-Mar-2023	----	----	----		05-Apr-2023	28 days	9 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) TRIP BLANK	E508	03-Apr-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	1 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQF38	E508	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQF40	E508	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQF42	E508	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQF46	E508	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQF70	E508	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQF75	E508	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) FIELD BLANK	E508	29-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	6 days	✔
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQF41	E508	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQF43	E508	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQF44	E508	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQF45	E508	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQM28	E508	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQM29C	E508	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQM71	E508	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQM72	E508	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) AQM73	E508	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) QC01	E508	28-Mar-2023	04-Apr-2023	----	----		04-Apr-2023	28 days	7 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) TRIP BLANK	E420	03-Apr-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	3 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF38	E420	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	7 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF40	E420	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	7 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF42	E420	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	7 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF46	E420	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	7 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF70	E420	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	7 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF75	E420	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) FIELD BLANK	E420	29-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	7 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF41	E420	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF43	E420	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF44	E420	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF45	E420	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM28	E420	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM29C	E420	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM71	E420	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM72	E420	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	8 days	✓

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Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM73	E420	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) QC01	E420	28-Mar-2023	05-Apr-2023	----	----		05-Apr-2023	180 days	9 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
Analytical Methods			QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Acidity by Titration	E283	888793	1	18	5.5	5.0	✔
Alkalinity Species by Titration	E290	885172	2	31	6.4	5.0	✔
Ammonia in Water by Colour	E303	885201	2	25	8.0	5.0	✔
Bromide in Water by IC	E235.Br	886126	1	18	5.5	5.0	✔
Chloride in Water by IC (Low Level)	E235.Cl-L	886125	1	18	5.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	885956	1	19	5.2	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	885873	1	18	5.5	5.0	✔
Fluoride in Water by IC	E235.F	886123	0	22	0.0	5.0	✖
Free Cyanide	E339	887695	1	18	5.5	5.0	✔
Nitrate in Water by IC	E235.NO3	886122	1	37	2.7	5.0	✖
Nitrite in Water by IC	E235.NO2	886121	1	39	2.5	5.0	✖
Sulfate in Water by IC	E235.SO4	886124	0	21	0.0	5.0	✖
Total Cyanide	E333	887696	1	18	5.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	887736	1	19	5.2	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	885320	1	20	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	886268	1	19	5.2	5.0	✔
Total metals in Water by CRC ICPMS	E420	887668	2	38	5.2	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	885876	1	18	5.5	5.0	✔
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	886770	2	33	6.0	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	885359	2	31	6.4	5.0	✔
WAD Cyanide	E336	887694	1	18	5.5	5.0	✔
Laboratory Control Samples (LCS)							
Acidity by Titration	E283	888793	1	18	5.5	5.0	✔
Alkalinity Species by Titration	E290	885172	2	31	6.4	5.0	✔
Ammonia in Water by Colour	E303	885201	2	25	8.0	5.0	✔
Bromide in Water by IC	E235.Br	886126	2	18	11.1	5.0	✔
Chloride in Water by IC (Low Level)	E235.Cl-L	886125	2	18	11.1	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	885956	1	19	5.2	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	885873	1	18	5.5	5.0	✔
Fluoride in Water by IC	E235.F	886123	2	22	9.0	5.0	✔
Free Cyanide	E339	887695	1	18	5.5	5.0	✔
Nitrate in Water by IC	E235.NO3	886122	2	37	5.4	5.0	✔
Nitrite in Water by IC	E235.NO2	886121	2	39	5.1	5.0	✔
Sulfate in Water by IC	E235.SO4	886124	2	21	9.5	5.0	✔
Total Cyanide	E333	887696	1	18	5.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	887736	1	19	5.2	5.0	✔



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS) - Continued							
Total Kjeldahl Nitrogen by Colourimetry	E319	885320	1	20	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	886268	1	19	5.2	5.0	✔
Total metals in Water by CRC ICPMS	E420	887668	2	38	5.2	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	885876	1	18	5.5	5.0	✔
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	886770	2	33	6.0	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	885359	2	31	6.4	5.0	✔
WAD Cyanide	E336	887694	1	18	5.5	5.0	✔
Method Blanks (MB)							
Acidity by Titration	E283	888793	1	18	5.5	5.0	✔
Alkalinity Species by Titration	E290	885172	2	31	6.4	5.0	✔
Ammonia in Water by Colour	E303	885201	2	25	8.0	5.0	✔
Bromide in Water by IC	E235.Br	886126	2	18	11.1	5.0	✔
Chloride in Water by IC (Low Level)	E235.Cl-L	886125	2	18	11.1	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	885956	1	19	5.2	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	885873	1	18	5.5	5.0	✔
Fluoride in Water by IC	E235.F	886123	2	22	9.0	5.0	✔
Free Cyanide	E339	887695	1	18	5.5	5.0	✔
Nitrate in Water by IC	E235.NO3	886122	2	37	5.4	5.0	✔
Nitrite in Water by IC	E235.NO2	886121	2	39	5.1	5.0	✔
Sulfate in Water by IC	E235.SO4	886124	2	21	9.5	5.0	✔
Total Cyanide	E333	887696	1	18	5.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	887736	1	19	5.2	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	885320	1	20	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	886268	1	19	5.2	5.0	✔
Total metals in Water by CRC ICPMS	E420	887668	2	38	5.2	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	885876	1	18	5.5	5.0	✔
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	886770	2	33	6.0	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	885359	2	31	6.4	5.0	✔
WAD Cyanide	E336	887694	1	18	5.5	5.0	✔
Matrix Spikes (MS)							
Ammonia in Water by Colour	E303	885201	2	25	8.0	5.0	✔
Bromide in Water by IC	E235.Br	886126	1	18	5.5	5.0	✔
Chloride in Water by IC (Low Level)	E235.Cl-L	886125	1	18	5.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	885956	1	19	5.2	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	885873	1	18	5.5	5.0	✔
Fluoride in Water by IC	E235.F	886123	0	22	0.0	5.0	✖
Free Cyanide	E339	887695	1	18	5.5	5.0	✔
Nitrate in Water by IC	E235.NO3	886122	1	37	2.7	5.0	✖
Nitrite in Water by IC	E235.NO2	886121	1	39	2.5	5.0	✖

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Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Matrix Spikes (MS) - Continued							
Sulfate in Water by IC	E235.SO4	886124	0	21	0.0	5.0	✖
Total Cyanide	E333	887696	1	18	5.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	887736	1	19	5.2	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	885320	1	20	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	886268	1	19	5.2	5.0	✔
Total metals in Water by CRC ICPMS	E420	887668	2	38	5.2	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	885876	1	18	5.5	5.0	✔
Total Phosphorus by Colourimetry (0.02 mg/L)	E372	886770	2	33	6.0	5.0	✔
WAD Cyanide	E336	887694	1	18	5.5	5.0	✔



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry (Low Level)	E160-L Winnipeg - Environmental	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Bromide in Water by IC	E235.Br Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC (Low Level)	E235.Cl-L Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC	E235.NO3 Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Acidity by Titration	E283 Waterloo - Environmental	Water	APHA 2310 B (mod)	Acidity is determined by potentiometric titration to pH endpoint of 8.3
Alkalinity Species by Titration	E290 Winnipeg - Environmental	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ammonia in Water by Colour	E303 Winnipeg - Environmental	Water	APHA 4500 NH3-NITROGEN (AMMONIA)	This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.
Total Kjeldahl Nitrogen by Colourimetry	E319 Winnipeg - Environmental	Water	APHA 4500-Norg D (mod)	Total Kjeldahl Nitrogen is determined using block digestion followed by colourimetric analysis.
Total Cyanide	E333 Waterloo - Environmental	Water	ISO 14403 (mod)	Total or Strong Acid Dissociable (SAD) Cyanide is determined by Continuous Flow Analyzer (CFA) with in-line UV digestion followed by colourimetric analysis. Method Limitation: High levels of thiocyanate (SCN) may cause positive interference (up to 0.5% of SCN concentration).
WAD Cyanide	E336 Waterloo - Environmental	Water	APHA 4500-CN I (mod)	Weak Acid Dissociable (WAD) cyanide is determined by Continuous Flow Analyzer (CFA) with in-line distillation followed by colourimetric analysis.
Free Cyanide	E339 Waterloo - Environmental	Water	ASTM D7237 (mod)	Free Cyanide is determined by Continuous Flow Analyzer (CFA) with in-line gas diffusion followed by colourimetric analysis.
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L Winnipeg - Environmental	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of total carbon (TC) is comprised of IC (which is common), this method is more accurate and more reliable than the TOC by subtraction method (i.e. TC minus TIC).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L Winnipeg - Environmental	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.02 mg/L)	E372 Winnipeg - Environmental	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total metals in Water by CRC ICPMS	E420 Winnipeg - Environmental	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals in Water by CRC ICPMS	E421 Winnipeg - Environmental	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Mercury in Water by CVAAS	E508 Winnipeg - Environmental	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Total Hexavalent Chromium (Cr VI) by IC	E532 Waterloo - Environmental	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. Results are based on an un-filtered, field-preserved sample.
Hardness (Calculated) from Total Ca/Mg	EC100A Winnipeg - Environmental	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 Winnipeg - Environmental	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 Winnipeg - Environmental	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Total Organic Carbon by Combustion	EP355 Winnipeg - Environmental	Water		Preparation for Total Organic Carbon by Combustion
Preparation for Dissolved Organic Carbon for Combustion	EP358 Winnipeg - Environmental	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Phosphorus in water	EP372 Winnipeg - Environmental	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO ₃ .



Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
	Winnipeg - Environmental			

QUALITY CONTROL REPORT

Work Order	: WP2303966	Page	: 1 of 24
Client	: Alamos Gold Inc.	Laboratory	: Winnipeg - Environmental
Contact	: Karen Mathers	Account Manager	: Judy Dalmaijer
Address	: C/O Stantec Consulting 500 - 311 Portage Avenue Winnipeg MB Canada R3B 2B9	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	:	Telephone	: +1 204 255 9720
Project	: ----	Date Samples Received	: 03-Apr-2023 11:20
PO	: ----	Date Analysis Commenced	: 03-Apr-2023
C-O-C number	: ----	Issue Date	: 11-Apr-2023 15:31
Sampler	: ---- 416 368 9932		
Site	: ----		
Quote number	: ALAMOS Gold Inc. - (Q88846)_V2		
No. of samples received	: 18		
No. of samples analysed	: 18		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Adrienne Tarr		Winnipeg Metals, Winnipeg, Manitoba
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Metals, Waterloo, Ontario
Lee McTavish		Winnipeg Inorganics, Winnipeg, Manitoba
Lee McTavish		Winnipeg Metals, Winnipeg, Manitoba
Oleksandr Busel		Winnipeg Inorganics, Winnipeg, Manitoba
Oleksandr Busel		Winnipeg Metals, Winnipeg, Manitoba
Zandrea Grabinski		Winnipeg Inorganics, Winnipeg, Manitoba



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 885172)											
WP2303945-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	134	134	0.0744%	20%	----
Physical Tests (QC Lot: 885359)											
WP2303945-001	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 886189)											
WP2304067-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	583	572	2.01%	20%	----
Physical Tests (QC Lot: 887732)											
WP2304122-001	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	2.7	2.9	0.2	Diff <2x LOR	----
Physical Tests (QC Lot: 888793)											
WP2303966-001	AQM28	Acidity (as CaCO3)	----	E283	2.0	mg/L	6.3	5.9	0.4	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 885201)											
WP2303945-005	Anonymous	Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 885202)											
WP2303966-014	AQF46	Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.252	0.252	0.156%	20%	----
Anions and Nutrients (QC Lot: 885320)											
WP2303966-002	AQM29C	Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.41	0.36	0.05	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 886125)											
WP2303966-003	AQM71	Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	3.18	3.16	0.498%	20%	----
Anions and Nutrients (QC Lot: 886126)											
WP2303966-003	AQM71	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 886770)											
WP2303911-001	Anonymous	Phosphorus, total	7723-14-0	E372	0.020	mg/L	0.531	0.527	0.775%	20%	----
Anions and Nutrients (QC Lot: 886771)											
WP2303966-014	AQF46	Phosphorus, total	7723-14-0	E372	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 887364)											
WP2304060-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	0.011	0.012	0.0008	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 887365)											
WP2304060-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.334	0.335	0.318%	20%	----
Cyanides (QC Lot: 887694)											
WP2303966-003	AQM71	Cyanide, weak acid dissociable	----	E336	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 887695)											

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 Work Order : WP2303966
 Client : Alamos Gold Inc.
 Project : ----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Cyanides (QC Lot: 887695) - continued											
WP2303966-003	AQM71	Cyanide, free	----	E339	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Cyanides (QC Lot: 887696)											
WP2303966-003	AQM71	Cyanide, strong acid dissociable (Total)	----	E333	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 885873)											
WP2303966-001	AQM28	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	13.9	14.4	3.47%	20%	----
Organic / Inorganic Carbon (QC Lot: 885876)											
WP2303966-001	AQM28	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	13.7	14.1	2.76%	20%	----
Total Metals (QC Lot: 886268)											
WP2303957-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Total Metals (QC Lot: 887668)											
WP2303945-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.113	0.121	7.37%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00101	0.00096	0.00004	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0211	0.0214	1.18%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.016	0.015	0.0006	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	38.2	38.6	0.822%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00164	0.00164	0.0000004	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.067	0.070	0.003	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000084	0.000086	0.000001	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0067	0.0065	0.0002	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	12.6	12.8	2.38%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00268	0.00269	0.263%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000491	0.000483	0.000008	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00078	0.00080	0.00001	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	1.94	1.94	0.441%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00080	0.00082	0.00002	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 887668) - continued											
WP2303945-001	Anonymous	Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000065	0.000051	0.000014	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	3.23	3.28	1.78%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	10.9	11.1	1.33%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0949	0.0981	3.34%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	7.39	7.70	4.13%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00343	0.00371	7.84%	20%	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000536	0.000534	0.406%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00110	0.00110	0.000005	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	0.00033	0.00024	0.00009	Diff <2x LOR	----
Total Metals (QC Lot: 887671)											
WP2303966-010	QC01	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0853	0.0871	2.09%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00130	# 0.00020	0.00110	Diff <2x LOR	DUP-H
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00054	0.00052	0.00002	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0125	0.0125	0.0360%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	0.000108	<0.000050	0.000058	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000194	0.0000158	0.0000036	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	3.94	3.92	0.580%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00162	0.00165	1.64%	20%	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00129	0.00125	0.00003	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.477	0.473	0.884%	20%	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000090	0.000086	0.000004	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0016	0.0016	0.000007	Diff <2x LOR	----
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.09	1.08	1.00%	20%	----		



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 887671) - continued											
WP2303966-010	QC01	Manganese, total	7439-96-5	E420	0.00010	mg/L	0.113	0.113	0.0407%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000075	0.000069	0.000006	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00780	0.00777	0.466%	20%	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	0.050	0.051	0.0009	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	0.855	0.854	0.205%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00144	0.00153	0.00009	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000080	0.000086	0.000006	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	4.60	4.72	2.55%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	1.65	1.61	2.33%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0174	0.0174	0.410%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	0.77	0.72	0.06	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000013	<0.000010	0.000003	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00267	0.00299	0.00032	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000032	0.000036	0.000005	Diff <2x LOR	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0122	0.0117	0.0004	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 885956)											
WP2303950-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0503	0.0508	0.983%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.701	0.699	0.206%	20%	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.174	0.172	1.10%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0681	0.0678	0.480%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.320	0.330	3.13%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000236	0.0000278	0.0000042	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.500	mg/L	486	485	0.243%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000022	0.000021	0.0000010	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 885956) - continued											
WP2303950-001	Anonymous	Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.159	0.156	1.82%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.0574	0.0567	1.07%	20%	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.013	0.013	0.0003	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0186	0.0191	2.71%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	38.8	39.0	0.612%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.110	0.109	0.447%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.0386	0.0386	0.217%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0222	0.0222	0.247%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	81.6	81.4	0.233%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.0158	0.0158	0.459%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.00996	0.0106	6.06%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.96	2.96	0.0480%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	0.000024	0.000023	0.000001	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	290	295	1.48%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	2.28	2.27	0.409%	20%	----
		Sulfur, dissolved	7704-34-9	E421	5.00	mg/L	510	515	1.15%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000048	0.000041	0.000006	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	0.0200	0.0201	0.266%	20%	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00111	0.00112	0.724%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	0.00140	0.00138	0.00002	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0024	0.0023	0.0001	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 887736)											
WP2303966-001	AQM28	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	0.00061	0.00056	0.00005	Diff <2x LOR	----

Qualifiers

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 885172)						
Alkalinity, total (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 885359)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 886189)						
Alkalinity, total (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 887732)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 888793)						
Acidity (as CaCO ₃)	----	E283	2	mg/L	<2.0	----
Anions and Nutrients (QCLot: 885201)						
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 885202)						
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 885320)						
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	<0.20	----
Anions and Nutrients (QCLot: 886121)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 886122)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 886123)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 886124)						
Sulfate (as SO ₄)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 886125)						
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 886126)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 886770)						
Phosphorus, total	7723-14-0	E372	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 886771)						
Phosphorus, total	7723-14-0	E372	0.02	mg/L	<0.020	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 887363)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 887364)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 887365)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 887366)						
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 887367)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 887368)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Cyanides (QCLot: 887694)						
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 887695)						
Cyanide, free	----	E339	0.002	mg/L	<0.0020	----
Cyanides (QCLot: 887696)						
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 885873)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 885876)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Metals (QCLot: 886268)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Total Metals (QCLot: 887668)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 887668) - continued						
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 887671)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 887671) - continued						
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 885956)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 885956) - continued						
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 885956) - continued						
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Speciated Metals (QCLot: 887736)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 885172)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	100 mg/L	101	85.0	115	----
Physical Tests (QCLot: 885359)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	150 mg/L	96.1	85.0	115	----
Physical Tests (QCLot: 886189)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	100 mg/L	102	85.0	115	----
Physical Tests (QCLot: 887732)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	150 mg/L	94.7	85.0	115	----
Physical Tests (QCLot: 888793)									
Acidity (as CaCO3)	----	E283	2	mg/L	50 mg/L	105	85.0	115	----
Anions and Nutrients (QCLot: 885201)									
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	0.25 mg/L	98.2	85.0	115	----
Anions and Nutrients (QCLot: 885202)									
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	0.25 mg/L	98.4	85.0	115	----
Anions and Nutrients (QCLot: 885320)									
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	4 mg/L	95.1	75.0	125	----
Anions and Nutrients (QCLot: 886121)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.4	90.0	110	----
Anions and Nutrients (QCLot: 886122)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.0	90.0	110	----
Anions and Nutrients (QCLot: 886123)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 886124)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	99.6	90.0	110	----
Anions and Nutrients (QCLot: 886125)									
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	100 mg/L	98.3	90.0	110	----
Anions and Nutrients (QCLot: 886126)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	95.3	85.0	115	----
Anions and Nutrients (QCLot: 886770)									
Phosphorus, total	7723-14-0	E372	0.02	mg/L	0.5 mg/L	102	80.0	120	----
Anions and Nutrients (QCLot: 886771)									
Phosphorus, total	7723-14-0	E372	0.02	mg/L	0.5 mg/L	102	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit					
Anions and Nutrients (QCLot: 887363)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 887364)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.9	90.0	110	----
Anions and Nutrients (QCLot: 887365)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	97.1	90.0	110	----
Anions and Nutrients (QCLot: 887366)									
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	100 mg/L	97.4	90.0	110	----
Anions and Nutrients (QCLot: 887367)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	102	85.0	115	----
Anions and Nutrients (QCLot: 887368)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	99.1	90.0	110	----
Cyanides (QCLot: 887694)									
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	0.125 mg/L	101	80.0	120	----
Cyanides (QCLot: 887695)									
Cyanide, free	----	E339	0.002	mg/L	0.125 mg/L	93.2	80.0	120	----
Cyanides (QCLot: 887696)									
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	0.25 mg/L	95.9	80.0	120	----
Organic / Inorganic Carbon (QCLot: 885873)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	95.4	80.0	120	----
Organic / Inorganic Carbon (QCLot: 885876)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	105	80.0	120	----
Total Metals (QCLot: 886268)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0.0001 mg/L	101	80.0	120	----
Total Metals (QCLot: 887668)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	97.0	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	102	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	96.0	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	99.1	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	93.1	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	102	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	97.4	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	96.3	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 887668) - continued									
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	94.4	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	96.7	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.3	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	99.7	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	101	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	92.9	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	98.4	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	107	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	94.9	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	100	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	98.5	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	106	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	96.2	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	94.5	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	114	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	112	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	85.6	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	91.6	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	116	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	93.8	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	88.7	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	102	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	102	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	98.0	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	92.8	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	97.9	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	97.1	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	89.4	80.0	120	----
Total Metals (QCLot: 887671)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	98.5	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	105	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	101	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	96.0	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	101	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 887671) - continued									
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	92.4	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	105	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	95.8	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	97.9	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	97.2	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	95.9	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	97.9	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	98.5	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	101	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	93.3	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	100	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	110	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	95.2	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	101	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	96.6	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	107	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	98.4	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	98.5	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	108	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	108	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	87.9	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	102	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	93.4	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	103	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	94.6	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	88.1	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	103	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	102	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	99.5	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	92.0	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	97.6	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	96.4	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	89.0	80.0	120	----
Dissolved Metals (QCLot: 885956)									



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 885956) - continued									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	87.8	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	95.9	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	98.9	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	92.2	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	96.1	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	88.7	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	99.2	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	93.5	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	93.0	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	91.2	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	91.7	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	92.6	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	95.2	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	88.3	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	88.9	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	96.1	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	98.2	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	89.8	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	94.8	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	92.9	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	92.9	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	90.0	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	89.8	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	107	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	102	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	82.9	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	97.9	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	91.0	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	86.0	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	98.1	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	89.1	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	85.0	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	98.5	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	93.1	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	93.8	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	93.0	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Concentration	LCS	Low	High	Qualifier
Analyte	CAS Number	Method	LOR	Unit					
Dissolved Metals (QCLot: 885956) - continued									
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	93.7	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	90.9	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	87.5	80.0	120	----
Speciated Metals (QCLot: 887736)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.025 mg/L	98.4	80.0	120	----



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 885201)										
WP2303945-005	Anonymous	Ammonia, total (as N)	7664-41-7	E303	0.239 mg/L	0.25 mg/L	95.7	75.0	125	----
Anions and Nutrients (QCLot: 885202)										
WP2303966-014	AQF46	Ammonia, total (as N)	7664-41-7	E303	ND mg/L	0.25 mg/L	ND	75.0	125	----
Anions and Nutrients (QCLot: 885320)										
WP2303966-002	AQM29C	Kjeldahl nitrogen, total [TKN]	----	E319	5.18 mg/L	5 mg/L	104	70.0	130	----
Anions and Nutrients (QCLot: 886125)										
WP2303966-003	AQM71	Chloride	16887-00-6	E235.Cl-L	112 mg/L	100 mg/L	112	75.0	125	----
Anions and Nutrients (QCLot: 886126)										
WP2303966-003	AQM71	Bromide	24959-67-9	E235.Br	0.57 mg/L	0.5 mg/L	114	75.0	125	----
Anions and Nutrients (QCLot: 886770)										
WP2303931-001	Anonymous	Phosphorus, total	7723-14-0	E372	0.256 mg/L	0.25 mg/L	102	70.0	130	----
Anions and Nutrients (QCLot: 886771)										
WP2303966-015	AQF42	Phosphorus, total	7723-14-0	E372	0.251 mg/L	0.25 mg/L	100	70.0	130	----
Anions and Nutrients (QCLot: 887364)										
WP2304060-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.522 mg/L	0.5 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 887365)										
WP2304060-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.55 mg/L	2.5 mg/L	102	75.0	125	----
Cyanides (QCLot: 887694)										
WP2303966-003	AQM71	Cyanide, weak acid dissociable	----	E336	0.128 mg/L	0.125 mg/L	102	75.0	125	----
Cyanides (QCLot: 887695)										
WP2303966-003	AQM71	Cyanide, free	----	E339	0.129 mg/L	0.125 mg/L	104	75.0	125	----
Cyanides (QCLot: 887696)										
WP2303966-003	AQM71	Cyanide, strong acid dissociable (Total)	----	E333	0.220 mg/L	0.25 mg/L	87.9	75.0	125	----
Organic / Inorganic Carbon (QCLot: 885873)										
WP2303966-002	AQM29C	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	5 mg/L	ND	70.0	130	----
Organic / Inorganic Carbon (QCLot: 885876)										
WP2303966-002	AQM29C	Carbon, total organic [TOC]	----	E355-L	ND mg/L	5 mg/L	ND	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 886268)										
WP2303966-001	AQM28	Mercury, total	7439-97-6	E508	0.0000991 mg/L	0.0001 mg/L	99.1	70.0	130	----
Total Metals (QCLot: 887668)										
WP2303945-001	Anonymous	Aluminum, total	7429-90-5	E420	0.216 mg/L	0.2 mg/L	108	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0198 mg/L	0.02 mg/L	99.0	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0442 mg/L	0.04 mg/L	110	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0103 mg/L	0.01 mg/L	103	70.0	130	----
		Boron, total	7440-42-8	E420	0.115 mg/L	0.1 mg/L	115	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00419 mg/L	0.004 mg/L	105	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	4 mg/L	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0104 mg/L	0.01 mg/L	104	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0429 mg/L	0.04 mg/L	107	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0213 mg/L	0.02 mg/L	107	70.0	130	----
		Copper, total	7440-50-8	E420	0.0210 mg/L	0.02 mg/L	105	70.0	130	----
		Iron, total	7439-89-6	E420	2.09 mg/L	2 mg/L	105	70.0	130	----
		Lead, total	7439-92-1	E420	0.0195 mg/L	0.02 mg/L	97.4	70.0	130	----
		Lithium, total	7439-93-2	E420	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0426 mg/L	0.04 mg/L	106	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.7 mg/L	10 mg/L	107	70.0	130	----
		Potassium, total	7440-09-7	E420	4.15 mg/L	4 mg/L	104	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0207 mg/L	0.02 mg/L	103	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0465 mg/L	0.04 mg/L	116	70.0	130	----
		Silicon, total	7440-21-3	E420	10.3 mg/L	10 mg/L	103	70.0	130	----
		Silver, total	7440-22-4	E420	0.00390 mg/L	0.004 mg/L	97.4	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	2 mg/L	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	23.1 mg/L	20 mg/L	116	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0381 mg/L	0.04 mg/L	95.3	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00394 mg/L	0.004 mg/L	98.4	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0201 mg/L	0.02 mg/L	101	70.0	130	----
				Tin, total	7440-31-5	E420	0.0197 mg/L	0.02 mg/L	98.6	70.0



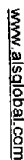
Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 887668) - continued										
WP2303945-001	Anonymous	Titanium, total	7440-32-6	E420	0.0416 mg/L	0.04 mg/L	104	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0195 mg/L	0.02 mg/L	97.7	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00396 mg/L	0.004 mg/L	98.9	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.108 mg/L	0.1 mg/L	108	70.0	130	----
		Zinc, total	7440-66-6	E420	0.408 mg/L	0.4 mg/L	102	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0390 mg/L	0.04 mg/L	97.5	70.0	130	----
Total Metals (QCLot: 887671)										
WP2303966-010	QC01	Aluminum, total	7429-90-5	E420	0.205 mg/L	0.2 mg/L	103	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0193 mg/L	0.02 mg/L	96.3	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Barium, total	7440-39-3	E420	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0430 mg/L	0.04 mg/L	107	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0108 mg/L	0.01 mg/L	108	70.0	130	----
		Boron, total	7440-42-8	E420	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00422 mg/L	0.004 mg/L	105	70.0	130	----
		Calcium, total	7440-70-2	E420	4.10 mg/L	4 mg/L	102	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0105 mg/L	0.01 mg/L	105	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0436 mg/L	0.04 mg/L	109	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0215 mg/L	0.02 mg/L	108	70.0	130	----
		Copper, total	7440-50-8	E420	0.0211 mg/L	0.02 mg/L	106	70.0	130	----
		Iron, total	7439-89-6	E420	2.09 mg/L	2 mg/L	105	70.0	130	----
		Lead, total	7439-92-1	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Lithium, total	7439-93-2	E420	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0198 mg/L	0.02 mg/L	99.2	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0431 mg/L	0.04 mg/L	108	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.2 mg/L	10 mg/L	102	70.0	130	----
		Potassium, total	7440-09-7	E420	4.08 mg/L	4 mg/L	102	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0459 mg/L	0.04 mg/L	115	70.0	130	----
		Silicon, total	7440-21-3	E420	10.7 mg/L	10 mg/L	107	70.0	130	----
		Silver, total	7440-22-4	E420	0.00403 mg/L	0.004 mg/L	101	70.0	130	----
		Sodium, total	7440-23-5	E420	2.12 mg/L	2 mg/L	106	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0200 mg/L	0.02 mg/L	99.9	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 887671) - continued										
WP2303966-010	QC01	Sulfur, total	7704-34-9	E420	21.7 mg/L	20 mg/L	108	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0403 mg/L	0.04 mg/L	101	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00399 mg/L	0.004 mg/L	99.8	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Tin, total	7440-31-5	E420	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0409 mg/L	0.04 mg/L	102	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0199 mg/L	0.02 mg/L	99.7	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00410 mg/L	0.004 mg/L	103	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Zinc, total	7440-66-6	E420	0.416 mg/L	0.4 mg/L	104	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0398 mg/L	0.04 mg/L	99.5	70.0	130	----
Dissolved Metals (QCLot: 885956)										
WP2303950-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.193 mg/L	0.2 mg/L	96.5	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0411 mg/L	0.04 mg/L	103	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00844 mg/L	0.01 mg/L	84.4	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	0.1 mg/L	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00382 mg/L	0.004 mg/L	95.5	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	4 mg/L	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0100 mg/L	0.01 mg/L	100	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0397 mg/L	0.04 mg/L	99.3	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Copper, dissolved	7440-50-8	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.94 mg/L	2 mg/L	97.1	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0176 mg/L	0.02 mg/L	87.8	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.102 mg/L	0.1 mg/L	102	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0373 mg/L	0.04 mg/L	93.3	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.3 mg/L	10 mg/L	103	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	4 mg/L	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0190 mg/L	0.02 mg/L	94.8	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 885956) - continued										
WP2303950-001	Anonymous	Selenium, dissolved	7782-49-2	E421	0.0460 mg/L	0.04 mg/L	115	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.80 mg/L	10 mg/L	98.0	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00358 mg/L	0.004 mg/L	89.5	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	2 mg/L	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	20 mg/L	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0430 mg/L	0.04 mg/L	107	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00354 mg/L	0.004 mg/L	88.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0194 mg/L	0.02 mg/L	96.8	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0209 mg/L	0.02 mg/L	105	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0426 mg/L	0.04 mg/L	106	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00385 mg/L	0.004 mg/L	96.4	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.369 mg/L	0.4 mg/L	92.2	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0427 mg/L	0.04 mg/L	107	70.0	130	----
Speciated Metals (QCLot: 887736)										
WP2303966-001	AQM28	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0397 mg/L	0.04 mg/L	99.2	70.0	130	----

COC Number: **22**

Canada Toll Free: 1 800 668 9878

Page 1 of 2

Environmental Division
Winnipeg
Work Order Reference

WP2303966

Telephone : + 1 204 255 9720

工部局



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Canada Toll Free: 1 800 668 9878

Chain of Custody (COC) / Analytical Request Form

COC Number: 22 -

Page 2 of 2

Report To		Contact and company name below will appear on the final report	
Company:	Stantec Consulting	Select Report Format:	☐ PDF ☒ EXCEL ☐ EDD (ORIGINAL)
Contact:	Karen Mathers	Merge QC/QCI Reports with COA	☐ YES ☐ NO ☐ N/A
Phone:	204-928-7621	Compare Results to Criteria on Report - provide details below if box checked	☐ Compare Results to Criteria on Report - provide details below if box checked
Street:	500 - 311 Portage Ave	Select Distribution:	☒ EMAIL ☐ MAIL ☐ FAX
City/Province:	Winnipeg, MB	Email 1 or Fax:	Karen Mathers@Stantec.com
Postal Code:	R3B 2B9	Email 2:	See page 1
Invoice To	Same as Report To	Invoice Recipients	Email 3: See page 1
Company:	Alamos Gold	Select Invoice Distribution:	☒ EMAIL ☐ MAIL ☐ FAX
Contact:	Project Information	Email 1 or Fax:	Email 2
ALS Account # / Quote #:	Q88846	Oil and Gas Required Fields (client use)	
Job #:	ALAMOS	A/E/Cost Center:	PC#
PO / A/E:		Major/Minor Code:	Routing Code:
LSD:		Requisitioner:	
ALS Lab Work Order # (ALS use only):		Location:	
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	ALS Contact:	SD
15	ADP330	Date (dd-mm-yy)	09-03-23
16	ADP340	Time (hh:mm)	0956
17	ADP340	Sample Type	W
18	ADP340		
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CERTIFICATE OF ANALYSIS

Work Order : **WP2305502**
Client : **Alamos Gold Inc.**
Contact : Karen Mathers
Address : PO Box 580
Lynn Lake MB Canada R0B 0W0
Telephone : 416 368 9932
Project : ALAMOS
PO : ----
C-O-C number : ----
Sampler : ----
Site : ----
Quote number : ALAMOS Gold Inc. - (Q88846)_V2
No. of samples received : 17
No. of samples analysed : 17

Page : 1 of 18
Laboratory : Winnipeg - Environmental
Account Manager : Judy Dalmaijer
Address : 1329 Niakwa Road East, Unit 12
Winnipeg MB Canada R2J 3T4
Telephone : +1 204 255 9720
Date Samples Received : 20-Apr-2023 11:03
Date Analysis Commenced : 21-Apr-2023
Issue Date : 27-Apr-2023 16:02

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Lee McTavish		Inorganics, Winnipeg, Manitoba
Lee McTavish		Metals, Winnipeg, Manitoba
Oleksandr Busel		Inorganics, Winnipeg, Manitoba
Oleksandr Busel		Metals, Winnipeg, Manitoba
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
µS/cm	microsiemens per centimetre
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

13 fractions not received at laboratory, but requested on Chain of Custody / analytical request form.

Qualifiers

<i>Qualifier</i>	<i>Description</i>
RRV	Reported result verified by repeat analysis.



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM71	AQM72	AQM73	AQM28	AQM29C
(Matrix: Water)										
Client sampling date / time					18-Apr-2023 13:52	18-Apr-2023 13:38	18-Apr-2023 13:25	18-Apr-2023 12:51	18-Apr-2023 13:05	
Analyte	CAS Number	Method	LOR	Unit	WP2305502-001	WP2305502-002	WP2305502-003	WP2305502-004	WP2305502-005	
					Result	Result	Result	Result	Result	
Physical Tests										
Acidity (as CaCO3)	----	E283	2.0	mg/L	3.8	3.9	9.7	3.0	<2.0	
Alkalinity, bicarbonate (as CaCO3)	----	E290	1.0	mg/L	46.1	5.8	7.4	14.5	9.5	
Alkalinity, carbonate (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, hydroxide (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, phenolphthalein (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	46.1	5.8	7.4	14.5	9.5	
Conductivity	----	E100	1.0	µS/cm	113	19.2	32.4	73.2	30.6	
Hardness (as CaCO3), dissolved	----	EC100	0.50	mg/L	45.9	6.66	14.3	27.6	10.7	
pH	----	E108	0.10	pH units	7.38	6.41	6.15	7.06	6.98	
Solids, total dissolved [TDS]	----	E162-L	3.0	mg/L	88.8	32.0	75.0	72.5	32.2	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	6.0	8.2	3.7	2.4	1.9	
Turbidity	----	E121	0.10	NTU	5.28	5.09	1.84	3.70	3.70	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.252	<0.010	0.027	0.011	<0.010	
Bromide	24959-67-9	E235.Br-T	0.010	mg/L	0.013	<0.010	<0.010	<0.010	<0.010	
Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	1.57	0.44	0.64	1.23	0.47	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.034	0.027	0.021	0.060	0.062	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.89	0.46	0.98	0.37	0.27	
Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0390	0.0058	<0.0050	0.112	0.0679	
Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0016	<0.0010	<0.0010	<0.0010	<0.0010	
Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0386	0.0423	0.0695	0.0272	0.0179	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	4.42	<0.30	0.47	12.7	2.18	
Cyanides										
Cyanide, free	----	E339-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cyanide, strong acid dissociable (Total)	----	E333-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cyanide, weak acid dissociable	----	E336-L	0.0010	mg/L	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	18.0	14.0	35.6	14.6	9.75	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	17.7	14.8	34.2	14.4	8.78	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM71	AQM72	AQM73	AQM28	AQM29C
(Matrix: Water)										
Client sampling date / time										
Analyte	CAS Number	Method	LOR	Unit	WP2305502-001	WP2305502-002	WP2305502-003	WP2305502-004	WP2305502-005	
					Result	Result	Result	Result	Result	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0736	0.124	0.0859	0.217	0.0649	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00034	0.00029	0.00056	0.00035	0.00022	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.0116 ^{RRV}	0.00664 ^{RRV}	0.00725 ^{RRV}	0.0106 ^{RRV}	0.00716 ^{RRV}	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000079	0.0000084	0.0000352	0.0000328	0.0000205	
Calcium, total	7440-70-2	E420	0.050	mg/L	14.5	2.01	4.24	8.00	3.22	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0.000043	<0.000010	<0.000010	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050 ^{RRV}	<0.00050	<0.00050	0.00060	<0.00050	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00016	0.00015	0.00060	0.00134	0.00019	
Copper, total	7440-50-8	E420	0.00050	mg/L	0.00064	<0.00050	0.00103	0.00649	0.00124	
Iron, total	7439-89-6	E420	0.010	mg/L	0.976	1.83	1.19	1.30	0.416	
Lead, total	7439-92-1	E420	0.000050	mg/L	0.000053	0.000071	0.000114	0.000109	0.000081	
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0010	<0.0010	<0.0010	0.0011	0.0011	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	2.25	0.554	1.08	1.90	0.890	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0951	0.0495	0.282	0.0783	0.0224	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000122	0.000060	0.000115	0.000078	<0.000050	
Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00052	<0.00050	0.00064	0.0600	0.00646	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0.071	<0.050	<0.050	
Potassium, total	7440-09-7	E420	0.050	mg/L	2.42	1.14	1.82	1.06	0.705	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00217	0.00186	0.00234	0.00120	0.00116	
Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000220	0.000302	0.000186	0.000186	0.000181	
Silicon, total	7440-21-3	E420	0.10	mg/L	6.34	2.60	3.56	3.80	3.19	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, total	7440-23-5	E420	0.050	mg/L	2.16	0.800	2.57	1.75	1.22	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0252	0.00617	0.0103	0.0252	0.0136	
Sulfur, total	7704-34-9	E420	0.50	mg/L	1.64	<0.50	<0.50	4.21	0.78	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM71	AQM72	AQM73	AQM28	AQM29C
(Matrix: Water)										
Client sampling date / time					18-Apr-2023 13:52	18-Apr-2023 13:38	18-Apr-2023 13:25	18-Apr-2023 12:51	18-Apr-2023 13:05	
Analyte	CAS Number	Method	LOR	Unit	WP2305502-001	WP2305502-002	WP2305502-003	WP2305502-004	WP2305502-005	
					Result	Result	Result	Result	Result	
Total Metals										
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00223	0.00342	0.00140	0.00339	0.00232	
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000020	0.000017	<0.000010	0.000030	0.000023	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	0.0035	0.0084	0.0141	0.0049	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0266	0.0599	0.0725	0.109	0.0198	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00022	0.00013	0.00046	0.00021	0.00014	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0108	0.0186	0.0200	0.0219	0.0128	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	0.0000063	0.0000274	0.0000212	<0.0000050	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	14.8	1.78	4.00	8.00	2.92	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0.000044	<0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00014	0.00011	0.00055	0.00101	0.00012	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00049	0.00203	0.00241	0.00518	0.00346	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.300	0.759	0.934	0.849	0.191	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	0.000084	0.000139	0.000110	0.000143	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0011	<0.0010	<0.0010	0.0011	0.0011	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	2.17	0.537	1.04	1.86	0.832	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0838	0.0489	0.247	0.0687	0.0154	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000116	0.000054	0.000115	0.000058	0.000052	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	0.00065	0.0550	0.00579	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQM71	AQM72	AQM73	AQM28	AQM29C
(Matrix: Water)										
Client sampling date / time										
Analyte	CAS Number	Method	LOR	Unit	WP2305502-001	WP2305502-002	WP2305502-003	WP2305502-004	WP2305502-005	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	2.42	1.26	1.79	1.09	0.670	
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00214	0.00200	0.00237	0.00118	0.00108	
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	5.48	1.88	3.22	3.57	3.08	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.94	0.544	1.02	1.84	1.24	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0256	0.00582	0.0102	0.0245	0.0128	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	1.88	<0.50	0.56	3.98	0.79	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	0.00012	0.00014	0.00012	<0.00010	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00073	0.00126	0.00087	0.00080	<0.00030	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000015	0.000013	<0.000010	0.000020	0.000016	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0017	0.0046	0.0099	0.0133	0.0037	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	0.00121	0.00064	<0.00050	<0.00050	<0.00050	

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF40	AQF41	AQF42	AQF43	AQF44
(Matrix: Water)										
Client sampling date / time					18-Apr-2023 10:06	18-Apr-2023 10:26	18-Apr-2023 08:54	18-Apr-2023 09:08	18-Apr-2023 09:34	
Analyte	CAS Number	Method	LOR	Unit	WP2305502-006	WP2305502-007	WP2305502-008	WP2305502-009	WP2305502-010	
					Result	Result	Result	Result	Result	
Physical Tests										
Acidity (as CaCO ₃)	----	E283	2.0	mg/L	<2.0	2.7	<2.0	2.3	2.3	
Alkalinity, bicarbonate (as CaCO ₃)	----	E290	1.0	mg/L	11.7	11.6	11.7	11.8	12.3	
Alkalinity, carbonate (as CaCO ₃)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, hydroxide (as CaCO ₃)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, phenolphthalein (as CaCO ₃)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, total (as CaCO ₃)	----	E290	1.0	mg/L	11.7	11.6	11.7	11.8	12.3	
Conductivity	----	E100	1.0	µS/cm	30.3	30.1	29.9	30.1	31.7	
Hardness (as CaCO ₃), dissolved	----	EC100	0.50	mg/L	11.5	11.3	11.7	11.5	12.7	
pH	----	E108	0.10	pH units	6.99	6.97	6.98	7.01	7.01	
Solids, total dissolved [TDS]	----	E162-L	3.0	mg/L	32.2	30.0	28.2	33.4	31.4	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Turbidity	----	E121	0.10	NTU	1.22	0.85	0.90	0.92	0.85	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	<0.010	<0.010	0.012	<0.010	<0.010	
Bromide	24959-67-9	E235.Br-T	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	0.26	0.24	0.26	0.24	0.26	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.077	0.076	0.073	0.076	0.075	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.24	0.25	0.35	0.25	0.28	
Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0992	0.100	0.0962	0.0975	0.0989	
Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0124	0.0117	0.0303	0.0123	0.0155	
Sulfate (as SO ₄)	14808-79-8	E235.SO4	0.30	mg/L	0.66	0.66	0.64	0.65	0.73	
Cyanides										
Cyanide, free	----	E339-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cyanide, strong acid dissociable (Total)	----	E333-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cyanide, weak acid dissociable	----	E336-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	9.96	9.66	9.80	9.61	9.80	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	9.17	9.54	9.66	9.16	9.54	
Total Metals										



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF40	AQF41	AQF42	AQF43	AQF44
(Matrix: Water)										
Client sampling date / time										
Analyte	CAS Number	Method	LOR	Unit	WP2305502-006	WP2305502-007	WP2305502-008	WP2305502-009	WP2305502-010	
					Result	Result	Result	Result	Result	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0342	0.0331	0.0381	0.0368	0.0369	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00023	0.00022	0.00024	0.00023	0.00021	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.00657 ^{RRV}	0.00669 ^{RRV}	0.00745 ^{RRV}	0.00674 ^{RRV}	0.00699 ^{RRV}	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000087	<0.0000050	0.0000103	0.0000081	<0.0000050	
Calcium, total	7440-70-2	E420	0.050	mg/L	3.13	3.21	3.28	3.26	3.40	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0.00093	<0.00050	<0.00050	
Iron, total	7439-89-6	E420	0.010	mg/L	0.274	0.279	0.287	0.277	0.271	
Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050 ^{RRV}	<0.000050	0.000072	<0.000050	<0.000050	
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0011	0.0011	0.0011	0.0011	0.0011	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.936	0.950	0.969	0.959	1.01	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0124	0.0132	0.0149	0.0140	0.0133	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000060	0.000051	0.000084	0.000069	0.000076	
Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
Potassium, total	7440-09-7	E420	0.050	mg/L	0.595	0.587	0.607	0.586	0.584	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00111	0.00108	0.00108	0.00112	0.00106	
Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000132	0.000157	0.000132	0.000092	0.000067	
Silicon, total	7440-21-3	E420	0.10	mg/L	3.09	3.12	2.96	2.99	2.96	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, total	7440-23-5	E420	0.050	mg/L	1.25	1.26	1.27 ^{RRV}	1.21	1.29	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0145	0.0142	0.0145	0.0142	0.0145	
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF40	AQF41	AQF42	AQF43	AQF44
(Matrix: Water)										
Client sampling date / time										
Analyte	CAS Number	Method	LOR	Unit	WP2305502-006	WP2305502-007	WP2305502-008	WP2305502-009	WP2305502-010	
					Result	Result	Result	Result	Result	
Total Metals										
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00079	0.00077	0.00126	0.00109	0.00096	
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000023	0.000025	0.000056	0.000027	0.000027	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0.0032	<0.0030	<0.0030	<0.0030
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0206	0.0204	0.0240	0.0198	0.0198	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00017	0.00015	0.00018	0.00015	0.00017	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0195	0.0199	0.0191	0.0202	0.0184	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000105	<0.0000050	0.0000120	<0.0000050	<0.0000050	<0.0000050
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	3.09	3.03	3.16	3.12	3.46	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00205	0.00174	0.00253	0.00193	0.00179	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.181	0.192	0.190	0.185	0.183	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000106	0.000082	0.000089	0.000066	0.000072	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0011	0.0011	0.0012	0.0011	0.0012	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	0.914	0.904	0.924	0.895	0.982	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00971	0.0107	0.0124	0.0109	0.0104	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000057	0.000067	0.000077	0.000058	0.000072	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF40	AQF41	AQF42	AQF43	AQF44
(Matrix: Water)										
Client sampling date / time					18-Apr-2023 10:06	18-Apr-2023 10:26	18-Apr-2023 08:54	18-Apr-2023 09:08	18-Apr-2023 09:34	
Analyte	CAS Number	Method	LOR	Unit	WP2305502-006	WP2305502-007	WP2305502-008	WP2305502-009	WP2305502-010	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.677	0.576	0.616	0.564	0.597	
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00115	0.00109	0.00102	0.00100	0.00106	
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.02	3.02	2.95	2.94	2.94	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.28	1.21	5.15	1.23	1.71	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0140	0.0140	0.0138	0.0143	0.0146	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	0.75	<0.50	<0.50	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	0.00014	0.00012	0.00015	0.00013	0.00012	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	0.00036	0.00035	0.00031	<0.00030	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000022	0.000022	0.000052	0.000020	0.000022	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0028	0.0022	0.0052	0.0023	0.0028	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF45	AQF46	AQF7S	AQF38	QC-01
(Matrix: Water)										
Client sampling date / time					18-Apr-2023 09:49	18-Apr-2023 11:28	18-Apr-2023 11:43	18-Apr-2023 10:47	18-Apr-2023	
Analyte	CAS Number	Method	LOR	Unit	WP2305502-011	WP2305502-012	WP2305502-013	WP2305502-014	WP2305502-015	
					Result	Result	Result	Result	Result	
Physical Tests										
Acidity (as CaCO3)	----	E283	2.0	mg/L	<2.0	8.7	<2.0	3.1	3.7	
Alkalinity, bicarbonate (as CaCO3)	----	E290	1.0	mg/L	13.1	39.2	16.9	84.5	84.0	
Alkalinity, carbonate (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, hydroxide (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, phenolphthalein (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	13.1	39.2	16.9	84.5	84.0	
Conductivity	----	E100	1.0	µS/cm	35.2	84.0	40.0	177	177	
Hardness (as CaCO3), dissolved	----	EC100	0.50	mg/L	13.3	35.1	17.7	84.6	80.9	
pH	----	E108	0.10	pH units	7.05	7.01	7.21	7.73	7.73	
Solids, total dissolved [TDS]	----	E162-L	3.0	mg/L	31.2	65.2	30.2	162	85.5	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	<1.0	<1.0	2.7	3.5	
Turbidity	----	E121	0.10	NTU	1.04	1.09	0.25	1.49	1.67	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	<0.010	0.237	<0.010	0.051	0.056	
Bromide	24959-67-9	E235.Br-T	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	0.46	0.29	0.12	0.61	0.66	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.076	0.049	0.047	0.237	0.234	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.27	0.74	0.30	1.32	1.40	
Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0980	0.0682	0.0626	0.0588	0.0597	
Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0134	0.0161	0.0074	0.0162	0.0200	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	1.01	0.43	0.81	0.55	0.57	
Cyanides										
Cyanide, free	----	E339-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	
Cyanide, strong acid dissociable (Total)	----	E333-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cyanide, weak acid dissociable	----	E336-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	9.73	13.4	10.7	41.0	43.7	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	9.55	13.2	9.67	40.4	41.4	
Total Metals										



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF45	AQF46	AQF7S	AQF38	QC-01
(Matrix: Water)										
Client sampling date / time										
Analyte	CAS Number	Method	LOR	Unit	WP2305502-011	WP2305502-012	WP2305502-013	WP2305502-014	WP2305502-015	
					Result	Result	Result	Result	Result	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0425	0.0244	0.0219	0.0360	0.0393	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0.00033	<0.00010	<0.00010	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00021	0.00032	0.00034	0.00090	0.00088	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.00701 RRV	0.0126	0.00868	0.0307	0.0302	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	<0.010	0.016	0.017	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000059	0.0000053	0.0000135	0.0000281	0.0000251	
Calcium, total	7440-70-2	E420	0.050	mg/L	3.68	10.8	4.47	22.6	22.2	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Copper, total	7440-50-8	E420	0.00050	mg/L	0.00088	<0.00050	<0.00050	0.00070	0.00075	
Iron, total	7439-89-6	E420	0.010	mg/L	0.273	0.460	0.051	0.181	0.179	
Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	0.000057	0.000069	
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0011	<0.0010	<0.0010	0.0031	0.0032	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.08	2.18	1.62	7.17	7.44	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0168	0.118	0.00266	0.0660	0.0660	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000063	0.000054	0.000076	0.00853	0.00839	
Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00106	<0.00050	<0.00050	<0.00050	0.00057	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
Potassium, total	7440-09-7	E420	0.050	mg/L	0.642	0.876	0.567	2.34	2.30	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00106	0.00112	0.00108	0.00346	0.00328	
Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000104	0.000078	0.000089	0.000219	0.000173	
Silicon, total	7440-21-3	E420	0.10	mg/L	3.10	1.62	0.98	4.18	4.21	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, total	7440-23-5	E420	0.050	mg/L	1.41	1.37	1.14 RRV	5.78	5.76	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0150	0.0200	0.0135	0.0605	0.0594	
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	<0.50	0.73	0.65	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF45	AQF46	AQF7S	AQF38	QC-01
(Matrix: Water)										
Client sampling date / time					18-Apr-2023 09:49	18-Apr-2023 11:28	18-Apr-2023 11:43	18-Apr-2023 10:47	18-Apr-2023 10:47	18-Apr-2023
Analyte	CAS Number	Method	LOR	Unit	WP2305502-011	WP2305502-012	WP2305502-013	WP2305502-014	WP2305502-014	WP2305502-015
					Result	Result	Result	Result	Result	Result
Total Metals										
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00130	0.00056	0.00061	0.00124	0.00124	0.00127
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000030	<0.000010	0.000010	0.000041	0.000041	0.000041
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0.0031	0.0055	0.0055	0.0055
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0185	0.0145	0.0182	0.0041	0.0041	0.0046
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00015	0.00029	0.00027	0.00077	0.00077	0.00082
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0135	0.0233	0.00794	0.0281	0.0281	0.0280
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	<0.010	0.016	0.016	0.014
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0.0000075	0.0000209	0.0000209	0.0000263
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	3.58	10.4	4.46	22.3	22.3	20.5
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00260	0.00163	0.00040	0.00060	0.00060	0.00060
Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.180	0.324	0.036	0.064	0.064	0.065
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000084	0.000062	<0.000050	<0.000050	<0.000050	<0.000050
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0012	0.0010	<0.0010	0.0033	0.0033	0.0031
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.05	2.21	1.60	7.02	7.02	7.22
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0140	0.104	0.00211	0.0405	0.0405	0.0422
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000081	0.000059	0.000076	0.00830	0.00830	0.00787
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00115	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050



Analytical Results

Sub-Matrix: Water					Client sample ID	AQF45	AQF46	AQF7S	AQF38	QC-01
(Matrix: Water)										
Client sampling date / time					18-Apr-2023 09:49	18-Apr-2023 11:28	18-Apr-2023 11:43	18-Apr-2023 10:47	18-Apr-2023	18-Apr-2023
Analyte	CAS Number	Method	LOR	Unit	WP2305502-011	WP2305502-012	WP2305502-013	WP2305502-014	WP2305502-015	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.639	0.892	0.575	2.33	2.33	2.33
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00104	0.00114	0.00102	0.00339	0.00354	0.00354
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	0.000119	0.000105	0.000105
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.99	1.58	0.929	3.70	3.72	3.72
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.40	1.32	1.68	5.61	5.50	5.50
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0152	0.0199	0.0135	0.0619	0.0595	0.0595
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	<0.50	0.69	0.91	0.91
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	0.00011	0.00012	<0.00010	<0.00010	<0.00010
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000024	<0.000010	<0.000010	0.000039	0.000036	0.000036
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0016	0.0024	0.0017	0.0040	0.0041	0.0041
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field	Field
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	TRIP BLANK	FIELD BLANK	----	----	----
Client sampling date / time					18-Apr-2023	18-Apr-2023 14:50	----	----	----	
Analyte	CAS Number	Method	LOR	Unit	WP2305502-016	WP2305502-017	-----	-----	-----	
					Result	Result	----	----	----	
Physical Tests										
Acidity (as CaCO3)	----	E283	2.0	mg/L	<2.0	<2.0	----	----	----	
Alkalinity, bicarbonate (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	----	----	----	
Alkalinity, carbonate (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	----	----	----	
Alkalinity, hydroxide (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	----	----	----	
Alkalinity, phenolphthalein (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	----	----	----	
Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	----	----	----	
Conductivity	----	E100	1.0	µS/cm	<1.0	<1.0	----	----	----	
Hardness (as CaCO3), dissolved	----	EC100	0.50	mg/L	<0.50	<0.50	----	----	----	
pH	----	E108	0.10	pH units	5.55	5.46	----	----	----	
Solids, total dissolved [TDS]	----	E162-L	3.0	mg/L	<3.0	4.4	----	----	----	
Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	<1.0	<1.0	----	----	----	
Turbidity	----	E121	0.10	NTU	<0.10	<0.10	----	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.071	<0.010	----	----	----	
Bromide	24959-67-9	E235.Br-T	0.010	mg/L	<0.010	<0.010	----	----	----	
Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	<0.10	<0.10	----	----	----	
Fluoride	16984-48-8	E235.F	0.020	mg/L	<0.020	<0.020	----	----	----	
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	<0.15	<0.15	----	----	----	
Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	<0.0050	<0.0050	----	----	----	
Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	<0.0020	<0.0020	----	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	<0.30	<0.30	----	----	----	
Cyanides										
Cyanide, free	----	E339-L	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Cyanide, strong acid dissociable (Total)	----	E333-L	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Cyanide, weak acid dissociable	----	E336-L	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	<0.50	0.80	----	----	----	
Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	<0.50	0.57	----	----	----	
Total Metals										



Analytical Results

Sub-Matrix: Water					Client sample ID	TRIP BLANK	FIELD BLANK	----	----	----
(Matrix: Water)										
Client sampling date / time					18-Apr-2023	18-Apr-2023 14:50	----	----	----	
Analyte	CAS Number	Method	LOR	Unit	WP2305502-016	WP2305502-017	-----	-----	-----	
					Result	Result	----	----	----	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	<0.0030	<0.0030	----	----	----	
Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Barium, total	7440-39-3	E420	0.00010	mg/L	<0.00010	<0.00010 ^{RRV}	----	----	----	
Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	----	----	----	
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	----	----	----	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	----	----	----	
Calcium, total	7440-70-2	E420	0.050	mg/L	<0.050	<0.050	----	----	----	
Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	----	----	----	
Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	<0.0050	<0.0050	----	----	----	
Manganese, total	7439-96-5	E420	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	----	----	----	
Potassium, total	7440-09-7	E420	0.050	mg/L	<0.050	<0.050	----	----	----	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Silicon, total	7440-21-3	E420	0.10	mg/L	<0.10	<0.10	----	----	----	
Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Sodium, total	7440-23-5	E420	0.050	mg/L	<0.050	<0.050	----	----	----	
Strontium, total	7440-24-6	E420	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	----	----	----	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	----	----	----	



Analytical Results

Sub-Matrix: Water					Client sample ID	TRIP BLANK	FIELD BLANK	----	----	----
(Matrix: Water)										
Client sampling date / time					18-Apr-2023	18-Apr-2023 14:50	----	----	----	
Analyte	CAS Number	Method	LOR	Unit	WP2305502-016	WP2305502-017	-----	-----	-----	
					Result	Result	----	----	----	
Total Metals										
Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	----	----	----	
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Uranium, total	7440-61-1	E420	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	----	----	----	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	<0.00010	0.00383	----	----	----	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	----	----	----	
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	----	----	----	
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	----	----	----	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	<0.050	<0.050	----	----	----	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	<0.00020	0.00125	----	----	----	
Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	<0.010	----	----	----	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	<0.0050	<0.0050	----	----	----	
Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	----	----	----	



Analytical Results

Sub-Matrix: Water					Client sample ID	TRIP BLANK	FIELD BLANK	----	----	----
(Matrix: Water)										
					Client sampling date / time	18-Apr-2023	18-Apr-2023 14:50	----	----	----
Analyte	CAS Number	Method	LOR	Unit	WP2305502-016	WP2305502-017	-----	-----	-----	
					Result	Result	----	----	----	
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	----	----	----	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	<0.050	<0.050	----	----	----	
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	<0.050	<0.050	----	----	----	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	<0.050	<0.050	----	----	----	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	----	----	----	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	0.00011	----	----	----	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	----	----	----	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	----	----	----	
Dissolved metals filtration location	----	EP421	-	-	Laboratory	Field	----	----	----	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	----	----	----	

Please refer to the General Comments section for an explanation of any qualifiers detected.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: WP2305502	Page	: 1 of 56
Client	: Alamos Gold Inc.	Laboratory	: Winnipeg - Environmental
Contact	: Karen Mathers	Account Manager	: Judy Dalmajer
Address	: PO Box 580 Lynn Lake MB Canada R0B 0W0	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	: 416 368 9932	Telephone	: +1 204 255 9720
Project	: ALAMOS	Date Samples Received	: 20-Apr-2023 11:03
PO	: ----	Issue Date	: 27-Apr-2023 16:02
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: ALAMOS Gold Inc. - (Q88846)_V2		
No. of samples received	: 17		
No. of samples analysed	: 17		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- Method Blank value outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Page : 3 of 56
Work Order : WP2305502
Client : Alamos Gold Inc.
Project : ALAMOS



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Total Metals	QC-908147-001	----	Antimony, total	7440-36-0	E420	0.00012 ^B mg/L	0.0001 mg/L	Blank result exceeds permitted value

Result Qualifiers

Qualifier *Description*

B *Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.*



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF38	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF40	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF41	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF42	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF43	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF44	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF45	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF46	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQF7S	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM28	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM29C	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM71	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM72	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) AQM73	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) FIELD BLANK	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) QC-01	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✓



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia in Water by Colour										
Amber glass total (sulfuric acid) TRIP BLANK	E303	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQF38	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQF40	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQF41	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQF42	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQF43	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQF44	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQF45	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQF46	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQF7S	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQM28	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQM29C	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQM71	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQM72	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE AQM73	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE FIELD BLANK	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✔
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE QC-01	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✔
Anions and Nutrients : Bromide in Water by IC (Trace level)										
HDPE TRIP BLANK	E235.Br-T	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF38	E235.CI-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF40	E235.CI-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF41	E235.CI-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF42	E235.CI-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF43	E235.CI-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF44	E235.CI-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF45	E235.CI-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF46	E235.CI-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQF7S	E235.CI-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQM28	E235.Cl-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQM29C	E235.Cl-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQM71	E235.Cl-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQM72	E235.Cl-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE AQM73	E235.Cl-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE FIELD BLANK	E235.Cl-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE QC-01	E235.Cl-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE TRIP BLANK	E235.Cl-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF38	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓



Matrix: **Water**

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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF40	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF41	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF42	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF43	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF44	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF45	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF46	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQF7S	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM28	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM29C	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM71	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM72	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE AQM73	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE FIELD BLANK	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE QC-01	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE TRIP BLANK	E235.F	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQF38	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQF40	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓



Matrix: Water

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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQF41	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQF42	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQF43	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQF44	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQF45	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQF46	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQF7S	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQM28	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQM29C	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQM71	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQM72	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE AQM73	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE FIELD BLANK	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE QC-01	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	4 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE TRIP BLANK	E235.NO3-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	4 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQF38	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQF40	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQF41	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQF42	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQF43	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQF44	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQF45	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQF46	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQF7S	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQM28	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQM29C	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQM71	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQM72	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE AQM73	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE FIELD BLANK	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE QC-01	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	4 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE TRIP BLANK	E235.NO2-L	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	3 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF38	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF40	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF41	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF42	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF43	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF44	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF45	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF46	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQF7S	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM28	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM29C	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM71	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM72	E235.SO4	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Water by IC										
HDPE AQM73	E235.S04	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE FIELD BLANK	E235.S04	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE QC-01	E235.S04	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE TRIP BLANK	E235.S04	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF38	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF40	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF41	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF42	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF43	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF44	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF45	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF46	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQF7S	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM28	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM29C	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM71	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM72	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) AQM73	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) FIELD BLANK	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) QC-01	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) TRIP BLANK	E319	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQF38	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQF40	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQF41	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQF42	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQF43	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQF44	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQF45	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQF46	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQF7S	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQM28	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQM29C	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQM71	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQM72	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) AQM73	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) FIELD BLANK	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) QC-01	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) TRIP BLANK	E372-U	18-Apr-2023	24-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E339-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E339-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E339-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E339-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF7S	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) QC-01	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Free Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E339-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	8 days	✓
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E333-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E333-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E333-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E333-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF7S	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✔
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✔
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✔
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✔
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✔
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✔
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✔
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) QC-01	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	8 days	✔
Cyanides : Total Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E333-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	8 days	✔



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF40	E336-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF42	E336-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF44	E336-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF45	E336-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	14 days	6 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF38	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF41	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF43	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF46	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQF7S	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM28	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM29C	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM71	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM72	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) AQM73	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) FIELD BLANK	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	7 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) QC-01	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	8 days	✓
Cyanides : WAD Cyanide (Low Level)										
UV-inhibited HDPE - total (sodium hydroxide) TRIP BLANK	E336-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	14 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF38	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF40	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF41	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF42	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF43	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF44	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF45	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF46	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQF7S	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM28	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM29C	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM71	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM72	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) AQM73	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) FIELD BLANK	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) QC-01	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) TRIP BLANK	E421	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF38	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✔
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF40	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✔



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF41	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF42	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF43	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF44	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF45	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF46	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQF7S	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM28	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM29C	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓



Matrix: **Water** Evaluation: **x** = Holding time exceedance ; **✓** = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM71	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM72	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) AQM73	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) FIELD BLANK	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) QC-01	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) TRIP BLANK	E358-L	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF38	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF40	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF41	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF42	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF43	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF44	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF45	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF46	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQF7S	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM28	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM29C	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM71	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM72	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) AQM73	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) FIELD BLANK	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) QC-01	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) TRIP BLANK	E355-L	18-Apr-2023	25-Apr-2023	----	----		25-Apr-2023	28 days	7 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF38	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF40	E283	18-Apr-2023	24-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF41	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF42	E283	18-Apr-2023	24-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Acidity by Titration										
HDPE AQF43	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF44	E283	18-Apr-2023	24-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF45	E283	18-Apr-2023	24-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF46	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQF7S	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM28	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM29C	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM71	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE AQM72	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Acidity by Titration										
HDPE AQM73	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE FIELD BLANK	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	8 days	✓
Physical Tests : Acidity by Titration										
HDPE QC-01	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	9 days	✓
Physical Tests : Acidity by Titration										
HDPE TRIP BLANK	E283	18-Apr-2023	25-Apr-2023	----	----		26-Apr-2023	14 days	9 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF38	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF40	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF41	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF42	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF43	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Alkalinity Species by Titration										
HDPE AQF44	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF45	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF46	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQF7S	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM28	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM29C	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM71	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM72	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE AQM73	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Alkalinity Species by Titration										
HDPE FIELD BLANK	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE QC-01	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE TRIP BLANK	E290	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	14 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE AQF38	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQF40	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQF41	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQF42	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQF43	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQF44	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Conductivity in Water										
HDPE AQF45	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQF46	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQF7S	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQM28	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQM29C	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQM71	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQM72	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE AQM73	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE FIELD BLANK	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	3 days	✓



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Conductivity in Water										
HDPE QC-01	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE TRIP BLANK	E100	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	28 days	4 days	✓
Physical Tests : pH by Meter										
HDPE AQF38	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQF40	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQF41	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQF42	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQF43	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQF44	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQF45	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : pH by Meter										
HDPE AQF46	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQF7S	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQM28	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQM29C	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQM71	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQM72	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE AQM73	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE FIELD BLANK	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : pH by Meter										
HDPE QC-01	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM



Matrix: **Water**

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : pH by Meter										
HDPE TRIP BLANK	E108	18-Apr-2023	21-Apr-2023	----	----		21-Apr-2023	0.25 hrs	0.25 hrs	✖ EHTR-FM
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQF38	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✔
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQF40	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✔
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQF41	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✔
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQF42	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✔
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQF43	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✔
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQF44	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✔
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQF45	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✔
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQF46	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✔



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQF7S	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQM28	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQM29C	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQM71	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQM72	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE AQM73	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE FIELD BLANK	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE QC-01	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE TRIP BLANK	E162-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF38	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF40	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF41	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF42	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF43	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF44	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF45	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF46	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQF7S	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM28	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM29C	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM71	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM72	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] AQM73	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] FIELD BLANK	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] QC-01	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] TRIP BLANK	E160-L	18-Apr-2023	----	----	----		24-Apr-2023	7 days	6 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQF38	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Turbidity by Nephelometry										
HDPE AQF40	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQF41	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQF42	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQF43	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQF44	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQF45	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQF46	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQF7S	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQM28	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Turbidity by Nephelometry										
HDPE AQM29C	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQM71	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQM72	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE AQM73	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE FIELD BLANK	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE QC-01	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	4 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE TRIP BLANK	E121	18-Apr-2023	----	----	----		21-Apr-2023	3 days	4 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF40	E532	18-Apr-2023	----	----	----		24-Apr-2023	28 days	6 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF42	E532	18-Apr-2023	----	----	----		24-Apr-2023	28 days	6 days	✓



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF44	E532	18-Apr-2023	----	----	----		24-Apr-2023	28 days	6 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF45	E532	18-Apr-2023	----	----	----		24-Apr-2023	28 days	6 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF38	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF41	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF43	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF46	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQF7S	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM28	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM29C	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM71	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM72	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) AQM73	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) FIELD BLANK	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) QC-01	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	8 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (sodium hydroxide) TRIP BLANK	E532	18-Apr-2023	----	----	----		25-Apr-2023	28 days	8 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF38	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF40	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF41	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF42	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF43	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF44	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF45	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF46	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQF7S	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM28	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM29C	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM71	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM72	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) AQM73	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) FIELD BLANK	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) QC-01	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓
Total Metals : Total metals in Water by CRC ICPMS										
HDPE total (nitric acid) TRIP BLANK	E420	18-Apr-2023	24-Apr-2023	----	----		24-Apr-2023	180 days	6 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended
 Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Acidity by Titration	E283	908756	2	31	6.4	5.0	✔
Alkalinity Species by Titration	E290	906387	1	18	5.5	5.0	✔
Ammonia in Water by Colour	E303	906423	3	58	5.1	5.0	✔
Bromide in Water by IC (Trace level)	E235.Br-T	906107	1	17	5.8	5.0	✔
Chloride in Water by IC (Low Level)	E235.Cl-L	906108	2	21	9.5	5.0	✔
Conductivity in Water	E100	906386	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	908152	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	908059	1	20	5.0	5.0	✔
Fluoride in Water by IC	E235.F	906106	3	37	8.1	5.0	✔
Free Cyanide (Low Level)	E339-L	908806	2	28	7.1	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	906110	3	32	9.3	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	906111	3	32	9.3	5.0	✔
pH by Meter	E108	906385	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	906109	3	35	8.5	5.0	✔
TDS by Gravimetry (Low Level)	E162-L	908085	1	17	5.8	5.0	✔
Total Cyanide (Low Level)	E333-L	908807	2	26	7.6	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	908101	2	22	9.0	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	908049	1	20	5.0	5.0	✔
Total metals in Water by CRC ICPMS	E420	908147	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	909413	1	20	5.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	908595	1	20	5.0	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	908084	1	17	5.8	5.0	✔
Turbidity by Nephelometry	E121	906406	1	20	5.0	5.0	✔
WAD Cyanide (Low Level)	E336-L	908808	2	23	8.7	5.0	✔
Laboratory Control Samples (LCS)							
Acidity by Titration	E283	908756	2	31	6.4	5.0	✔
Alkalinity Species by Titration	E290	906387	1	18	5.5	5.0	✔
Ammonia in Water by Colour	E303	906423	3	58	5.1	5.0	✔
Bromide in Water by IC (Trace level)	E235.Br-T	906107	3	17	17.6	5.0	✔
Chloride in Water by IC (Low Level)	E235.Cl-L	906108	3	21	14.2	5.0	✔
Conductivity in Water	E100	906386	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	908152	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	908059	1	20	5.0	5.0	✔
Fluoride in Water by IC	E235.F	906106	3	37	8.1	5.0	✔
Free Cyanide (Low Level)	E339-L	908806	2	28	7.1	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	906110	3	32	9.3	5.0	✔



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS) - Continued							
Nitrite in Water by IC (Low Level)	E235.NO2-L	906111	3	32	9.3	5.0	✔
pH by Meter	E108	906385	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	906109	3	35	8.5	5.0	✔
TDS by Gravimetry (Low Level)	E162-L	908085	1	17	5.8	5.0	✔
Total Cyanide (Low Level)	E333-L	908807	2	26	7.6	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	908101	2	22	9.0	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	908049	1	20	5.0	5.0	✔
Total metals in Water by CRC ICPMS	E420	908147	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	909413	1	20	5.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	908595	1	20	5.0	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	908084	1	17	5.8	5.0	✔
Turbidity by Nephelometry	E121	906406	1	20	5.0	5.0	✔
WAD Cyanide (Low Level)	E336-L	908808	2	23	8.7	5.0	✔
Method Blanks (MB)							
Acidity by Titration	E283	908756	2	31	6.4	5.0	✔
Alkalinity Species by Titration	E290	906387	1	18	5.5	5.0	✔
Ammonia in Water by Colour	E303	906423	3	58	5.1	5.0	✔
Bromide in Water by IC (Trace level)	E235.Br-T	906107	3	17	17.6	5.0	✔
Chloride in Water by IC (Low Level)	E235.Cl-L	906108	3	21	14.2	5.0	✔
Conductivity in Water	E100	906386	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	908152	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	908059	1	20	5.0	5.0	✔
Fluoride in Water by IC	E235.F	906106	3	37	8.1	5.0	✔
Free Cyanide (Low Level)	E339-L	908806	2	28	7.1	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	906110	3	32	9.3	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	906111	3	32	9.3	5.0	✔
Sulfate in Water by IC	E235.SO4	906109	3	35	8.5	5.0	✔
TDS by Gravimetry (Low Level)	E162-L	908085	1	17	5.8	5.0	✔
Total Cyanide (Low Level)	E333-L	908807	2	26	7.6	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	908101	2	22	9.0	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	908049	1	20	5.0	5.0	✔
Total metals in Water by CRC ICPMS	E420	908147	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	909413	1	20	5.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	908595	1	20	5.0	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	908084	1	17	5.8	5.0	✔
Turbidity by Nephelometry	E121	906406	1	20	5.0	5.0	✔
WAD Cyanide (Low Level)	E336-L	908808	2	23	8.7	5.0	✔
Matrix Spikes (MS)							
Ammonia in Water by Colour	E303	906423	3	58	5.1	5.0	✔



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
<i>Analytical Methods</i>	<i>Method</i>	<i>QC Lot #</i>	<i>QC</i>	<i>Regular</i>	<i>Actual</i>	<i>Expected</i>	<i>Evaluation</i>
Matrix Spikes (MS) - Continued							
Bromide in Water by IC (Trace level)	E235.Br-T	906107	1	17	5.8	5.0	✔
Chloride in Water by IC (Low Level)	E235.Cl-L	906108	2	21	9.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	908152	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	908059	1	20	5.0	5.0	✔
Fluoride in Water by IC	E235.F	906106	3	37	8.1	5.0	✔
Free Cyanide (Low Level)	E339-L	908806	2	28	7.1	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	906110	3	32	9.3	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	906111	3	32	9.3	5.0	✔
Sulfate in Water by IC	E235.SO4	906109	3	35	8.5	5.0	✔
Total Cyanide (Low Level)	E333-L	908807	2	26	7.6	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	908101	2	22	9.0	5.0	✔
Total Kjeldahl Nitrogen by Colourimetry	E319	908049	1	20	5.0	5.0	✔
Total metals in Water by CRC ICPMS	E420	908147	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	909413	1	20	5.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	908595	1	20	5.0	5.0	✔
WAD Cyanide (Low Level)	E336-L	908808	2	23	8.7	5.0	✔



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Conductivity in Water	E100 Winnipeg - Environmental	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 Winnipeg - Environmental	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally $20 \pm 5^\circ\text{C}$). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Turbidity by Nephelometry	E121 Winnipeg - Environmental	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
TSS by Gravimetry (Low Level)	E160-L Winnipeg - Environmental	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
TDS by Gravimetry (Low Level)	E162-L Winnipeg - Environmental	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at $180 \pm 2^\circ\text{C}$ for 16 hours or to constant weight, with gravimetric measurement of the residue.
Bromide in Water by IC (Trace level)	E235.Br-T Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC (Low Level)	E235.Cl-L Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC (Low Level)	E235.NO2-L Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC (Low Level)	E235.NO3-L Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 Winnipeg - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Acidity by Titration	E283 Waterloo - Environmental	Water	APHA 2310 B (mod)	Acidity is determined by potentiometric titration to pH endpoint of 8.3
Alkalinity Species by Titration	E290 Winnipeg - Environmental	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia in Water by Colour	E303 Winnipeg - Environmental	Water	APHA 4500 NH3-NITROGEN (AMMONIA)	This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.
Total Kjeldahl Nitrogen by Colourimetry	E319 Winnipeg - Environmental	Water	APHA 4500-Norg D (mod)	Total Kjeldahl Nitrogen is determined using block digestion followed by colourimetric analysis.
Total Cyanide (Low Level)	E333-L Waterloo - Environmental	Water	ISO 14403 (mod)	Total or Strong Acid Dissociable (SAD) Cyanide is determined by Continuous Flow Analyzer (CFA) with in-line UV digestion followed by colourimetric analysis. Method Limitation: High levels of thiocyanate (SCN) may cause positive interference (up to 0.5% of SCN concentration).
WAD Cyanide (Low Level)	E336-L Waterloo - Environmental	Water	APHA 4500-CN I (mod)	Weak Acid Dissociable (WAD) cyanide is determined by Continuous Flow Analyzer (CFA) with in-line distillation followed by colourimetric analysis.
Free Cyanide (Low Level)	E339-L Waterloo - Environmental	Water	ASTM D7237 (mod)	Free Cyanide is determined by Continuous Flow Analyzer (CFA) with in-line gas diffusion followed by colourimetric analysis.
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L Winnipeg - Environmental	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of total carbon (TC) is comprised of IC (which is common), this method is more accurate and more reliable than the TOC by subtraction method (i.e. TC minus TIC).



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Organic Carbon by Combustion (Low Level)	E358-L Winnipeg - Environmental	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO ₂ . NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U Winnipeg - Environmental	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total metals in Water by CRC ICPMS	E420 Winnipeg - Environmental	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Metals in Water by CRC ICPMS	E421 Winnipeg - Environmental	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Hexavalent Chromium (Cr VI) by IC	E532 Waterloo - Environmental	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. Results are based on an un-filtered, field-preserved sample.
Dissolved Hardness (Calculated)	EC100 Winnipeg - Environmental	Water	APHA 2340B	"Hardness (as CaCO ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 Winnipeg - Environmental	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 Winnipeg - Environmental	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Total Organic Carbon by Combustion	EP355 Winnipeg - Environmental	Water		Preparation for Total Organic Carbon by Combustion

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Client : Alamos Gold Inc.
Project : ALAMOS



Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Dissolved Organic Carbon for Combustion	EP358 Winnipeg - Environmental	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Phosphorus in water	EP372 Winnipeg - Environmental	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 Winnipeg - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.

QUALITY CONTROL REPORT

Work Order	: WP2305502	Page	: 1 of 22
Client	: Alamos Gold Inc.	Laboratory	: Winnipeg - Environmental
Contact	: Karen Mathers	Account Manager	: Judy Dalmaijer
Address	: PO Box 580 Lynn Lake MB Canada R0B 0W0	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	:	Telephone	: +1 204 255 9720
Project	: ALAMOS	Date Samples Received	: 20-Apr-2023 11:03
PO	: ----	Date Analysis Commenced	: 21-Apr-2023
C-O-C number	: ----	Issue Date	: 27-Apr-2023 16:02
Sampler	: ---- 416 368 9932		
Site	: ----		
Quote number	: ALAMOS Gold Inc. - (Q88846)_V2		
No. of samples received	: 17		
No. of samples analysed	: 17		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Lee McTavish		Winnipeg Inorganics, Winnipeg, Manitoba
Lee McTavish		Winnipeg Metals, Winnipeg, Manitoba
Oleksandr Busel		Winnipeg Inorganics, Winnipeg, Manitoba
Oleksandr Busel		Winnipeg Metals, Winnipeg, Manitoba
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 906385)											
WP2305502-001	AQM71	pH	----	E108	0.10	pH units	7.38	7.40	0.271%	4%	----
Physical Tests (QC Lot: 906386)											
WP2305502-001	AQM71	Conductivity	----	E100	1.0	µS/cm	113	113	0.00%	10%	----
Physical Tests (QC Lot: 906387)											
WP2305502-001	AQM71	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	46.1	45.8	0.653%	20%	----
Physical Tests (QC Lot: 906406)											
WP2305502-001	AQM71	Turbidity	----	E121	0.10	NTU	5.28	5.04	4.65%	15%	----
Physical Tests (QC Lot: 908084)											
WP2305502-001	AQM71	Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	6.0	6.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 908085)											
WP2305502-001	AQM71	Solids, total dissolved [TDS]	----	E162-L	10.0	mg/L	88.8	99.2	10.3	Diff <2x LOR	----
Physical Tests (QC Lot: 908756)											
WP2305331-003	Anonymous	Acidity (as CaCO3)	----	E283	2.0	mg/L	10.0	8.2	1.8	Diff <2x LOR	----
Physical Tests (QC Lot: 910160)											
WP2305502-001	AQM71	Acidity (as CaCO3)	----	E283	2.0	mg/L	3.8	4.3	0.4	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 906106)											
WP2305502-006	AQF40	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.077	0.077	0.0001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 906107)											
WP2305502-006	AQF40	Bromide	24959-67-9	E235.Br-T	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 906108)											
WP2305502-006	AQF40	Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	0.26	0.26	0.004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 906109)											
WP2305502-006	AQF40	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	0.66	0.66	0.003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 906110)											
WP2305502-006	AQF40	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0992	0.0992	0.0161%	20%	----
Anions and Nutrients (QC Lot: 906111)											
WP2305502-006	AQF40	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 906423)											
WP2305502-001	AQM71	Ammonia, total (as N)	7664-41-7	E303	0.010	mg/L	0.252	0.246	2.55%	20%	----
Anions and Nutrients (QC Lot: 906506)											

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 Work Order : WP2305502
 Client : Alamos Gold Inc.
 Project : ALAMOS



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients (QC Lot: 906506) - continued											
WP2305555-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 906507)											
WP2305555-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.171	0.171	0.00875%	20%	----
Anions and Nutrients (QC Lot: 906509)											
WP2305555-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.025	0.024	0.0002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 906510)											
WP2305555-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	9.52	9.55	0.352%	20%	----
Anions and Nutrients (QC Lot: 907141)											
WP2305610-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.123	0.122	0.001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 907143)											
WP2305610-001	Anonymous	Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	59.0	59.1	0.200%	20%	----
Anions and Nutrients (QC Lot: 907144)											
WP2305610-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0407	0.0404	0.0003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 907145)											
WP2305610-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0016	0.0016	0.00008	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 907146)											
WP2305610-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	28.6	28.6	0.0373%	20%	----
Anions and Nutrients (QC Lot: 908049)											
WP2305502-001	AQM71	Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	0.89	0.82	0.07	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 908595)											
WP2305502-001	AQM71	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0386	0.0381	1.33%	20%	----
Anions and Nutrients (QC Lot: 910185)											
WP2305607-001	Anonymous	Ammonia, total (as N)	7664-41-7	E303	2.00	mg/L	23.8	26.3	9.77%	20%	----
Anions and Nutrients (QC Lot: 913015)											
SK2301649-001	Anonymous	Ammonia, total (as N)	7664-41-7	E303	2.00	mg/L	35.0	34.9	0.521%	20%	----
Cyanides (QC Lot: 908806)											
WP2305489-003	Anonymous	Cyanide, free	----	E339-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Cyanides (QC Lot: 908807)											
WP2305489-003	Anonymous	Cyanide, strong acid dissociable (Total)	----	E333-L	0.0010	mg/L	0.0021	0.0020	0.0001	Diff <2x LOR	----
Cyanides (QC Lot: 908808)											
WP2305489-003	Anonymous	Cyanide, weak acid dissociable	----	E336-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Cyanides (QC Lot: 909974)											



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Cyanides (QC Lot: 909974) - continued											
WP2305502-001	AQM71	Cyanide, strong acid dissociable (Total)	----	E333-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Cyanides (QC Lot: 909975)											
WP2305502-001	AQM71	Cyanide, weak acid dissociable	----	E336-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Cyanides (QC Lot: 909976)											
WP2305502-001	AQM71	Cyanide, free	----	E339-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 908059)											
WP2305502-001	AQM71	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	18.0	18.4	2.63%	20%	----
Organic / Inorganic Carbon (QC Lot: 909413)											
WP2305474-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	10.8	11.0	1.23%	20%	----
Total Metals (QC Lot: 908147)											
WP2305502-001	AQM71	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0736	0.0738	0.378%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00034	0.00032	0.00003	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0116	0.0120	3.18%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000079	0.0000076	0.0000004	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	14.5	15.9	9.00%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00016	0.00017	0.00001	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00064	0.00065	0.00001	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.976	0.998	2.24%	20%	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000053	0.000057	0.000003	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0010	0.0010	0.00002	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	2.25	2.24	0.278%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0951	0.0934	1.86%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000122	0.000130	0.000009	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00052	0.00051	0.00002	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	0.053	0.003	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	2.42	2.39	1.20%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00217	0.00215	0.806%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 908147) - continued											
WP2305502-001	AQM71	Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000220	0.000205	0.000015	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	6.34	6.38	0.703%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	2.16	2.15	0.605%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0252	0.0252	0.348%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	1.64	1.73	0.08	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00223	0.00195	0.00028	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000020	0.000021	0.000001	Diff <2x LOR	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 908152)											
WP2305502-001	AQM71	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0266	0.0266	0.0760%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00022	0.00021	0.00001	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0108	0.0106	0.987%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	0.0000051	0.00000006	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	14.8	15.2	2.54%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00014	0.00014	0.0000002	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00049	0.00048	0.000009	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.300	0.302	0.648%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0011	0.0011	0.00002	Diff <2x LOR	----
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	2.17	2.18	0.253%	20%	----		



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 908152) - continued											
WP2305502-001	AQM71	Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0838	0.0826	1.34%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000116	0.000102	0.000014	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	2.42	2.38	1.64%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00214	0.00217	1.16%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	5.48	5.47	0.304%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.94	1.89	2.85%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0256	0.0253	1.46%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	1.88	1.74	0.14	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00073	0.00072	0.000004	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000015	0.000018	0.000002	Diff <2x LOR	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0017	0.0017	0.000004	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 908101)											
WP2305502-006	AQF40	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 909847)											
WP2305502-001	AQM71	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	0.00121	0.00100	0.00021	Diff <2x LOR	----



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 906386)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests (QCLot: 906387)						
Alkalinity, total (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 906406)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 908084)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 908085)						
Solids, total dissolved [TDS]	----	E162-L	3	mg/L	<3.0	----
Physical Tests (QCLot: 908756)						
Acidity (as CaCO ₃)	----	E283	2	mg/L	<2.0	----
Physical Tests (QCLot: 910160)						
Acidity (as CaCO ₃)	----	E283	2	mg/L	<2.0	----
Anions and Nutrients (QCLot: 906106)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 906107)						
Bromide	24959-67-9	E235.Br-T	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 906108)						
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 906109)						
Sulfate (as SO ₄)	14808-79-8	E235.SO ₄	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 906110)						
Nitrate (as N)	14797-55-8	E235.NO ₃ -L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 906111)						
Nitrite (as N)	14797-65-0	E235.NO ₂ -L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 906423)						
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 906505)						
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 906506)						
Nitrite (as N)	14797-65-0	E235.NO ₂ -L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 906507)						



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 906507) - continued						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 906509)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 906510)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 906513)						
Bromide	24959-67-9	E235.Br-T	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 907141)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 907142)						
Bromide	24959-67-9	E235.Br-T	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 907143)						
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 907144)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 907145)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 907146)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 908049)						
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	<0.20	----
Anions and Nutrients (QCLot: 908595)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 910185)						
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 913015)						
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	<0.010	----
Cyanides (QCLot: 908806)						
Cyanide, free	----	E339-L	0.001	mg/L	<0.0010	----
Cyanides (QCLot: 908807)						
Cyanide, strong acid dissociable (Total)	----	E333-L	0.001	mg/L	<0.0010	----
Cyanides (QCLot: 908808)						
Cyanide, weak acid dissociable	----	E336-L	0.001	mg/L	<0.0010	----
Cyanides (QCLot: 909974)						
Cyanide, strong acid dissociable (Total)	----	E333-L	0.001	mg/L	<0.0010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Cyanides (QCLot: 909975)						
Cyanide, weak acid dissociable	----	E336-L	0.001	mg/L	<0.0010	----
Cyanides (QCLot: 909976)						
Cyanide, free	----	E339-L	0.001	mg/L	<0.0010	----
Organic / Inorganic Carbon (QCLot: 908059)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 909413)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Metals (QCLot: 908147)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	# 0.00012	B
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 908147) - continued						
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 908152)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----



Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 908152) - continued						
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Speciated Metals (QCLot: 908101)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Speciated Metals (QCLot: 909847)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----

Qualifiers

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 906385)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 906386)									
Conductivity	----	E100	1	µS/cm	1412 µS/cm	100	90.0	110	----
Physical Tests (QCLot: 906387)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	100 mg/L	98.7	85.0	115	----
Physical Tests (QCLot: 906406)									
Turbidity	----	E121	0.1	NTU	200 NTU	96.5	85.0	115	----
Physical Tests (QCLot: 908084)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	150 mg/L	96.4	85.0	115	----
Physical Tests (QCLot: 908085)									
Solids, total dissolved [TDS]	----	E162-L	3	mg/L	1000 mg/L	97.3	85.0	115	----
Physical Tests (QCLot: 908756)									
Acidity (as CaCO3)	----	E283	2	mg/L	50 mg/L	102	85.0	115	----
Physical Tests (QCLot: 910160)									
Acidity (as CaCO3)	----	E283	2	mg/L	50 mg/L	102	85.0	115	----
Anions and Nutrients (QCLot: 906106)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	105	90.0	110	----
Anions and Nutrients (QCLot: 906107)									
Bromide	24959-67-9	E235.Br-T	0.01	mg/L	0.5 mg/L	102	85.0	115	----
Anions and Nutrients (QCLot: 906108)									
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	100 mg/L	99.1	90.0	110	----
Anions and Nutrients (QCLot: 906109)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 906110)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 906111)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	99.6	90.0	110	----
Anions and Nutrients (QCLot: 906423)									
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	0.25 mg/L	97.9	85.0	115	----
Anions and Nutrients (QCLot: 906505)									
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	100 mg/L	98.9	90.0	110	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit					
Anions and Nutrients (QCLot: 906506)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	99.4	90.0	110	----
Anions and Nutrients (QCLot: 906507)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 906509)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	105	90.0	110	----
Anions and Nutrients (QCLot: 906510)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 906513)									
Bromide	24959-67-9	E235.Br-T	0.01	mg/L	0.5 mg/L	99.2	85.0	115	----
Anions and Nutrients (QCLot: 907141)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	105	90.0	110	----
Anions and Nutrients (QCLot: 907142)									
Bromide	24959-67-9	E235.Br-T	0.01	mg/L	0.5 mg/L	99.9	85.0	115	----
Anions and Nutrients (QCLot: 907143)									
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	100 mg/L	98.4	90.0	110	----
Anions and Nutrients (QCLot: 907144)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 907145)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	99.3	90.0	110	----
Anions and Nutrients (QCLot: 907146)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 908049)									
Kjeldahl nitrogen, total [TKN]	----	E319	0.15	mg/L	4 mg/L	98.5	75.0	125	----
Anions and Nutrients (QCLot: 908595)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.5 mg/L	95.8	80.0	120	----
Anions and Nutrients (QCLot: 910185)									
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	0.25 mg/L	99.8	85.0	115	----
Anions and Nutrients (QCLot: 913015)									
Ammonia, total (as N)	7664-41-7	E303	0.01	mg/L	0.25 mg/L	106	85.0	115	----
Cyanides (QCLot: 908806)									
Cyanide, free	----	E339-L	0.001	mg/L	0.125 mg/L	96.3	80.0	120	----
Cyanides (QCLot: 908807)									
Cyanide, strong acid dissociable (Total)	----	E333-L	0.001	mg/L	0.25 mg/L	90.6	80.0	120	----
Cyanides (QCLot: 908808)									



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit					
Cyanides (QCLot: 908808) - continued									
Cyanide, weak acid dissociable	----	E336-L	0.001	mg/L	0.125 mg/L	98.5	80.0	120	----
Cyanides (QCLot: 909974)									
Cyanide, strong acid dissociable (Total)	----	E333-L	0.001	mg/L	0.25 mg/L	93.1	80.0	120	----
Cyanides (QCLot: 909975)									
Cyanide, weak acid dissociable	----	E336-L	0.001	mg/L	0.125 mg/L	104	80.0	120	----
Cyanides (QCLot: 909976)									
Cyanide, free	----	E339-L	0.001	mg/L	0.125 mg/L	102	80.0	120	----
Organic / Inorganic Carbon (QCLot: 908059)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	101	80.0	120	----
Organic / Inorganic Carbon (QCLot: 909413)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	98.8	80.0	120	----
Total Metals (QCLot: 908147)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	105	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	106	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	101	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	101	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	97.5	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	103	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	99.8	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	94.8	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	100	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	102	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	103	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	90.6	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	98.7	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	96.8	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	102	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	103	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	103	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	112	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	103	80.0	120	----



Sub-Matrix: Water

Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 908147) - continued									
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	95.7	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	107	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	93.9	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	103	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	102	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	104	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	97.3	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	102	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	97.5	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	103	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	101	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	99.8	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	103	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	101	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	97.3	80.0	120	----
Dissolved Metals (QCLot: 908152)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	107	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	98.3	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	98.0	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	95.9	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	107	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	99.4	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	110	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	95.1	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	97.0	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	96.4	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	96.1	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	97.8	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	98.1	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	86.6	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	100	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	108	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	102	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 908152) - continued									
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	97.1	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	101	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	96.6	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	113	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	101	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	99.8	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	89.2	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	101	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	92.6	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	102	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	101	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	96.2	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	98.3	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	101	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	95.6	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	97.5	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	97.4	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	99.1	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	98.8	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	99.1	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	95.5	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	98.1	80.0	120	----
Speciated Metals (QCLot: 908101)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.025 mg/L	97.2	80.0	120	----
Speciated Metals (QCLot: 909847)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.025 mg/L	98.0	80.0	120	----



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	Target	MS	Low	High	
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method						
Anions and Nutrients (QCLot: 906106)										
WP2305502-006	AQF40	Fluoride	16984-48-8	E235.F	1.07 mg/L	1 mg/L	107	75.0	125	----
Anions and Nutrients (QCLot: 906107)										
WP2305502-006	AQF40	Bromide	24959-67-9	E235.Br-T	0.511 mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 906108)										
WP2305502-006	AQF40	Chloride	16887-00-6	E235.Cl-L	102 mg/L	100 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 906109)										
WP2305502-006	AQF40	Sulfate (as SO4)	14808-79-8	E235.SO4	103 mg/L	100 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 906110)										
WP2305502-006	AQF40	Nitrate (as N)	14797-55-8	E235.NO3-L	2.56 mg/L	2.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 906111)										
WP2305502-006	AQF40	Nitrite (as N)	14797-65-0	E235.NO2-L	0.508 mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 906423)										
WP2305502-001	AQM71	Ammonia, total (as N)	7664-41-7	E303	ND mg/L	0.25 mg/L	ND	75.0	125	----
Anions and Nutrients (QCLot: 906506)										
WP2305555-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.509 mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 906507)										
WP2305555-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.57 mg/L	2.5 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 906509)										
WP2305555-001	Anonymous	Fluoride	16984-48-8	E235.F	1.08 mg/L	1 mg/L	108	75.0	125	----
Anions and Nutrients (QCLot: 906510)										
WP2305555-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	103 mg/L	100 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 907141)										
WP2305610-001	Anonymous	Fluoride	16984-48-8	E235.F	1.04 mg/L	1 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 907143)										
WP2305610-001	Anonymous	Chloride	16887-00-6	E235.Cl-L	99.9 mg/L	100 mg/L	99.9	75.0	125	----
Anions and Nutrients (QCLot: 907144)										
WP2305610-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.50 mg/L	2.5 mg/L	100	75.0	125	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 907145)										
WP2305610-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.491 mg/L	0.5 mg/L	98.2	75.0	125	----
Anions and Nutrients (QCLot: 907146)										
WP2305610-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	99.9 mg/L	100 mg/L	99.9	75.0	125	----
Anions and Nutrients (QCLot: 908049)										
WP2305502-001	AQM71	Kjeldahl nitrogen, total [TKN]	----	E319	4.83 mg/L	5 mg/L	96.5	70.0	130	----
Anions and Nutrients (QCLot: 908595)										
WP2305502-002	AQM72	Phosphorus, total	7723-14-0	E372-U	0.246 mg/L	0.25 mg/L	98.5	70.0	130	----
Anions and Nutrients (QCLot: 910185)										
WP2305607-001	Anonymous	Ammonia, total (as N)	7664-41-7	E303	ND mg/L	0.25 mg/L	ND	75.0	125	----
Anions and Nutrients (QCLot: 913015)										
SK2301649-001	Anonymous	Ammonia, total (as N)	7664-41-7	E303	ND mg/L	0.25 mg/L	ND	75.0	125	----
Cyanides (QCLot: 908806)										
WP2305489-003	Anonymous	Cyanide, free	----	E339-L	0.129 mg/L	0.125 mg/L	103	75.0	125	----
Cyanides (QCLot: 908807)										
WP2305489-003	Anonymous	Cyanide, strong acid dissociable (Total)	----	E333-L	0.221 mg/L	0.25 mg/L	88.4	75.0	125	----
Cyanides (QCLot: 908808)										
WP2305489-003	Anonymous	Cyanide, weak acid dissociable	----	E336-L	0.127 mg/L	0.125 mg/L	102	75.0	125	----
Cyanides (QCLot: 909974)										
WP2305502-001	AQM71	Cyanide, strong acid dissociable (Total)	----	E333-L	0.226 mg/L	0.25 mg/L	90.2	75.0	125	----
Cyanides (QCLot: 909975)										
WP2305502-001	AQM71	Cyanide, weak acid dissociable	----	E336-L	0.136 mg/L	0.125 mg/L	109	75.0	125	----
Cyanides (QCLot: 909976)										
WP2305502-001	AQM71	Cyanide, free	----	E339-L	0.139 mg/L	0.125 mg/L	111	75.0	125	----
Organic / Inorganic Carbon (QCLot: 908059)										
WP2305502-002	AQM72	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	5 mg/L	ND	70.0	130	----
Organic / Inorganic Carbon (QCLot: 909413)										
WP2305474-002	Anonymous	Carbon, total organic [TOC]	----	E355-L	ND mg/L	5 mg/L	ND	70.0	130	----
Total Metals (QCLot: 908147)										
WP2305502-001	AQM71	Aluminum, total	7429-90-5	E420	0.213 mg/L	0.2 mg/L	107	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0205 mg/L	0.02 mg/L	103	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0214 mg/L	0.02 mg/L	107	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Total Metals (QCLot: 908147) - continued										
WP2305502-001	AQM71	Barium, total	7440-39-3	E420	0.0216 mg/L	0.02 mg/L	108	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0420 mg/L	0.04 mg/L	105	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0104 mg/L	0.01 mg/L	104	70.0	130	----
		Boron, total	7440-42-8	E420	0.110 mg/L	0.1 mg/L	110	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00427 mg/L	0.004 mg/L	107	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	4 mg/L	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0104 mg/L	0.01 mg/L	104	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0428 mg/L	0.04 mg/L	107	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0216 mg/L	0.02 mg/L	108	70.0	130	----
		Copper, total	7440-50-8	E420	0.0215 mg/L	0.02 mg/L	107	70.0	130	----
		Iron, total	7439-89-6	E420	2.03 mg/L	2 mg/L	101	70.0	130	----
		Lead, total	7439-92-1	E420	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0957 mg/L	0.1 mg/L	95.7	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0430 mg/L	0.04 mg/L	107	70.0	130	----
		Phosphorus, total	7723-14-0	E420	11.1 mg/L	10 mg/L	111	70.0	130	----
		Potassium, total	7440-09-7	E420	4.16 mg/L	4 mg/L	104	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0210 mg/L	0.02 mg/L	105	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0418 mg/L	0.04 mg/L	104	70.0	130	----
		Silicon, total	7440-21-3	E420	9.39 mg/L	10 mg/L	93.9	70.0	130	----
		Silver, total	7440-22-4	E420	0.00396 mg/L	0.004 mg/L	98.9	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	2 mg/L	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	20.4 mg/L	20 mg/L	102	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0385 mg/L	0.04 mg/L	96.4	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00415 mg/L	0.004 mg/L	104	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0213 mg/L	0.02 mg/L	107	70.0	130	----
		Tin, total	7440-31-5	E420	0.0198 mg/L	0.02 mg/L	99.2	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0410 mg/L	0.04 mg/L	103	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0199 mg/L	0.02 mg/L	99.6	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00432 mg/L	0.004 mg/L	108	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.108 mg/L	0.1 mg/L	108	70.0	130	----
		Zinc, total	7440-66-6	E420	0.423 mg/L	0.4 mg/L	106	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 908147) - continued										
WP2305502-001	AQM71	Zirconium, total	7440-67-7	E420	0.0385 mg/L	0.04 mg/L	96.2	70.0	130	----
Dissolved Metals (QCLot: 908152)										
WP2305502-001	AQM71	Aluminum, dissolved	7429-90-5	E421	0.228 mg/L	0.2 mg/L	114	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0217 mg/L	0.02 mg/L	109	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0458 mg/L	0.04 mg/L	114	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0106 mg/L	0.01 mg/L	106	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.110 mg/L	0.1 mg/L	110	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00409 mg/L	0.004 mg/L	102	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	4 mg/L	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0104 mg/L	0.01 mg/L	104	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0419 mg/L	0.04 mg/L	105	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0214 mg/L	0.02 mg/L	107	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0210 mg/L	0.02 mg/L	105	70.0	130	----
		Iron, dissolved	7439-89-6	E421	2.00 mg/L	2 mg/L	99.9	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0217 mg/L	0.02 mg/L	109	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.114 mg/L	0.1 mg/L	114	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	1 mg/L	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0424 mg/L	0.04 mg/L	106	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	11.5 mg/L	10 mg/L	115	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	4.58 mg/L	4 mg/L	114	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0218 mg/L	0.02 mg/L	109	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0408 mg/L	0.04 mg/L	102	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	10.4 mg/L	10 mg/L	104	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00401 mg/L	0.004 mg/L	100	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	2.01 mg/L	2 mg/L	100	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	0.02 mg/L	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	22.0 mg/L	20 mg/L	110	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0417 mg/L	0.04 mg/L	104	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00417 mg/L	0.004 mg/L	104	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0225 mg/L	0.02 mg/L	112	70.0	130	----
				Tin, dissolved	7440-31-5	E421	0.0196 mg/L	0.02 mg/L	98.0	70.0



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 908152) - continued										
WP2305502-001	AQM71	Titanium, dissolved	7440-32-6	E421	0.0414 mg/L	0.04 mg/L	103	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00427 mg/L	0.004 mg/L	107	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.107 mg/L	0.1 mg/L	107	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.421 mg/L	0.4 mg/L	105	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0421 mg/L	0.04 mg/L	105	70.0	130	----
Speciated Metals (QCLot: 908101)										
WP2305502-006	AQF40	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0397 mg/L	0.04 mg/L	99.3	70.0	130	----
Speciated Metals (QCLot: 909847)										
WP2305502-001	AQM71	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0396 mg/L	0.04 mg/L	99.0	70.0	130	----



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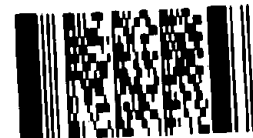
Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 22 -

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Environmental Division
Winnipeg
Work Order Reference
WP2305502



Telephone: +1 204 265 9720

Report To Contact and company name below will appear on the final report		Reports / Recipients		Turnaround Time (TAT) Requested	
Company:	Stantec Consulting	Select Report Format:	☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)	☒ Routine [R] if received by 3pm M-F - no surcharges apply	
Contact:	Karen Mathers	Merge QC/QCI Reports with COA	☐ YES ☐ NO ☐ N/A	☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum	
Phone:	204-928-7621	☐ Compare Results to Criteria on Report - provide details below if box checked		☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum	
Company address below will appear on the final report		Select Distribution:	☒ EMAIL ☐ MAIL ☐ FAX	☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum	
Street:	500 - 311 Portage Ave	Email 1 or Fax	Karen.Mathers@stantec.com	☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum	
City/Province:	Winnipeg, MB	Email 2	Brad.Horne@stantec.com	☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.	
Postal Code:	R3B 2B9	Email 3	Jeremy.Jackson@stantec.com	Additional fees may apply to rush requests on weekends, statuts	
Invoice To	Same as Report To ☐ YES ☒ NO	Invoice Recipients		Date and Time Required for all E&P TATs:	
	Copy of Invoice with Report ☐ YES ☒ NO	Select Invoice Distribution:	☒ EMAIL ☐ MAIL ☐ FAX	For all tests with rush TATs requested, please contact your AM to confirm availability.	
Company:	Alamos Gold	Email 1 or Fax		Analysis Request	
Contact:		Email 2		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below	
Project Information		Oil and Gas Required Fields (client use)			
ALS Account # / Quote #:	ARG100/WP2022ARG1000003_V3	AFE/Cost Center:	PO#		
Job #:	ALAMOS	Major/Minor Code:	Routing Code:		
PO / AFE:		Requisitioner:			
LSD:		Location:			
ALS Lab Work Order # (ALS use only):		ALS Contact:	JD	Sampler:	BE, AR
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	
	AQM71	18-04-23	1352	W	
	AQM72		1338		
	AQM73		1325		
	AQM28		1251		
	AQM29C		1305		
	AQF40		1006		
	AQF41		1026		
	AQF42		0854		
	AQF43		0908		
	AQF44		0934		
	AQF45		0949		
	AQF46		1128		
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		SAMPLE RECEIPT DETAILS (ALS use only)	
Are samples taken from a Regulated DW System? ☐ YES ☐ NO		all dissolved bottles field filtered		Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED	
Are samples for human consumption/ use? ☐ YES ☐ NO				Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO	
				Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A	
				INITIAL COOLER TEMPERATURES °C	
				FINAL COOLER TEMPERATURES °C	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)		FINAL SHIPMENT RECEPTION (ALS use only)	
Released by:	Date:	Time:	Received by:	Date:	Time:
B. Dyer	19-04-23		JB	APR 20 2023	11:03

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WHITE - LABORATORY COPY YELLOW - CLIENT COPY

FEB 2022 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

C.2 Hold time exceedance information sheet





Hold Times: General Information & Interpretation of Exceedances

Version: Nov 14, 2017

A sample hold time is the recommended maximum time between sampling and analysis, and is defined for specific tests matched with sample matrix and sample preservation practices where applicable. Maximum hold times are established and intended as best-practice guidance to protect the integrity of test samples, and to minimize the potential for significant changes to samples prior to analysis, due to mechanisms like bacterial action, chemical reaction, and evaporative loss. Despite common perception, hold times are not intended to be used as fixed limits for validation or invalidation of test results; rather, they are intended to define the best-practice for holding time that will ensure valid results.

Where available and established, ALS Canada uses hold time guidelines established either by specific provincial regulators (e.g. British Columbia MOE, Ontario MOE), or by the CCME (Canadian Council of Ministers of the Environment). In the absence of CCME or provincial hold time guidelines, ALS uses published guidelines from other reputable public or government organizations such as the US EPA, the American Public Health Association (APHA), or Environment Canada.

Rigorous scientific studies are not always available to substantiate reliable hold time recommendations for all test methods. Because of this, published hold time guidelines may sometimes be somewhat arbitrary, and in many cases are very conservative. This problem has been recognized by the US EPA, and was the impetus for a 2006 EPA study titled "Sample Holding Time Re-Evaluation". The EPA introduction to this project stated the following:

"While holding times may appear adequate to protect sample integrity and provide sufficient time for laboratory analysis, relevant data is sparse on individually defined holding times and, thus, some of the holding times appear to be arbitrary and/or politically driven. Holding times appear to be arbitrary when a single value is applied over a large general class of compounds (e.g., pesticides or polycyclic aromatic hydrocarbons); when the holding time was originally "established" for aqueous media and then blindly applied to other media (e.g., sediments and tissues); or when a contaminant is known to be chemically highly stable and will still be present in the sample even if the sample is not extracted in the regulatory time frame. For example, if PCBs significantly degraded after 7 days, then there would not be an environmental problem with PCBs today."

Another important reason for conservatism in hold time guidelines is that a single guideline may be applied to a vast range of different sample types and compositions. A hold time guideline that is appropriate for a wastewater with complex chemical and microbiological composition may be overly conservative for less complex samples. Thus, it is important to note that for many test parameters and for many sample types, no noticeable degradation or change to results will be observed long after the recommended hold time has passed.

With consideration of conservatism of some specific hold time guidelines, the potential for data quality impact due to hold times can sometimes be evaluated as a function of the degree of exceedance of the recommended hold time. If analysis within a recommended hold time is understood to prevent data quality issues, then it should be clear that a very minimal exceedance of the recommended hold time (e.g. as a percentage of the original hold time) cannot cause test results to immediately become compromised.

When analytical hold times are exceeded, it is common practice to apply professional judgement to assess whether the results may still be useable and fit-for-purpose. For most tests (with the exception of microbiological tests used for health purposes), where samples have been stored appropriately (e.g. under refrigeration), ALS normally recommends that test results with hold time exceedances of less than 50% of the recommended hold time may be considered valid and defensible, with the caveat that the measurement uncertainty associated with those test results may be higher than usual. A common approach under the US EPA Contract Laboratory Program is to flag test results with marginal hold time exceedances as "estimates" to indicate that a higher than usual degree of uncertainty. For more significant hold time exceedances, the environmental fate and stability characteristics of the specific substance(s) being tested should be considered prior to determining whether test results may or may not still be fit-for-purpose. As part of the evaluation of any test results that may have been analyzed beyond the recommended hold time, ALS also recommends to consider consistency with historical or expected test results, or with other available test results from related or similar samples (e.g. from other samples at the same site).

Many regulators will accept test results analyzed beyond best-practice hold times if professional judgment indicates that the results should still be defensible and fit-for-purpose, with consideration of the specific factors described above.

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Appendix D



D.1 Statistical Summary of Screening Results



Parameter of Potential Concern	Corrected Site ID	Detection Limit	Units	MWQG (long-term)		MWQG (short-term)		CCME (long-term)		CCME (short-term)		Summary Statistics				Number (and percent) of Samples in Exceedance	Maximum Magnitude of Exceedance (x-fold guideline)			
				Min	Max	Min	Max	Min	Max	Min	Max	N	Min	Mean	Max		MWQG LT	MWQG ST	CCME LT	CCME ST
Phosphorus (total)	AQF40	0.001 - 0.05	mg/L	0.025	-	-	-	-	-	-	-	14	0.01000	0.0188	0.025	-	-	-	-	-
	AQF41	0.001 - 0.05	mg/L	0.025	-	-	-	-	-	-	-	11	0.01170	0.0193	0.031	1 (9%)	1.2	-	-	-
	AQF42	0.001 - 0.05	mg/L	0.025	-	-	-	-	-	-	-	11	0.01390	0.0191	0.0303	1 (9%)	1.2	-	-	-
	AQF43	0.001 - 0.05	mg/L	0.025	-	-	-	-	-	-	-	11	0.01000	0.0176	0.031	1 (9%)	1.2	-	-	-
	AQF44	0.001 - 0.05	mg/L	0.025	-	-	-	-	-	-	-	11	0.01000	0.0162	0.025	-	-	-	-	-
	AQF45	0.001 - 0.05	mg/L	0.025	-	-	-	-	-	-	-	12	0.01000	0.0138	0.0201	-	-	-	-	-
Ammonia(N) (total)	AQF40	0.01	mg/L	3.57	4.68	17.5	32.6	1.26	12.5	-	-	14	0.005	0.0186	0.093	-	-	-	-	-
	AQF41	0.01	mg/L	3.57	4.68	17.5	32.6	1.26	39.4	-	-	11	0.005	0.0165	0.043	-	-	-	-	-
	AQF42	0.01	mg/L	3.32	4.68	15.3	32.6	1.26	12.5	-	-	11	0.005	0.0227	0.053	-	-	-	-	-
	AQF43	0.01	mg/L	3.32	4.68	15.3	32.6	1.26	12.5	-	-	11	0.005	0.0143	0.031	-	-	-	-	-
	AQF44	0.01	mg/L	3.57	4.61	17.5	31.3	1.26	3.96	-	-	11	0.005	0.551	5.83	1 (9%)	1.6	-	4.6	-
	AQF45	0.01	mg/L	3.78	4.68	19.7	32.6	1.26	39.4	-	-	12	0.005	0.0173	0.051	-	-	-	-	-
Aluminum (total)	AQF40	0.003	mg/L	0.005	0.1	-	-	0.005	0.1	-	-	14	0.034	0.0488	0.0824	3 (21%)	8.8	-	8.8	-
	AQF41	0.003	mg/L	0.005	0.1	-	-	0.005	0.1	-	-	11	0.0331	0.0561	0.105	4 (36%)	21	-	21	-
	AQF42	0.003	mg/L	0.005	0.1	-	-	0.005	0.1	-	-	11	0.0373	0.0655	0.158	5 (45%)	11	-	11	-
	AQF43	0.003	mg/L	0.005	0.1	-	-	0.005	0.1	-	-	11	0.0359	0.0489	0.0681	2 (18%)	12	-	12	-
	AQF44	0.003	mg/L	0.1	0.1	-	-	0.1	0.1	-	-	11	0.0364	0.0581	0.109	1 (9%)	1.1	-	1.1	-
	AQF45	0.003	mg/L	0.005	0.1	-	-	0.005	0.1	-	-	12	0.0425	0.064	0.112	4 (33%)	13	-	13	-
Chromium VI* (total)	AQF40	0.0005	mg/L	0.00001	0.16	-	-	-	-	-	-	12	0.00025	0.000293	0.00052	12 (100%)	52	-	-	-
	AQF41	0.0005	mg/L	0.00001	0.16	-	-	-	-	-	-	11	0.00025	0.000285	0.00064	11 (100%)	64	-	-	-
	AQF42	0.0005	mg/L	0.00001	0.16	-	-	-	-	-	-	11	0.00025	0.00028	0.00058	11 (100%)	58	-	-	-
	AQF43	0.0005	mg/L	0.00001	0.16	-	-	-	-	-	-	11	0.00025	0.00051	0.0018	11 (100%)	180	-	-	-
	AQF44	0.0005	mg/L	0.00001	0.16	-	-	-	-	-	-	11	0.00025	0.000299	0.00053	11 (100%)	53	-	-	-
	AQF45	0.0005	mg/L	0.00001	0.16	-	-	-	-	-	-	12	0.00025	0.000482	0.00251	12 (100%)	250	-	-	-
Copper (dissolved)	AQF40	0.0002	mg/L	0.0012	0.00156	0.00147	0.00195	-	-	-	-	14	0.00022	0.00146	0.00504	6 (42%)	3.9	3.1	-	-
	AQF41	0.0002	mg/L	0.00119	0.00153	0.00145	0.00191	-	-	-	-	11	0.00021	0.00127	0.0041	4 (36%)	3.3	2.7	-	-
	AQF42	0.0002	mg/L	0.00118	0.00159	0.00144	0.00199	-	-	-	-	11	0.00021	0.00109	0.00323	4 (36%)	2.7	2.2	-	-
	AQF43	0.0002	mg/L	0.00123	0.00153	0.0015	0.00191	-	-	-	-	11	0.00022	0.00134	0.00509	4 (36%)	3.8	3.1	-	-
	AQF44	0.0002	mg/L	0.00122	0.00162	0.00149	0.00204	-	-	-	-	11	0.00025	0.00159	0.00457	6 (55%)	3.1	2.5	-	-
	AQF45	0.0002	mg/L	0.00127	0.00183	0.00156	0.00233	-	-	-	-	12	0.000235	0.00127	0.00418	4 (33%)	2.8	2.2	-	-
Iron (total)	AQF40	0.01	mg/L	0.3	-	-	-	0.3	-	-	-	14	0.158	0.264	0.452	2 (14%)	1.5	-	1.5	-
	AQF41	0.01	mg/L	0.3	-	-	-	0.3	-	-	-	11	0.194	0.329	0.586	4 (36%)	2	-	2	-
	AQF42	0.01	mg/L	0.3	-	-	-	0.3	-	-	-	11	0.172	0.335	0.586	6 (55%)	2	-	2	-
	AQF43	0.01	mg/L	0.3	-	-	-	0.3	-	-	-	11	0.197	0.266	0.354	2 (18%)	1.2	-	1.2	-
	AQF44	0.01	mg/L	0.3	-	-	-	0.3	-	-	-	11	0.207	0.285	0.36	4 (36%)	1.2	-	1.2	-
	AQF45	0.01	mg/L	0.3	-	-	-	0.3	-	-	-	12	0.207	0.279	0.363	4 (33%)	1.2	-	1.2	-
Lead (dissolved)	AQF40	0.00005	mg/L	0.000181	0.000256	0.00465	0.00656	-	-	-	-	14	0.000025	7.15E-05	0.00018	-	-	-	-	-
	AQF41	0.00005	mg/L	0.000178	0.000249	0.00457	0.00639	-	-	-	-	11	0.000025	5.36E-05	0.000162	-	-	-	-	-
	AQF42	0.00005	mg/L	0.000177	0.000262	0.00455	0.00673	-	-	-	-	11	0.000025	5.97E-05	0.000154	-	-	-	-	-
	AQF43	0.00005	mg/L	0.000186	0.000249	0.00477	0.00639	-	-	-	-	11	0.000025	0.00061	0.00626	1 (9%)	30	1.2	-	-
	AQF44	0.00005	mg/L	0.000184	0.000269	0.00473	0.00691	-	0	-	-	11	0.000025	6.61E-05	0.000167	-	-	-	-	-
	AQF45	0.00005	mg/L	0.000196	0.000317	0.00502	0.00814	-	-	-	-	12	0.000025	4.91E-05	0.000159	-	-	-	-	-
Zinc (dissolved)	AQF40	0.001	mg/L	0.0161	0.0208	0.016	0.0207	0.00589	0.0154	0.0186	0.0245	14	0.0005	0.00365	0.0103	-	-	-	-	-
	AQF41	0.001	mg/L	0.0159	0.0204	0.0158	0.0203	0.00581	0.019	0.0184	0.0238	11	0.0005	0.00448	0.0256	1 (9%)	1.4	1.5	2.6	1.2
	AQF42	0.001	mg/L	0.0159	0.0212	0.0157	0.0211	0.00522	0.0175	0.0183	0.0254	11	0.0005	0.00315	0.009	-	-	-	-	-
	AQF43	0.001	mg/L	0.0164	0.0204	0.0163	0.0203	0.00609	0.0144	0.0194	0.0237	11	0.0005	0.00197	0.0048	-	-	-	-	-
	AQF44	0.001	mg/L	0.0163	0.0217	0.0162	0.0215	0.00663	0.0142	0.0192	0.025	11	0.0005	0.00221	0.005	-	-	-	-	-
	AQF45	0.001	mg/L	0.0171	0.0245	0.0169	0.0243	0.00712	0.0323	0.0199	0.0282	12	0.0005	0.00176	0.006	-	-	-	-	-

Notes:

MWQG = Manitoba Water Quality Guideline; CCME = Canadian Council of Ministers of the Environment; MDMER = Metal and Diamond Mine Effluent Regulations; ST = short-term; LT = long-term

* The detection limit for chromium VI (0.0005 mg/L) is greater than the long-term Manitoba water quality guideline (0.00001 mg/L); several of the guideline exceedances are non-detects.

Appendix E



E.1 Summary of the median, 90th percentile and 10th percentile mixed concentrations for May through October



Monthly Hughes River flow rate and base-case pumping rate

Scenario	Statistic	Station	Month	D_Oxygen_fie	D_Oxygen	ORP_field	pH_field	Specific_	TDS_field	Temp_fiel	Turbidity_	Alkalinity(	(CO3)_car	(HCO3)_bi	(OH)_hydr	Conducti	DOC_D	Hardness	Hardness
				ld	_percent_			Conducta				CaCO3)_T	bonate	carbonate	oxide			(CaCO3)_	(CaCO3)_
				mg/L	%			nce_field				mg/L	mg/L	mg/L	mg/L			D	T
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.5		12.8	0.300	16	0.17				14
	90th percentile	Downstream Stations	May - Oct	13.8	118					19.3		14.1	0.300	17	0.17				15
	10th percentile	Downstream Stations	May - Oct	7.6	78					3.6		11.0	0.300	13	0.17				13
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.4		13.8	0.300	17	0.17				15
	90th percentile	Downstream Stations	May - Oct	13.7	117					19.3		15.1	0.300	18	0.17				16
	10th percentile	Downstream Stations	May - Oct	7.6	78					3.6		12.3	0.300	15	0.17				14
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.6		11.2	0.300	14	0.17				12
	90th percentile	Downstream Stations	May - Oct	13.8	118					19.5		12.6	0.300	15	0.17				14
	10th percentile	Downstream Stations	May - Oct	7.6	79					3.5		9.5	0.300	12	0.17				11
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.5		12.8	0.300	16	0.17				14
	90th percentile	Downstream Stations	May - Oct	13.7	118					19.3		14.1	0.300	17	0.17				15
	10th percentile	Downstream Stations	May - Oct	7.6	78					3.6		10.9	0.300	13	0.17				13
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.0	90					14.4		13.8	0.300	17	0.17				15
	90th percentile	Downstream Stations	May - Oct	13.6	117					19.3		15.1	0.300	18	0.17				16
	10th percentile	Downstream Stations	May - Oct	7.6	78					3.6		12.3	0.300	15	0.17				14
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.6		11.2	0.300	14	0.17				12
	90th percentile	Downstream Stations	May - Oct	13.8	118					19.5		12.6	0.300	15	0.17				14
	10th percentile	Downstream Stations	May - Oct	7.6	79					3.5		9.5	0.300	12	0.17				11
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.6		11.3	0.300	14	0.17				12
	90th percentile	Downstream Stations	May - Oct	13.8	118					19.5		12.6	0.300	15	0.17				14
	10th percentile	Downstream Stations	May - Oct	7.6	79					3.6		9.5	0.300	12	0.17				11

Monthly Hughes River flow rate and base-case pumping rate cont'd																				
Scenario	Statistic	Station	Month	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia (N)_T	Nitrate(N)	Nitrite(N)	Nitrite_nit rate(N)	Nitrogen(TKN)	Phosphor us_D	Phosphor us_T	Bromide	Chloride	Fluoride	Sulfate(S O4)
				pH	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.011	0.010	0.001	0.019			0.015	0.05	0.31	0.064	3.74
	90th percentile	Downstream Stations	May - Oct				9.8			0.034	0.032	0.005	0.038			0.020	0.05	0.36	0.066	3.85
	10th percentile	Downstream Stations	May - Oct				8.7			0.007	0.003	0.001	0.003			0.013	0.05	0.25	0.058	2.59
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct				9.1			0.012	0.010	0.001	0.019			0.015	0.05	0.34	0.064	4.78
	90th percentile	Downstream Stations	May - Oct				9.8			0.035	0.032	0.005	0.038			0.020	0.05	0.39	0.066	5.01
	10th percentile	Downstream Stations	May - Oct				8.7			0.009	0.004	0.001	0.003			0.013	0.05	0.28	0.058	4.39
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.010	0.010	0.001	0.019			0.015	0.05	0.27	0.063	1.92
	90th percentile	Downstream Stations	May - Oct				9.9			0.032	0.032	0.005	0.038			0.020	0.05	0.32	0.065	2.28
	10th percentile	Downstream Stations	May - Oct				8.8			0.006	0.003	0.001	0.003			0.013	0.05	0.21	0.057	1.36
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.011	0.010	0.001	0.019			0.015	0.05	0.31	0.064	3.72
	90th percentile	Downstream Stations	May - Oct				9.8			0.034	0.032	0.005	0.038			0.020	0.05	0.36	0.066	3.83
	10th percentile	Downstream Stations	May - Oct				8.7			0.007	0.003	0.001	0.003			0.013	0.05	0.25	0.058	2.58
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.1			0.012	0.010	0.001	0.019			0.015	0.05	0.34	0.064	4.76
	90th percentile	Downstream Stations	May - Oct				9.8			0.034	0.032	0.005	0.038			0.020	0.05	0.39	0.066	4.98
	10th percentile	Downstream Stations	May - Oct				8.7			0.008	0.004	0.001	0.003			0.013	0.05	0.28	0.058	4.37
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.009	0.010	0.001	0.019			0.015	0.05	0.27	0.063	1.91
	90th percentile	Downstream Stations	May - Oct				9.9			0.032	0.032	0.005	0.038			0.020	0.05	0.32	0.065	2.27
	10th percentile	Downstream Stations	May - Oct				8.8			0.006	0.003	0.001	0.003			0.013	0.05	0.21	0.057	1.35
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.010	0.010	0.001	0.019			0.015	0.05	0.27	0.063	1.92
	90th percentile	Downstream Stations	May - Oct				9.9			0.033	0.032	0.005	0.038			0.020	0.05	0.32	0.065	2.28
	10th percentile	Downstream Stations	May - Oct				8.8			0.006	0.003	0.001	0.003			0.013	0.05	0.21	0.057	1.36

Monthly Hughes River flow rate and base-case pumping rate cont'd

Scenario	Statistic	Station	Month	Aluminu m_T	Antimony _T	Arsenic_T	Barium_T	Beryllium _T	Bismuth_T	Boron_T	Cadmium _T	Calcium_ T	Cesium_T	Chromiu m_T	Chromiu mVI_T	Cobalt_T	Copper_T	Iron_T	Lead_T	Lithium_T
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.057	0.00005	0.00028	0.0063	0.00005	0.000025	0.0057	2.5E-06	4.4	0.000010	0.000193		5.28E-05	0.00025	0.27	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.074	0.00005	0.00031	0.0067	0.00005	0.000025	0.0057	2.5E-06	4.9	0.000010	0.000264		5.29E-05	0.00025	0.37	6.1E-05	0.0016
	10th percentile	Downstream Stations	May - Oct	0.041	0.00005	0.00024	0.0058	0.00005	0.000025	0.0054	2.5E-06	4.1	0.000008	0.000139		5.17E-05	0.00025	0.21	0.000025	0.0006
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.056	0.00005	0.00032	0.0065	0.00005	0.000025	0.0059	2.5E-06	4.9	0.000011	0.000192		5.37E-05	0.00025	0.28	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.074	0.00005	0.00034	0.0068	0.00005	0.000025	0.0060	2.5E-06	5.3	0.000011	0.000263		5.39E-05	0.00025	0.37	6.07E-05	0.0016
	10th percentile	Downstream Stations	May - Oct	0.041	0.00005	0.00029	0.0059	0.00005	0.000025	0.0058	2.5E-06	4.7	0.000010	0.000139		5.33E-05	0.00025	0.22	0.000025	0.0006
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.057	0.00005	0.00024	0.0061	0.00005	0.000025	0.0053	2.5E-06	3.5	0.000007	0.000194		5.12E-05	0.00025	0.27	0.000025	0.0011
	90th percentile	Downstream Stations	May - Oct	0.075	0.00005	0.00026	0.0064	0.00005	0.000025	0.0054	2.5E-06	4.1	0.000008	0.000266		5.16E-05	0.00025	0.36	6.13E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.041	0.00005	0.00020	0.0056	0.00005	0.000025	0.0052	2.5E-06	3.3	0.000006	0.00014		5.06E-05	0.00025	0.20	0.000025	0.0005
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.057	0.00005	0.00028	0.0063	0.00005	0.000025	0.0057	2.5E-06	4.3	0.000009	0.000193		5.26E-05	0.00025	0.27	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.074	0.00005	0.00031	0.0067	0.00005	0.000025	0.0057	2.5E-06	4.8	0.000009	0.000264		5.27E-05	0.00025	0.37	6.1E-05	0.0016
	10th percentile	Downstream Stations	May - Oct	0.041	0.00005	0.00024	0.0058	0.00005	0.000025	0.0054	2.5E-06	4.1	0.000008	0.000138		5.16E-05	0.00025	0.21	0.000025	0.0006
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.056	0.00005	0.00031	0.0065	0.00005	0.000025	0.0059	2.5E-06	4.9	0.000011	0.000192		5.35E-05	0.00025	0.28	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.074	0.00005	0.00034	0.0068	0.00005	0.000025	0.0060	2.5E-06	5.2	0.000011	0.000262		5.37E-05	0.00025	0.37	6.07E-05	0.0016
	10th percentile	Downstream Stations	May - Oct	0.041	0.00005	0.00028	0.0059	0.00005	0.000025	0.0058	2.5E-06	4.7	0.000010	0.000138		5.31E-05	0.00025	0.22	0.000025	0.0006
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.057	0.00005	0.00024	0.0061	0.00005	0.000025	0.0053	2.5E-06	3.5	0.000007	0.000194		5.12E-05	0.00025	0.27	0.000025	0.0011
	90th percentile	Downstream Stations	May - Oct	0.075	0.00005	0.00025	0.0064	0.00005	0.000025	0.0054	2.5E-06	4.1	0.000007	0.000266		5.15E-05	0.00025	0.36	6.13E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.041	0.00005	0.00020	0.0056	0.00005	0.000025	0.0052	2.5E-06	3.3	0.000006	0.000139		5.06E-05	0.00025	0.20	0.000025	0.0005
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.057	0.00005	0.00024	0.0061	0.00005	0.000025	0.0053	2.5E-06	3.6	0.000007	0.000195		5.14E-05	0.00025	0.27	0.000025	0.0011
	90th percentile	Downstream Stations	May - Oct	0.075	0.00005	0.00026	0.0065	0.00005	0.000025	0.0054	2.5E-06	4.1	0.000008	0.000266		5.17E-05	0.00025	0.36	6.13E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.041	0.00005	0.00020	0.0056	0.00005	0.000025	0.0052	2.5E-06	3.3	0.000006	0.00014		5.07E-05	0.00025	0.21	0.000025	0.0005

Monthly Hughes River flow rate and base-case pumping rate cont'd

Scenario	Statistic	Station	Month	Magnesium_T	Manganese_T	Mercury_T	Molybdenum_T	Nickel_T	Potassium_T	Rubidium_T	Selenium_T	Silicon_T	Silver_T	Sodium_T	Strontium_T	Sulfur_T	Tellurium_T	Thallium_T	Thorium_T	Tin_T
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.3	0.032	1.91E-06	0.000101	0.00025	0.63	0.0011	2.55E-05	2.3	0.000005	1.4	0.017	1.33	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.4	0.041	2.5E-06	0.000126	0.000535	0.66	0.0012	5.78E-05	2.6	0.000005	1.5	0.018	1.36	0.0001	5.0E-06	5.0E-05	0.00027
	10th percentile	Downstream Stations	May - Oct	1.1	0.028	1.14E-06	7.17E-05	0.00025	0.60	0.0010	2.53E-05	2.1	0.000005	1.2	0.015	0.91	0.0001	5.0E-06	5.0E-05	0.00006
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.4	0.038	1.91E-06	0.000104	0.00025	0.67	0.0012	2.57E-05	2.3	0.000005	1.5	0.018	1.68	0.0001	5.0E-06	5.0E-05	0.00007
	90th percentile	Downstream Stations	May - Oct	1.5	0.046	2.5E-06	0.000129	0.000533	0.71	0.0013	5.77E-05	2.6	0.000005	1.6	0.020	1.74	0.0001	5.0E-06	5.0E-05	0.00027
	10th percentile	Downstream Stations	May - Oct	1.3	0.032	1.15E-06	7.53E-05	0.00025	0.65	0.0011	2.56E-05	2.1	0.000005	1.4	0.017	1.51	0.0001	5.0E-06	5.0E-05	0.00006
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.0	0.025	1.9E-06	9.63E-05	0.00025	0.57	0.0011	2.52E-05	2.3	0.000005	1.2	0.015	0.73	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.2	0.033	2.5E-06	0.000123	0.000537	0.61	0.0012	5.78E-05	2.5	0.000005	1.3	0.015	0.85	0.0001	5.0E-06	5.0E-05	0.00026
	10th percentile	Downstream Stations	May - Oct	0.9	0.020	1.13E-06	6.67E-05	0.00025	0.55	0.0010	2.51E-05	2.1	0.000005	1.1	0.013	0.50	0.0001	5.0E-06	5.0E-05	0.00005
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.3	0.032	1.91E-06	0.000101	0.00025	0.63	0.0011	0.000025	2.3	0.000005	1.4	0.017	1.31	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.4	0.041	2.5E-06	0.000126	0.000535	0.66	0.0012	5.72E-05	2.5	0.000005	1.5	0.018	1.34	0.0001	5.0E-06	5.0E-05	0.00026
	10th percentile	Downstream Stations	May - Oct	1.1	0.027	1.14E-06	7.12E-05	0.00025	0.60	0.0010	0.000025	2.1	0.000005	1.2	0.015	0.90	0.0001	5.0E-06	5.0E-05	0.00006
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.4	0.037	1.91E-06	0.000103	0.00025	0.67	0.0012	0.000025	2.3	0.000005	1.5	0.018	1.66	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.5	0.046	2.5E-06	0.000128	0.000533	0.71	0.0013	5.71E-05	2.6	0.000005	1.6	0.020	1.72	0.0001	5.0E-06	5.0E-05	0.00027
	10th percentile	Downstream Stations	May - Oct	1.3	0.032	1.15E-06	7.45E-05	0.00025	0.65	0.0011	0.000025	2.1	0.000005	1.4	0.017	1.49	0.0001	5.0E-06	5.0E-05	0.00006
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.0	0.025	1.9E-06	9.6E-05	0.00025	0.57	0.0011	0.000025	2.3	0.000005	1.2	0.015	0.72	0.0001	5.0E-06	5.0E-05	0.00005
	90th percentile	Downstream Stations	May - Oct	1.2	0.033	2.5E-06	0.000123	0.000537	0.61	0.0012	5.75E-05	2.5	0.000005	1.3	0.015	0.84	0.0001	5.0E-06	5.0E-05	0.00026
	10th percentile	Downstream Stations	May - Oct	0.9	0.020	1.13E-06	6.65E-05	0.00025	0.55	0.0010	0.000025	2.1	0.000005	1.1	0.013	0.49	0.0001	5.0E-06	5.0E-05	0.00005
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.0	0.025	1.9E-06	9.65E-05	0.000252	0.57	0.0011	2.53E-05	2.3	0.000005	1.2	0.015	0.74	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.2	0.033	2.5E-06	0.000123	0.000539	0.61	0.0012	5.79E-05	2.5	0.000005	1.3	0.015	0.87	0.0001	5.0E-06	5.0E-05	0.00027
	10th percentile	Downstream Stations	May - Oct	0.9	0.020	1.13E-06	6.69E-05	0.000251	0.55	0.0010	2.52E-05	2.1	0.000005	1.1	0.013	0.50	0.0001	5.0E-06	5.0E-05	0.00006

Monthly Hughes River flow rate and base-case pumping rate cont'd

Scenario	Statistic	Station	Month	Titanium_ T	Tungsten _T	Uranium_ T	Vanadium _T	Zinc_T	Zirconiu m_T	Aluminu m_D	Antimony _D	Arsenic_ D	Barium_D	Beryllium _D	Bismuth_ D	Boron_D	Cadmium _D	Calcium_ D	Cesium_ D	Chromiu m_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.0017	5.14E-05	8.86E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00023	0.005807	0.00005	0.000025	0.0058	2.5E-06	4.2	9.48E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0025	5.15E-05	9.63E-05	0.00025	0.004842	0.000104	0.036	0.00005	0.00026	0.008767	0.00005	0.000025	0.0058	2.5E-06	4.6	9.55E-06	0.000138
	10th percentile	Downstream Stations	May - Oct	0.0010	5.09E-05	6.59E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00020	0.005243	0.00005	0.000025	0.0055	2.5E-06	4.0	7.7E-06	7.65E-05
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.19E-05	0.00011	0.00025	0.0015	0.0001	0.029	0.00005	0.00025	0.005959	0.00005	0.000025	0.0060	2.5E-06	4.8	1.1E-05	0.000118
	90th percentile	Downstream Stations	May - Oct	0.0025	5.2E-05	0.000115	0.00025	0.00482	0.000104	0.036	0.00005	0.00028	0.008874	0.00005	0.000025	0.0061	2.5E-06	5.0	1.11E-05	0.000138
	10th percentile	Downstream Stations	May - Oct	0.0010	5.17E-05	0.0001	0.00025	0.0015	0.0001	0.021	0.00005	0.00023	0.005412	0.00005	0.000025	0.0059	2.5E-06	4.6	1.02E-05	7.64E-05
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.0017	5.06E-05	5.35E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00019	0.005568	0.00005	0.000025	0.0053	2.5E-06	3.5	6.96E-06	0.00012
	90th percentile	Downstream Stations	May - Oct	0.0025	5.08E-05	6.69E-05	0.00025	0.004875	0.000104	0.037	0.00005	0.00022	0.008599	0.00005	0.000025	0.0054	2.5E-06	4.0	7.46E-06	0.000139
	10th percentile	Downstream Stations	May - Oct	0.0010	5.03E-05	4.11E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00017	0.004988	0.00005	0.000025	0.0052	2.5E-06	3.2	6.01E-06	7.67E-05
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0017	5.14E-05	8.79E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00022	0.005792	0.00005	0.000025	0.0058	2.5E-06	4.2	9.37E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0025	5.14E-05	9.56E-05	0.00025	0.004842	0.000104	0.036	0.00005	0.00026	0.008753	0.00005	0.000025	0.0058	2.5E-06	4.6	9.44E-06	0.000138
	10th percentile	Downstream Stations	May - Oct	0.0010	5.08E-05	6.55E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00019	0.005228	0.00005	0.000025	0.0055	2.5E-06	4.0	7.63E-06	7.65E-05
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.18E-05	0.000109	0.00025	0.0015	0.0001	0.029	0.00005	0.00025	0.00594	0.00005	0.000025	0.0060	2.5E-06	4.8	1.09E-05	0.000118
	90th percentile	Downstream Stations	May - Oct	0.0025	5.19E-05	0.000114	0.00025	0.00482	0.000104	0.036	0.00005	0.00028	0.008856	0.00005	0.000025	0.0061	2.5E-06	5.0	1.1E-05	0.000138
	10th percentile	Downstream Stations	May - Oct	0.0010	5.16E-05	9.94E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00022	0.005392	0.00005	0.000025	0.0059	2.5E-06	4.5	1E-05	7.64E-05
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0017	5.06E-05	5.32E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00019	0.005561	0.00005	0.000025	0.0053	2.5E-06	3.5	6.91E-06	0.00012
	90th percentile	Downstream Stations	May - Oct	0.0025	5.08E-05	6.66E-05	0.00025	0.004875	0.000104	0.037	0.00005	0.00022	0.008591	0.00005	0.000025	0.0054	2.5E-06	3.9	7.4E-06	0.000139
	10th percentile	Downstream Stations	May - Oct	0.0010	5.03E-05	4.1E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00016	0.004982	0.00005	0.000025	0.0052	2.5E-06	3.2	5.98E-06	7.67E-05
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0017	5.07E-05	5.39E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00020	0.005587	0.00005	0.000025	0.0053	2.52E-06	3.5	7.02E-06	0.00012
	90th percentile	Downstream Stations	May - Oct	0.0025	5.09E-05	6.75E-05	0.00025	0.004875	0.000104	0.037	0.00005	0.00023	0.00862	0.00005	0.000025	0.0054	2.53E-06	4.0	7.54E-06	0.000139
	10th percentile	Downstream Stations	May - Oct	0.0010	5.04E-05	4.14E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00017	0.005005	0.00005	0.000025	0.0052	2.51E-06	3.2	6.04E-06	7.67E-05

Monthly Hughes River flow rate and base-case pumping rate cont'd

Scenario	Statistic	Station	Month	Cobalt_D	Copper_D	Iron_D	Lead_D	Lithium_D	Magnesium_D	Manganese_D	Mercury_D	Molybdenum_D	Nickel_D	Potassium_D	Rubidium_D	Selenium_D	Silicon_D	Silver_D	Sodium_D	Strontium_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	5.29E-05	0.0004	0.15	0.000025	0.000588	1.23	0.020	1.54E-06	0.0001	0.00025	0.620391	0.001031	0.000025	2.2	0.000005	1.3	0.016
	90th percentile	Downstream Stations	May - Oct	5.3E-05	0.0017	0.21	0.00012	0.000955	1.34	0.028	1.92E-06	0.000141	0.00025	0.664238	0.001145	5.15E-05	2.4	0.000005	1.4	0.017
	10th percentile	Downstream Stations	May - Oct	5.18E-05	0.0003	0.12	0.000025	0.000571	1.14	0.015	8.38E-07	8.45E-05	0.00025	0.595492	0.000906	0.000025	2.0	0.000005	1.1	0.014
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	5.38E-05	0.0004	0.15	0.000025	0.000619	1.40	0.025	1.55E-06	0.000104	0.00025	0.661701	0.001057	0.000025	2.2	0.000005	1.4	0.018
	90th percentile	Downstream Stations	May - Oct	5.4E-05	0.0017	0.21	0.000119	0.000984	1.49	0.036	1.93E-06	0.000143	0.00025	0.708057	0.00117	5.14E-05	2.4	0.000005	1.5	0.019
	10th percentile	Downstream Stations	May - Oct	5.34E-05	0.0003	0.12	0.000025	0.000608	1.34	0.021	8.46E-07	8.79E-05	0.00025	0.636586	0.000949	0.000025	2.0	0.000005	1.3	0.016
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	5.13E-05	0.0004	0.15	0.000025	0.000539	1.00	0.012	1.53E-06	9.66E-05	0.00025	0.559603	0.000993	0.000025	2.1	0.000005	1.1	0.014
	90th percentile	Downstream Stations	May - Oct	5.16E-05	0.0017	0.21	0.000121	0.000909	1.14	0.022	1.92E-06	0.000138	0.00025	0.602287	0.001103	5.18E-05	2.4	0.000005	1.3	0.015
	10th percentile	Downstream Stations	May - Oct	5.07E-05	0.0002	0.12	0.000025	0.000528	0.92	0.008	8.26E-07	8.05E-05	0.00025	0.530824	0.000877	0.000025	2.0	0.000005	1.0	0.012
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.29E-05	0.0003	0.15	0.000025	0.000585	1.22	0.019	1.54E-06	9.97E-05	0.00025	0.618999	0.00103	0.000025	2.2	0.000005	1.3	0.016
	90th percentile	Downstream Stations	May - Oct	5.3E-05	0.0017	0.21	0.00012	0.000951	1.33	0.028	1.92E-06	0.000141	0.00025	0.662852	0.001144	5.15E-05	2.4	0.000005	1.4	0.017
	10th percentile	Downstream Stations	May - Oct	5.18E-05	0.0002	0.12	0.000025	0.000568	1.13	0.015	8.38E-07	8.4E-05	0.00025	0.594169	0.000906	0.000025	2.0	0.000005	1.1	0.014
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.38E-05	0.0003	0.15	0.000025	0.000614	1.38	0.024	1.55E-06	0.000103	0.00025	0.659819	0.001055	0.000025	2.2	0.000005	1.4	0.018
	90th percentile	Downstream Stations	May - Oct	5.4E-05	0.0016	0.21	0.000119	0.000979	1.48	0.035	1.93E-06	0.000143	0.00025	0.706197	0.001168	5.14E-05	2.4	0.000005	1.5	0.019
	10th percentile	Downstream Stations	May - Oct	5.34E-05	0.0002	0.12	0.000025	0.000604	1.32	0.021	8.46E-07	8.71E-05	0.00025	0.634832	0.000947	0.000025	2.0	0.000005	1.3	0.016
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.13E-05	0.0003	0.15	0.000025	0.000537	1.00	0.012	1.53E-06	9.64E-05	0.00025	0.55892	0.000993	0.000025	2.1	0.000005	1.1	0.014
	90th percentile	Downstream Stations	May - Oct	5.16E-05	0.0017	0.21	0.000121	0.000908	1.14	0.022	1.92E-06	0.000138	0.00025	0.601711	0.001103	5.18E-05	2.4	0.000005	1.3	0.015
	10th percentile	Downstream Stations	May - Oct	5.07E-05	0.0002	0.12	0.000025	0.000527	0.92	0.007	8.26E-07	8.03E-05	0.00025	0.530203	0.000877	0.000025	2.0	0.000005	1.0	0.012
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.14E-05	0.0004	0.16	2.56E-05	0.000539	1.00	0.012	1.54E-06	9.68E-05	0.000252	0.561011	0.000995	0.000025	2.1	0.000005	1.1	0.014
	90th percentile	Downstream Stations	May - Oct	5.17E-05	0.0017	0.21	0.000121	0.000909	1.15	0.022	1.92E-06	0.000139	0.000252	0.603474	0.001104	5.18E-05	2.4	0.000005	1.3	0.015
	10th percentile	Downstream Stations	May - Oct	5.07E-05	0.0002	0.13	2.53E-05	0.000528	0.93	0.008	8.41E-07	8.07E-05	0.000251	0.532104	0.000878	0.000025	2.0	0.000005	1.0	0.012

Monthly Hughes River flow rate and base-case pumping rate cont'd													
Scenario	Statistic	Station	Month	Sulfur_D	Tellurium_D	Thallium_D	Thorium_D	Tin_D	Titanium_D	Tungsten_D	Uranium_D	Vanadium_D	Zinc_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.36	0.0001	0.000005	0.00005	6.04E-05	0.000445	5.15E-05	9.28E-05	0.00025	0.0014
	90th percentile	Downstream Stations	May - Oct	1.52	0.0001	0.000005	0.00005	0.000202	0.000678	5.16E-05	9.67E-05	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	0.92	0.0001	0.000005	0.00005	5.63E-05	0.000313	5.09E-05	6.57E-05	0.00025	0.0005
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.74	0.0001	0.000005	0.00005	6.41E-05	0.000443	5.2E-05	0.000116	0.00025	0.0014
	90th percentile	Downstream Stations	May - Oct	1.87	0.0001	0.000005	0.00005	0.000205	0.000673	5.21E-05	0.000121	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	1.53	0.0001	0.000005	0.00005	6.19E-05	0.000312	5.18E-05	0.000105	0.00025	0.0005
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.73	0.0001	0.000005	0.00005	5.49E-05	0.000448	5.07E-05	5.35E-05	0.00025	0.0014
	90th percentile	Downstream Stations	May - Oct	0.90	0.0001	0.000005	0.00005	0.000198	0.000681	5.09E-05	6.21E-05	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	0.50	0.0001	0.000005	0.00005	5.23E-05	0.000314	5.04E-05	3.9E-05	0.00025	0.0005
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.34	0.0001	0.000005	0.00005	5.46E-05	0.000445	5.14E-05	9.17E-05	0.00025	0.0014
	90th percentile	Downstream Stations	May - Oct	1.50	0.0001	0.000005	0.00005	0.000197	0.000678	5.15E-05	9.57E-05	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	0.90	0.0001	0.000005	0.00005	5.28E-05	0.000313	5.09E-05	6.51E-05	0.00025	0.0005
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.71	0.0001	0.000005	0.00005	5.62E-05	0.000443	5.19E-05	0.000114	0.00025	0.0014
	90th percentile	Downstream Stations	May - Oct	1.85	0.0001	0.000005	0.00005	0.000198	0.000673	5.2E-05	0.000119	0.00025	0.0044
	10th percentile	Downstream Stations	May - Oct	1.50	0.0001	0.000005	0.00005	5.53E-05	0.000312	5.17E-05	0.000103	0.00025	0.0005
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.72	0.0001	0.000005	0.00005	5.22E-05	0.000448	5.06E-05	5.31E-05	0.00025	0.0014
	90th percentile	Downstream Stations	May - Oct	0.89	0.0001	0.000005	0.00005	0.000196	0.000681	5.08E-05	6.15E-05	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	0.49	0.0001	0.000005	0.00005	5.1E-05	0.000314	5.03E-05	3.87E-05	0.00025	0.0005
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.75	0.0001	0.000005	0.00005	5.95E-05	0.000448	5.07E-05	5.41E-05	0.00025	0.0014
	90th percentile	Downstream Stations	May - Oct	0.92	0.0001	0.000005	0.00005	0.000201	0.000681	5.09E-05	6.28E-05	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	0.51	0.0001	0.000005	0.00005	5.46E-05	0.000314	5.04E-05	3.93E-05	0.00025	0.0005

Monthly Hughes River flow rate and base-case pumping rate cont'd

Scenario	Statistic	Station	Month	D_Oxygen_fie ld	D_Oxygen _percent_ field	ORP_field	pH_field	Specific_ Conducta nce_field	TDS_field	Temp_fiel d	Turbidity_ field	Alkalinity(CaCO3)_T	(CO3)_car bonate	(HCO3)_bi carbonate	(OH)_hydr oxide	Conducti vity	DOC_D	Hardness (CaCO3)_ D	Hardness (CaCO3)_ T
				mg/L	%	mV	pH	uS/cm	mg/L	C	NTU	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	mg/L
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.6		11.3	0.300	14	0.17				12
	90th percentile	Downstream Stations	May - Oct	13.8	118					19.5		12.6	0.300	15	0.17				14
	10th percentile	Downstream Stations	May - Oct	7.6	79					3.6		9.5	0.300	12	0.17				11
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.6		11.3	0.300	14	0.17				12
	90th percentile	Downstream Stations	May - Oct	13.8	118					19.5		12.6	0.300	15	0.17				14
	10th percentile	Downstream Stations	May - Oct	7.6	79					3.6		9.5	0.300	12	0.17				11

Notes:
Pink shaded cell indicates parameter of potential concern (PoPC), identified when mixed concetnration exceeded both the baseline and a WQGL
" _T" indicates total concentration
" _D" indicates dissolved concentration

Monthly Hughes River flow rate and base-case pumping rate cont'd

Scenario	Statistic	Station	Month	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia (N)_T	Nitrate(N)	Nitrite(N)	Nitrite_nit rate(N)	Nitrogen(TKN)	Phosphor us_D	Phosphor us_T	Bromide	Chloride	Fluoride	Sulfate(S O4)
				pH	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.010	0.010	0.001	0.019			0.015	0.05	0.27	0.063	1.92
	90th percentile	Downstream Stations	May - Oct				9.9			0.033	0.032	0.005	0.038			0.020	0.05	0.32	0.065	2.28
	10th percentile	Downstream Stations	May - Oct				8.8			0.006	0.003	0.001	0.003			0.013	0.05	0.21	0.057	1.36
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.010	0.010	0.001	0.019			0.015	0.05	0.27	0.063	1.92
	90th percentile	Downstream Stations	May - Oct				9.9			0.033	0.032	0.005	0.038			0.020	0.05	0.32	0.065	2.28
	10th percentile	Downstream Stations	May - Oct				8.8			0.006	0.003	0.001	0.003			0.013	0.05	0.21	0.057	1.36

Monthly Hughes River flow rate and base-case pumping rate cont'd

Scenario	Statistic	Station	Month	Aluminu m_T	Antimony _T	Arsenic_T	Barium_T	Beryllium _T	Bismuth_T	Boron_T	Cadmium _T	Calcium_ T	Cesium_T	Chromiu m_T	Chromiu mVI_T	Cobalt_T	Copper_T	Iron_T	Lead_T	Lithium_T
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.057	0.00005	0.00024	0.0061	0.00005	0.000025	0.0053	2.5E-06	3.6	0.000007	0.000195		5.14E-05	0.00025	0.27	0.000025	0.0011
	90th percentile	Downstream Stations	May - Oct	0.075	0.00005	0.00026	0.0065	0.00005	0.000025	0.0054	2.5E-06	4.1	0.000008	0.000266		5.17E-05	0.00025	0.36	6.13E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.041	0.00005	0.00020	0.0056	0.00005	0.000025	0.0052	2.5E-06	3.3	0.000006	0.00014		5.07E-05	0.00025	0.21	0.000025	0.0005
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.057	0.00005	0.00024	0.0061	0.00005	0.000025	0.0053	2.5E-06	3.6	0.000007	0.000195		5.14E-05	0.00025	0.27	0.000025	0.0011
	90th percentile	Downstream Stations	May - Oct	0.075	0.00005	0.00026	0.0065	0.00005	0.000025	0.0054	2.5E-06	4.1	0.000008	0.000266		5.17E-05	0.00025	0.36	6.13E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.041	0.00005	0.00020	0.0056	0.00005	0.000025	0.0052	2.5E-06	3.3	0.000006	0.00014		5.07E-05	0.00025	0.21	0.000025	0.0005

Monthly Hughes River flow rate and base-case pumping rate cont'd

Scenario	Statistic	Station	Month	Magnesium_T	Manganese_T	Mercury_T	Molybdenum_T	Nickel_T	Potassium_T	Rubidium_T	Selenium_T	Silicon_T	Silver_T	Sodium_T	Strontium_T	Sulfur_T	Tellurium_T	Thallium_T	Thorium_T	Tin_T
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.0	0.025	1.9E-06	9.65E-05	0.000252	0.57	0.0011	2.53E-05	2.3	0.000005	1.2	0.015	0.74	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.2	0.033	2.5E-06	0.000123	0.000539	0.61	0.0012	5.79E-05	2.5	0.000005	1.3	0.015	0.87	0.0001	5.0E-06	5.0E-05	0.00027
	10th percentile	Downstream Stations	May - Oct	0.9	0.020	1.13E-06	6.69E-05	0.000251	0.55	0.0010	2.52E-05	2.1	0.000005	1.1	0.013	0.50	0.0001	5.0E-06	5.0E-05	0.00006
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.0	0.025	1.9E-06	9.65E-05	0.000252	0.57	0.0011	2.53E-05	2.3	0.000005	1.2	0.015	0.74	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.2	0.033	2.5E-06	0.000123	0.000539	0.61	0.0012	5.79E-05	2.5	0.000005	1.3	0.015	0.87	0.0001	5.0E-06	5.0E-05	0.00027
	10th percentile	Downstream Stations	May - Oct	0.9	0.020	1.13E-06	6.69E-05	0.000251	0.55	0.0010	2.52E-05	2.1	0.000005	1.1	0.013	0.50	0.0001	5.0E-06	5.0E-05	0.00006

Monthly Hughes River flow rate and base-case pumping rate cont'd

Scenario	Statistic	Station	Month	Titanium_ T	Tungsten _T	Uranium_ T	Vanadium _T	Zinc_T	Zirconiu m_T	Aluminu m_D	Antimony _D	Arsenic_ D	Barium_D	Beryllium _D	Bismuth_ D	Boron_D	Cadmium _D	Calcium_ D	Cesium_ D	Chromiu m_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0017	5.07E-05	5.39E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00020	0.005587	0.00005	0.000025	0.0053	2.52E-06	3.5	7.02E-06	0.00012
	90th percentile	Downstream Stations	May - Oct	0.0025	5.09E-05	6.75E-05	0.00025	0.004875	0.000104	0.037	0.00005	0.00023	0.00862	0.00005	0.000025	0.0054	2.53E-06	4.0	7.54E-06	0.000139
	10th percentile	Downstream Stations	May - Oct	0.0010	5.04E-05	4.14E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00017	0.005005	0.00005	0.000025	0.0052	2.51E-06	3.2	6.04E-06	7.67E-05
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0017	5.07E-05	5.39E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00020	0.005587	0.00005	0.000025	0.0053	2.52E-06	3.5	7.02E-06	0.00012
	90th percentile	Downstream Stations	May - Oct	0.0025	5.09E-05	6.75E-05	0.00025	0.004875	0.000104	0.037	0.00005	0.00023	0.00862	0.00005	0.000025	0.0054	2.53E-06	4.0	7.54E-06	0.000139
	10th percentile	Downstream Stations	May - Oct	0.0010	5.04E-05	4.14E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00017	0.005005	0.00005	0.000025	0.0052	2.51E-06	3.2	6.04E-06	7.67E-05

Monthly Hughes River flow rate and base-case pumping rate cont'd																				
Scenario	Statistic	Station	Month	Cobalt_D	Copper_D	Iron_D	Lead_D	Lithium_D	Magnesium_D	Manganese_D	Mercury_D	Molybdenum_D	Nickel_D	Potassium_D	Rubidium_D	Selenium_D	Silicon_D	Silver_D	Sodium_D	Strontium_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.14E-05	0.0004	0.16	2.56E-05	0.000539	1.00	0.012	1.54E-06	9.68E-05	0.000252	0.561011	0.000995	0.000025	2.1	0.000005	1.1	0.014
	90th percentile	Downstream Stations	May - Oct	5.17E-05	0.0017	0.21	0.000121	0.000909	1.15	0.022	1.92E-06	0.000139	0.000252	0.603474	0.001104	5.18E-05	2.4	0.000005	1.3	0.015
	10th percentile	Downstream Stations	May - Oct	5.07E-05	0.0002	0.13	2.53E-05	0.000528	0.93	0.008	8.41E-07	8.07E-05	0.000251	0.532104	0.000878	0.000025	2.0	0.000005	1.0	0.012
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.14E-05	0.0004	0.16	2.56E-05	0.000539	1.00	0.012	1.54E-06	9.68E-05	0.000252	0.561011	0.000995	0.000025	2.1	0.000005	1.1	0.014
	90th percentile	Downstream Stations	May - Oct	5.17E-05	0.0017	0.21	0.000121	0.000909	1.15	0.022	1.92E-06	0.000139	0.000252	0.603474	0.001104	5.18E-05	2.4	0.000005	1.3	0.015
	10th percentile	Downstream Stations	May - Oct	5.07E-05	0.0002	0.13	2.53E-05	0.000528	0.93	0.008	8.41E-07	8.07E-05	0.000251	0.532104	0.000878	0.000025	2.0	0.000005	1.0	0.012

Monthly Hughes River flow rate and base-case pumping rate cont'd

Scenario	Statistic	Station	Month	Sulfur_D	Tellurium_D	Thallium_D	Thorium_D	Tin_D	Titanium_D	Tungsten_D	Uranium_D	Vanadium_D	Zinc_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.75	0.0001	0.000005	0.00005	5.95E-05	0.000448	5.07E-05	5.41E-05	0.00025	0.0014
	90th percentile	Downstream Stations	May - Oct	0.92	0.0001	0.000005	0.00005	0.000201	0.000681	5.09E-05	6.28E-05	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	0.51	0.0001	0.000005	0.00005	5.46E-05	0.000314	5.04E-05	3.93E-05	0.00025	0.0005
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.75	0.0001	0.000005	0.00005	5.95E-05	0.000448	5.07E-05	5.41E-05	0.00025	0.0014
	90th percentile	Downstream Stations	May - Oct	0.92	0.0001	0.000005	0.00005	0.000201	0.000681	5.09E-05	6.28E-05	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	0.51	0.0001	0.000005	0.00005	5.46E-05	0.000314	5.04E-05	3.93E-05	0.00025	0.0005

Monthly Hughes River flow rate and double the pumping rate

Scenario	Statistic	Station	Month	D_Oxygen_fie	D_Oxygen	ORP_field	pH_field	Specific_	TDS_field	Temp_fiel	Turbidity_	Alkalinity(	(CO3)_car	(HCO3)_bi	(OH)_hydr	Conducti	DOC_D	Hardness	Hardness
				ld	_percent_			Conducta				CaCO3)_T	bonate	carbonate	oxide			(CaCO3)_	(CaCO3)_
				mg/L	%			nce_field				mg/L	mg/L	mg/L	mg/L			D	T
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	8.9	88					14.3		15.6	0.300	19	0.17				17
	90th percentile	Downstream Stations	May - Oct	13.8	111					19.1		16.9	0.300	21	0.17				18
	10th percentile	Downstream Stations	May - Oct	6.8	72					3.7		13.3	0.300	16	0.17				16
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	8.9	88					14.2		17.4	0.300	21	0.17				19
	90th percentile	Downstream Stations	May - Oct	13.6	109					19.0		18.9	0.300	23	0.17				20
	10th percentile	Downstream Stations	May - Oct	6.8	72					3.7		15.9	0.300	19	0.17				19
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	9.0	89					14.5		12.5	0.300	15	0.17				13
	90th percentile	Downstream Stations	May - Oct	13.9	112					19.4		14.0	0.300	17	0.17				15
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		10.4	0.300	13	0.17				12
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	8.9	88					14.3		15.6	0.300	19	0.17				17
	90th percentile	Downstream Stations	May - Oct	13.7	111					19.1		16.8	0.300	20	0.17				18
	10th percentile	Downstream Stations	May - Oct	6.8	72					3.7		13.3	0.300	16	0.17				16
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	8.9	87					14.2		17.4	0.300	21	0.17				19
	90th percentile	Downstream Stations	May - Oct	13.6	109					19.0		18.8	0.300	23	0.17				20
	10th percentile	Downstream Stations	May - Oct	6.8	72					3.7		15.9	0.300	19	0.17				19
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.0	89					14.5		12.5	0.300	15	0.17				13
	90th percentile	Downstream Stations	May - Oct	13.9	112					19.4		14.0	0.300	17	0.17				15
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		10.4	0.300	13	0.17				12

Monthly Hughes River flow rate and double the pumping rate cont'd																				
Scenario	Statistic	Station	Month	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia (N)_T	Nitrate(N)	Nitrite(N)	Nitrite_nit rate(N)	Nitrogen(TKN)	Phosphor us_D	Phosphor us_T	Bromide	Chloride	Fluoride	Sulfate(S O4)
				pH	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct				9.1			0.014	0.011	0.001	0.019			0.015	0.05	0.37	0.064	6.88
	90th percentile	Downstream Stations	May - Oct				9.6			0.039	0.032	0.005	0.038			0.020	0.05	0.43	0.067	7.08
	10th percentile	Downstream Stations	May - Oct				8.7			0.009	0.004	0.001	0.004			0.013	0.05	0.34	0.058	4.52
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct				9.0			0.017	0.011	0.001	0.019			0.015	0.05	0.43	0.065	8.88
	90th percentile	Downstream Stations	May - Oct				9.6			0.041	0.033	0.005	0.038			0.020	0.05	0.50	0.067	9.28
	10th percentile	Downstream Stations	May - Oct				8.6			0.012	0.005	0.001	0.004			0.013	0.05	0.39	0.059	8.01
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.011	0.010	0.001	0.019			0.015	0.05	0.30	0.063	3.32
	90th percentile	Downstream Stations	May - Oct				9.7			0.036	0.032	0.005	0.038			0.020	0.05	0.36	0.066	4.04
	10th percentile	Downstream Stations	May - Oct				8.7			0.006	0.003	0.001	0.003			0.013	0.05	0.25	0.057	2.08
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.1			0.014	0.011	0.001	0.019			0.015	0.05	0.37	0.064	6.85
	90th percentile	Downstream Stations	May - Oct				9.6			0.038	0.032	0.005	0.038			0.020	0.05	0.43	0.067	7.05
	10th percentile	Downstream Stations	May - Oct				8.7			0.008	0.004	0.001	0.004			0.013	0.05	0.34	0.058	4.50
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.0			0.015	0.011	0.001	0.019			0.015	0.05	0.43	0.065	8.84
	90th percentile	Downstream Stations	May - Oct				9.6			0.040	0.033	0.005	0.038			0.020	0.05	0.49	0.067	9.23
	10th percentile	Downstream Stations	May - Oct				8.6			0.011	0.005	0.001	0.004			0.013	0.05	0.39	0.059	7.97
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.011	0.010	0.001	0.019			0.015	0.05	0.30	0.063	3.31
	90th percentile	Downstream Stations	May - Oct				9.7			0.036	0.032	0.005	0.038			0.020	0.05	0.36	0.066	4.02
	10th percentile	Downstream Stations	May - Oct				8.7			0.006	0.003	0.001	0.003			0.013	0.05	0.25	0.057	2.08

Monthly Hughes River flow rate and double the pumping rate cont'd																				
Scenario	Statistic	Station	Month	Aluminu	Antimony	Arsenic_T	Barium_T	Beryllium	Bismuth_T	Boron_T	Cadmium	Calcium_	Cesium_T	Chromiu	Chromiu	Cobalt_T	Copper_T	Iron_T	Lead_T	Lithium_T
				m_T	_T			_T			_T	T		m_T	mVI_T					
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.055	0.00005	0.00037	0.0066	0.00005	0.000025	0.0064	2.5E-06	5.8	0.000014	0.000187		5.55E-05	0.00025	0.28	0.000025	0.0013
	90th percentile	Downstream Stations	May - Oct	0.074	0.00005	0.00039	0.0073	0.00005	0.000025	0.0064	2.5E-06	6.2	0.000014	0.000279		5.57E-05	0.00025	0.38	6.23E-05	0.0016
	10th percentile	Downstream Stations	May - Oct	0.038	0.00005	0.00031	0.0062	0.00005	0.000025	0.0059	2.5E-06	4.9	0.000010	0.000143		5.34E-05	0.00025	0.23	0.000025	0.0007
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.054	0.00005	0.00043	0.0070	0.00005	0.000025	0.0068	2.5E-06	6.7	0.000017	0.000185		5.73E-05	0.00025	0.29	0.000025	0.0013
	90th percentile	Downstream Stations	May - Oct	0.074	0.00005	0.00046	0.0075	0.00005	0.000025	0.0069	2.5E-06	7.1	0.000017	0.000276		5.76E-05	0.00025	0.39	6.18E-05	0.0017
	10th percentile	Downstream Stations	May - Oct	0.038	0.00005	0.00039	0.0065	0.00005	0.000025	0.0066	2.5E-06	6.5	0.000015	0.000142		5.64E-05	0.00025	0.24	0.000025	0.0007
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.055	0.00005	0.00027	0.0062	0.00005	0.000025	0.0056	2.5E-06	4.1	0.000009	0.000189		5.25E-05	0.00025	0.27	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.076	0.00005	0.00030	0.0068	0.00005	0.000025	0.0058	2.5E-06	4.8	0.000010	0.000282		5.31E-05	0.00025	0.37	6.3E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00022	0.0059	0.00005	0.000025	0.0053	2.5E-06	3.8	0.000007	0.000144		5.13E-05	0.00025	0.22	0.000025	0.0006
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.055	0.00005	0.00036	0.0066	0.00005	0.000025	0.0064	2.5E-06	5.7	0.000014	0.000186		5.52E-05	0.00025	0.28	0.000025	0.0013
	90th percentile	Downstream Stations	May - Oct	0.074	0.00005	0.00039	0.0073	0.00005	0.000025	0.0064	2.5E-06	6.2	0.000014	0.000278		5.54E-05	0.00025	0.38	6.23E-05	0.0016
	10th percentile	Downstream Stations	May - Oct	0.038	0.00005	0.00031	0.0062	0.00005	0.000025	0.0058	2.5E-06	4.9	0.000010	0.000142		5.32E-05	0.00025	0.23	0.000025	0.0007
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.054	0.00005	0.00042	0.0070	0.00005	0.000025	0.0068	2.5E-06	6.7	0.000016	0.000184		5.69E-05	0.00025	0.29	0.000025	0.0013
	90th percentile	Downstream Stations	May - Oct	0.074	0.00005	0.00045	0.0075	0.00005	0.000025	0.0069	2.5E-06	7.1	0.000017	0.000275		5.72E-05	0.00025	0.39	6.18E-05	0.0017
	10th percentile	Downstream Stations	May - Oct	0.038	0.00005	0.00039	0.0065	0.00005	0.000025	0.0066	2.5E-06	6.5	0.000015	0.000141		5.61E-05	0.00025	0.24	0.000025	0.0007
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.055	0.00005	0.00027	0.0062	0.00005	0.000025	0.0056	2.5E-06	4.1	0.000009	0.000188		5.23E-05	0.00025	0.27	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.076	0.00005	0.00030	0.0068	0.00005	0.000025	0.0058	2.5E-06	4.8	0.000010	0.000282		5.29E-05	0.00025	0.37	6.3E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00022	0.0059	0.00005	0.000025	0.0053	2.5E-06	3.8	0.000007	0.000144		5.12E-05	0.00025	0.22	0.000025	0.0006

Monthly Hughes River flow rate and double the pumping rate cont'd																				
Scenario	Statistic	Station	Month	Magnesi <u>m</u> _T	Mangane <u>se</u> _T	Mercury_ <u>T</u>	Molybden <u>um</u> _T	Nickel_ <u>T</u>	Potassiu <u>m</u> _T	Rubidium_ <u>T</u>	Selenium_ <u>T</u>	Silicon_ <u>T</u>	Silver_ <u>T</u>	Sodium_ <u>T</u>	Strontium_ <u>T</u>	Sulfur_ <u>T</u>	Tellurium_ <u>T</u>	Thallium_ <u>T</u>	Thorium_ <u>T</u>	Tin_ <u>T</u>
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.7	0.045	1.94E-06	0.000104	0.00025	0.74	0.0012	2.6E-05	2.4	0.000005	1.7	0.021	2.36	0.0001	5.0E-06	5.0E-05	0.00007
	90th percentile	Downstream Stations	May - Oct	1.8	0.054	2.5E-06	0.000131	0.000388	0.77	0.0013	5.69E-05	2.6	0.000005	1.8	0.022	2.43	0.0001	5.0E-06	5.0E-05	0.00026
	10th percentile	Downstream Stations	May - Oct	1.4	0.040	1.15E-06	7.97E-05	0.00025	0.69	0.0011	2.56E-05	2.2	0.000005	1.4	0.018	1.55	0.0001	5.0E-06	5.0E-05	0.00007
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.9	0.055	1.95E-06	0.000111	0.00025	0.82	0.0013	2.64E-05	2.4	0.000005	1.9	0.024	3.04	0.0001	5.0E-06	5.0E-05	0.00008
	90th percentile	Downstream Stations	May - Oct	2.0	0.066	2.5E-06	0.000136	0.000387	0.86	0.0014	5.69E-05	2.6	0.000005	2.0	0.025	3.16	0.0001	5.0E-06	5.0E-05	0.00027
	10th percentile	Downstream Stations	May - Oct	1.8	0.050	1.17E-06	8.59E-05	0.00025	0.79	0.0011	2.62E-05	2.2	0.000005	1.8	0.023	2.71	0.0001	5.0E-06	5.0E-05	0.00008
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.2	0.031	1.93E-06	9.62E-05	0.00025	0.61	0.0011	2.55E-05	2.3	0.000005	1.3	0.016	1.19	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.4	0.041	2.5E-06	0.000124	0.00039	0.66	0.0012	5.7E-05	2.5	0.000005	1.5	0.018	1.44	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	1.1	0.026	1.13E-06	6.94E-05	0.00025	0.59	0.0010	2.52E-05	2.1	0.000005	1.2	0.014	0.74	0.0001	5.0E-06	5.0E-05	0.00006
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.7	0.045	1.94E-06	0.000103	0.00025	0.73	0.0012	0.000025	2.4	0.000005	1.7	0.021	2.33	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.8	0.054	2.5E-06	0.00013	0.000388	0.76	0.0013	5.59E-05	2.6	0.000005	1.8	0.022	2.40	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	1.4	0.040	1.15E-06	7.85E-05	0.00025	0.69	0.0011	0.000025	2.2	0.000005	1.4	0.018	1.53	0.0001	5.0E-06	5.0E-05	0.00006
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.9	0.055	1.95E-06	0.00011	0.00025	0.81	0.0013	0.000025	2.4	0.000005	1.9	0.024	3.00	0.0001	5.0E-06	5.0E-05	0.00007
	90th percentile	Downstream Stations	May - Oct	2.0	0.066	2.5E-06	0.000134	0.000387	0.85	0.0013	5.56E-05	2.6	0.000005	2.0	0.025	3.12	0.0001	5.0E-06	5.0E-05	0.00026
	10th percentile	Downstream Stations	May - Oct	1.8	0.049	1.17E-06	8.43E-05	0.00025	0.79	0.0011	0.000025	2.2	0.000005	1.8	0.023	2.67	0.0001	5.0E-06	5.0E-05	0.00007
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.2	0.031	1.93E-06	9.58E-05	0.00025	0.61	0.0011	0.000025	2.3	0.000005	1.3	0.016	1.18	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.4	0.041	2.5E-06	0.000123	0.00039	0.66	0.0012	5.65E-05	2.5	0.000005	1.5	0.018	1.42	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	1.1	0.026	1.13E-06	6.89E-05	0.00025	0.58	0.0010	0.000025	2.1	0.000005	1.2	0.014	0.73	0.0001	5.0E-06	5.0E-05	0.00005

Monthly Hughes River flow rate and double the pumping rate cont'd

Scenario	Statistic	Station	Month	Titanium_ T	Tungsten _T	Uranium_ T	Vanadium _T	Zinc_T	Zirconiu m_T	Aluminu m_D	Antimony _D	Arsenic_ D	Barium_D	Beryllium _D	Bismuth_ D	Boron_D	Cadmium _D	Calcium_ D	Cesium_ D	Chromiu m_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.28E-05	0.000149	0.00025	0.0015	0.0001	0.028	0.00005	0.00029	0.006214	0.00005	0.000025	0.0065	2.5E-06	5.6	1.38E-05	0.000118
	90th percentile	Downstream Stations	May - Oct	0.0026	5.29E-05	0.000156	0.00025	0.005073	0.0001	0.035	0.00005	0.00032	0.009494	0.00005	0.000025	0.0066	2.5E-06	5.9	1.39E-05	0.000132
	10th percentile	Downstream Stations	May - Oct	0.0009	5.18E-05	0.000103	0.00025	0.0015	0.0001	0.020	0.00005	0.00024	0.005634	0.00005	0.000025	0.0059	2.5E-06	5.0	1.03E-05	6.45E-05
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.38E-05	0.000189	0.00025	0.0015	0.0001	0.028	0.00005	0.00034	0.006539	0.00005	0.000025	0.0070	2.5E-06	6.5	1.68E-05	0.000117
	90th percentile	Downstream Stations	May - Oct	0.0025	5.39E-05	0.000196	0.00025	0.00503	0.0001	0.035	0.00005	0.00037	0.009762	0.00005	0.000025	0.0071	2.5E-06	6.8	1.7E-05	0.000131
	10th percentile	Downstream Stations	May - Oct	0.0009	5.33E-05	0.00017	0.00025	0.0015	0.0001	0.020	0.00005	0.00031	0.005959	0.00005	0.000025	0.0068	2.5E-06	6.4	1.51E-05	6.44E-05
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.13E-05	7.99E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00022	0.005776	0.00005	0.000025	0.0057	2.5E-06	3.9	8.89E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0026	5.16E-05	9.97E-05	0.00025	0.005143	0.0001	0.036	0.00005	0.00025	0.009142	0.00005	0.000025	0.0058	2.5E-06	4.6	9.88E-06	0.000134
	10th percentile	Downstream Stations	May - Oct	0.0009	5.07E-05	5.58E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00018	0.005163	0.00005	0.000025	0.0053	2.5E-06	3.7	7.01E-06	6.47E-05
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.27E-05	0.000148	0.00025	0.0015	0.0001	0.028	0.00005	0.00028	0.006185	0.00005	0.000025	0.0065	2.5E-06	5.5	1.36E-05	0.000118
	90th percentile	Downstream Stations	May - Oct	0.0026	5.28E-05	0.000155	0.00025	0.005073	0.0001	0.035	0.00005	0.00032	0.009468	0.00005	0.000025	0.0066	2.5E-06	5.9	1.37E-05	0.000132
	10th percentile	Downstream Stations	May - Oct	0.0009	5.17E-05	0.000102	0.00025	0.0015	0.0001	0.020	0.00005	0.00023	0.005605	0.00005	0.000025	0.0059	2.5E-06	4.9	1.02E-05	6.45E-05
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.35E-05	0.000187	0.00025	0.0015	0.0001	0.028	0.00005	0.00033	0.006501	0.00005	0.000025	0.0070	2.5E-06	6.5	1.65E-05	0.000117
	90th percentile	Downstream Stations	May - Oct	0.0025	5.37E-05	0.000195	0.00025	0.00503	0.0001	0.035	0.00005	0.00036	0.009725	0.00005	0.000025	0.0071	2.5E-06	6.8	1.67E-05	0.000131
	10th percentile	Downstream Stations	May - Oct	0.0009	5.31E-05	0.000168	0.00025	0.0015	0.0001	0.020	0.00005	0.00030	0.005919	0.00005	0.000025	0.0068	2.5E-06	6.3	1.49E-05	6.44E-05
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.12E-05	7.93E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00021	0.005766	0.00005	0.000025	0.0057	2.5E-06	3.9	8.79E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0026	5.15E-05	9.89E-05	0.00025	0.005143	0.0001	0.036	0.00005	0.00025	0.00913	0.00005	0.000025	0.0058	2.5E-06	4.6	9.76E-06	0.000134
	10th percentile	Downstream Stations	May - Oct	0.0009	5.06E-05	5.55E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00018	0.00515	0.00005	0.000025	0.0053	2.5E-06	3.6	6.96E-06	6.47E-05

Monthly Hughes River flow rate and double the pumping rate cont'd																				
Scenario	Statistic	Station	Month	Cobalt_D	Copper_D	Iron_D	Lead_D	Lithium_D	Magnesium_D	Manganese_D	Mercury_D	Molybdenum_D	Nickel_D	Potassium_D	Rubidium_D	Selenium_D	Silicon_D	Silver_D	Sodium_D	Strontium_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	5.57E-05	0.0004	0.16	0.000025	0.000673	1.65	0.034	1.55E-06	0.000108	0.00025	0.720558	0.001087	0.000025	2.2	0.000005	1.7	0.020
	90th percentile	Downstream Stations	May - Oct	5.59E-05	0.0016	0.21	9.41E-05	0.001103	1.75	0.038	2.13E-06	0.000145	0.00025	0.776246	0.001211	4.65E-05	2.4	0.000005	1.7	0.022
	10th percentile	Downstream Stations	May - Oct	5.35E-05	0.0003	0.12	0.000025	0.000624	1.44	0.027	8.83E-07	9.03E-05	0.00025	0.687189	0.00097	0.000025	2.0	0.000005	1.3	0.018
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	5.75E-05	0.0004	0.16	0.000025	0.000732	1.93	0.043	1.57E-06	0.000113	0.00025	0.809115	0.001141	0.000025	2.3	0.000005	1.9	0.023
	90th percentile	Downstream Stations	May - Oct	5.78E-05	0.0016	0.21	9.33E-05	0.001171	2.01	0.052	2.14E-06	0.00015	0.00025	0.854436	0.00126	4.63E-05	2.5	0.000005	2.0	0.024
	10th percentile	Downstream Stations	May - Oct	5.66E-05	0.0003	0.12	0.000025	0.000707	1.86	0.039	9.02E-07	9.71E-05	0.00025	0.773251	0.001044	0.000025	2.1	0.000005	1.7	0.022
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	5.25E-05	0.0004	0.15	0.000025	0.000577	1.16	0.018	1.54E-06	9.92E-05	0.00025	0.604121	0.00102	0.000025	2.2	0.000005	1.3	0.016
	90th percentile	Downstream Stations	May - Oct	5.32E-05	0.0016	0.21	9.53E-05	0.001028	1.35	0.026	2.13E-06	0.000139	0.00025	0.649202	0.001129	4.69E-05	2.4	0.000005	1.4	0.017
	10th percentile	Downstream Stations	May - Oct	5.13E-05	0.0002	0.12	0.000025	0.000548	1.05	0.013	8.6E-07	8.26E-05	0.00025	0.581431	0.00091	0.000025	2.0	0.000005	1.1	0.014
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.57E-05	0.0003	0.15	0.000025	0.000667	1.63	0.033	1.55E-06	0.000107	0.00025	0.718091	0.001085	0.000025	2.2	0.000005	1.6	0.020
	90th percentile	Downstream Stations	May - Oct	5.59E-05	0.0016	0.21	9.41E-05	0.001098	1.73	0.038	2.13E-06	0.000144	0.00025	0.773504	0.001208	4.65E-05	2.4	0.000005	1.7	0.021
	10th percentile	Downstream Stations	May - Oct	5.35E-05	0.0002	0.12	0.000025	0.00062	1.43	0.027	8.83E-07	8.95E-05	0.00025	0.685043	0.000968	0.000025	2.0	0.000005	1.3	0.018
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.75E-05	0.0003	0.15	0.000025	0.000723	1.91	0.043	1.57E-06	0.000112	0.00025	0.805445	0.001138	0.000025	2.3	0.000005	1.9	0.023
	90th percentile	Downstream Stations	May - Oct	5.78E-05	0.0016	0.21	9.33E-05	0.001163	1.98	0.051	2.14E-06	0.000149	0.00025	0.850767	0.001257	4.63E-05	2.5	0.000005	1.9	0.024
	10th percentile	Downstream Stations	May - Oct	5.66E-05	0.0002	0.12	0.000025	0.000698	1.83	0.039	9.02E-07	9.56E-05	0.00025	0.769854	0.001041	0.000025	2.1	0.000005	1.7	0.022
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.25E-05	0.0003	0.15	0.000025	0.000574	1.16	0.018	1.54E-06	9.87E-05	0.00025	0.60321	0.001019	0.000025	2.2	0.000005	1.3	0.016
	90th percentile	Downstream Stations	May - Oct	5.32E-05	0.0016	0.21	9.53E-05	0.001026	1.34	0.026	2.13E-06	0.000139	0.00025	0.648006	0.001128	4.69E-05	2.4	0.000005	1.4	0.017
	10th percentile	Downstream Stations	May - Oct	5.13E-05	0.0002	0.12	0.000025	0.000546	1.05	0.012	8.6E-07	8.21E-05	0.00025	0.580385	0.000909	0.000025	2.0	0.000005	1.1	0.013

Monthly Hughes River flow rate and double the pumping rate cont'd													
Scenario	Statistic	Station	Month	Sulfur_D	Tellurium_D	Thallium_D	Thorium_D	Tin_D	Titanium_D	Tungsten_D	Uranium_D	Vanadium_D	Zinc_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	2.43	0.0001	0.000005	0.00005	7.05E-05	0.000434	5.3E-05	0.000161	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	2.58	0.0001	0.000005	0.00005	0.000282	0.000651	5.31E-05	0.000166	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	1.57	0.0001	0.000005	0.00005	6.24E-05	0.000292	5.19E-05	0.000108	0.00025	0.0005
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	3.15	0.0001	0.000005	0.00005	7.74E-05	0.000429	5.4E-05	0.000203	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	3.26	0.0001	0.000005	0.00005	0.000287	0.000643	5.42E-05	0.000212	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	2.75	0.0001	0.000005	0.00005	7.34E-05	0.000291	5.35E-05	0.000183	0.00025	0.0005
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.21	0.0001	0.000005	0.00005	5.97E-05	0.000438	5.13E-05	8.45E-05	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	1.49	0.0001	0.000005	0.00005	0.000275	0.000659	5.17E-05	9.97E-05	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	0.75	0.0001	0.000005	0.00005	5.47E-05	0.000295	5.07E-05	5.48E-05	0.00025	0.0005
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	2.39	0.0001	0.000005	0.00005	5.91E-05	0.000434	5.28E-05	0.000158	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	2.54	0.0001	0.000005	0.00005	0.000271	0.000651	5.29E-05	0.000164	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	1.55	0.0001	0.000005	0.00005	5.55E-05	0.000292	5.18E-05	0.000106	0.00025	0.0005
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	3.10	0.0001	0.000005	0.00005	6.21E-05	0.000429	5.38E-05	0.000201	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	3.20	0.0001	0.000005	0.00005	0.000272	0.000643	5.39E-05	0.00021	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	2.70	0.0001	0.000005	0.00005	6.03E-05	0.000291	5.33E-05	0.000181	0.00025	0.0005
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.19	0.0001	0.000005	0.00005	5.43E-05	0.000438	5.13E-05	8.36E-05	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	1.47	0.0001	0.000005	0.00005	0.000271	0.000659	5.16E-05	9.86E-05	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	0.74	0.0001	0.000005	0.00005	5.21E-05	0.000295	5.07E-05	5.43E-05	0.00025	0.0005

Monthly Hughes River flow rate and double the pumping rate cont'd

Scenario	Statistic	Station	Month	D_Oxygen_fie ld	D_Oxygen _percent_ field	ORP_field	pH_field	Specific_ Conducta nce_field	TDS_field	Temp_fiel d	Turbidity_ field	Alkalinity(CaCO3)_T	(CO3)_car bonate	(HCO3)_bi carbonate	(OH)_hydr oxide	Conducti vity	DOC_D	Hardness (CaCO3)_ D	Hardness (CaCO3)_ T
				mg/L	%	mV	pH	uS/cm	mg/L	C	NTU	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	mg/L
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.0	89					14.5		12.5	0.300	15	0.17				13
	90th percentile	Downstream Stations	May - Oct	13.9	112					19.4		14.0	0.300	17	0.17				15
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		10.4	0.300	13	0.17				12
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.0	89					14.5		12.5	0.300	15	0.17				13
	90th percentile	Downstream Stations	May - Oct	13.9	112					19.4		14.0	0.300	17	0.17				15
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		10.4	0.300	13	0.17				12
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.0	89					14.5		12.5	0.300	15	0.17				13
	90th percentile	Downstream Stations	May - Oct	13.9	112					19.4		14.0	0.300	17	0.17				15
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		10.4	0.300	13	0.17				12

Notes:
Pink shaded cell indicates parameter of potential concern (PoPC), identified when mixed concetnration exceeded both the baseline and a WQGL
" _T" indicates total concentration
" _D" indicates dissolved concentration

Monthly Hughes River flow rate and double the pumping rate cont'd

Scenario	Statistic	Station	Month	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia (N)_T	Nitrate(N)	Nitrite(N)	Nitrite_nit rate(N)	Nitrogen(TKN)	Phosphor us_D	Phosphor us_T	Bromide	Chloride	Fluoride	Sulfate(S O4)
				pH	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.011	0.010	0.001	0.019			0.015	0.05	0.30	0.063	3.31
	90th percentile	Downstream Stations	May - Oct				9.7			0.036	0.032	0.005	0.038			0.020	0.05	0.36	0.066	4.02
	10th percentile	Downstream Stations	May - Oct				8.7			0.006	0.003	0.001	0.003			0.013	0.05	0.25	0.057	2.08
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.011	0.010	0.001	0.019			0.015	0.05	0.30	0.063	3.31
	90th percentile	Downstream Stations	May - Oct				9.7			0.036	0.032	0.005	0.038			0.020	0.05	0.36	0.066	4.02
	10th percentile	Downstream Stations	May - Oct				8.7			0.006	0.003	0.001	0.003			0.013	0.05	0.25	0.057	2.08
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.011	0.010	0.001	0.019			0.015	0.05	0.30	0.063	3.31
	90th percentile	Downstream Stations	May - Oct				9.7			0.036	0.032	0.005	0.038			0.020	0.05	0.36	0.066	4.02
	10th percentile	Downstream Stations	May - Oct				8.7			0.006	0.003	0.001	0.003			0.013	0.05	0.25	0.057	2.08

Monthly Hughes River flow rate and double the pumping rate cont'd

Scenario	Statistic	Station	Month	Aluminu m_T	Antimony _T	Arsenic_T	Barium_T	Beryllium _T	Bismuth_T	Boron_T	Cadmium _T	Calcium_ T	Cesium_T	Chromiu m_T	Chromiu mVI_T	Cobalt_T	Copper_T	Iron_T	Lead_T	Lithium_T
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.055	0.00005	0.00027	0.0062	0.00005	0.000025	0.0056	2.5E-06	4.1	0.000009	0.000188		5.23E-05	0.00025	0.27	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.076	0.00005	0.00030	0.0068	0.00005	0.000025	0.0058	2.5E-06	4.8	0.000010	0.000282		5.29E-05	0.00025	0.37	6.3E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00022	0.0059	0.00005	0.000025	0.0053	2.5E-06	3.8	0.000007	0.000144		5.12E-05	0.00025	0.22	0.000025	0.0006
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.055	0.00005	0.00027	0.0062	0.00005	0.000025	0.0056	2.5E-06	4.1	0.000009	0.000188		5.23E-05	0.00025	0.27	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.076	0.00005	0.00030	0.0068	0.00005	0.000025	0.0058	2.5E-06	4.8	0.000010	0.000282		5.29E-05	0.00025	0.37	6.3E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00022	0.0059	0.00005	0.000025	0.0053	2.5E-06	3.8	0.000007	0.000144		5.12E-05	0.00025	0.22	0.000025	0.0006
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.055	0.00005	0.00027	0.0062	0.00005	0.000025	0.0056	2.5E-06	4.1	0.000009	0.000188		5.23E-05	0.00025	0.27	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.076	0.00005	0.00030	0.0068	0.00005	0.000025	0.0058	2.5E-06	4.8	0.000010	0.000282		5.29E-05	0.00025	0.37	6.3E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00022	0.0059	0.00005	0.000025	0.0053	2.5E-06	3.8	0.000007	0.000144		5.12E-05	0.00025	0.22	0.000025	0.0006

Monthly Hughes River flow rate and double the pumping rate cont'd

Scenario	Statistic	Station	Month	Magnesium_T	Manganese_T	Mercury_T	Molybdenum_T	Nickel_T	Potassium_T	Rubidium_T	Selenium_T	Silicon_T	Silver_T	Sodium_T	Strontium_T	Sulfur_T	Tellurium_T	Thallium_T	Thorium_T	Tin_T
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.2	0.031	1.93E-06	9.58E-05	0.00025	0.61	0.0011	0.000025	2.3	0.000005	1.3	0.016	1.18	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.4	0.041	2.5E-06	0.000123	0.00039	0.66	0.0012	5.65E-05	2.5	0.000005	1.5	0.018	1.42	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	1.1	0.026	1.13E-06	6.89E-05	0.00025	0.58	0.0010	0.000025	2.1	0.000005	1.2	0.014	0.73	0.0001	5.0E-06	5.0E-05	0.00005
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.2	0.031	1.93E-06	9.58E-05	0.00025	0.61	0.0011	0.000025	2.3	0.000005	1.3	0.016	1.18	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.4	0.041	2.5E-06	0.000123	0.00039	0.66	0.0012	5.65E-05	2.5	0.000005	1.5	0.018	1.42	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	1.1	0.026	1.13E-06	6.89E-05	0.00025	0.58	0.0010	0.000025	2.1	0.000005	1.2	0.014	0.73	0.0001	5.0E-06	5.0E-05	0.00005
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.2	0.031	1.93E-06	9.58E-05	0.00025	0.61	0.0011	0.000025	2.3	0.000005	1.3	0.016	1.18	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.4	0.041	2.5E-06	0.000123	0.00039	0.66	0.0012	5.65E-05	2.5	0.000005	1.5	0.018	1.42	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	1.1	0.026	1.13E-06	6.89E-05	0.00025	0.58	0.0010	0.000025	2.1	0.000005	1.2	0.014	0.73	0.0001	5.0E-06	5.0E-05	0.00005

Monthly Hughes River flow rate and double the pumping rate cont'd

Scenario	Statistic	Station	Month	Titanium_ T	Tungsten _T	Uranium_ T	Vanadium _T	Zinc_T	Zirconiu m_T	Aluminu m_D	Antimony _D	Arsenic_ D	Barium_D	Beryllium _D	Bismuth_ D	Boron_D	Cadmium _D	Calcium_ D	Cesium_ D	Chromiu m_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.12E-05	7.93E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00021	0.005766	0.00005	0.000025	0.0057	2.5E-06	3.9	8.79E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0026	5.15E-05	9.89E-05	0.00025	0.005143	0.0001	0.036	0.00005	0.00025	0.00913	0.00005	0.000025	0.0058	2.5E-06	4.6	9.76E-06	0.000134
	10th percentile	Downstream Stations	May - Oct	0.0009	5.06E-05	5.55E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00018	0.00515	0.00005	0.000025	0.0053	2.5E-06	3.6	6.96E-06	6.47E-05
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.12E-05	7.93E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00021	0.005766	0.00005	0.000025	0.0057	2.5E-06	3.9	8.79E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0026	5.15E-05	9.89E-05	0.00025	0.005143	0.0001	0.036	0.00005	0.00025	0.00913	0.00005	0.000025	0.0058	2.5E-06	4.6	9.76E-06	0.000134
	10th percentile	Downstream Stations	May - Oct	0.0009	5.06E-05	5.55E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00018	0.00515	0.00005	0.000025	0.0053	2.5E-06	3.6	6.96E-06	6.47E-05
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.12E-05	7.93E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00021	0.005766	0.00005	0.000025	0.0057	2.5E-06	3.9	8.79E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0026	5.15E-05	9.89E-05	0.00025	0.005143	0.0001	0.036	0.00005	0.00025	0.00913	0.00005	0.000025	0.0058	2.5E-06	4.6	9.76E-06	0.000134
	10th percentile	Downstream Stations	May - Oct	0.0009	5.06E-05	5.55E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00018	0.00515	0.00005	0.000025	0.0053	2.5E-06	3.6	6.96E-06	6.47E-05

Monthly Hughes River flow rate and double the pumping rate cont'd																				
Scenario	Statistic	Station	Month	Cobalt_D	Copper_D	Iron_D	Lead_D	Lithium_D	Magnesium_D	Manganese_D	Mercury_D	Molybdenum_D	Nickel_D	Potassium_D	Rubidium_D	Selenium_D	Silicon_D	Silver_D	Sodium_D	Strontium_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.25E-05	0.0003	0.15	0.000025	0.000574	1.16	0.018	1.54E-06	9.87E-05	0.00025	0.60321	0.001019	0.000025	2.2	0.000005	1.3	0.016
	90th percentile	Downstream Stations	May - Oct	5.32E-05	0.0016	0.21	9.53E-05	0.001026	1.34	0.026	2.13E-06	0.000139	0.00025	0.648006	0.001128	4.69E-05	2.4	0.000005	1.4	0.017
	10th percentile	Downstream Stations	May - Oct	5.13E-05	0.0002	0.12	0.000025	0.000546	1.05	0.012	8.6E-07	8.21E-05	0.00025	0.580385	0.000909	0.000025	2.0	0.000005	1.1	0.013
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.25E-05	0.0003	0.15	0.000025	0.000574	1.16	0.018	1.54E-06	9.87E-05	0.00025	0.60321	0.001019	0.000025	2.2	0.000005	1.3	0.016
	90th percentile	Downstream Stations	May - Oct	5.32E-05	0.0016	0.21	9.53E-05	0.001026	1.34	0.026	2.13E-06	0.000139	0.00025	0.648006	0.001128	4.69E-05	2.4	0.000005	1.4	0.017
	10th percentile	Downstream Stations	May - Oct	5.13E-05	0.0002	0.12	0.000025	0.000546	1.05	0.012	8.6E-07	8.21E-05	0.00025	0.580385	0.000909	0.000025	2.0	0.000005	1.1	0.013
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.25E-05	0.0003	0.15	0.000025	0.000574	1.16	0.018	1.54E-06	9.87E-05	0.00025	0.60321	0.001019	0.000025	2.2	0.000005	1.3	0.016
	90th percentile	Downstream Stations	May - Oct	5.32E-05	0.0016	0.21	9.53E-05	0.001026	1.34	0.026	2.13E-06	0.000139	0.00025	0.648006	0.001128	4.69E-05	2.4	0.000005	1.4	0.017
	10th percentile	Downstream Stations	May - Oct	5.13E-05	0.0002	0.12	0.000025	0.000546	1.05	0.012	8.6E-07	8.21E-05	0.00025	0.580385	0.000909	0.000025	2.0	0.000005	1.1	0.013

Monthly Hughes River flow rate and double the pumping rate cont'd

Scenario	Statistic	Station	Month	Sulfur_D	Tellurium_D	Thallium_D	Thorium_D	Tin_D	Titanium_D	Tungsten_D	Uranium_D	Vanadium_D	Zinc_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.19	0.0001	0.000005	0.00005	5.43E-05	0.000438	5.13E-05	8.36E-05	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	1.47	0.0001	0.000005	0.00005	0.000271	0.000659	5.16E-05	9.86E-05	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	0.74	0.0001	0.000005	0.00005	5.21E-05	0.000295	5.07E-05	5.43E-05	0.00025	0.0005
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.19	0.0001	0.000005	0.00005	5.43E-05	0.000438	5.13E-05	8.36E-05	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	1.47	0.0001	0.000005	0.00005	0.000271	0.000659	5.16E-05	9.86E-05	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	0.74	0.0001	0.000005	0.00005	5.21E-05	0.000295	5.07E-05	5.43E-05	0.00025	0.0005
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.19	0.0001	0.000005	0.00005	5.43E-05	0.000438	5.13E-05	8.36E-05	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	1.47	0.0001	0.000005	0.00005	0.000271	0.000659	5.16E-05	9.86E-05	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	0.74	0.0001	0.000005	0.00005	5.21E-05	0.000295	5.07E-05	5.43E-05	0.00025	0.0005

25% of monthly Hughes River flow rate as a mixing zone

Scenario	Statistic	Staion	Month	D_Oxygen_fie	D_Oxygen	ORP_field	pH_field	Specific_	TDS_field	Temp_fiel	Turbidity_	Alkalinity(	(CO3)_car	(HCO3)_bi	(OH)_hydr	Conducti	DOC_D	Hardness	Hardness
				ld	_percent_			Conducta				CaCO3)_T	bonate	carbonate	oxide			(CaCO3)_	(CaCO3)_
				mg/L	%			nce_field				mg/L	mg/L	mg/L	mg/L			D	T
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	8.8	87					14.0		21.1	0.300	26	0.17				23
	90th percentile	Downstream Stations	May - Oct	13.6	109					18.7		22.3	0.300	27	0.17				25
	10th percentile	Downstream Stations	May - Oct	6.8	71					3.7		17.1	0.300	21	0.17				20
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	9.0	89					14.4		13.8	0.300	17	0.17				15
	90th percentile	Downstream Stations	May - Oct	13.8	111					19.3		15.1	0.300	18	0.17				16
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		12.3	0.300	15	0.17				14
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.6		11.2	0.300	14	0.17				12
	90th percentile	Downstream Stations	May - Oct	13.9	112					19.5		12.5	0.300	15	0.17				13
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		9.5	0.300	12	0.17				11
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	8.8	86					14.0		21.0	0.300	26	0.17				23
	90th percentile	Downstream Stations	May - Oct	13.5	109					18.6		22.2	0.300	27	0.17				24
	10th percentile	Downstream Stations	May - Oct	6.7	71					3.7		17.0	0.300	21	0.17				20
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.0	89					14.4		13.8	0.300	17	0.17				15
	90th percentile	Downstream Stations	May - Oct	13.7	111					19.3		15.0	0.300	18	0.17				16
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		12.2	0.300	15	0.17				14
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.6		11.2	0.300	14	0.17				12
	90th percentile	Downstream Stations	May - Oct	13.9	112					19.5		12.5	0.300	15	0.17				13
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		9.5	0.300	12	0.17				11

25% of monthly Hughes River flow rate as a mixing zone cont'd																				
Scenario	Statistic	Staion	Month	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia (N)_T	Nitrate(N)	Nitrite(N)	Nitrite_nit rate(N)	Nitrogen(TKN)	Phosphor us_D	Phosphor us_T	Bromide	Chloride	Fluoride	Sulfate(S O4)
				pH	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct				9.0			0.020	0.012	0.001	0.020			0.015	0.050	0.50	0.065	12.8
	90th percentile	Downstream Stations	May - Oct				9.5			0.044	0.033	0.005	0.038			0.020	0.050	0.58	0.068	13.2
	10th percentile	Downstream Stations	May - Oct				8.6			0.013	0.006	0.001	0.005			0.014	0.050	0.47	0.060	8.3
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct				9.1			0.012	0.010	0.001	0.019			0.015	0.050	0.33	0.064	4.8
	90th percentile	Downstream Stations	May - Oct				9.7			0.037	0.032	0.005	0.038			0.020	0.050	0.41	0.066	5.0
	10th percentile	Downstream Stations	May - Oct				8.7			0.009	0.004	0.001	0.003			0.013	0.050	0.29	0.058	4.4
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.010	0.010	0.001	0.019			0.015	0.050	0.27	0.063	1.9
	90th percentile	Downstream Stations	May - Oct				9.7			0.035	0.032	0.005	0.038			0.020	0.050	0.33	0.065	2.3
	10th percentile	Downstream Stations	May - Oct				8.8			0.006	0.003	0.001	0.003			0.013	0.050	0.21	0.057	1.4
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.0			0.019	0.012	0.001	0.020			0.015	0.050	0.50	0.065	12.8
	90th percentile	Downstream Stations	May - Oct				9.5			0.043	0.033	0.005	0.038			0.020	0.050	0.58	0.068	13.1
	10th percentile	Downstream Stations	May - Oct				8.6			0.012	0.006	0.001	0.005			0.013	0.050	0.47	0.060	8.2
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.1			0.012	0.010	0.001	0.019			0.015	0.050	0.33	0.064	4.8
	90th percentile	Downstream Stations	May - Oct				9.7			0.037	0.032	0.005	0.038			0.020	0.050	0.41	0.066	5.0
	10th percentile	Downstream Stations	May - Oct				8.7			0.008	0.004	0.001	0.003			0.013	0.050	0.29	0.058	4.4
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.009	0.010	0.001	0.019			0.015	0.050	0.27	0.063	1.9
	90th percentile	Downstream Stations	May - Oct				9.7			0.035	0.032	0.005	0.038			0.020	0.050	0.33	0.065	2.3
	10th percentile	Downstream Stations	May - Oct				8.8			0.006	0.003	0.001	0.003			0.013	0.050	0.21	0.057	1.3

25% of monthly Hughes River flow rate as a mixing zone cont'd

Scenario	Statistic	Staion	Month	Aluminu m_T	Antimony _T	Arsenic_T	Barium_T	Beryllium _T	Bismuth_T	Boron_T	Cadmium _T	Calcium_ T	Cesium_T	Chromiu m_T	Chromiu mVI_T	Cobalt_T	Copper_T	Iron_T	Lead_T	Lithium_T
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.053	0.00005	0.00054	0.0074	0.00005	0.000025	0.0077	2.5E-06	8.6	0.000022	0.00018		6.07E-05	0.00025	0.30	0.000025	0.0014
	90th percentile	Downstream Stations	May - Oct	0.072	0.00005	0.00057	0.0081	0.00005	0.000025	0.0078	2.5E-06	9.0	0.000023	0.00027		6.1E-05	0.00025	0.40	6.12E-05	0.0017
	10th percentile	Downstream Stations	May - Oct	0.037	0.00005	0.00044	0.0069	0.00005	0.000025	0.0067	2.5E-06	6.6	0.000016	0.00014		5.67E-05	0.00025	0.26	0.000025	0.0008
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.055	0.00005	0.00031	0.0065	0.00005	0.000025	0.0059	2.5E-06	4.9	0.000011	0.00019		5.37E-05	0.00025	0.27	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.075	0.00005	0.00034	0.0070	0.00005	0.000025	0.0060	2.5E-06	5.3	0.000011	0.00028		5.39E-05	0.00025	0.38	6.26E-05	0.0016
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00028	0.0059	0.00005	0.000025	0.0058	2.5E-06	4.7	0.000010	0.00014		5.33E-05	0.00025	0.22	0.000025	0.0006
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.056	0.00005	0.00023	0.0061	0.00005	0.000025	0.0053	2.5E-06	3.5	0.000007	0.00019		5.12E-05	0.00025	0.26	0.000025	0.0011
	90th percentile	Downstream Stations	May - Oct	0.076	0.00005	0.00025	0.0066	0.00005	0.000025	0.0054	2.5E-06	4.0	0.000008	0.00028		5.16E-05	0.00025	0.37	6.32E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00020	0.0056	0.00005	0.000025	0.0052	2.5E-06	3.3	0.000006	0.00014		5.06E-05	0.00025	0.21	0.000025	0.0005
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.053	0.00005	0.00053	0.0074	0.00005	0.000025	0.0076	2.5E-06	8.5	0.000022	0.00018		6.01E-05	0.00025	0.30	0.000025	0.0014
	90th percentile	Downstream Stations	May - Oct	0.072	0.00005	0.00056	0.0080	0.00005	0.000025	0.0077	2.5E-06	8.9	0.000022	0.00027		6.04E-05	0.00025	0.40	6.12E-05	0.0017
	10th percentile	Downstream Stations	May - Oct	0.037	0.00005	0.00044	0.0069	0.00005	0.000025	0.0066	2.5E-06	6.6	0.000015	0.00014		5.63E-05	0.00025	0.26	0.000025	0.0008
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.055	0.00005	0.00031	0.0064	0.00005	0.000025	0.0059	2.5E-06	4.9	0.000011	0.00019		5.35E-05	0.00025	0.27	0.000025	0.0012
	90th percentile	Downstream Stations	May - Oct	0.075	0.00005	0.00034	0.0070	0.00005	0.000025	0.0060	2.5E-06	5.2	0.000011	0.00028		5.37E-05	0.00025	0.38	6.26E-05	0.0016
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00028	0.0059	0.00005	0.000025	0.0058	2.5E-06	4.7	0.000010	0.00014		5.31E-05	0.00025	0.22	0.000025	0.0006
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.056	0.00005	0.00023	0.0061	0.00005	0.000025	0.0053	2.5E-06	3.5	0.000007	0.00019		5.12E-05	0.00025	0.26	0.000025	0.0011
	90th percentile	Downstream Stations	May - Oct	0.076	0.00005	0.00025	0.0066	0.00005	0.000025	0.0054	2.5E-06	4.0	0.000007	0.00028		5.15E-05	0.00025	0.36	6.32E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00020	0.0056	0.00005	0.000025	0.0052	2.5E-06	3.3	0.000006	0.00014		5.06E-05	0.00025	0.21	0.000025	0.0005

25% of monthly Hughes River flow rate as a mixing zone cont'd

Scenario	Statistic	Staion	Month	Magnesi <u>m</u> _T	Mangane <u>se</u> _T	Mercury_ <u>T</u>	Molybden <u>um</u> _T	Nickel_ <u>T</u>	Potassiu <u>m</u> _T	Rubidium_ <u>T</u>	Selenium_ <u>T</u>	Silicon_ <u>T</u>	Silver_ <u>T</u>	Sodium_ <u>T</u>	Strontium_ <u>T</u>	Sulfur_ <u>T</u>	Tellurium_ <u>T</u>	Thallium_ <u>T</u>	Thorium_ <u>T</u>	Tin_ <u>T</u>
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	2.4	0.069	1.96E-06	0.00012	0.00025	0.94	0.0013	2.7E-05	2.4	0.000005	2.2	0.029	4.34	0.0001	5.0E-06	5.0E-05	0.00010
	90th percentile	Downstream Stations	May - Oct	2.5	0.080	2.5E-06	0.000146	0.000383	0.98	0.0014	5.69E-05	2.7	0.000005	2.4	0.031	4.46	0.0001	5.0E-06	5.0E-05	0.00027
	10th percentile	Downstream Stations	May - Oct	1.9	0.062	1.19E-06	9.66E-05	0.00025	0.82	0.0012	2.62E-05	2.3	0.000005	1.8	0.024	2.80	0.0001	5.0E-06	5.0E-05	0.00008
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.4	0.037	1.93E-06	0.000101	0.00025	0.67	0.0012	2.57E-05	2.3	0.000005	1.5	0.018	1.68	0.0001	5.0E-06	5.0E-05	0.00007
	90th percentile	Downstream Stations	May - Oct	1.5	0.050	2.5E-06	0.000126	0.000389	0.71	0.0013	5.7E-05	2.6	0.000005	1.6	0.019	1.74	0.0001	5.0E-06	5.0E-05	0.00026
	10th percentile	Downstream Stations	May - Oct	1.3	0.032	1.14E-06	7.4E-05	0.00025	0.65	0.0010	2.56E-05	2.1	0.000005	1.4	0.017	1.51	0.0001	5.0E-06	5.0E-05	0.00006
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.0	0.025	1.92E-06	9.34E-05	0.00025	0.57	0.0011	2.52E-05	2.3	0.000005	1.2	0.014	0.73	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.2	0.037	2.5E-06	0.000119	0.000391	0.61	0.0012	5.7E-05	2.5	0.000005	1.3	0.015	0.85	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	0.9	0.020	1.12E-06	6.55E-05	0.00025	0.54	0.0010	2.51E-05	2.1	0.000005	1.1	0.013	0.50	0.0001	5.0E-06	5.0E-05	0.00005
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	2.4	0.069	1.96E-06	0.000118	0.00025	0.94	0.0013	0.000025	2.4	0.000005	2.2	0.029	4.28	0.0001	5.0E-06	5.0E-05	0.00008
	90th percentile	Downstream Stations	May - Oct	2.5	0.079	2.5E-06	0.000144	0.000383	0.98	0.0014	5.49E-05	2.7	0.000005	2.4	0.030	4.40	0.0001	5.0E-06	5.0E-05	0.00026
	10th percentile	Downstream Stations	May - Oct	1.9	0.062	1.19E-06	9.44E-05	0.00025	0.82	0.0012	0.000025	2.3	0.000005	1.8	0.024	2.76	0.0001	5.0E-06	5.0E-05	0.00007
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.4	0.037	1.93E-06	0.000101	0.00025	0.67	0.0012	0.000025	2.3	0.000005	1.5	0.018	1.66	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.5	0.050	2.5E-06	0.000125	0.000389	0.71	0.0013	5.63E-05	2.6	0.000005	1.6	0.019	1.72	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	1.3	0.032	1.14E-06	7.32E-05	0.00025	0.64	0.0010	0.000025	2.1	0.000005	1.4	0.017	1.49	0.0001	5.0E-06	5.0E-05	0.00006
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.0	0.025	1.92E-06	9.32E-05	0.00025	0.57	0.0011	0.000025	2.3	0.000005	1.2	0.014	0.72	0.0001	5.0E-06	5.0E-05	0.00005
	90th percentile	Downstream Stations	May - Oct	1.2	0.037	2.5E-06	0.000119	0.000391	0.61	0.0012	5.67E-05	2.5	0.000005	1.3	0.015	0.84	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	0.9	0.020	1.12E-06	6.52E-05	0.00025	0.54	0.0010	0.000025	2.1	0.000005	1.1	0.013	0.49	0.0001	5.0E-06	5.0E-05	0.00005

25% of monthly Hughes River flow rate as a mixing zone cont'd

Scenario	Statistic	Staion	Month	Titanium_ T	Tungsten _T	Uranium_ T	Vanadium _T	Zinc_T	Zirconiu m_T	Aluminu m_D	Antimony _D	Arsenic_ D	Barium_D	Beryllium _D	Bismuth_ D	Boron_D	Cadmium _D	Calcium_ D	Cesium_ D	Chromiu m_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.55E-05	0.000265	0.00025	0.0015	0.0001	0.027	0.00005	0.00041	0.007009	0.00005	0.000025	0.0079	2.5E-06	8.3	2.2E-05	0.000115
	90th percentile	Downstream Stations	May - Oct	0.0025	5.57E-05	0.000273	0.00025	0.004955	0.0001	0.035	0.00005	0.00045	0.010147	0.00005	0.000025	0.0080	2.5E-06	8.6	2.23E-05	0.00013
	10th percentile	Downstream Stations	May - Oct	0.0009	5.34E-05	0.000175	0.00025	0.0015	0.0001	0.020	0.00005	0.00032	0.006451	0.00005	0.000025	0.0068	2.5E-06	6.6	1.55E-05	6.4E-05
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.19E-05	0.000109	0.00025	0.0015	0.0001	0.029	0.00005	0.00025	0.005959	0.00005	0.000025	0.0060	2.5E-06	4.8	1.1E-05	0.000118
	90th percentile	Downstream Stations	May - Oct	0.0026	5.2E-05	0.000115	0.00025	0.005113	0.0001	0.036	0.00005	0.00028	0.009291	0.00005	0.000025	0.0061	2.5E-06	5.0	1.11E-05	0.000133
	10th percentile	Downstream Stations	May - Oct	0.0009	5.17E-05	1E-04	0.00025	0.0015	0.0001	0.021	0.00005	0.00023	0.005356	0.00005	0.000025	0.0059	2.5E-06	4.6	1.02E-05	6.47E-05
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.06E-05	5.29E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00019	0.005568	0.00005	0.000025	0.0053	2.5E-06	3.5	6.96E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0026	5.08E-05	6.57E-05	0.00025	0.005171	0.0001	0.036	0.00005	0.00022	0.008973	0.00005	0.000025	0.0054	2.5E-06	3.9	7.46E-06	0.000134
	10th percentile	Downstream Stations	May - Oct	0.0009	5.03E-05	4.12E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00017	0.004957	0.00005	0.000025	0.0052	2.5E-06	3.2	6.01E-06	6.49E-05
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.52E-05	0.000262	0.00025	0.0015	0.0001	0.027	0.00005	0.00040	0.006957	0.00005	0.000025	0.0079	2.5E-06	8.2	2.16E-05	0.000115
	90th percentile	Downstream Stations	May - Oct	0.0025	5.53E-05	0.00027	0.00025	0.004955	0.0001	0.035	0.00005	0.00044	0.010097	0.00005	0.000025	0.0080	2.5E-06	8.5	2.19E-05	0.00013
	10th percentile	Downstream Stations	May - Oct	0.0009	5.32E-05	0.000173	0.00025	0.0015	0.0001	0.020	0.00005	0.00031	0.006406	0.00005	0.000025	0.0068	2.5E-06	6.6	1.52E-05	6.4E-05
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.18E-05	0.000108	0.00025	0.0015	0.0001	0.029	0.00005	0.00025	0.00594	0.00005	0.000025	0.0060	2.5E-06	4.7	1.09E-05	0.000118
	90th percentile	Downstream Stations	May - Oct	0.0026	5.19E-05	0.000114	0.00025	0.005113	0.0001	0.036	0.00005	0.00027	0.009273	0.00005	0.000025	0.0061	2.5E-06	4.9	1.1E-05	0.000133
	10th percentile	Downstream Stations	May - Oct	0.0009	5.16E-05	9.91E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00022	0.005336	0.00005	0.000025	0.0059	2.5E-06	4.5	1E-05	6.47E-05
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.06E-05	5.26E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00019	0.005561	0.00005	0.000025	0.0053	2.5E-06	3.5	6.91E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0026	5.08E-05	6.53E-05	0.00025	0.005171	0.0001	0.036	0.00005	0.00022	0.008966	0.00005	0.000025	0.0054	2.5E-06	3.8	7.4E-06	0.000134
	10th percentile	Downstream Stations	May - Oct	0.0009	5.03E-05	4.11E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00016	0.00495	0.00005	0.000025	0.0052	2.5E-06	3.2	5.98E-06	6.49E-05

25% of monthly Hughes River flow rate as a mixing zone cont'd																				
Scenario	Statistic	Staion	Month	Cobalt_D	Copper_D	Iron_D	Lead_D	Lithium_D	Magnesium_D	Manganese_D	Mercury_D	Molybdenum_D	Nickel_D	Potassium_D	Rubidium_D	Selenium_D	Silicon_D	Silver_D	Sodium_D	Strontium_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	6.1E-05	0.0004	0.16	0.000025	0.000835	2.46	0.060	1.58E-06	0.000122	0.00025	0.930323	0.001222	0.000025	2.3	0.000005	2.3	0.029
	90th percentile	Downstream Stations	May - Oct	6.14E-05	0.0016	0.21	9.18E-05	0.001224	2.55	0.062	2.14E-06	0.000158	0.00025	0.989689	0.001346	4.58E-05	2.5	0.000005	2.4	0.030
	10th percentile	Downstream Stations	May - Oct	5.69E-05	0.0003	0.13	0.000025	0.000743	1.95	0.049	9.29E-07	0.000102	0.00025	0.8425	0.001084	0.000025	2.1	0.000005	1.7	0.023
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	5.38E-05	0.0004	0.15	0.000025	0.000619	1.39	0.024	1.55E-06	0.000104	0.00025	0.657941	0.001049	0.000025	2.2	0.000005	1.4	0.018
	90th percentile	Downstream Stations	May - Oct	5.4E-05	0.0016	0.21	9.49E-05	0.001075	1.47	0.036	2.13E-06	0.000142	0.00025	0.706279	0.001165	4.67E-05	2.4	0.000005	1.5	0.019
	10th percentile	Downstream Stations	May - Oct	5.34E-05	0.0003	0.12	0.000025	0.000605	1.32	0.021	8.69E-07	8.69E-05	0.00025	0.62808	0.000957	0.000025	2.0	0.000005	1.3	0.016
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	5.13E-05	0.0004	0.15	0.000025	0.000539	0.99	0.012	1.53E-06	9.66E-05	0.00025	0.555922	0.000987	0.000025	2.1	0.000005	1.1	0.014
	90th percentile	Downstream Stations	May - Oct	5.16E-05	0.0016	0.21	9.59E-05	0.001002	1.13	0.022	2.13E-06	0.000136	0.00025	0.600074	0.001097	4.71E-05	2.4	0.000005	1.3	0.015
	10th percentile	Downstream Stations	May - Oct	5.07E-05	0.0002	0.12	0.000025	0.000524	0.91	0.008	8.47E-07	7.95E-05	0.00025	0.526744	0.000887	0.000025	2.0	0.000005	1.0	0.012
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	6.1E-05	0.0004	0.15	0.000025	0.000822	2.43	0.060	1.58E-06	0.00012	0.00025	0.92499	0.001217	0.000025	2.3	0.000005	2.3	0.028
	90th percentile	Downstream Stations	May - Oct	6.14E-05	0.0016	0.21	9.18E-05	0.001213	2.51	0.062	2.14E-06	0.000156	0.00025	0.984868	0.001341	4.58E-05	2.5	0.000005	2.4	0.029
	10th percentile	Downstream Stations	May - Oct	5.69E-05	0.0002	0.12	0.000025	0.000733	1.92	0.048	9.29E-07	9.99E-05	0.00025	0.839266	0.00108	0.000025	2.1	0.000005	1.7	0.023
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.38E-05	0.0003	0.15	0.000025	0.000614	1.37	0.024	1.55E-06	0.000103	0.00025	0.656063	0.001048	0.000025	2.2	0.000005	1.4	0.018
	90th percentile	Downstream Stations	May - Oct	5.4E-05	0.0016	0.21	9.49E-05	0.001071	1.46	0.035	2.13E-06	0.000141	0.00025	0.704401	0.001163	4.67E-05	2.4	0.000005	1.5	0.018
	10th percentile	Downstream Stations	May - Oct	5.34E-05	0.0002	0.12	0.000025	0.000601	1.31	0.021	8.69E-07	8.61E-05	0.00025	0.626278	0.000956	0.000025	2.0	0.000005	1.3	0.016
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.13E-05	0.0003	0.15	0.000025	0.000537	0.99	0.012	1.53E-06	9.64E-05	0.00025	0.555294	0.000987	0.000025	2.1	0.000005	1.1	0.014
	90th percentile	Downstream Stations	May - Oct	5.16E-05	0.0016	0.21	9.59E-05	0.001001	1.12	0.022	2.13E-06	0.000136	0.00025	0.599446	0.001096	4.71E-05	2.4	0.000005	1.2	0.015
	10th percentile	Downstream Stations	May - Oct	5.07E-05	0.0002	0.12	0.000025	0.000523	0.91	0.008	8.47E-07	7.93E-05	0.00025	0.526139	0.000887	0.000025	2.0	0.000005	1.0	0.012

25% of monthly Hughes River flow rate as a mixing zone cont'd													
Scenario	Statistic	Staion	Month	Sulfur_D	Tellurium_D	Thallium_D	Thorium_D	Tin_D	Titanium_D	Tungsten_D	Uranium_D	Vanadium_D	Zinc_D
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
median Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	4.47	0.0001	0.000005	0.00005	8.97E-05	0.000428	5.58E-05	0.00029	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	4.60	0.0001	0.000005	0.00005	0.000293	0.000638	5.6E-05	0.000297	0.00025	0.0045
	10th percentile	Downstream Stations	May - Oct	2.84	0.0001	0.000005	0.00005	7.43E-05	0.000288	5.36E-05	0.000189	0.00025	0.0006
10th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	1.74	0.0001	0.000005	0.00005	6.4E-05	0.000434	5.2E-05	0.000115	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	1.88	0.0001	0.000005	0.00005	0.000279	0.000654	5.21E-05	0.000121	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	1.53	0.0001	0.000005	0.00005	6.19E-05	0.000294	5.18E-05	0.000105	0.00025	0.0005
90th percentile Hughes monthly flow rate, median mixed pit concentrations	median	Downstream Stations	May - Oct	0.73	0.0001	0.000005	0.00005	5.49E-05	0.000439	5.07E-05	5.3E-05	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	0.97	0.0001	0.000005	0.00005	0.000273	0.000662	5.09E-05	6.15E-05	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	0.50	0.0001	0.000005	0.00005	5.23E-05	0.000296	5.04E-05	3.9E-05	0.00025	0.0005
median Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	4.38	0.0001	0.000005	0.00005	6.75E-05	0.000428	5.55E-05	0.000286	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	4.51	0.0001	0.000005	0.00005	0.000273	0.000638	5.57E-05	0.000293	0.00025	0.0044
	10th percentile	Downstream Stations	May - Oct	2.79	0.0001	0.000005	0.00005	6.07E-05	0.000288	5.34E-05	0.000186	0.00025	0.0005
10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.71	0.0001	0.000005	0.00005	5.62E-05	0.000434	5.19E-05	0.000114	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	1.85	0.0001	0.000005	0.00005	0.000271	0.000654	5.2E-05	0.000119	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	1.50	0.0001	0.000005	0.00005	5.53E-05	0.000294	5.17E-05	0.000103	0.00025	0.0005
90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.72	0.0001	0.000005	0.00005	5.22E-05	0.000439	5.06E-05	5.26E-05	0.00025	0.0015
	90th percentile	Downstream Stations	May - Oct	0.96	0.0001	0.000005	0.00005	0.00027	0.000662	5.08E-05	6.09E-05	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	0.49	0.0001	0.000005	0.00005	5.1E-05	0.000296	5.03E-05	3.87E-05	0.00025	0.0005

25% of monthly Hughes River flow rate as a mixing zone cont'd

median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.6		11.2	0.300	14	0.17				12
	90th percentile	Downstream Stations	May - Oct	13.9	112					19.5		12.6	0.300	15	0.17				13
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		9.5	0.300	12	0.17				11
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.6		11.2	0.300	14	0.17				12
	90th percentile	Downstream Stations	May - Oct	13.9	112					19.5		12.6	0.300	15	0.17				13
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		9.5	0.300	12	0.17				11
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	9.1	90					14.6		11.2	0.300	14	0.17				12
	90th percentile	Downstream Stations	May - Oct	13.9	112					19.5		12.6	0.300	15	0.17				13
	10th percentile	Downstream Stations	May - Oct	6.9	73					3.7		9.5	0.300	12	0.17				11

Notes:
Pink shaded cell indicates parameter of potential concern (PoPC), identified when mixed concetnration exceeded both the baseline and a WQGL
" _T" indicates total concentration
" _D" indicates dissolved concentration

25% of monthly Hughes River flow rate as a mixing zone cont'd

median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.010	0.010	0.001	0.019			0.015	0.050	0.27	0.063	1.9
	90th percentile	Downstream Stations	May - Oct				9.7			0.035	0.032	0.005	0.038			0.020	0.050	0.33	0.065	2.3
	10th percentile	Downstream Stations	May - Oct				8.8			0.006	0.003	0.001	0.003			0.013	0.050	0.21	0.057	1.4
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.010	0.010	0.001	0.019			0.015	0.050	0.27	0.063	1.9
	90th percentile	Downstream Stations	May - Oct				9.7			0.035	0.032	0.005	0.038			0.020	0.050	0.33	0.065	2.3
	10th percentile	Downstream Stations	May - Oct				8.8			0.006	0.003	0.001	0.003			0.013	0.050	0.21	0.057	1.4
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct				9.2			0.010	0.010	0.001	0.019			0.015	0.050	0.27	0.063	1.9
	90th percentile	Downstream Stations	May - Oct				9.7			0.035	0.032	0.005	0.038			0.020	0.050	0.33	0.065	2.3
	10th percentile	Downstream Stations	May - Oct				8.8			0.006	0.003	0.001	0.003			0.013	0.050	0.21	0.057	1.4

25% of monthly Hughes River flow rate as a mixing zone cont'd																				
median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.056	0.00005	0.00023	0.0061	0.00005	0.000025	0.0053	2.5E-06	3.6	0.000007	0.00019		5.14E-05	0.00025	0.26	0.000025	0.0011
	90th percentile	Downstream Stations	May - Oct	0.076	0.00005	0.00025	0.0066	0.00005	0.000025	0.0054	2.5E-06	4.1	0.000008	0.00028		5.17E-05	0.00025	0.37	6.32E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00020	0.0056	0.00005	0.000025	0.0052	2.5E-06	3.3	0.000006	0.00014		5.07E-05	0.00025	0.21	0.000025	0.0005
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.056	0.00005	0.00023	0.0061	0.00005	0.000025	0.0053	2.5E-06	3.6	0.000007	0.00019		5.14E-05	0.00025	0.26	0.000025	0.0011
	90th percentile	Downstream Stations	May - Oct	0.076	0.00005	0.00025	0.0066	0.00005	0.000025	0.0054	2.5E-06	4.1	0.000008	0.00028		5.17E-05	0.00025	0.37	6.32E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00020	0.0056	0.00005	0.000025	0.0052	2.5E-06	3.3	0.000006	0.00014		5.07E-05	0.00025	0.21	0.000025	0.0005
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.056	0.00005	0.00023	0.0061	0.00005	0.000025	0.0053	2.5E-06	3.6	0.000007	0.00019		5.14E-05	0.00025	0.26	0.000025	0.0011
	90th percentile	Downstream Stations	May - Oct	0.076	0.00005	0.00025	0.0066	0.00005	0.000025	0.0054	2.5E-06	4.1	0.000008	0.00028		5.17E-05	0.00025	0.37	6.32E-05	0.0015
	10th percentile	Downstream Stations	May - Oct	0.039	0.00005	0.00020	0.0056	0.00005	0.000025	0.0052	2.5E-06	3.3	0.000006	0.00014		5.07E-05	0.00025	0.21	0.000025	0.0005

25% of monthly Hughes River flow rate as a mixing zone cont'd

median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.0	0.025	1.92E-06	9.35E-05	0.000252	0.57	0.0011	2.53E-05	2.3	0.000005	1.2	0.014	0.74	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.2	0.037	2.5E-06	0.000119	0.000394	0.61	0.0012	5.71E-05	2.5	0.000005	1.3	0.015	0.87	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	0.9	0.020	1.12E-06	6.57E-05	0.000251	0.54	0.0010	2.52E-05	2.1	0.000005	1.1	0.013	0.50	0.0001	5.0E-06	5.0E-05	0.00006
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.0	0.025	1.92E-06	9.35E-05	0.000252	0.57	0.0011	2.53E-05	2.3	0.000005	1.2	0.014	0.74	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.2	0.037	2.5E-06	0.000119	0.000394	0.61	0.0012	5.71E-05	2.5	0.000005	1.3	0.015	0.87	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	0.9	0.020	1.12E-06	6.57E-05	0.000251	0.54	0.0010	2.52E-05	2.1	0.000005	1.1	0.013	0.50	0.0001	5.0E-06	5.0E-05	0.00006
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	1.0	0.025	1.92E-06	9.35E-05	0.000252	0.57	0.0011	2.53E-05	2.3	0.000005	1.2	0.014	0.74	0.0001	5.0E-06	5.0E-05	0.00006
	90th percentile	Downstream Stations	May - Oct	1.2	0.037	2.5E-06	0.000119	0.000394	0.61	0.0012	5.71E-05	2.5	0.000005	1.3	0.015	0.87	0.0001	5.0E-06	5.0E-05	0.00025
	10th percentile	Downstream Stations	May - Oct	0.9	0.020	1.12E-06	6.57E-05	0.000251	0.54	0.0010	2.52E-05	2.1	0.000005	1.1	0.013	0.50	0.0001	5.0E-06	5.0E-05	0.00006

25% of monthly Hughes River flow rate as a mixing zone cont'd

median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.07E-05	5.33E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00020	0.005587	0.00005	0.000025	0.0053	2.52E-06	3.5	7.02E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0026	5.09E-05	6.62E-05	0.00025	0.005171	0.0001	0.036	0.00005	0.00023	0.008989	0.00005	0.000025	0.0054	2.53E-06	3.9	7.54E-06	0.000134
	10th percentile	Downstream Stations	May - Oct	0.0009	5.04E-05	4.14E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00017	0.004976	0.00005	0.000025	0.0052	2.51E-06	3.2	6.04E-06	6.49E-05
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.07E-05	5.33E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00020	0.005587	0.00005	0.000025	0.0053	2.52E-06	3.5	7.02E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0026	5.09E-05	6.62E-05	0.00025	0.005171	0.0001	0.036	0.00005	0.00023	0.008989	0.00005	0.000025	0.0054	2.53E-06	3.9	7.54E-06	0.000134
	10th percentile	Downstream Stations	May - Oct	0.0009	5.04E-05	4.14E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00017	0.004976	0.00005	0.000025	0.0052	2.51E-06	3.2	6.04E-06	6.49E-05
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.0016	5.07E-05	5.33E-05	0.00025	0.0015	0.0001	0.029	0.00005	0.00020	0.005587	0.00005	0.000025	0.0053	2.52E-06	3.5	7.02E-06	0.000119
	90th percentile	Downstream Stations	May - Oct	0.0026	5.09E-05	6.62E-05	0.00025	0.005171	0.0001	0.036	0.00005	0.00023	0.008989	0.00005	0.000025	0.0054	2.53E-06	3.9	7.54E-06	0.000134
	10th percentile	Downstream Stations	May - Oct	0.0009	5.04E-05	4.14E-05	0.00025	0.0015	0.0001	0.021	0.00005	0.00017	0.004976	0.00005	0.000025	0.0052	2.51E-06	3.2	6.04E-06	6.49E-05

25% of monthly Hughes River flow rate as a mixing zone cont'd

median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.14E-05	0.0004	0.16	2.56E-05	0.000539	1.00	0.012	1.54E-06	9.68E-05	0.000252	0.557216	0.000989	0.000025	2.1	0.000005	1.1	0.014
	90th percentile	Downstream Stations	May - Oct	5.17E-05	0.0016	0.22	9.66E-05	0.001002	1.13	0.022	2.14E-06	0.000136	0.000252	0.601368	0.001098	4.71E-05	2.4	0.000005	1.3	0.015
	10th percentile	Downstream Stations	May - Oct	5.07E-05	0.0002	0.13	2.53E-05	0.000524	0.92	0.008	8.6E-07	7.98E-05	0.000251	0.527992	0.000888	0.000025	2.0	0.000005	1.0	0.012
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.14E-05	0.0004	0.16	2.56E-05	0.000539	1.00	0.012	1.54E-06	9.68E-05	0.000252	0.557216	0.000989	0.000025	2.1	0.000005	1.1	0.014
	90th percentile	Downstream Stations	May - Oct	5.17E-05	0.0016	0.22	9.66E-05	0.001002	1.13	0.022	2.14E-06	0.000136	0.000252	0.601368	0.001098	4.71E-05	2.4	0.000005	1.3	0.015
	10th percentile	Downstream Stations	May - Oct	5.07E-05	0.0002	0.13	2.53E-05	0.000524	0.92	0.008	8.6E-07	7.98E-05	0.000251	0.527992	0.000888	0.000025	2.0	0.000005	1.0	0.012
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	5.14E-05	0.0004	0.16	2.56E-05	0.000539	1.00	0.012	1.54E-06	9.68E-05	0.000252	0.557216	0.000989	0.000025	2.1	0.000005	1.1	0.014
	90th percentile	Downstream Stations	May - Oct	5.17E-05	0.0016	0.22	9.66E-05	0.001002	1.13	0.022	2.14E-06	0.000136	0.000252	0.601368	0.001098	4.71E-05	2.4	0.000005	1.3	0.015
	10th percentile	Downstream Stations	May - Oct	5.07E-05	0.0002	0.13	2.53E-05	0.000524	0.92	0.008	8.6E-07	7.98E-05	0.000251	0.527992	0.000888	0.000025	2.0	0.000005	1.0	0.012

25% of monthly Hughes River flow rate as a mixing zone cont'd

median Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.75	0.0001	0.000005	0.00005	5.95E-05	0.000439	5.07E-05	5.36E-05	0.00025	0.0016
	90th percentile	Downstream Stations	May - Oct	0.98	0.0001	0.000005	0.00005	0.000276	0.000662	5.09E-05	6.22E-05	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	0.51	0.0001	0.000005	0.00005	5.46E-05	0.000296	5.04E-05	3.93E-05	0.00025	0.0005
10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.75	0.0001	0.000005	0.00005	5.95E-05	0.000439	5.07E-05	5.36E-05	0.00025	0.0016
	90th percentile	Downstream Stations	May - Oct	0.98	0.0001	0.000005	0.00005	0.000276	0.000662	5.09E-05	6.22E-05	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	0.51	0.0001	0.000005	0.00005	5.46E-05	0.000296	5.04E-05	3.93E-05	0.00025	0.0005
90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations	median	Downstream Stations	May - Oct	0.75	0.0001	0.000005	0.00005	5.95E-05	0.000439	5.07E-05	5.36E-05	0.00025	0.0016
	90th percentile	Downstream Stations	May - Oct	0.98	0.0001	0.000005	0.00005	0.000276	0.000662	5.09E-05	6.22E-05	0.00025	0.0046
	10th percentile	Downstream Stations	May - Oct	0.51	0.0001	0.000005	0.00005	5.46E-05	0.000296	5.04E-05	3.93E-05	0.00025	0.0005

Appendix F



F.1 Full Modelling Results – Base-Case Scenarios



Dewatering rate	392.4 L/s
Pink fill: parameter of potential concern (PoPC)	Station AQF 41 is upsteram of the discharge point; no mixing scenarios conducted on AQF41
Light grey fill: river station concentrations less than method detection limit (<MDL)	Paramaters with "_T" indicates total concentration
"-" symbol: no geochemistry measurement for river and/or pit; pH cannot be mixed	Parameters with "_D" indicates dissolved concentration
Light grey with "-" symbol: river measurement <MDL and no geochemistry measurement for pit	

Median Hughes monthly flow rate, median mixed pit concentrations

		Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	
Month	Site	D_Oxygen_percent_ D_Oxygen_field mg/L	field %	ORP_field mV	pH_field pH	Specific_Conducta nce_field uS/cm	TDS_field mg/L	Temp_field C	Turbidity_ field NTU	Acidity(CaCO 3) mg/L	Alkalinity(CaCO 3)_bicarbonate mg/L	Alkalinity(CaCO 3)_carbonate mg/L	Alkalinity(CaC O3)_hydroxide mg/L	Alkalinity(CaC O3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbo nate mg/L	(HCO3)_bicarbo nate mg/L	(OH)_hydroxi de mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(CaC O3)_D mg/L	Hardness(CaC O3)_T mg/L	pH pH	TDS_T mg/L
1	AQF40	10.0	68.4	-	-	-	-	-	-	-	-	-	-	-	12.1	-	-	-	-	-	-	-	-	-
2	AQF40	10.8	74.4	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-
3	AQF40	11.7	80.5	-	-	-	-	0.2	-	-	-	-	-	-	11.5	0.5	18.6	0.49	-	-	-	17.4	-	-
4	AQF40	20.0	139.6	-	-	-	-	0.6	-	-	-	-	-	-	15.4	0.4	17.9	0.33	39.0	-	-	16.6	-	-
5	AQF40	12.4	94.6	-	-	-	-	3.9	-	-	-	-	-	-	12.2	0.3	14.9	0.17	-	-	-	13.8	-	-
6	AQF40	9.0	90.5	-	-	-	-	15.3	-	-	-	-	-	-	11.0	0.3	13.4	0.17	-	-	-	13.0	-	-
7	AQF40	6.7	72.0	-	-	-	-	18.6	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	14.1	-	-
8	AQF40	6.1	66.7	-	-	-	-	19.8	-	-	-	-	-	-	13.1	0.3	15.9	0.17	-	-	-	13.3	-	-
9	AQF40	8.0	78.9	-	-	-	-	13.6	-	-	-	-	-	-	13.2	0.3	16.1	0.17	-	-	-	13.6	-	-
10	AQF40	12.0	90.2	-	-	-	-	3.6	-	-	-	-	-	-	13.6	0.3	16.5	0.17	-	-	-	14.4	-	-
11	AQF40	10.4	71.3	-	-	-	-	0.3	-	-	-	-	-	-	14.2	0.3	17.3	0.17	-	-	-	14.4	-	-
12	AQF40	10.2	69.8	-	-	-	-	0.2	-	-	-	-	-	-	13.2	-	-	-	-	-	-	-	-	-
1	AQF42	10.5	71.9	-	-	-	-	0.2	-	-	-	-	-	-	13.9	-	-	-	-	-	-	-	-	-
2	AQF42	12.1	82.1	-	-	-	-	0.2	-	-	-	-	-	-	10.0	-	-	-	-	-	-	17.8	-	-
3	AQF42	10.6	71.9	-	-	-	-	0.2	-	-	-	-	-	-	17.6	0.5	21.5	0.49	-	-	-	17.6	-	-
4	AQF42	15.5	107.3	-	-	-	-	0.2	-	-	-	-	-	-	15.4	0.4	18.5	0.33	38.6	-	-	16.2	-	-
5	AQF42	13.7	133.0	-	-	-	-	4.4	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.8	-	-
6	AQF42	10.3	103.0	-	-	-	-	15.2	-	-	-	-	-	-	10.6	0.3	12.9	0.17	-	-	-	12.3	-	-
7	AQF42	8.0	86.9	-	-	-	-	18.8	-	-	-	-	-	-	12.7	0.3	15.5	0.17	-	-	-	13.1	-	-
8	AQF42	7.9	84.8	-	-	-	-	18.5	-	-	-	-	-	-	13.1	0.3	15.9	0.17	-	-	-	13.4	-	-
9	AQF42	8.5	82.4	-	-	-	-	14.0	-	-	-	-	-	-	12.7	0.3	15.5	0.17	-	-	-	14.2	-	-
10	AQF42	11.4	95.7	-	-	-	-	3.7	-	-	-	-	-	-	13.2	0.3	16.1	0.17	-	-	-	14.2	-	-
11	AQF42	11.7	80.2	-	-	-	-	0.3	-	-	-	-	-	-	14.7	0.3	17.9	0.17	-	-	-	15.1	-	-
12	AQF42	11.1	76.1	-	-	-	-	0.2	-	-	-	-	-	-	14.4	-	-	-	-	-	-	-	-	-
1	AQF43	13.3	91.4	-	-	-	-	-	-	-	-	-	-	-	14.5	-	-	-	-	-	-	-	-	-
2	AQF43	13.5	92.3	-	-	-	-	-	-	-	-	-	-	-	14.4	-	-	-	-	-	-	-	-	-
3	AQF43	13.7	93.4	-	-	-	-	0.2	-	-	-	-	-	-	14.3	0.5	18.6	0.49	-	-	-	17.2	-	-
4	AQF43	16.9	116.2	-	-	-	-	0.3	-	-	-	-	-	-	15.5	0.4	18.4	0.33	38.8	-	-	16.6	-	-
5	AQF43	16.9	136.9	-	-	-	-	5.9	-	-	-	-	-	-	13.3	0.3	16.2	0.17	-	-	-	13.9	-	-
6	AQF43	10.3	104.0	-	-	-	-	15.6	-	-	-	-	-	-	11.0	0.3	13.4	0.17	-	-	-	13.5	-	-
7	AQF43	8.2	89.2	-	-	-	-	19.3	-	-	-	-	-	-	11.1	0.3	13.6	0.17	-	-	-	13.3	-	-
8	AQF43	8.2	89.4	-	-	-	-	19.4	-	-	-	-	-	-	14.0	0.3	17.1	0.17	-	-	-	14.0	-	-
9	AQF43	9.0	85.4	-	-	-	-	12.9	-	-	-	-	-	-	13.6	0.3	16.6	0.17	-	-	-	14.0	-	-
10	AQF43	12.8	94.7	-	-	-	-	3.0	-	-	-	-	-	-	13.0	0.3	15.8	0.17	-	-	-	14.2	-	-
11	AQF43	14.3	98.0	-	-	-	-	-	-	-	-	-	-	-	14.3	0.3	17.4	0.17	-	-	-	14.7	-	-
12	AQF43	13.8	94.7	-	-	-	-	-	-	-	-	-	-	-	14.5	-	-	-	-	-	-	15.1	-	-
1	AQF44	11.2	76.9	-	-	-	-	0.2	-	-	-	-	-	-	12.3	-	-	-	-	-	-	-	-	-
2	AQF44	12.4	84.4	-	-	-	-	0.2	-	-	-	-	-	-	15.9	-	-	-	-	-	-	-	-	-
3	AQF44	13.6	91.9	-	-	-	-	0.2	-	-	-	-	-	-	19.4	0.5	26.7	0.49	-	-	-	17.9	-	-
4	AQF44	19.3	132.8	-	-	-	-	0.2	-	-	-	-	-	-	16.0	0.4	21.8	0.33	40.4	-	-	16.8	-	-
5	AQF44	14.2	132.0	-	-	-	-	6.2	-	-	-	-	-	-	12.0	0.3	14.6	0.17	-	-	-	13.6	-	-
6	AQF44	10.5	105.0	-	-	-	-	15.5	-	-	-	-	-	-	11.0	0.3	13.4	0.17	-	-	-	12.7	-	-
7	AQF44	8.5	93.5	-	-	-	-	19.6	-	-	-	-	-	-	11.3	0.3	13.8	0.17	-	-	-	13.3	-	-
8	AQF44	8.1	88.5	-	-	-	-	19.1	-	-	-	-	-	-	13.9	0.3	17.0	0.17	-	-	-	14.1	-	-
9	AQF44	9.1	84.1	-	-	-	-	11.8	-	-	-	-	-	-	14.4	0.3	17.5	0.17	-	-	-	15.8	-	-
10	AQF44	12.2	89.7	-	-	-	-	2.6	-	-	-	-	-	-	13.8	0.3	16.8	0.17	-	-	-	15.0	-	-
11	AQF44	12.4	85.5	-	-	-	-	0.2	-	-	-	-	-	-	16.4	0.3	20.0	0.17	-	-	-	16.0	-	-
12	AQF44	11.8	81.2	-	-	-	-	0.2	-	-	-	-	-	-	14.4	-	-	-	-	-	-	-	-	-

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

Site	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al
	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite_nitrat e(N) mg/L	Nitrogen(TKN) mg/L	Phosphorus_D mg/L	Phosphorus_T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_T mg/L	Chromium VI_T mg/L	Cobalt_T mg/L	Copper_T mg/L
AQF40	-	10.1	-	-	0.095	0.072	0.005	0.071	-	-	0.025	0.050	1.586	0.070	5.6	0.038	0.00010866	0.00033	0.00730	0.000011	0.000025	0.00593	0.000008	5.10695	0.000011	0.00025	-	0.000054	0.00063
AQF40	-	9.8	-	-	0.060	0.089	0.005	-	-	-	0.021	0.050	1.085	0.072	7.2	0.036	0.000118388	0.00032	0.00744	0.000011	0.000025	0.00596	0.000005	5.32475	0.000011	0.00025	-	0.000054	0.00044
AQF40	-	9.6	-	-	0.026	0.106	0.005	-	-	-	0.018	0.050	0.583	0.075	8.7	0.034	0.000128137	0.00031	0.00756	0.000011	0.000025	0.00597	0.000003	5.49303	0.000011	0.00025	-	0.000054	0.00025
AQF40	-	9.1	-	-	0.009	0.098	0.001	-	-	-	0.025	0.006	0.362	0.078	4.8	0.034	0.00005	0.00035	0.00712	0.000011	0.000025	0.00591	0.000009	5.04204	0.000011	0.00025	-	0.000054	0.00025
AQF40	-	8.7	-	-	0.007	0.038	0.001	0.044	-	-	0.023	0.050	0.303	0.065	2.6	0.055	0.00005	0.00025	0.00625	0.000050	0.000025	0.00543	0.000003	4.08872	0.000008	0.00022	-	0.000052	0.00025
AQF40	-	9.8	-	-	0.008	0.011	0.005	0.035	-	-	0.015	0.050	0.316	0.057	3.1	0.062	0.00005	0.00025	0.00640	0.000050	0.000025	0.00559	0.000005	4.24713	0.000009	0.00020	-	0.000052	0.00025
AQF40	-	8.8	-	-	0.014	0.003	0.001	0.218	-	-	0.012	0.050	0.297	0.063	3.8	0.048	0.00005	0.00027	0.00667	0.000050	0.000025	0.00573	0.000003	4.46026	0.000010	0.00016	-	0.000053	0.00025
AQF40	-	9.2	-	-	0.022	0.003	0.001	0.003	-	-	0.015	0.050	0.252	0.066	3.7	0.034	0.00005	0.00028	0.00568	0.000050	0.000025	0.00572	0.000003	4.13714	0.000010	0.00014	-	0.000053	0.00025
AQF40	-	8.9	-	-	0.025	0.003	0.001	0.003	-	-	0.012	0.050	0.283	0.064	4.0	0.045	0.00005	0.00029	0.00658	0.000050	0.000025	0.00573	0.000003	4.55498	0.000010	0.00013	-	0.000053	0.00025
AQF40	-	8.8	-	-	0.017	0.026	0.001	0.038	-	-	0.020	0.050	0.308	0.065	3.8	0.054	0.00005	0.00027	0.00564	0.000050	0.000025	0.00570	0.000003	4.49586	0.000009	0.00025	-	0.000053	0.00025
AQF40	-	10.1	-	-	0.016	0.025	0.001	0.025	-	-	0.019	0.050	0.299	0.062	4.1	0.081	0.00005	0.00029	0.00875	0.000050	0.000025	0.00579	0.000012	4.77872	0.000010	0.00030	-	0.000053	0.00066
AQF40	-	10.1	-	-	0.056	0.048	0.003	0.048	-	-	0.022	0.050	0.945	0.066	4.9	0.059	7.93725E-05	0.00031	0.00803	0.000030	0.000025	0.00587	0.000010	4.96417	0.000011	0.00027	-	0.000053	0.00065
AQF42	-	9.8	-	-	0.051	0.068	0.005	0.067	-	-	0.025	0.050	0.696	0.073	5.4	0.051	0.000225981	0.00033	0.00818	0.000011	0.000025	0.00593	0.000003	5.42958	0.000011	0.00025	-	0.000054	0.00025
AQF42	-	10.0	-	-	0.037	0.119	0.005	-	-	-	0.025	0.050	0.660	0.072	13.8	0.066	0.000284472	0.00035	0.00885	0.000011	0.000025	0.00596	0.000011	5.61784	0.000011	0.00025	-	0.000054	0.00097
AQF42	-	10.3	-	-	0.056	0.111	0.005	-	-	-	0.025	0.050	0.534	0.075	5.1	0.122	0.00005	0.00034	0.00949	0.000011	0.000025	0.00597	0.000003	5.50280	0.000024	0.00050	-	0.000122	0.00444
AQF42	-	9.6	-	-	0.016	0.095	0.001	-	-	-	0.030	0.006	0.362	0.074	4.8	0.037	0.00005	0.00036	0.00798	0.000011	0.000025	0.00591	0.000010	5.18875	0.000011	0.00025	-	0.000054	0.00092
AQF42	-	9.5	-	-	0.007	0.039	0.001	0.039	-	-	0.015	0.050	0.318	0.064	2.5	0.054	0.00005	0.00029	0.00612	0.000050	0.000025	0.00543	0.000003	3.75227	0.000008	0.00017	-	0.000052	0.00025
AQF42	-	9.4	-	-	0.008	0.011	0.005	0.035	-	-	0.016	0.050	0.316	0.057	3.1	0.058	0.00005	0.00024	0.00637	0.000050	0.000025	0.00559	0.000003	4.09927	0.000009	0.00024	-	0.000052	0.00025
AQF42	-	9.1	-	-	0.025	0.003	0.001	0.003	-	-	0.015	0.050	0.390	0.061	3.8	0.048	0.00005	0.00027	0.00619	0.000050	0.000025	0.00573	0.000007	4.09673	0.000010	0.00125	-	0.000053	0.00061
AQF42	-	9.3	-	-	0.046	0.003	0.001	0.003	-	-	0.014	0.050	0.252	0.065	3.7	0.037	0.00005	0.00030	0.00592	0.000050	0.000025	0.00572	0.000003	4.35333	0.000010	0.00015	-	0.000053	0.00025
AQF42	-	9.0	-	-	0.008	0.007	0.001	0.007	-	-	0.015	0.050	0.361	0.064	3.8	0.039	0.00005	0.00029	0.00642	0.000050	0.000025	0.00573	0.000003	4.57463	0.000010	0.00014	-	0.000053	0.00025
AQF42	-	9.9	-	-	0.008	0.019	0.001	0.019	-	-	0.015	0.050	0.289	0.063	3.7	0.041	0.00005	0.00028	0.00583	0.000050	0.000025	0.00570	0.000003	4.51552	0.000009	0.00014	-	0.000053	0.00025
AQF42	-	9.5	-	-	0.022	0.025	0.001	0.025	-	-	0.015	0.050	0.368	0.062	4.3	0.155	0.000128479	0.00031	0.01472	0.000050	0.000025	0.00579	0.000030	4.95529	0.000024	0.00075	-	0.000122	0.00090
AQF42	-	9.7	-	-	0.037	0.047	0.003	0.046	-	-	0.020	0.050	0.533	0.067	4.9	0.103	0.000177281	0.00032	0.01143	0.000030	0.000025	0.00587	0.000016	5.21874	0.000017	0.00050	-	0.000088	0.00057
AQF43	-	10.0	-	-	0.025	0.065	0.005	0.064	-	-	0.025	0.050	0.354	0.071	4.8	0.039	0.00005	0.00029	0.00706	0.000011	0.000025	0.00593	0.000003	5.27315	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.5	-	-	0.019	0.088	0.005	-	-	-	0.021	0.050	0.355	0.073	5.3	0.037	0.00005	0.00030	0.00723	0.000011	0.000025	0.00596	0.000003	5.36383	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.1	-	-	0.012	0.112	0.005	-	-	-	0.018	0.050	0.353	0.074	5.8	0.035	0.00005	0.00030	0.00739	0.000011	0.000025	0.00597	0.000003	5.42466	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.1	-	-	0.009	0.097	0.001	-	-	-	0.013	0.006	0.342	0.077	4.8	0.036	0.00005	0.00035	0.00728	0.000011	0.000025	0.00591	0.000008	5.16919	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.9	-	-	0.007	0.032	0.001	0.032	-	-	0.031	0.050	0.368	0.064	2.6	0.060	0.00005	0.00029	0.00622	0.000050	0.000025	0.00543	0.000003	4.11841	0.000008	0.00018	-	0.000052	0.00025
AQF43	-	8.8	-	-	0.008	0.011	0.005	0.035	-	-	0.015	0.050	0.316	0.058	3.2	0.067	0.00005	0.00024	0.00632	0.000050	0.000025	0.00559	0.000003	4.15841	0.000009	0.00026	-	0.000052	0.00025
AQF43	-	9.1	-	-	0.033	0.003	0.001	0.003	-	-	0.015	0.050	0.253	0.062	3.8	0.057	0.00005	0.00028	0.00616	0.000050	0.000025	0.00573	0.000003	4.21463	0.000010	0.00015	-	0.000053	0.00025
AQF43	-	9.2	-	-	0.017	0.009	0.001	0.009	-	-	0.016	0.050	0.262	0.067	3.8	0.047	0.00005	0.00032	0.00592	0.000050	0.000025	0.00572	0.000003	4.55970	0.000010	0.00025	-	0.000053	0.00025
AQF43	-	9.0	-	-	0.028	0.003	0.001	0.003	-	-	0.015	0.050	0.273	0.064	3.8	0.048	0.00005	0.00029	0.00657	0.000050	0.000025	0.00573	0.000003	4.58445	0.000010	0.00017	-	0.000053	0.00025
AQF43	-	9.3	-	-	0.008	0.020	0.001	0.020	-	-	0.015	0.050	0.279	0.064	3.6	0.066	0.00005	0.00028	0.00581	0.000050	0.000025	0.00570	0.000003	4.59418	0.000009	0.00023	-	0.000053	0.00025
AQF43	-	9.9	-	-	0.034	0.027	0.001	0.027	-	-	0.015	0.050	0.299	0.063	4.1	0.040	0.00005	0.00026	0.00577	0.000050	0.000025	0.00579	0.000003	4.78853	0.000010	0.00016	-	0.000053	0.00025
AQF43	-	9.9	-	-	0.030	0.046	0.003	0.046	-	-	0.020	0.050	0.328	0.067	4.5	0.039	0.00005	0.00028	0.00642	0.000030	0.000025	0.00587	0.000003	5.05229	0.000011	0.00020	-	0.000053	0.00025
AQF44	-	10.1	-	-	0.141	0.074	0.005	0.073	-	-	0.025	0.050	1.781	0.069	5.8	0.040	0.00005	0.00030	0.00730	0.000011	0.000025	0.00593	0.000019	5.43936	0.000011	0.00025	-	0.000054	0.00050
AQF44	-	9.8	-	-	0.080	0.091	0.005	-	-	-	0.018	0.050	1.793	0.071	7.4	0.038	0.00005	0.00031	0.00739	0.000011	0.000025	0.00596	0.000011	5.54946	0.000011	0.00025	-	0.000054	0.00038
AQF44	-	9.5	-	-	0.018	0.109	0.005	-	-	-	0.010	0.050	1.814	0.073	8.8	0.037	0.00005	0.00031	0.00746	0.000011	0.000025	0.00597	0.000003	5.62000	0.000011	0.00025	-	0.000054	0.00025
AQF44	-	9.5	-	-	0.009	0.098	0.																						

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met I	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met I	Total_Met al	Total_Met Total_Metal	Total_Met Dissolved_Meta I	Total_Met Dissolved_Meta I	Total_Met Dissolved_Meta I
Site	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesium m_T mg/L	Manganese e_T mg/L	Mercury_T mg/L	Molybden um_T mg/L	Nickel_T mg/L	Potassium _T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_ T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L
AQF40	0.29	0.00007	0.00120	1.5	0.029	0.000003	0.00013	0.00025	0.73	0.0012	0.000066	3.2	0.000005	1.7	0.0200	1.7	0.00010	0.000005	0.00005	0.00037	0.0012	0.0001	0.0001	0.0003	0.0053	0.0001	0.0201	0.0001	0.0002
AQF40	0.30	0.00005	0.00128	1.5	0.030	0.000002	0.00010	0.00025	0.75	0.0012	0.000046	3.3	0.000005	1.7	0.020	2.1	0.00010	0.000005	0.00005	0.00034	0.0010	0.0001	0.0001	0.0003	0.0057	0.0002	0.0206	0.0001	0.0003
AQF40	0.30	0.00003	0.00135	1.5	0.030	0.000002	0.00007	0.00025	0.77	0.0012	0.000026	3.5	0.000005	1.8	0.021	2.5	0.00010	0.000005	0.00005	0.00031	0.0008	0.0001	0.0001	0.0003	0.0060	0.0002	0.0211	0.0001	0.0003
AQF40	0.29	0.00003	0.00120	1.5	0.031	0.000002	0.00007	0.00025	0.74	0.0012	0.000130	3.1	0.000005	1.6	0.020	1.6	0.00010	0.000005	0.00005	0.00007	0.0008	0.0001	0.0001	0.0003	0.0015	0.0001	0.0202	0.0001	0.0003
AQF40	0.32	0.00003	0.00090	1.2	0.044	0.000002	0.00007	0.00025	0.68	0.0011	0.000025	2.4	0.000005	1.4	0.016	0.9	0.00010	0.000005	0.00005	0.00010	0.0016	0.0001	0.0001	0.0003	0.0015	0.0001	0.0363	0.0001	0.0002
AQF40	0.35	0.00006	0.00156	1.1	0.035	0.000002	0.00008	0.00025	0.63	0.0010	0.000025	2.0	0.000005	1.2	0.014	1.2	0.00010	0.000005	0.00005	0.00025	0.0015	0.0001	0.0001	0.0003	0.0049	0.0001	0.0354	0.0001	0.0002
AQF40	0.21	0.00015	0.00089	1.3	0.034	0.000001	0.00011	0.00025	0.68	0.0012	0.000026	2.2	0.000005	1.4	0.018	1.4	0.00010	0.000005	0.00005	0.00006	0.0014	0.0001	0.0001	0.0003	0.0015	0.0001	0.0264	0.0001	0.0003
AQF40	0.22	0.00003	0.00059	1.2	0.029	0.000002	0.00007	0.00025	0.60	0.0011	0.000026	2.1	0.000005	1.5	0.016	1.3	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0001	0.0003	0.0043	0.0001	0.0201	0.0001	0.0002
AQF40	0.20	0.00003	0.00118	1.3	0.026	0.000003	0.00012	0.00025	0.63	0.0011	0.000026	2.4	0.000005	1.4	0.018	1.4	0.00010	0.000005	0.00005	0.00014	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0313	0.0001	0.0003
AQF40	0.27	0.00004	0.00123	1.3	0.031	0.000001	0.00012	0.00053	0.64	0.0011	0.000026	2.4	0.000005	1.5	0.017	1.3	0.00010	0.000005	0.00005	0.00006	0.0017	0.0001	0.0001	0.0003	0.0015	0.0001	0.0226	0.0001	0.0002
AQF40	0.31	0.00010	0.00060	1.4	0.036	0.000003	0.00011	0.00025	0.67	0.0012	0.000026	2.8	0.000005	1.4	0.018	1.4	0.00010	0.000005	0.00005	0.00006	0.0039	0.0001	0.0001	0.0003	0.0045	0.0001	0.0219	0.0001	0.0002
AQF40	0.30	0.00009	0.00090	1.4	0.033	0.000003	0.00012	0.00025	0.70	0.0012	0.000046	3.0	0.000005	1.6	0.019	1.6	0.00010	0.000005	0.00005	0.00022	0.0025	0.0001	0.0001	0.0003	0.0049	0.0001	0.0210	0.0001	0.0002
AQF42	0.33	0.00003	0.00130	1.5	0.033	0.000003	0.00010	0.00025	0.73	0.0013	0.000060	3.4	0.000005	1.8	0.020	1.9	0.00010	0.000005	0.00005	0.00054	0.0017	0.0001	0.0002	0.0003	0.0039	0.0001	0.0203	0.0001	0.0003
AQF42	0.37	0.00008	0.00130	1.6	0.040	0.000001	0.00008	0.00025	0.87	0.0013	0.000026	3.5	0.000005	1.8	0.021	9.8	0.00010	0.000005	0.00005	0.00206	0.0022	0.0001	0.0001	0.0003	0.0250	0.0001	0.0236	0.0001	0.0003
AQF42	0.60	0.00009	0.00140	1.6	0.069	0.000003	0.00008	0.00079	0.79	0.0014	0.000026	3.7	0.000005	1.8	0.021	1.7	0.00010	0.000005	0.00005	0.00007	0.0058	0.0001	0.0001	0.0003	0.0053	0.0001	0.0352	0.0001	0.0003
AQF42	0.30	0.00007	0.00120	1.5	0.033	0.000003	0.00010	0.00025	0.75	0.0012	0.000130	3.0	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00007	0.0012	0.0001	0.0001	0.0003	0.0032	0.0001	0.0235	0.0001	0.0003
AQF42	0.49	0.00003	0.00115	1.1	0.074	0.000003	0.00009	0.00025	0.60	0.0010	0.000025	2.3	0.000005	1.2	0.015	0.9	0.00010	0.000005	0.00005	0.00027	0.0015	0.0001	0.0001	0.0003	0.0015	0.0001	0.0330	0.0001	0.0002
AQF42	0.37	0.00006	0.00156	1.1	0.028	0.000002	0.00021	0.00025	0.61	0.0010	0.000025	2.1	0.000005	1.2	0.015	1.2	0.00010	0.000005	0.00005	0.00029	0.0017	0.0001	0.0001	0.0003	0.0015	0.0001	0.0336	0.0001	0.0002
AQF42	0.26	0.00003	0.00059	1.2	0.032	0.000002	0.00009	0.00025	0.61	0.0011	0.000026	2.2	0.000005	1.3	0.016	1.4	0.00010	0.000005	0.00005	0.00042	0.0012	0.0001	0.0001	0.0003	0.0059	0.0001	0.0251	0.0001	0.0002
AQF42	0.23	0.00003	0.00059	1.3	0.031	0.000002	0.00008	0.00025	0.63	0.0012	0.000051	2.4	0.000005	1.4	0.018	1.3	0.00010	0.000005	0.00005	0.00006	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0213	0.0001	0.0002
AQF42	0.19	0.00003	0.00059	1.3	0.025	0.000003	0.00010	0.00025	0.64	0.0011	0.000026	2.3	0.000005	1.4	0.018	1.4	0.00010	0.000005	0.00005	0.00006	0.0008	0.0001	0.0001	0.0003	0.0031	0.0001	0.0243	0.0001	0.0002
AQF42	0.25	0.00003	0.00118	1.3	0.029	0.000001	0.00012	0.00025	0.63	0.0011	0.000026	2.7	0.000005	1.4	0.017	1.3	0.00010	0.000005	0.00005	0.00006	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0189	0.0001	0.0002
AQF42	0.43	0.00014	0.00119	1.4	0.089	0.000003	0.00015	0.00025	0.71	0.0013	0.000026	2.8	0.000005	1.4	0.019	1.4	0.00010	0.000005	0.00005	0.00018	0.0077	0.0001	0.0002	0.0003	0.0043	0.0001	0.0313	0.0001	0.0002
AQF42	0.38	0.00008	0.00125	1.5	0.061	0.000003	0.00012	0.00025	0.72	0.0013	0.000043	3.1	0.000005	1.6	0.020	1.7	0.00010	0.000005	0.00005	0.00036	0.0047	0.0001	0.0002	0.0003	0.0041	0.0001	0.0258	0.0001	0.0002
AQF43	0.29	0.00003	0.00130	1.5	0.029	0.000003	0.00008	0.00025	0.70	0.0011	0.000026	3.4	0.000005	1.7	0.020	1.7	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0015	0.0001	0.0208	0.0001	0.0002
AQF43	0.30	0.00003	0.00130	1.5	0.030	0.000002	0.00006	0.00025	0.72	0.0012	0.000026	3.4	0.000005	1.7	0.021	1.7	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0020	0.0001	0.0204	0.0001	0.0003
AQF43	0.31	0.00003	0.00130	1.5	0.030	0.000002	0.00005	0.00025	0.74	0.0012	0.000026	3.5	0.000005	1.7	0.020	1.7	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0024	0.0001	0.0199	0.0001	0.0003
AQF43	0.29	0.00003	0.00120	1.5	0.032	0.000002	0.00008	0.00025	0.73	0.0012	0.000091	3.0	0.000005	1.6	0.020	1.6	0.00010	0.000005	0.00005	0.00007	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0194	0.0001	0.0002
AQF43	0.36	0.00007	0.00154	1.1	0.037	0.000003	0.00011	0.00025	0.61	0.0011	0.000025	2.3	0.000005	1.3	0.016	0.9	0.00010	0.000005	0.00005	0.00006	0.0018	0.0001	0.0001	0.0003	0.0047	0.0001	0.0297	0.0001	0.0002
AQF43	0.32	0.00003	0.00156	1.2	0.029	0.000002	0.00006	0.00058	0.63	0.0011	0.000025	2.2	0.000005	1.3	0.016	1.2	0.00010	0.000005	0.00005	0.00006	0.0018	0.0001	0.0001	0.0009	0.0015	0.0003	0.0307	0.0001	0.0002
AQF43	0.26	0.00003	0.00059	1.3	0.037	0.000001	0.00009	0.00025	0.62	0.0012	0.000057	2.2	0.000005	1.3	0.016	1.4	0.00010	0.000005	0.00005	0.00006	0.0014	0.0001	0.0001	0.0003	0.0015	0.0001	0.0287	0.0001	0.0002
AQF43	0.22	0.00003	0.00059	1.3	0.035	0.000002	0.00011	0.00066	0.64	0.0012	0.000026	2.3	0.000005	1.4	0.018	1.3	0.00010	0.000005	0.00005	0.00006	0.0015	0.0001	0.0001	0.0003	0.0048	0.0001	0.0226	0.0001	0.0002
AQF43	0.21	0.00003	0.00118	1.3	0.029	0.000003	0.00012	0.00025	0.62	0.0012	0.000118	2.5	0.000005	1.4	0.018	1.4	0.00030	0.000005	0.00005	0.00006	0.0013	0.0001	0.0001	0.0003	0.0015	0.0001	0.0267	0.0001	0.0003
AQF43	0.27	0.00003	0.00118	1.4	0.030	0.000001	0.00015	0.00025	0.65	0.0012	0.000057	2.7	0.000005	1.4	0.017	1.3	0.00010	0.000005	0.00005	0.00006	0.0022	0.0001	0.0001	0.0003	0.0015	0.0001	0.0212	0.0001	0.0002
AQF43	0.22	0.00003	0.00060	1.4	0.026	0.000003	0.00010	0.00025	0.66	0.0011	0.000053	2.9	0.000005	1.5	0.018	1.4	0.00010	0.000005	0.00005	0.00006	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0178	0.0001	0.0002
AQF43	0.25	0.00003	0.00095	1.5	0.028	0.000003	0.00009	0.00025	0.68	0.0011	0.000039	3.1	0.000005																

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

Site	Dissolved_Meta I	Dissolved_Meta I	Dissolved_Meta Dissolved_Metal	Dissolved_Meta I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Meta I	Dissolved_Metal	Dissolved_Meta I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Metal	Dissolved_Met al	Dissolved_Metal I
	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_ D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L
AQF40	0.0130	1.09E-05	0.000025	0.0060	0.0000025	5.04	1.08E-05	0.00025	5.4E-05	0.0028	0.16	0.00013	0.0013	1.49	0.0252	-	0.00009	0.00025	0.74	0.0011	0.000025	3.14
AQF40	0.0135	1.09E-05	0.000025	0.0060	0.0000025	5.14	1.10E-05	0.00025	5.4E-05	0.0020	0.18	0.00009	0.0012	1.51	0.0264	-	0.00010	0.00025	0.73	0.0011	0.000033	3.15
AQF40	0.0140	1.09E-05	0.000025	0.0060	0.0000025	5.20	1.10E-05	0.00025	5.4E-05	0.0012	0.19	0.00005	0.0010	1.52	0.0272	0.0000010	0.00012	0.00025	0.72	0.0011	0.000041	3.16
AQF40	0.0198	1.09E-05	0.000025	0.0060	1.03246E-05	4.95	1.07E-05	0.00025	5.4E-05	0.0020	0.18	0.00010	0.0012	1.47	0.0282	0.0000014	0.00007	0.00025	0.82	0.0012	0.000025	3.07
AQF40	0.0066	5.00E-05	0.000025	0.0055	0.0000025	4.06	7.70E-06	0.00010	5.2E-05	0.0006	0.21	0.00003	0.0011	1.19	0.0343	0.0000019	0.00014	0.00025	0.66	0.0010	0.000025	2.45
AQF40	0.0057	5.00E-05	0.000025	0.0056	0.0000025	3.99	8.70E-06	0.00013	5.2E-05	0.0003	0.18	0.00003	0.0006	1.14	0.0156	0.0000018	0.00008	0.00025	0.63	0.0010	0.000025	2.02
AQF40	0.0058	5.00E-05	0.000025	0.0058	5.15274E-06	4.37	9.53E-06	0.00011	5.3E-05	0.0003	0.11	0.00007	0.0009	1.26	0.0199	0.0000012	0.00011	0.00025	0.67	0.0011	0.000025	1.95
AQF40	0.0052	5.00E-05	0.000025	0.0058	0.0000025	4.10	9.48E-06	0.00012	5.3E-05	0.0003	0.15	0.00003	0.0006	1.22	0.0197	-	0.00010	0.00025	0.62	0.0011	0.000052	2.11
AQF40	0.0063	5.00E-05	0.000025	0.0058	0.0000025	4.23	9.55E-06	0.00022	5.3E-05	0.0026	0.13	0.00015	0.0006	1.21	0.0209	-	0.00015	0.00025	0.61	0.0012	0.000052	2.28
AQF40	0.0085	5.00E-05	0.000025	0.0058	0.0000025	4.38	9.35E-06	0.00008	5.3E-05	0.0016	0.14	0.00007	0.0009	1.30	0.0177	0.0000011	0.00011	0.00025	0.61	0.0011	0.000042	2.34
AQF40	0.0052	5.00E-05	0.000025	0.0059	0.0000025	4.49	9.92E-06	0.00015	5.3E-05	0.0050	0.14	0.00018	0.0006	1.30	0.0206	-	0.00010	0.00025	0.65	0.0010	0.000025	2.47
AQF40	0.0091	3.04E-05	0.000025	0.0059	0.0000025	4.79	1.04E-05	0.00020	5.4E-05	0.0039	0.15	0.00015	0.0009	1.40	0.0231	-	0.00009	0.00025	0.70	0.0011	0.000025	2.81
AQF42	0.0136	1.09E-05	0.000025	0.0060	0.0000025	5.02	1.08E-05	0.00025	5.4E-05	0.0032	0.18	0.00015	0.0013	1.52	0.0265	-	0.00011	0.00025	0.73	0.0012	0.000025	3.11
AQF42	0.0207	1.09E-05	0.000025	0.0060	0.0000025	5.31	1.10E-05	0.00025	5.4E-05	0.0020	0.20	0.00008	0.0006	1.59	0.0336	0.0000003	0.00008	0.00025	0.90	0.0012	0.000025	3.31
AQF42	0.0086	1.09E-05	0.000025	0.0060	0.0000025	5.29	1.10E-05	0.00025	5.4E-05	0.0004	0.22	0.00003	0.0014	1.52	0.0305	-	0.00008	0.00025	0.71	0.0012	0.000063	3.22
AQF42	0.0194	1.09E-05	0.000025	0.0060	1.17917E-05	5.02	1.07E-05	0.00025	5.4E-05	0.0025	0.19	0.00009	0.0013	1.48	0.0308	-	0.00009	0.00025	0.76	0.0011	0.000025	3.00
AQF42	0.0059	5.00E-05	0.000025	0.0055	0.0000025	3.76	7.70E-06	0.00014	5.2E-05	0.0007	0.30	0.00003	0.0006	1.12	0.0528	0.0000016	0.00010	0.00025	0.62	0.0010	0.000025	2.46
AQF42	0.0059	5.00E-05	0.000025	0.0056	0.0000025	3.79	8.70E-06	0.00013	5.2E-05	0.0003	0.18	0.00003	0.0006	1.08	0.0142	0.0000017	0.00008	0.00025	0.65	0.0010	0.000025	2.03
AQF42	0.0059	5.00E-05	0.000025	0.0058	0.0000025	4.09	9.53E-06	0.00005	5.3E-05	0.0002	0.15	0.00003	0.0006	1.18	0.0194	0.0000015	0.00009	0.00025	0.61	0.0010	0.000025	2.01
AQF42	0.0055	5.00E-05	0.000025	0.0058	0.0000025	4.14	9.48E-06	0.00011	5.3E-05	0.0004	0.15	0.00012	0.0006	1.21	0.0201	-	0.00010	0.00025	0.60	0.0012	0.000025	2.08
AQF42	0.0060	5.00E-05	0.000025	0.0058	0.0000025	4.41	9.55E-06	0.00012	5.3E-05	0.0002	0.12	0.00003	0.0006	1.26	0.0189	-	0.00009	0.00025	0.62	0.0010	0.000060	2.20
AQF42	0.0052	5.00E-05	0.000025	0.0058	0.0000025	4.35	9.35E-06	0.00005	5.3E-05	0.0005	0.12	0.00003	0.0006	1.29	0.0179	0.0000008	0.00011	0.00025	0.57	0.0010	0.000025	2.36
AQF42	0.0152	5.00E-05	0.000025	0.0059	0.0000025	4.66	9.92E-06	0.00077	5.3E-05	0.0015	0.19	0.00007	0.0006	1.35	0.0358	-	0.00090	0.00025	0.64	0.0011	0.000025	2.34
AQF42	0.0145	3.04E-05	0.000025	0.0059	0.0000025	4.86	1.04E-05	0.00051	5.4E-05	0.0024	0.19	0.00011	0.0009	1.44	0.0313	-	0.00050	0.00025	0.69	0.0011	0.000025	2.73
AQF43	0.0068	1.09E-05	0.000025	0.0060	0.0000025	4.99	1.08E-05	0.00025	5.4E-05	0.0004	0.16	0.00003	0.0012	1.50	0.0239	-	0.00007	0.00025	0.69	0.0011	0.000025	3.09
AQF43	0.0100	1.09E-05	0.000025	0.0060	0.0000025	5.11	1.10E-05	0.00025	5.4E-05	0.0007	0.18	0.00003	0.0011	1.51	0.0255	-	0.00007	0.00025	0.70	0.0011	0.000034	3.15
AQF43	0.0132	1.09E-05	0.000025	0.0060	0.0000025	5.19	1.10E-05	0.00025	5.4E-05	0.0010	0.19	0.00004	0.0010	1.51	0.0267	0.0000010	0.00006	0.00025	0.71	0.0011	0.000043	3.20
AQF43	0.0204	1.09E-05	0.000025	0.0060	0.0000025	4.98	1.07E-05	0.00025	5.4E-05	0.0019	0.19	0.00007	0.0012	1.45	0.0293	0.0000018	0.00007	0.00025	0.71	0.0011	0.000025	2.99
AQF43	0.0056	5.00E-05	0.000025	0.0055	0.0000025	4.11	4.73E-05	0.00012	5.2E-05	0.0005	0.21	0.00003	0.0006	1.18	0.0280	0.0000025	0.00010	0.00025	0.63	0.0009	0.000025	2.31
AQF43	0.0057	5.00E-05	0.000025	0.0056	0.0000025	4.14	8.70E-06	0.00012	5.2E-05	0.0002	0.17	0.00003	0.0006	1.18	0.0149	0.0000018	0.00009	0.00025	0.76	0.0010	0.000025	1.97
AQF43	0.0058	5.00E-05	0.000025	0.0058	0.0000025	4.11	9.53E-06	0.00011	5.3E-05	0.0003	0.16	0.00003	0.0006	1.23	0.0191	0.0000015	0.00007	0.00025	0.63	0.0011	0.000025	2.24
AQF43	0.0052	5.00E-05	0.000025	0.0058	0.0000025	4.35	9.48E-06	0.00005	5.3E-05	0.0004	0.14	0.00003	0.0006	1.25	0.0204	-	0.00011	0.00025	0.66	0.0011	0.000025	2.08
AQF43	0.0063	5.00E-05	0.000025	0.0058	0.0000025	4.36	9.55E-06	0.00012	5.3E-05	0.0004	0.13	0.00003	0.0006	1.25	0.0206	-	0.00010	0.00025	0.61	0.0011	0.000025	2.26
AQF43	0.0112	5.00E-05	0.000025	0.0058	0.0000025	4.36	9.35E-06	0.00013	5.3E-05	0.0037	0.13	0.00015	0.0006	1.27	0.0181	0.0000008	0.00014	0.00025	0.60	0.0010	0.000025	2.40
AQF43	0.0053	5.00E-05	0.000025	0.0059	0.0000025	4.56	9.92E-06	0.00011	5.3E-05	0.0050	0.11	0.00614	0.0006	1.33	0.0184	-	0.00010	0.00025	0.62	0.0010	0.000025	2.47
AQF43	0.0061	3.04E-05	0.000025	0.0059	0.0000025	4.80	1.04E-05	0.00018	5.4E-05	0.0027	0.13	0.00307	0.0009	1.42	0.0214	-	0.00008	0.00025	0.66	0.0010	0.000025	2.79
AQF44	0.0138	1.09E-05	0.000025	0.0060	1.15923E-05	5.33	1.08E-05	0.00025	5.4E-05	0.0037	0.17	0.00016	0.0013	1.55	0.0246	-	0.00009	0.00025	0.71	0.0011	0.000025	3.07
AQF44	0.0164	1.09E-05	0.000025	0.0060	7.04289E-06	5.37	1.10E-05	0.00025	5.4E-05	0.0030	0.18	0.00010	0.0011	1.56	0.0258	-	0.00008	0.00025	0.73	0.0011	0.000025	3.13
AQF44	0.0189	1.09E-05	0.000025	0.0060	0.0000025	5.36	1.10E-05	0.00025	5.4E-05	0.0022	0.19	0.00004	0.0010	1.56	0.0267	0.0000009	0.00008	0.00025	0.74	0.0012	0.000025	3.19
AQF44	0.0187	1.09E-05	0.000025	0.0060	0.0000025	5.32	1.07E-05	0.00025	5.4E-05	0.0018	0.18	0.00007	0.0013	1.54	0.0288	0.0000009	0.00008	0.00025	0.74	0.0012	0.000025	2.99
AQF44	0.0057	5.00E-05	0.000025	0.0055	0.0000025	4.04	7.70E-06	0.00012	5.2E-05	0.0004	0.22	0.00003	0.0011	1.16	0.0278	0.0000009	0.00009	0.00025	0.62	0.0009	0.000025	2.39
AQF44	0.0254	5.00E-05	0.000025	0.0056	0.0000025	3.90	8.70E-06	0.00013	5.2E-05	0.0014	0.17	0.00003	0.0006	1.12	0.0148	0.0000017	0.00019	0.00025	0.72	0.0010	0.000025	2.04
AQF44	0.0058	5.00E-05	0.000025	0.0058	0.0000025	4.16	9.53E-06	0.00011	5.3E-05	0.0003	0.16	0.00003	0.0006	1.19	0.0194	0.0000016	0.00010	0.00025	0.62	0.0011	0.000025	2.05
AQF44	0.0053	5.00E-05	0.000025	0.0058	0.0000025	4.38	9.48E-06	0.00012	5.3E-05	0.0003	0.13	0.00012	0.0006	1.26	0.0207	-	0.00015	0.00025	0.66	0.0011	0.000025	2.11
AQF44	0.0070	5.00E-05	0.000025	0.0058	0.0000025	4.84	9.55E-06	0.00012	5.3E-05	0.0003	0.12	0.00003	0.0012	1.38	0.0199	-	0.00008	0.00025	0.66	0.0010	0.000025	2.07

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Methylme		Methylme	
		Dissolved_Metal	Dissolved_Metal	I	I	Dissolved_Metal	I	Dissolved_Metal	al	al	Dissolved_Metal	Dissolved_Metal	al	Dissolved_Metal	al		Cyanides	Cyanides	Cyanides	rcury	rcury		
Site		Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L	Zinc_D mg/L	Zirconium_D mg/L		cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WAD mg/L	Methylme rcury_D mg/L	Methylme rcury_T mg/L		
AQF40		0.000005	1.74	0.02	1.68	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00011	0.00025	0.0045	0.00015		-	-	-	-	-		
AQF40		0.000005	1.75	0.02	1.81	0.00010	0.00001	0.00005	0.00009	0.00015	0.00005	0.00012	0.00025	0.0032	0.00015		-	-	-	-	-		
AQF40		0.000005	1.77	0.02	1.92	0.00010	0.00001	0.00005	0.00011	0.00015	0.00005	0.00012	0.00025	0.0018	0.00015		-	-	-	-	-		
AQF40		0.000005	1.71	0.02	1.66	0.00010	0.00001	0.00005	0.00015	0.00015	0.00005	0.00011	0.00025	0.0028	0.00015		-	-	-	-	-		
AQF40		0.000005	1.25	0.02	0.92	0.00010	0.00001	0.00005	0.00013	0.00071	0.00005	0.00006	0.00025	0.0030	0.00010		-	-	-	-	-		
AQF40		0.000005	1.24	0.01	1.17	0.00010	0.00001	0.00005	0.00020	0.00050	0.00005	0.00008	0.00025	0.0063	0.00010		-	-	-	-	-		
AQF40		0.000005	1.37	0.02	1.52	0.00010	0.00001	0.00005	0.00011	0.00041	0.00005	0.00010	0.00025	0.0037	0.00010		-	-	-	-	-		
AQF40		0.000005	1.38	0.02	1.36	0.00010	0.00001	0.00005	0.00025	0.00037	0.00005	0.00009	0.00025	0.0033	0.00010		-	-	-	-	-		
AQF40		0.000005	1.36	0.02	1.38	0.00010	0.00001	0.00005	0.00006	0.00054	0.00005	0.00010	0.00025	0.0047	0.00010		-	-	-	-	-		
AQF40		0.000005	1.45	0.02	1.53	0.00010	0.00001	0.00005	0.00006	0.00027	0.00005	0.00010	0.00025	0.0021	0.00011		-	-	-	-	-		
AQF40		0.000005	1.38	0.02	1.47	0.00010	0.00001	0.00005	0.00006	0.00034	0.00005	0.00010	0.00025	0.0101	0.00010		-	-	-	-	-		
AQF40		0.000005	1.56	0.02	1.59	0.00010	0.00001	0.00005	0.00006	0.00024	0.00005	0.00010	0.00025	0.0073	0.00012		-	-	-	-	-		
AQF42		0.000005	1.76	0.02	1.68	0.00010	0.00001	0.00005	0.00019	0.00015	0.00005	0.00015	0.00025	0.0046	0.00015		-	-	-	-	-		
AQF42		0.000005	1.85	0.02	2.02	0.00010	0.00001	0.00005	0.00019	0.00040	0.00005	0.00013	0.00025	0.0048	0.00015		-	-	-	-	-		
AQF42		0.000005	1.76	0.02	1.74	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00012	0.00025	0.0012	0.00015		-	-	-	-	-		
AQF42		0.000005	5.50	0.02	2.14	0.00010	0.00001	0.00005	0.00016	0.00035	0.00005	0.00014	0.00025	0.0051	0.00015		-	-	-	-	-		
AQF42		0.000005	1.11	0.01	0.92	0.00010	0.00001	0.00005	0.00006	0.00051	0.00005	0.00006	0.00025	0.0012	0.00010		-	-	-	-	-		
AQF42		0.000005	1.22	0.01	1.17	0.00010	0.00001	0.00005	0.00030	0.00046	0.00005	0.00008	0.00025	0.0005	0.00010		-	-	-	-	-		
AQF42		0.000005	1.24	0.02	1.68	0.00010	0.00001	0.00005	0.00069	0.00043	0.00005	0.00010	0.00025	0.0089	0.00010		-	-	-	-	-		
AQF42		0.000005	1.31	0.02	1.36	0.00010	0.00001	0.00005	0.00006	0.00045	0.00005	0.00009	0.00025	0.0030	0.00010		-	-	-	-	-		
AQF42		0.000005	1.40	0.02	1.38	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00009	0.00025	0.0005	0.00010		-	-	-	-	-		
AQF42		0.000005	1.36	0.02	1.33	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00009	0.00025	0.0011	0.00010		-	-	-	-	-		
AQF42		0.000005	1.38	0.02	1.47	0.00010	0.00001	0.00005	0.00006	0.00100	0.00091	0.00014	0.00025	0.0033	0.00010		-	-	-	-	-		
AQF42		0.000005	1.57	0.02	1.59	0.00010	0.00001	0.00005	0.00013	0.00058	0.00048	0.00015	0.00025	0.0039	0.00012		-	-	-	-	-		
AQF43		0.000005	1.72	0.02	1.68	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00011	0.00025	0.0011	0.00015		-	-	-	-	-		
AQF43		0.000005	1.74	0.02	1.73	0.00010	0.00001	0.00005	0.00008	0.00023	0.00005	0.00012	0.00025	0.0013	0.00015		-	-	-	-	-		
AQF43		0.000005	1.75	0.02	1.74	0.00010	0.00001	0.00005	0.00010	0.00015	0.00005	0.00012	0.00025	0.0015	0.00015		-	-	-	-	-		
AQF43		0.000005	1.66	0.02	1.66	0.00010	0.00001	0.00005	0.00014	0.00031	0.00005	0.00011	0.00025	0.0023	0.00015		-	-	-	-	-		
AQF43		0.000005	1.14	0.02	1.26	0.00010	0.00001	0.00005	0.00006	0.00044	0.00005	0.00007	0.00025	0.0015	0.00010		-	-	-	-	-		
AQF43		0.000005	1.24	0.01	1.17	0.00010	0.00001	0.00005	0.00006	0.00037	0.00005	0.00008	0.00025	0.0045	0.00010		-	-	-	-	-		
AQF43		0.000005	1.41	0.02	1.37	0.00010	0.00001	0.00005	0.00006	0.00044	0.00005	0.00009	0.00025	0.0013	0.00010		-	-	-	-	-		
AQF43		0.000005	1.33	0.02	1.36	0.00010	0.00001	0.00005	0.00006	0.00057	0.00005	0.00009	0.00025	0.0005	0.00010		-	-	-	-	-		
AQF43		0.000005	1.33	0.02	1.38	0.00010	0.00001	0.00005	0.00006	0.00041	0.00005	0.00009	0.00025	0.0005	0.00010		-	-	-	-	-		
AQF43		0.000005	1.36	0.02	1.33	0.00010	0.00001	0.00005	0.00006	0.00041	0.00005	0.00009	0.00025	0.0022	0.00010		-	-	-	-	-		
AQF43		0.000005	1.38	0.02	1.47	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00010	0.00025	0.0047	0.00010		-	-	-	-	-		
AQF43		0.000005	1.55	0.02	1.59	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00011	0.00025	0.0029	0.00012		-	-	-	-	-		
AQF44		0.000005	1.76	0.02	1.68	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00011	0.00025	0.0038	0.00015		-	-	-	-	-		
AQF44		0.000005	1.77	0.02	1.73	0.00010	0.00001	0.00005	0.00010	0.00023	0.00005	0.00012	0.00025	0.0031	0.00015		-	-	-	-	-		
AQF44		0.000005	1.78	0.02	1.74	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00012	0.00025	0.0023	0.00015		-	-	-	-	-		
AQF44		0.000005	2.13	0.02	1.66	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00011	0.00025	0.0028	0.00015		-	-	-	-	-		
AQF44		0.000005	1.10	0.02	0.92	0.00010	0.00001	0.00005	0.00006	0.00047	0.00005	0.00007	0.00025	0.0005	0.00010		-	-	-	-	-		
AQF44		0.000005	1.25	0.01	1.17	0.00010	0.00001	0.00005	0.00020	0.00041	0.00005	0.00008	0.00025	0.0033	0.00010		-	-	-	-	-		
AQF44		0.000005	1.22	0.02	1.37	0.00010	0.00001	0.00005	0.00006	0.00048	0.00005	0.00010	0.00025	0.0005	0.00010		-	-	-	-	-		
AQF44		0.000005	1.33	0.02	1.36	0.00010	0.00001	0.00005	0.00006	0.00044	0.00005	0.00009	0.00025	0.0026	0.00010		-	-	-	-	-		
AQF44		0.000005	1.44	0.02	1.79	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00010	0.00025	0.0005	0.00010		-	-	-	-	-		
AQF44		0.000005	1.39	0.02	1.33	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00009	0.00025	0.0005	0.00010		-	-	-	-	-		
AQF44		0.000005	1.41	0.02	1.47	0.00010	0.00001	0.00005	0.00006	0.00049	0.00005	0.00010	0.00025	0.0049	0.00010		-	-	-	-	-		
AQF44		0.000005	1.59	0.02	1.59	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00011	0.00025	0.0044	0.00012		-	-	-	-	-		

Median Hughes monthly flow rate, median mixed pit concentrations cont'd																								
		Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General
Month	Site	D_Oxygen_percent_		ORP_field mV	pH_field pH	Specific_Conducta		Turbidity_ field NTU	Acidity(CaCO 3) mg/L	Alkalinity(CaCO 3)_bicarbonate mg/L	Alkalinity(CaCO 3)_carbonate mg/L	Alkalinity(CaC O3)_hydroxide mg/L	Alkalinity(CaC O3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbo nate mg/L	(HCO3)_bicarbo nate mg/L	(OH)_hydroxi de mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(CaC		pH pH	TDS_T mg/L	
		D_Oxygen_field mg/L	field %			nce_field uS/cm	TDS_field mg/L													O3)_D mg/L	Hardness(CaC O3)_T mg/L			
1	AQF45	12.9	88.2	-	-	-	-	-	-	-	-	-	-	15.5	-	-	-	-	-	-	-	-	-	-
2	AQF45	13.2	90.4	-	-	-	-	-	-	-	-	-	-	14.7	-	-	-	-	-	-	-	-	-	-
3	AQF45	13.6	92.6	-	-	-	-	0.2	-	-	-	-	-	13.9	0.5	19.7	0.49	-	-	-	19.5	-	-	-
4	AQF45	18.9	134.7	-	-	-	-	0.5	-	-	-	-	-	16.8	0.4	18.1	0.33	43.8	-	-	17.8	-	-	-
5	AQF45	14.3	116.1	-	-	-	-	7.7	-	-	-	-	-	11.9	0.3	14.5	0.17	-	-	-	14.1	-	-	-
6	AQF45	9.6	97.0	-	-	-	-	14.9	-	-	-	-	-	11.0	0.3	13.4	0.17	-	-	-	13.1	-	-	-
7	AQF45	6.9	74.1	-	-	-	-	18.7	-	-	-	-	-	11.9	0.3	14.6	0.17	-	-	-	13.8	-	-	-
8	AQF45	7.7	82.0	-	-	-	-	18.8	-	-	-	-	-	14.2	0.3	17.4	0.17	-	-	-	14.6	-	-	-
9	AQF45	8.6	83.2	-	-	-	-	13.6	-	-	-	-	-	14.4	0.3	17.5	0.17	-	-	-	15.8	-	-	-
10	AQF45	12.9	91.3	-	-	-	-	1.3	-	-	-	-	-	14.1	0.3	17.2	0.17	-	-	-	15.4	-	-	-
11	AQF45	13.0	88.7	-	-	-	-	0.2	-	-	-	-	-	16.1	0.3	19.6	0.17	-	-	-	16.3	-	-	-
12	AQF45	14.0	95.4	-	-	-	-	-	-	-	-	-	-	15.4	0.3	18.8	0.17	-	-	-	17.7	-	-	-
May -Oct	Downstream stn Median	9.1	90.0	-	-	-	-	14.5	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.9	-	-	-
May-Oct	Downstream stn 90P	13.8	117.7	-	-	-	-	19.3	-	-	-	-	-	14.1	0.3	17.2	0.17	-	-	-	15.0	-	-	-
May-Oct	Downstream stn 10P	7.6	78.4	-	-	-	-	3.6	-	-	-	-	-	11.0	0.3	13.4	0.17	-	-	-	13.0	-	-	-

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
							Nitrite_nitrat		Phosphorus_D	Phosphorus_T						Aluminum			Beryllium_T											
Site	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	e(N) mg/L	Nitrogen(TKN) mg/L	D mg/L	T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	T mg/L	VI_T mg/L	Cobalt_T mg/L	Copper_T mg/L	
AQF45	-	10.1	-	-	0.030	0.073	0.005	0.072	-	-	0.010	0.050	0.354	0.071	4.9	0.045	0.00005	0.00030	0.00734	0.000011	0.000025	0.00593	0.000003	5.58601	0.000011	0.00025	-	0.000054	0.00025	
AQF45	-	10.1	-	-	0.033	0.089	0.005	-	-	-	0.010	0.050	1.236	0.072	6.5	0.046	0.00005	0.00030	0.00749	0.000011	0.000025	0.00596	0.000003	5.87185	0.000011	0.00025	-	0.000054	0.00025	
AQF45	-	10.2	-	-	0.035	0.106	0.005	-	-	-	0.010	0.050	2.126	0.074	8.0	0.048	0.00005	0.00031	0.00762	0.000011	0.000025	0.00597	0.000003	6.12790	0.000011	0.00025	-	0.000054	0.00025	
AQF45	-	9.5	-	-	0.009	0.097	0.001	-	-	-	0.014	0.006	0.557	0.077	5.2	0.042	0.00005	0.00033	0.00755	0.000011	0.000025	0.00591	0.000006	5.57998	0.000011	0.00025	-	0.000054	0.00087	
AQF45	-	9.4	-	-	0.007	0.026	0.001	0.026	-	-	0.020	0.050	0.328	0.065	2.6	0.069	0.00005	0.00024	0.00609	0.000050	0.000025	0.00543	0.000003	3.96008	0.000008	0.00019	-	0.000052	0.00025	
AQF45	-	8.5	-	-	0.008	0.011	0.005	0.035	-	-	0.015	0.050	0.316	0.057	3.2	0.077	0.00005	0.00024	0.00650	0.000050	0.000025	0.00559	0.000003	4.29641	0.000009	0.00024	-	0.000052	0.00025	
AQF45	-	9.1	-	-	0.021	0.003	0.001	0.003	-	-	0.018	0.050	0.469	0.063	3.9	0.072	0.00005	0.00027	0.00653	0.000050	0.000025	0.00573	0.000003	4.37183	0.000010	0.00019	-	0.000053	0.00025	
AQF45	-	9.2	-	-	0.044	0.003	0.001	0.003	-	-	0.018	0.050	0.271	0.067	3.8	0.110	0.00005	0.00032	0.00696	0.000050	0.000025	0.00572	0.000003	4.69728	0.000018	0.00073	-	0.000053	0.00025	
AQF45	-	9.3	-	-	0.018	0.006	0.001	0.006	-	-	0.013	0.050	0.312	0.066	3.9	0.074	0.00005	0.00029	0.00692	0.000050	0.000025	0.00573	0.000003	4.94795	0.000010	0.00020	-	0.000053	0.00025	
AQF45	-	9.2	-	-	0.008	0.019	0.001	0.019	-	-	0.013	0.050	0.348	0.060	3.7	0.064	0.00005	0.00029	0.00583	0.000050	0.000025	0.00570	0.000003	4.84982	0.000009	0.00023	-	0.000053	0.00025	
AQF45	-	9.8	-	-	0.009	0.030	0.001	0.030	-	-	0.014	0.050	0.338	0.064	4.2	0.047	0.00005	0.00029	0.00598	0.000050	0.000025	0.00579	0.000003	5.20054	0.000010	0.00017	-	0.000053	0.00025	
AQF45	-	9.4	-	-	0.019	0.041	0.001	0.041	-	-	0.013	0.050	0.377	0.071	4.6	0.057	0.00005	0.00037	0.00866	0.000050	0.000025	0.00587	0.000003	6.33489	0.000011	0.00022	-	0.000053	0.00025	
Downstream stn Median	-	9.2	-	-	0.011	0.010	0.001	0.019	-	-	0.015	0.050	0.308	0.064	3.7	0.057	0.00005	0.00028	0.00629	0.000050	0.000025	0.00571	0.000003	4.36258	0.000010	0.00019	-	0.000053	0.00025	
Downstream stn 90P	-	9.8	-	-	0.034	0.032	0.005	0.038	-	-	0.020	0.050	0.362	0.066	3.8	0.074	0.00005	0.00031	0.00670	0.000050	0.000025	0.00573	0.000003	4.85473	0.000010	0.00026	-	0.000053	0.00025	
Downstream stn 10P	-	8.7	-	-	0.007	0.003	0.001	0.003	-	-	0.013	0.050	0.253	0.058	2.6	0.041	0.00005	0.00024	0.00583	0.000050	0.000025	0.00543	0.000003	4.07586	0.000008	0.00014	-	0.000052	0.00025	

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

		Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

	Dissolved_Meta	Dissolved_Meta	Dissolved_Meta		Dissolved_Meta		Dissolved_Meta		Dissolved_Meta		Dissolved_Meta		Dissolved_Meta		Dissolved_Met		Dissolved_Met	Dissolved_Met	Dissolved_Met		Dissolved_Met		Dissolved_Meta
	I	I	Dissolved_Metal	I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	I	Dissolved_Metal	I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	al	al	al	Dissolved_Metal	al	Dissolved_Metal	I	
Site	Barium_D	Beryllium_D	Bismuth_D	Boron_D	Cadmium_D	Calcium_D	Cesium_D	Chromium_D	Cobalt_D	Copper_D	Iron_D	Lead_D	Lithium_D	Magnesium_D	Manganese_D	Molybdenum_D		Nickel_D	Potassium_D	Rubidium_D	Selenium_D	Silicon_D	
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
AQF45	0.0139	1.09E-05	0.000025	0.0060	0.0000025	5.51	1.08E-05	0.00025	5.4E-05	0.0029	0.15	0.00009	0.0013	1.61	0.0244	-	0.00010	0.00025	0.72	0.0011	0.000025	3.08	
AQF45	0.0107	1.09E-05	0.000025	0.0060	0.0000025	5.60	1.10E-05	0.00025	5.4E-05	0.0016	0.17	0.00006	0.0011	1.62	0.0256	-	0.00009	0.00025	0.73	0.0011	0.000034	3.10	
AQF45	0.0075	1.09E-05	0.000025	0.0060	0.0000025	5.65	1.10E-05	0.00025	5.4E-05	0.0004	0.19	0.00003	0.0010	1.63	0.0263	0.0000009	0.00008	0.00025	0.73	0.0011	0.000043	3.12	
AQF45	0.0139	1.09E-05	0.000025	0.0060	0.0000025	5.43	1.07E-05	0.00025	5.4E-05	0.0026	0.18	0.00008	0.0013	1.60	0.0323	0.0000008	0.00009	0.00113027	0.78	0.0011	0.000025	3.04	
AQF45	0.0057	5.00E-05	0.000025	0.0055	0.0000025	4.13	7.70E-06	0.00012	5.2E-05	0.0004	0.22	0.00003	0.0006	1.21	0.0212	0.0000008	0.00009	0.00025	0.64	0.0009	0.000025	2.29	
AQF45	0.0059	5.00E-05	0.000025	0.0056	0.0000025	4.00	8.70E-06	0.00012	5.2E-05	0.0003	0.18	0.00003	0.0006	1.15	0.0145	0.0000020	0.00011	0.00025	0.59	0.0010	0.000072	1.95	
AQF45	0.0057	5.00E-05	0.000025	0.0058	0.0000025	4.29	9.53E-06	0.00013	5.3E-05	0.0004	0.16	0.00003	0.0006	1.23	0.0188	0.0000017	0.00010	0.00025	0.60	0.0011	0.000025	2.12	
AQF45	0.0056	5.00E-05	0.000025	0.0058	0.0000025	4.46	9.48E-06	0.00014	5.3E-05	0.0007	0.15	0.00003	0.0006	1.33	0.0264	-	0.00012	0.00025	0.61	0.0012	0.000025	2.12	
AQF45	0.0067	5.00E-05	0.000025	0.0058	0.0000025	4.83	9.55E-06	0.00014	5.3E-05	0.0003	0.16	0.00003	0.0006	1.39	0.0293	-	0.00011	0.00025	0.61	0.0010	0.000025	2.27	
AQF45	0.0116	5.00E-05	0.000025	0.0058	0.0000025	4.68	9.35E-06	0.00011	5.3E-05	0.0025	0.12	0.00006	0.0006	1.37	0.0178	0.0000009	0.00010	0.00025	0.58	0.0009	0.000025	2.33	
AQF45	0.0054	5.00E-05	0.000025	0.0059	0.0000025	5.00	9.92E-06	0.00005	5.3E-05	0.0041	0.12	0.00016	0.0006	1.45	0.0189	-	0.00016	0.00025	0.65	0.0010	0.000025	2.46	
AQF45	0.0063	5.00E-05	0.000025	0.0059	0.0000025	5.43	3.49E-05	0.00005	5.4E-05	0.0003	0.13	0.00003	0.0019	1.58	0.0214	-	0.00009	0.00025	0.70	0.0011	0.000025	2.67	
Downstream stn Median	0.0058	5.00E-05	0.000025	0.0058	0.0000025	4.19	9.48E-06	0.00012	5.3E-05	0.0004	0.15	0.00003	0.0006	1.23	0.0196	0.0000015	0.00010	0.00025	0.62	0.0010	0.000025	2.16	
Downstream stn 90P	0.0088	5.00E-05	0.000025	0.0058	0.0000025	4.58	9.55E-06	0.00014	5.3E-05	0.0017	0.21	0.00012	0.0010	1.34	0.0281	0.0000019	0.00014	0.00025	0.66	0.0011	0.000052	2.39	
Downstream stn 10P	0.0052	5.00E-05	0.000025	0.0055	0.0000025	3.98	7.70E-06	0.00008	5.2E-05	0.0003	0.12	0.00003	0.0006	1.14	0.0149	0.0000008	0.00008	0.00025	0.60	0.0009	0.000025	2.01	

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

		Dissolved_Metal		Dissolved_Metal	Dissolved_Metal		Dissolved_Metal		Dissolved_Metal	Dissolved_Metal	Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Cyanides	Cyanides	Cyanides	Methylme	Methylme
		Dissolved_Metal	Dissolved_Metal	I	I	Dissolved_Metal	I	Dissolved_Metal	al	al	Dissolved_Metal	Dissolved_Metal	al	Dissolved_Metal	al	Dissolved_Metal				rcury	rcury
Site	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L	Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WAD mg/L	Methylme rcury_D mg/L	Methylme rcury_T mg/L		
AQF45	0.000005	1.79	0.02	1.68	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00012	0.00025	0.0023	0.00015	-	-	-	-	-		
AQF45	0.000005	1.80	0.02	2.13	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00012	0.00025	0.0019	0.00015	-	-	-	-	-		
AQF45	0.000005	1.81	0.02	2.55	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00012	0.00025	0.0015	0.00015	-	-	-	-	-		
AQF45	0.000005	1.83	0.02	1.66	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00011	0.00025	0.0016	0.00015	-	-	-	-	-		
AQF45	0.000005	1.11	0.02	0.92	0.00010	0.00001	0.00005	0.00006	0.00067	0.00005	0.00007	0.00025	0.0013	0.00010	-	-	-	-	-		
AQF45	0.000005	1.20	0.01	1.17	0.00023	0.00001	0.00005	0.00006	0.00055	0.00005	0.00008	0.00025	0.0011	0.00010	-	-	-	-	-		
AQF45	0.000005	1.25	0.02	1.37	0.00010	0.00001	0.00005	0.00006	0.00064	0.00005	0.00010	0.00025	0.0021	0.00010	-	-	-	-	-		
AQF45	0.000005	1.34	0.02	1.36	0.00010	0.00001	0.00005	0.00006	0.00117	0.00005	0.00010	0.00025	0.0012	0.00010	-	-	-	-	-		
AQF45	0.000005	1.48	0.02	1.38	0.00010	0.00001	0.00005	0.00006	0.00115	0.00005	0.00010	0.00025	0.0005	0.00010	-	-	-	-	-		
AQF45	0.000005	1.41	0.02	1.33	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00009	0.00025	0.0016	0.00010	-	-	-	-	-		
AQF45	0.000005	1.43	0.02	1.47	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00010	0.00025	0.0059	0.00010	-	-	-	-	-		
AQF45	0.000005	1.63	0.02	1.59	0.00010	0.00001	0.00005	0.00006	0.00034	0.00005	0.00011	0.00025	0.0005	0.00010	-	-	-	-	-		
Downstream stn Median	0.000005	1.33	0.02	1.36	0.00010	0.00001	0.00005	0.00006	0.00044	0.00005	0.00009	0.00025	0.0014	0.00010	-	-	-	-	-		
Downstream stn 90P	0.000005	1.42	0.02	1.52	0.00010	0.00001	0.00005	0.00020	0.00068	0.00005	0.00010	0.00025	0.0045	0.00010	-	-	-	-	-		
Downstream stn 10P	0.000005	1.14	0.01	0.92	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00007	0.00025	0.0005	0.00010	-	-	-	-	-		

10th percentile Hughes monthly flow rate, median mixed pit concentrations

		Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	
Month	Site	D_Oxygen_percent_ D_Oxygen_field mg/L	field %	ORP_field mV	pH_field pH	Specific_Conducta nce_field uS/cm	TDS_field mg/L	Temp_field C	Turbidity_ field NTU	Acidity(CaCO 3) mg/L	Alkalinity(CaCO 3)_bicarbonate mg/L	Alkalinity(CaCO 3)_carbonate mg/L	Alkalinity(CaC O3)_hydroxide mg/L	Alkalinity(CaC O3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbo nate mg/L	(HCO3)_bicarbo nate mg/L	(OH)_hydroxi de mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(CaC O3)_D mg/L	Hardness(CaC O3)_T mg/L	pH pH	TDS_T mg/L
1	AQF40	10.0	68.4	-	-	-	-	-	-	-	-	-	-	-	12.3	-	-	-	-	-	-	-	-	-
2	AQF40	10.8	74.4	-	-	-	-	-	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-
3	AQF40	11.7	80.4	-	-	-	-	0.2	-	-	-	-	-	-	11.7	0.5	18.8	0.49	-	-	-	17.6	-	-
4	AQF40	20.0	139.4	-	-	-	-	0.6	-	-	-	-	-	-	15.8	0.4	18.3	0.33	39.9	-	-	17.1	-	-
5	AQF40	12.3	94.0	-	-	-	-	3.9	-	-	-	-	-	-	13.8	0.3	16.8	0.17	-	-	-	15.7	-	-
6	AQF40	9.0	90.0	-	-	-	-	15.3	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	14.6	-	-
7	AQF40	6.7	71.8	-	-	-	-	18.6	-	-	-	-	-	-	13.3	0.3	16.2	0.17	-	-	-	15.3	-	-
8	AQF40	6.0	66.5	-	-	-	-	19.7	-	-	-	-	-	-	14.1	0.3	17.2	0.17	-	-	-	14.6	-	-
9	AQF40	8.0	78.6	-	-	-	-	13.6	-	-	-	-	-	-	14.2	0.3	17.3	0.17	-	-	-	14.8	-	-
10	AQF40	11.9	90.0	-	-	-	-	3.6	-	-	-	-	-	-	14.4	0.3	17.5	0.17	-	-	-	15.4	-	-
11	AQF40	10.4	71.2	-	-	-	-	0.3	-	-	-	-	-	-	14.6	0.3	17.7	0.17	-	-	-	14.8	-	-
12	AQF40	10.2	69.8	-	-	-	-	0.2	-	-	-	-	-	-	13.5	-	-	-	-	-	-	-	-	-
1	AQF42	10.5	71.9	-	-	-	-	0.2	-	-	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-
2	AQF42	12.1	82.0	-	-	-	-	0.2	-	-	-	-	-	-	10.2	-	-	-	-	-	-	18.0	-	-
3	AQF42	10.5	71.9	-	-	-	-	0.2	-	-	-	-	-	-	17.8	0.5	21.7	0.49	-	-	-	17.8	-	-
4	AQF42	15.5	107.2	-	-	-	-	0.2	-	-	-	-	-	-	15.8	0.4	19.0	0.33	39.5	-	-	16.7	-	-
5	AQF42	13.6	132.0	-	-	-	-	4.4	-	-	-	-	-	-	12.7	0.3	15.5	0.17	-	-	-	14.8	-	-
6	AQF42	10.3	102.5	-	-	-	-	15.2	-	-	-	-	-	-	11.9	0.3	14.5	0.17	-	-	-	13.9	-	-
7	AQF42	7.9	86.5	-	-	-	-	18.8	-	-	-	-	-	-	13.7	0.3	16.7	0.17	-	-	-	14.3	-	-
8	AQF42	7.9	84.5	-	-	-	-	18.4	-	-	-	-	-	-	14.1	0.3	17.2	0.17	-	-	-	14.7	-	-
9	AQF42	8.5	82.1	-	-	-	-	14.0	-	-	-	-	-	-	13.7	0.3	16.7	0.17	-	-	-	15.4	-	-
10	AQF42	11.3	95.4	-	-	-	-	3.7	-	-	-	-	-	-	14.0	0.3	17.1	0.17	-	-	-	15.2	-	-
11	AQF42	11.6	80.1	-	-	-	-	0.3	-	-	-	-	-	-	15.0	0.3	18.3	0.17	-	-	-	15.4	-	-
12	AQF42	11.0	76.0	-	-	-	-	0.2	-	-	-	-	-	-	14.7	-	-	-	-	-	-	-	-	-
1	AQF43	13.3	91.3	-	-	-	-	-	-	-	-	-	-	-	14.8	-	-	-	-	-	-	-	-	-
2	AQF43	13.5	92.3	-	-	-	-	-	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-
3	AQF43	13.7	93.3	-	-	-	-	0.2	-	-	-	-	-	-	14.4	0.5	18.8	0.49	-	-	-	17.4	-	-
4	AQF43	16.9	116.0	-	-	-	-	0.3	-	-	-	-	-	-	15.9	0.4	18.9	0.33	39.7	-	-	17.1	-	-
5	AQF43	16.7	135.9	-	-	-	-	5.9	-	-	-	-	-	-	14.9	0.3	18.1	0.17	-	-	-	15.8	-	-
6	AQF43	10.3	103.4	-	-	-	-	15.6	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	15.1	-	-
7	AQF43	8.1	88.9	-	-	-	-	19.2	-	-	-	-	-	-	12.1	0.3	14.8	0.17	-	-	-	14.5	-	-
8	AQF43	8.1	89.1	-	-	-	-	19.3	-	-	-	-	-	-	15.1	0.3	18.4	0.17	-	-	-	15.3	-	-
9	AQF43	9.0	85.1	-	-	-	-	12.9	-	-	-	-	-	-	14.6	0.3	17.8	0.17	-	-	-	15.2	-	-
10	AQF43	12.7	94.4	-	-	-	-	3.0	-	-	-	-	-	-	13.8	0.3	16.8	0.17	-	-	-	15.2	-	-
11	AQF43	14.3	97.8	-	-	-	-	-	-	-	-	-	-	-	14.7	0.3	17.8	0.17	-	-	-	15.1	-	-
12	AQF43	13.8	94.6	-	-	-	-	-	-	-	-	-	-	-	14.8	-	-	-	-	-	-	15.4	-	-
1	AQF44	11.2	76.8	-	-	-	-	0.2	-	-	-	-	-	-	12.5	-	-	-	-	-	-	-	-	-
2	AQF44	12.4	84.4	-	-	-	-	0.2	-	-	-	-	-	-	16.1	-	-	-	-	-	-	-	-	-
3	AQF44	13.6	91.9	-	-	-	-	0.2	-	-	-	-	-	-	19.5	0.5	26.9	0.49	-	-	-	18.1	-	-
4	AQF44	19.2	132.6	-	-	-	-	0.2	-	-	-	-	-	-	16.4	0.4	22.2	0.33	41.2	-	-	17.3	-	-
5	AQF44	14.1	131.0	-	-	-	-	6.2	-	-	-	-	-	-	13.6	0.3	16.6	0.17	-	-	-	15.5	-	-
6	AQF44	10.5	104.4	-	-	-	-	15.5	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	14.3	-	-
7	AQF44	8.5	93.2	-	-	-	-	19.5	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	14.5	-	-
8	AQF44	8.1	88.2	-	-	-	-	19.0	-	-	-	-	-	-	15.0	0.3	18.3	0.17	-	-	-	15.4	-	-
9	AQF44	9.1	83.8	-	-	-	-	11.7	-	-	-	-	-	-	15.4	0.3	18.8	0.17	-	-	-	16.9	-	-
10	AQF44	12.1	89.5	-	-	-	-	2.6	-	-	-	-	-	-	14.6	0.3	17.7	0.17	-	-	-	15.9	-	-
11	AQF44	12.4	85.4	-	-	-	-	0.2	-	-	-	-	-	-	16.7	0.3	20.4	0.17	-	-	-	16.4	-	-
12	AQF44	11.8	81.1	-	-	-	-	0.2	-	-	-	-	-	-	14.7	-	-	-	-	-	-	-	-	-
1	AQF45	12.9	88.1	-	-	-	-	-	-	-	-	-	-	-	15.7	-	-	-	-	-	-	-	-	-
2	AQF45	13.2	90.3	-	-	-	-	-	-	-	-	-	-	-	14.9	-	-	-	-	-	-	-	-	-
3	AQF45	13.6	92.5	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.5	19.9	0.49	-	-	-	19.7	-	-
4	AQF45	18.8	134.5	-	-	-	-	0.5	-	-	-	-	-	-	17.1	0.4	18.6	0.33	44.7	-	-	18.2	-	-
5	AQF45	14.2	115.3	-	-	-	-	7.7	-	-	-	-	-	-	13.5	0.3	16.5	0.17	-	-	-	16.0	-	-
6	AQF45	9.5	96.5	-	-	-	-	14.9	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	14.7	-	-
7	AQF45	6.8	73.8	-	-	-	-	18.7	-	-	-	-	-	-	12.9	0.3	15.8	0.17	-	-	-	15.0	-	-
8	AQF45	7.6	81.7	-	-	-	-	18.7	-	-	-	-	-	-	15.3	0.3	18.7	0.17	-	-	-	15.9	-	-
9	AQF45	8.6	82.9	-	-	-	-	13.6	-	-	-	-	-	-	15.4	0.3	18.8	0.17	-	-	-	16.9	-	-
10	AQF45	12.8	91.																					

10th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

		General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Met al	Total_Metal	Total_Met al	Total_Met al	Total_Metal l	Total_Metal l	Total_Met al	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
Site	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite_nitrat e(N) mg/L	Nitrogen(TKN) mg/L	D mg/L	T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum _T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_ T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_T mg/L	Chromium VI_T mg/L	Cobalt_T mg/L	Copper_T mg/L
AQF40	-	10.1	-	-	0.095	0.072	0.005	0.071	-	-	0.025	0.050	1.591	0.070	5.9	0.038	0.000108571	0.00034	0.00734	0.000011	0.000025	0.00599	0.000008	5.23608	0.000011	0.00025	-	0.000054	0.00063
AQF40	-	9.8	-	-	0.061	0.088	0.005	-	-	-	0.021	0.050	1.088	0.072	7.4	0.036	0.000118324	0.00033	0.00746	0.000011	0.000025	0.00599	0.000005	5.40378	0.000011	0.00025	-	0.000054	0.00044
AQF40	-	9.6	-	-	0.026	0.106	0.005	-	-	-	0.018	0.050	0.587	0.075	8.9	0.034	0.000128061	0.00032	0.00758	0.000011	0.000025	0.00601	0.000003	5.57537	0.000011	0.00025	-	0.000054	0.00025
AQF40	-	9.1	-	-	0.010	0.098	0.001	-	-	-	0.025	0.006	0.371	0.078	5.2	0.034	0.000000000	0.00036	0.00717	0.000011	0.000025	0.00600	0.000009	5.22331	0.000011	0.00025	-	0.000054	0.00025
AQF40	-	8.7	-	-	0.009	0.038	0.001	0.044	-	-	0.023	0.050	0.347	0.065	4.4	0.054	0.000005	0.00030	0.00649	0.000050	0.000025	0.00583	0.000003	4.91554	0.000010	0.00022	-	0.000053	0.00025
AQF40	-	9.8	-	-	0.009	0.011	0.005	0.035	-	-	0.015	0.050	0.352	0.057	4.6	0.061	0.000005	0.00029	0.00660	0.000050	0.000025	0.00591	0.000005	4.91918	0.000011	0.00020	-	0.000054	0.00025
AQF40	-	8.7	-	-	0.015	0.004	0.001	0.217	-	-	0.012	0.050	0.324	0.064	4.9	0.048	0.000005	0.00031	0.00682	0.000050	0.000025	0.00597	0.000003	4.96839	0.000011	0.00016	-	0.000054	0.00025
AQF40	-	9.2	-	-	0.023	0.004	0.001	0.003	-	-	0.015	0.050	0.282	0.066	4.9	0.033	0.000005	0.00032	0.00585	0.000050	0.000025	0.00598	0.000003	4.69259	0.000011	0.00014	-	0.000054	0.00025
AQF40	-	8.9	-	-	0.026	0.004	0.001	0.003	-	-	0.012	0.050	0.310	0.064	5.1	0.045	0.000005	0.00033	0.00673	0.000050	0.000025	0.00597	0.000003	5.06516	0.000011	0.00013	-	0.000054	0.00025
AQF40	-	8.8	-	-	0.018	0.026	0.001	0.038	-	-	0.020	0.050	0.330	0.065	4.7	0.053	0.000005	0.00029	0.00576	0.000050	0.000025	0.00589	0.000003	4.90024	0.000011	0.00025	-	0.000054	0.00025
AQF40	-	10.1	-	-	0.017	0.025	0.001	0.025	-	-	0.019	0.050	0.308	0.062	4.5	0.081	0.000005	0.00030	0.00879	0.000050	0.000025	0.00587	0.000012	4.94149	0.000011	0.00030	-	0.000053	0.00066
AQF40	-	10.1	-	-	0.056	0.048	0.003	0.048	-	-	0.022	0.050	0.952	0.066	5.2	0.059	7.93204E-05	0.00032	0.00807	0.000030	0.000025	0.00594	0.000010	5.11561	0.000011	0.00027	-	0.000054	0.00065
AQF42	-	9.8	-	-	0.052	0.068	0.005	0.067	-	-	0.025	0.050	0.702	0.073	5.7	0.051	0.000225714	0.00034	0.00822	0.000011	0.000025	0.00599	0.000003	5.5822	0.000011	0.00025	-	0.000054	0.00025
AQF42	-	10.0	-	-	0.037	0.119	0.005	-	-	-	0.025	0.050	0.664	0.072	13.9	0.066	0.000284254	0.00036	0.00887	0.000011	0.000025	0.00599	0.000011	5.69659	0.000011	0.00025	-	0.000054	0.00097
AQF42	-	10.3	-	-	0.056	0.111	0.005	-	-	-	0.025	0.050	0.538	0.075	5.3	0.122	0.000005	0.00034	0.00951	0.000011	0.000025	0.00601	0.000003	5.58512	0.000024	0.00050	-	0.000122	0.00444
AQF42	-	9.6	-	-	0.016	0.095	0.001	-	-	-	0.030	0.006	0.371	0.074	5.2	0.037	0.000005	0.00037	0.00803	0.000011	0.000025	0.00600	0.000010	5.36971	0.000011	0.00025	-	0.000054	0.00091
AQF42	-	9.5	-	-	0.009	0.039	0.001	0.039	-	-	0.015	0.050	0.362	0.064	4.3	0.053	0.000005	0.00034	0.00636	0.000050	0.000025	0.00583	0.000003	4.58231	0.000010	0.00017	-	0.000053	0.00025
AQF42	-	9.4	-	-	0.009	0.011	0.005	0.035	-	-	0.016	0.050	0.352	0.057	4.6	0.058	0.000005	0.00028	0.00657	0.000050	0.000025	0.00591	0.000003	4.77247	0.000011	0.00024	-	0.000054	0.00025
AQF42	-	9.1	-	-	0.026	0.004	0.001	0.003	-	-	0.015	0.050	0.417	0.061	4.9	0.047	0.000005	0.00030	0.00634	0.000050	0.000025	0.00597	0.000007	4.60702	0.000011	0.00014	-	0.000054	0.00061
AQF42	-	9.3	-	-	0.047	0.004	0.001	0.003	-	-	0.014	0.050	0.282	0.065	4.9	0.037	0.000005	0.00034	0.00608	0.000050	0.000025	0.00598	0.000003	4.90739	0.000011	0.00015	-	0.000054	0.00025
AQF42	-	9.0	-	-	0.009	0.008	0.001	0.007	-	-	0.015	0.050	0.388	0.064	4.9	0.039	0.000005	0.00033	0.00657	0.000050	0.000025	0.00597	0.000003	5.08469	0.000011	0.00014	-	0.000054	0.00025
AQF42	-	9.9	-	-	0.009	0.019	0.001	0.019	-	-	0.015	0.050	0.310	0.063	4.5	0.041	0.000005	0.00031	0.00595	0.000050	0.000025	0.00589	0.000003	4.91981	0.000011	0.00014	-	0.000054	0.00025
AQF42	-	9.5	-	-	0.023	0.025	0.001	0.025	-	-	0.015	0.050	0.376	0.062	4.7	0.155	0.000128329	0.00032	0.01476	0.000050	0.000025	0.00587	0.000030	5.11773	0.000024	0.00075	-	0.000122	0.00090
AQF42	-	9.7	-	-	0.037	0.047	0.003	0.046	-	-	0.020	0.050	0.541	0.068	5.2	0.103	0.000177055	0.00033	0.01146	0.000030	0.000025	0.00594	0.000016	5.36972	0.000018	0.00050	-	0.000088	0.00057
AQF43	-	10.0	-	-	0.025	0.065	0.005	0.064	-	-	0.025	0.050	0.361	0.071	5.1	0.039	0.000225714	0.00030	0.00709	0.000011	0.000025	0.00599	0.000003	5.40203	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.5	-	-	0.019	0.088	0.005	-	-	-	0.021	0.050	0.359	0.073	5.5	0.037	0.000005	0.00030	0.00725	0.000011	0.000025	0.00599	0.000003	5.44282	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.1	-	-	0.013	0.112	0.005	-	-	-	0.018	0.050	0.358	0.074	6.0	0.035	0.000005	0.00031	0.00742	0.000011	0.000025	0.00601	0.000003	5.50706	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.1	-	-	0.010	0.096	0.001	-	-	-	0.013	0.006	0.352	0.077	5.2	0.036	0.000005	0.00036	0.00733	0.000011	0.000025	0.00600	0.000008	5.35019	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.9	-	-	0.009	0.032	0.001	0.032	-	-	0.031	0.050	0.411	0.064	4.4	0.060	0.000005	0.00034	0.00646	0.000050	0.000025	0.00583	0.000003	4.94494	0.000010	0.00018	-	0.000053	0.00025
AQF43	-	8.8	-	-	0.009	0.011	0.005	0.035	-	-	0.015	0.050	0.352	0.058	4.7	0.067	0.000005	0.00028	0.00652	0.000050	0.000025	0.00591	0.000003	4.83115	0.000011	0.00026	-	0.000054	0.00025
AQF43	-	9.1	-	-	0.034	0.004	0.001	0.003	-	-	0.015	0.050	0.280	0.062	4.9	0.057	0.000005	0.00032	0.00631	0.000050	0.000025	0.00597	0.000003	4.72422	0.000011	0.00015	-	0.000054	0.00025
AQF43	-	9.2	-	-	0.018	0.010	0.001	0.009	-	-	0.016	0.050	0.292	0.067	5.0	0.046	0.000005	0.00036	0.00608	0.000050	0.000025	0.00598	0.000003	5.11243	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.0	-	-	0.029	0.004	0.001	0.003	-	-	0.015	0.050	0.300	0.064	4.9	0.048	0.000005	0.00032	0.00671	0.000050	0.000025	0.00597	0.000003	5.09446	0.000011	0.00017	-	0.000054	0.00025
AQF43	-	9.3	-	-	0.009	0.020	0.001	0.020	-	-	0.015	0.050	0.301	0.064	4.5	0.066	0.000005	0.00031	0.00593	0.000050	0.000025	0.00589	0.000003	4.99810	0.000011	0.00023	-	0.000054	0.00025
AQF43	-	9.8	-	-	0.034	0.027	0.001	0.027	-	-	0.015	0.050	0.308	0.063	4.5	0.040	0.000005	0.00027	0.00582	0.000050	0.000025	0.00587	0.000003	4.95128	0.000011	0.00016	-	0.000053	0.00025
AQF43	-	9.9	-	-	0.030	0.046	0.003	0.046	-	-	0.020	0.050	0.336	0.067	4.8	0.039	0.000005	0.00029	0.00647	0.000030	0.000025	0.00594	0.000003	5.20358	0.000011	0.00020	-	0.000054	0.00025
AQF44	-	10.1	-	-	0.141	0.074	0.005	0.073	-	-	0.025	0.050	1.786	0.069	6.1	0.040	0.000005	0.00031	0.00734	0.000011	0.000025	0.00599	0.000019	5.56798	0.000011	0.00025	-	0.000054	0.00050
AQF44	-	9.8	-	-	0.080	0.091	0.005	-	-	-	0.018	0.050	1.796	0.071	7.5	0.038	0.000005	0.00031	0.00741	0.000011	0.000025	0.00599	0.000011	5.62827	0.000011	0.00025	-	0.000054	0.00038
AQF44	-	9.5	-	-	0.018	0.109	0.005	-	-	-	0.010	0.050	1.817	0.073	9.0	0.037	0.000005	0.00032	0.00749	0.000011	0.000025	0.00601	0.000003	5.70222	0.000011	0.00025	-	0.000054	0.00025
AQF44	-	9.4	-	-	0.010	0.098	0.001	-	-	-	0.025	0.006	0.371	0.076	5.3	0.036	0.000005	0.00034	0.00758	0.000011	0.000025	0.00600	0.0						

10th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Metal	Total_Met al	Total_Met al	Total_Met al	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal</

10th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

Site	Dissolved_Metal Barium_D mg/L	Dissolved_Metal Beryllium_D mg/L	Dissolved_Metal Bismuth_D mg/L	Dissolved_Metal Boron_D mg/L	Dissolved_Metal Cadmium_D mg/L	Dissolved_Metal Calcium_D mg/L	Dissolved_Metal Cesium_D mg/L	Dissolved_Metal Chromium_D mg/L	Dissolved_Metal Cobalt_D mg/L	Dissolved_Metal Copper_D mg/L	Dissolved_Metal Iron_D mg/L	Dissolved_Metal Lead_D mg/L	Dissolved_Metal Lithium_D mg/L	Dissolved_Metal Magnesium_D mg/L	Dissolved_Metal Manganese_D mg/L	Dissolved_Metal Mercury_D mg/L	Dissolved_Metal Molybdenum_D mg/L	Dissolved_Metal Nickel_D mg/L	Dissolved_Metal Potassium_D mg/L	Dissolved_Metal Rubidium_D mg/L	Dissolved_Metal Selenium_D mg/L	Dissolved_Metal Silicon_D mg/L
AQF40	0.0130	1.10E-05	0.000025	0.0061	0.0000025	5.16	1.12E-05	0.00025	5.4E-05	0.0028	0.16	0.00013	0.0013	1.53	0.0265	-	0.00009	0.00025	0.75	0.0011	0.000025	3.14
AQF40	0.0135	1.10E-05	0.000025	0.0061	0.0000025	5.21	1.12E-05	0.00025	5.4E-05	0.0020	0.18	0.00009	0.0012	1.53	0.0271	-	0.00010	0.00025	0.74	0.0011	0.000033	3.15
AQF40	0.0140	1.10E-05	0.000025	0.0061	0.0000025	5.28	1.13E-05	0.00025	5.4E-05	0.0012	0.19	0.00005	0.0010	1.55	0.0280	0.0000010	0.00012	0.00025	0.73	0.0011	0.000041	3.17
AQF40	0.0198	1.10E-05	0.000025	0.0061	1.0308E-05	5.13	1.12E-05	0.00025	5.4E-05	0.0020	0.18	0.00010	0.0012	1.52	0.0299	0.0000014	0.00007	0.00025	0.83	0.0013	0.000025	3.08
AQF40	0.0068	5.00E-05	0.000025	0.0059	0.0000025	4.86	1.02E-05	0.00010	5.3E-05	0.0006	0.21	0.00003	0.0012	1.43	0.0421	0.0000019	0.00014	0.00025	0.72	0.0011	0.000025	2.48
AQF40	0.0059	5.00E-05	0.000025	0.0060	0.0000025	4.64	1.07E-05	0.00013	5.4E-05	0.0003	0.18	0.00003	0.0006	1.34	0.0221	0.0000018	0.00009	0.00025	0.68	0.0010	0.000025	2.05
AQF40	0.0059	5.00E-05	0.000025	0.0060	5.13704E-06	4.87	1.10E-05	0.00011	5.4E-05	0.0003	0.11	0.00007	0.0010	1.41	0.0248	0.0000012	0.00011	0.00025	0.71	0.0012	0.000025	1.97
AQF40	0.0053	5.00E-05	0.000025	0.0061	0.0000025	4.64	1.11E-05	0.00012	5.4E-05	0.0003	0.15	0.00003	0.0006	1.38	0.0251	-	0.00010	0.00025	0.66	0.0011	0.000051	2.13
AQF40	0.0064	5.00E-05	0.000025	0.0061	0.0000025	4.73	1.11E-05	0.00022	5.4E-05	0.0026	0.13	0.00015	0.0006	1.36	0.0258	-	0.00015	0.00025	0.65	0.0012	0.000051	2.29
AQF40	0.0086	5.00E-05	0.000025	0.0060	0.0000025	4.77	1.05E-05	0.00008	5.4E-05	0.0016	0.14	0.00007	0.0009	1.42	0.0217	0.0000011	0.00011	0.00025	0.64	0.0011	0.000042	2.36
AQF40	0.0053	5.00E-05	0.000025	0.0059	0.0000025	4.65	1.04E-05	0.00015	5.4E-05	0.0050	0.14	0.00018	0.0006	1.35	0.0222	-	0.00010	0.00025	0.67	0.0010	0.000025	2.47
AQF40	0.0092	3.05E-05	0.000025	0.0060	0.0000025	4.94	1.09E-05	0.00020	5.4E-05	0.0039	0.15	0.00015	0.0010	1.45	0.0246	-	0.00010	0.00025	0.71	0.0011	0.000025	2.81
AQF42	0.0136	1.10E-05	0.000025	0.0061	0.0000025	5.14	1.12E-05	0.00025	5.4E-05	0.0032	0.18	0.00015	0.0013	1.55	0.0277	-	0.00012	0.00025	0.74	0.0012	0.000025	3.12
AQF42	0.0207	1.10E-05	0.000025	0.0061	0.0000025	5.39	1.12E-05	0.00025	5.4E-05	0.0020	0.20	0.00008	0.0006	1.62	0.0343	0.0000003	0.00009	0.00025	0.91	0.0012	0.000025	3.31
AQF42	0.0086	1.10E-05	0.000025	0.0061	0.0000025	5.37	1.13E-05	0.00025	5.4E-05	0.0004	0.22	0.00003	0.0014	1.55	0.0313	-	0.00008	0.00025	0.72	0.0012	0.000063	3.22
AQF42	0.0194	1.10E-05	0.000025	0.0061	1.1772E-05	5.20	1.12E-05	0.00025	5.4E-05	0.0025	0.19	0.00009	0.0013	1.53	0.0325	-	0.00009	0.00025	0.78	0.0011	0.000025	3.01
AQF42	0.0061	5.00E-05	0.000025	0.0059	0.0000025	4.57	1.02E-05	0.00014	5.3E-05	0.0007	0.30	0.00003	0.0006	1.37	0.0605	0.0000016	0.00010	0.00025	0.68	0.0010	0.000025	2.49
AQF42	0.0061	5.00E-05	0.000025	0.0060	0.0000025	4.45	1.07E-05	0.00013	5.4E-05	0.0004	0.18	0.00003	0.0006	1.28	0.0208	0.0000017	0.00009	0.00025	0.70	0.0010	0.000025	2.05
AQF42	0.0060	5.00E-05	0.000025	0.0060	0.0000025	4.58	1.10E-05	0.00005	5.4E-05	0.0002	0.15	0.00003	0.0006	1.33	0.0243	0.0000015	0.00009	0.00025	0.64	0.0011	0.000025	2.03
AQF42	0.0057	5.00E-05	0.000025	0.0061	0.0000025	4.68	1.11E-05	0.00011	5.4E-05	0.0004	0.15	0.00012	0.0006	1.38	0.0255	-	0.00011	0.00025	0.65	0.0012	0.000025	2.10
AQF42	0.0062	5.00E-05	0.000025	0.0061	0.0000025	4.91	1.11E-05	0.00012	5.4E-05	0.0002	0.12	0.00003	0.0006	1.41	0.0239	-	0.00009	0.00025	0.66	0.0011	0.000060	2.22
AQF42	0.0053	5.00E-05	0.000025	0.0060	0.0000025	4.74	1.05E-05	0.00005	5.4E-05	0.0005	0.12	0.00003	0.0006	1.41	0.0218	0.0000008	0.00011	0.00025	0.60	0.0010	0.000025	2.38
AQF42	0.0152	5.00E-05	0.000025	0.0059	0.0000025	4.82	1.04E-05	0.00076	5.4E-05	0.0015	0.19	0.00007	0.0006	1.40	0.0374	-	0.00090	0.00025	0.65	0.0011	0.000025	2.34
AQF42	0.0145	3.05E-05	0.000025	0.0060	0.0000025	5.01	1.09E-05	0.00050	5.4E-05	0.0024	0.19	0.00011	0.0010	1.48	0.0328	-	0.00050	0.00025	0.70	0.0011	0.000025	2.73
AQF43	0.0069	1.10E-05	0.000025	0.0061	0.0000025	5.11	1.12E-05	0.00025	5.4E-05	0.0004	0.16	0.00003	0.0012	1.54	0.0252	-	0.00007	0.00025	0.70	0.0011	0.000025	3.10
AQF43	0.0100	1.10E-05	0.000025	0.0061	0.0000025	5.18	1.12E-05	0.00025	5.4E-05	0.0007	0.18	0.00003	0.0011	1.53	0.0263	-	0.00007	0.00025	0.71	0.0011	0.000034	3.15
AQF43	0.0133	1.10E-05	0.000025	0.0061	0.0000025	5.27	1.13E-05	0.00025	5.4E-05	0.0010	0.19	0.00004	0.0010	1.53	0.0275	0.0000010	0.00006	0.00025	0.71	0.0011	0.000043	3.20
AQF43	0.0205	1.10E-05	0.000025	0.0061	0.0000025	5.16	1.12E-05	0.00025	5.4E-05	0.0019	0.19	0.00007	0.0012	1.51	0.0311	0.0000018	0.00007	0.00025	0.72	0.0011	0.000025	3.00
AQF43	0.0058	5.00E-05	0.000025	0.0059	0.0000025	4.92	4.94E-05	0.00012	5.3E-05	0.0005	0.21	0.00003	0.0006	1.42	0.0359	0.0000025	0.00010	0.00025	0.70	0.0009	0.000025	2.34
AQF43	0.0059	5.00E-05	0.000025	0.0060	0.0000025	4.79	1.07E-05	0.00012	5.4E-05	0.0003	0.17	0.00003	0.0006	1.38	0.0214	0.0000018	0.00009	0.00025	0.81	0.0010	0.000025	2.00
AQF43	0.0059	5.00E-05	0.000025	0.0060	0.0000025	4.60	1.10E-05	0.00011	5.4E-05	0.0003	0.16	0.00003	0.0006	1.38	0.0240	0.0000015	0.00007	0.00025	0.66	0.0011	0.000025	2.25
AQF43	0.0053	5.00E-05	0.000025	0.0061	0.0000025	4.89	1.11E-05	0.00005	5.4E-05	0.0004	0.14	0.00003	0.0006	1.41	0.0257	-	0.00011	0.00025	0.71	0.0011	0.000025	2.10
AQF43	0.0064	5.00E-05	0.000025	0.0061	0.0000025	4.86	1.11E-05	0.00012	5.4E-05	0.0004	0.13	0.00003	0.0006	1.39	0.0256	-	0.00010	0.00025	0.65	0.0011	0.000025	2.27
AQF43	0.0113	5.00E-05	0.000025	0.0060	0.0000025	4.75	1.05E-05	0.00013	5.4E-05	0.0037	0.13	0.00015	0.0006	1.39	0.0221	0.0000008	0.00014	0.00025	0.63	0.0010	0.000025	2.42
AQF43	0.0053	5.00E-05	0.000025	0.0059	0.0000025	4.72	1.04E-05	0.00011	5.4E-05	0.0050	0.11	0.00613	0.0006	1.38	0.0200	-	0.00010	0.00025	0.63	0.0010	0.000025	2.47
AQF43	0.0061	3.05E-05	0.000025	0.0060	0.0000025	4.95	1.09E-05	0.00018	5.4E-05	0.0027	0.14	0.00307	0.0009	1.47	0.0228	-	0.00009	0.00025	0.67	0.0010	0.000025	2.79
AQF44	0.0138	1.10E-05	0.000025	0.0061	1.15786E-05	5.46	1.12E-05	0.00025	5.4E-05	0.0037	0.17	0.00015	0.0013	1.59	0.0259	-	0.00009	0.00025	0.72	0.0011	0.000025	3.08
AQF44	0.0164	1.10E-05	0.000025	0.0061	7.03866E-06	5.45	1.12E-05	0.00025	5.4E-05	0.0030	0.18	0.00010	0.0011	1.59	0.0266	-	0.00008	0.00025	0.73	0.0011	0.000025	3.14
AQF44	0.0189	1.10E-05	0.000025	0.0061	0.0000025	5.44	1.13E-05	0.00025	5.4E-05	0.0022	0.19	0.00004	0.0010	1.59	0.0275	0.0000009	0.00008	0.00025	0.75	0.0012	0.000025	3.19
AQF44	0.0187	1.10E-05	0.000025	0.0061	0.0000025	5.49	1.12E-05	0.00025	5.4E-05	0.0018	0.18	0.00007	0.0013	1.59	0.0306	0.0000009	0.00008	0.00025	0.76	0.0012	0.000025	3.00
AQF44	0.0059	5.00E-05	0.000025	0.0059	0.0000025	4.84	1.02E-05	0.00012	5.3E-05	0.0004	0.22	0.00003	0.0012	1.40	0.0357	0.0000009	0.00009	0.00025	0.69	0.0009	0.000025	2.42
AQF44	0.0254	5.00E-05	0.000025	0.0060	0.0000025	4.56	1.07E-05	0.00013	5.4E-05	0.0014	0.18	0.00003	0.0006	1.32	0.0213	0.0000017	0.00019	0.00025	0.77	0.0010	0.000025	2.06
AQF44	0.0060	5.00E-05	0.000025	0.0060	0.0000025	4.65	1.10E-05	0.00011	5.4E-05	0.0003	0.16	0.00003	0.0006	1.34	0.0243	0.0000016	0.00010	0.00025	0.66	0.0011	0.000025	2.07
AQF44	0.0054	5.00E-05	0.000025	0.0061	0.0000025	4.92	1.11E-05	0.00012	5.4E-05	0.0003	0.14	0.00012	0.0006	1.43	0.0260	-	0.00016	0.00025	0.70	0.0011	0.000025	2.13
AQF44	0.0071	5.00E-05	0.000025	0.0061	0.0000025	5.33	1.11E-05	0.00012	5.4E-05	0.0003	0.12	0.00003	0.0012	1.53	0.0248	-	0.00008	0.00025	0.70	0.0011	0.000025	2.09
AQF44	0.00																					

10th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

Site	Dissolved_Metal		Dissolved_Metal	Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Cyanides	Cyanides	Cyanides	Methylme	Methylme
	Dissolved_Metal	Dissolved_Metal	I	I	Dissolved_Metal	I	Dissolved_Metal	al	al	Dissolved_Metal	Dissolved_Metal	al	Dissolved_Metal	al				rcury	rcury	
	Silver_D	Sodium_D	Strontium_D	Sulfur_D	Tellurium_D	Thallium_D	Thorium_D	Tin_D	Titanium_D	Tungsten_D	Uranium_D	Vanadium_D	Zinc_D	Zirconium_D	cyanide_free	cyanide_SAD	cyanide_WAD	Methylme	Methylme	
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
AQF40	0.000005	1.77	0.02	1.78	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00012	0.00025	0.0045	0.00015	-	-	-	-	-	
AQF40	0.000005	1.77	0.02	1.87	0.00010	0.00001	0.00005	0.00009	0.00015	0.00005	0.00012	0.00025	0.0032	0.00015	-	-	-	-	-	
AQF40	0.000005	1.79	0.02	1.98	0.00010	0.00001	0.00005	0.00011	0.00015	0.00005	0.00012	0.00025	0.0018	0.00015	-	-	-	-	-	
AQF40	0.000005	1.75	0.02	1.79	0.00010	0.00001	0.00005	0.00015	0.00015	0.00005	0.00012	0.00025	0.0028	0.00015	-	-	-	-	-	
AQF40	0.000005	1.44	0.02	1.53	0.00010	0.00001	0.00005	0.00014	0.00070	0.00005	0.00010	0.00025	0.0030	0.00010	-	-	-	-	-	
AQF40	0.000005	1.39	0.02	1.66	0.00010	0.00001	0.00005	0.00020	0.00050	0.00005	0.00011	0.00025	0.0063	0.00010	-	-	-	-	-	
AQF40	0.000005	1.48	0.02	1.90	0.00010	0.00001	0.00005	0.00012	0.00040	0.00005	0.00012	0.00025	0.0037	0.00010	-	-	-	-	-	
AQF40	0.000005	1.51	0.02	1.76	0.00010	0.00001	0.00005	0.00025	0.00036	0.00005	0.00012	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF40	0.000005	1.48	0.02	1.75	0.00010	0.00001	0.00005	0.00006	0.00054	0.00005	0.00012	0.00025	0.0047	0.00010	-	-	-	-	-	
AQF40	0.000005	1.54	0.02	1.82	0.00010	0.00001	0.00005	0.00006	0.00027	0.00005	0.00012	0.00025	0.0021	0.00011	-	-	-	-	-	
AQF40	0.000005	1.42	0.02	1.59	0.00010	0.00001	0.00005	0.00006	0.00034	0.00005	0.00010	0.00025	0.0101	0.00010	-	-	-	-	-	
AQF40	0.000005	1.60	0.02	1.70	0.00010	0.00001	0.00005	0.00006	0.00024	0.00005	0.00011	0.00025	0.0073	0.00012	-	-	-	-	-	
AQF42	0.000005	1.79	0.02	1.78	0.00010	0.00001	0.00005	0.00019	0.00015	0.00005	0.00016	0.00025	0.0046	0.00015	-	-	-	-	-	
AQF42	0.000005	1.87	0.02	2.08	0.00010	0.00001	0.00005	0.00019	0.00040	0.00005	0.00013	0.00025	0.0048	0.00015	-	-	-	-	-	
AQF42	0.000005	1.78	0.02	1.80	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00013	0.00025	0.0012	0.00015	-	-	-	-	-	
AQF42	0.000005	5.53	0.02	2.28	0.00010	0.00001	0.00005	0.00016	0.00035	0.00005	0.00015	0.00025	0.0051	0.00015	-	-	-	-	-	
AQF42	0.000005	1.30	0.02	1.53	0.00010	0.00001	0.00005	0.00006	0.00050	0.00005	0.00010	0.00025	0.0012	0.00010	-	-	-	-	-	
AQF42	0.000005	1.37	0.02	1.66	0.00010	0.00001	0.00005	0.00031	0.00045	0.00005	0.00011	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF42	0.000005	1.36	0.02	2.05	0.00010	0.00001	0.00005	0.00069	0.00043	0.00005	0.00012	0.00025	0.0088	0.00010	-	-	-	-	-	
AQF42	0.000005	1.44	0.02	1.76	0.00010	0.00001	0.00005	0.00006	0.00045	0.00005	0.00012	0.00025	0.0030	0.00010	-	-	-	-	-	
AQF42	0.000005	1.52	0.02	1.75	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00012	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF42	0.000005	1.46	0.02	1.62	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00011	0.00025	0.0011	0.00010	-	-	-	-	-	
AQF42	0.000005	1.42	0.02	1.59	0.00010	0.00001	0.00005	0.00006	0.00100	0.00090	0.00014	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF42	0.000005	1.61	0.02	1.70	0.00010	0.00001	0.00005	0.00013	0.00058	0.00048	0.00015	0.00025	0.0039	0.00012	-	-	-	-	-	
AQF43	0.000005	1.75	0.02	1.78	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00012	0.00025	0.0011	0.00015	-	-	-	-	-	
AQF43	0.000005	1.76	0.02	1.78	0.00010	0.00001	0.00005	0.00008	0.00023	0.00005	0.00012	0.00025	0.0013	0.00015	-	-	-	-	-	
AQF43	0.000005	1.77	0.02	1.80	0.00010	0.00001	0.00005	0.00010	0.00015	0.00005	0.00012	0.00025	0.0015	0.00015	-	-	-	-	-	
AQF43	0.000005	1.70	0.02	1.79	0.00010	0.00001	0.00005	0.00014	0.00031	0.00005	0.00012	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF43	0.000005	1.33	0.02	1.87	0.00010	0.00001	0.00005	0.00006	0.00043	0.00005	0.00010	0.00025	0.0015	0.00010	-	-	-	-	-	
AQF43	0.000005	1.39	0.02	1.66	0.00010	0.00001	0.00005	0.00006	0.00037	0.00005	0.00011	0.00025	0.0044	0.00010	-	-	-	-	-	
AQF43	0.000005	1.52	0.02	1.74	0.00010	0.00001	0.00005	0.00006	0.00044	0.00005	0.00012	0.00025	0.0013	0.00010	-	-	-	-	-	
AQF43	0.000005	1.46	0.02	1.76	0.00010	0.00001	0.00005	0.00006	0.00057	0.00005	0.00012	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF43	0.000005	1.44	0.02	1.75	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00012	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF43	0.000005	1.46	0.02	1.62	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00011	0.00025	0.0022	0.00010	-	-	-	-	-	
AQF43	0.000005	1.42	0.02	1.59	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00010	0.00025	0.0047	0.00010	-	-	-	-	-	
AQF43	0.000005	1.59	0.02	1.70	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00011	0.00025	0.0029	0.00012	-	-	-	-	-	
AQF44	0.000005	1.79	0.02	1.78	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00012	0.00025	0.0038	0.00015	-	-	-	-	-	
AQF44	0.000005	1.79	0.02	1.78	0.00010	0.00001	0.00005	0.00010	0.00023	0.00005	0.00012	0.00025	0.0031	0.00015	-	-	-	-	-	
AQF44	0.000005	1.80	0.02	1.80	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00012	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF44	0.000005	2.17	0.02	1.79	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00012	0.00025	0.0028	0.00015	-	-	-	-	-	
AQF44	0.000005	1.29	0.02	1.53	0.00010	0.00001	0.00005	0.00006	0.00046	0.00005	0.00010	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.40	0.02	1.66	0.00010	0.00001	0.00005	0.00020	0.00040	0.00005	0.00011	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF44	0.000005	1.34	0.02	1.74	0.00010	0.00001	0.00005	0.00006	0.00048	0.00005	0.00012	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.46	0.02	1.76	0.00010	0.00001	0.00005	0.00006	0.00044	0.00005	0.00012	0.00025	0.0026	0.00010	-	-	-	-	-	
AQF44	0.000005	1.56	0.02	2.16	0.00010	0.00001	0.00005	0.00006	0.00039	0.00005	0.00012	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.49	0.02	1.62	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00011	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.45	0.02	1.59	0.00010	0.00001	0.00005	0.00006	0.00049	0.00005	0.00010	0.00025	0.0049	0.00010	-	-	-	-	-	
AQF44	0.000005	1.63	0.02	1.70	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00011	0.00025	0.0044	0.00012	-	-	-	-	-	
AQF45	0.000005	1.82	0.02	1.78	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00012	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF45	0.000005	1.82	0.02	2.19	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00012	0.00025	0.0019	0.00015	-	-	-	-	-	
AQF45	0.000005	1.82	0.02	2.61	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00012	0.00025	0.0015	0.00015	-	-	-	-	-	
AQF45	0.000005	1.87	0.02	1.79	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00012	0.00025	0.0016	0.00015	-	-	-	-	-	
AQF45	0.000005	1.30	0.02	1.53	0.00010	0.00001	0.00005	0.00006	0.00067	0.00005	0.00011	0.00025	0.0013	0.00010	-	-	-	-	-	
AQF45	0.000005	1.35	0.02	1.66	0.00023	0.00001	0.00005	0.00006	0.00055	0.00005	0.00011	0.00025	0.0011	0.00010	-	-	-	-	-	
AQF45	0.000005	1.36	0.02	1.74	0.00010	0.00001	0.00005	0.00006	0.00064	0.00005	0.00012	0.00025	0.0021	0.00010	-	-	-	-	-	
AQF45	0.000005	1.46	0.02	1.76	0.00010	0.00001	0.00005	0.00006	0.00117	0.00005	0.00012	0.00025	0.0012	0.00010	-	-	-	-	-	
AQF45	0.000005	1.59	0.02	1.75	0.00010	0.00001	0.00005	0.00006	0.00115	0.00005	0.00012	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF45	0.000005	1.51	0.02	1.62	0.00010	0.00001	0.00005	0.00006	0.00039	0.00005	0.00011	0.00025	0.0016	0.00010	-	-	-	-	-	
AQF45	0.000005	1.47	0.02	1.59	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00010	0.00025	0.0059	0.00010	-	-	-	-	-	
AQF45	0.000005	1.67	0.02	1.70	0.00010	0.00001	0.00005	0.00006	0.00034	0.00005	0.00012	0.00025	0.0005	0.00010	-	-	-			

90th percentile Hughes monthly flow rate, median mixed pit concentrations

		Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	
Month	Site	D_Oxygen_percent_ field mg/L	D_Oxygen_percent_ field %	ORP_field mV	pH_field pH	Specific_Conducta nce_field uS/cm	TDS_field mg/L	Temp_field C	Turbidity_ field NTU	Acidity(CaCO 3) mg/L	Alkalinity(CaCO 3)_bicarbonate mg/L	Alkalinity(CaCO 3)_carbonate mg/L	Alkalinity(CaC O3)_hydroxide mg/L	Alkalinity(CaC O3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbo nate mg/L	(HCO3)_bicarbo nate mg/L	(OH)_hydroxi de mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(CaC O3)_D mg/L	Hardness(CaC O3)_T mg/L	pH pH	TDS_T mg/L
1	AQF40	10.0	68.5	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-
2	AQF40	10.9	74.5	-	-	-	-	-	-	-	-	-	-	-	11.6	-	-	-	-	-	-	-	-	-
3	AQF40	11.7	80.5	-	-	-	-	0.2	-	-	-	-	-	-	11.3	0.5	18.4	0.49	-	-	-	17.2	-	-
4	AQF40	20.2	140.5	-	-	-	-	0.6	-	-	-	-	-	-	14.1	0.4	16.2	0.33	35.9	-	-	15.0	-	-
5	AQF40	12.5	95.0	-	-	-	-	3.9	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.5	-	-
6	AQF40	9.0	91.0	-	-	-	-	15.4	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.2	-	-
7	AQF40	6.8	72.4	-	-	-	-	18.8	-	-	-	-	-	-	10.6	0.3	12.9	0.17	-	-	-	12.0	-	-
8	AQF40	6.1	67.0	-	-	-	-	20.0	-	-	-	-	-	-	11.4	0.3	13.9	0.17	-	-	-	11.3	-	-
9	AQF40	8.0	79.3	-	-	-	-	13.7	-	-	-	-	-	-	11.6	0.3	14.1	0.17	-	-	-	11.6	-	-
10	AQF40	12.0	90.7	-	-	-	-	3.6	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	12.9	-	-
11	AQF40	10.4	71.4	-	-	-	-	0.3	-	-	-	-	-	-	13.5	0.3	16.4	0.17	-	-	-	13.4	-	-
12	AQF40	10.2	69.9	-	-	-	-	0.2	-	-	-	-	-	-	12.8	-	-	-	-	-	-	-	-	-
1	AQF42	10.5	72.0	-	-	-	-	0.2	-	-	-	-	-	-	13.6	-	-	-	-	-	-	-	-	-
2	AQF42	12.1	82.1	-	-	-	-	0.2	-	-	-	-	-	-	9.8	-	-	-	-	-	-	17.6	-	-
3	AQF42	10.6	71.9	-	-	-	-	0.2	-	-	-	-	-	-	17.4	0.5	21.2	0.49	-	-	-	17.3	-	-
4	AQF42	15.6	107.9	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.4	16.9	0.33	35.5	-	-	14.6	-	-
5	AQF42	13.8	133.6	-	-	-	-	4.4	-	-	-	-	-	-	10.0	0.3	12.1	0.17	-	-	-	11.5	-	-
6	AQF42	10.4	103.6	-	-	-	-	15.3	-	-	-	-	-	-	9.1	0.3	11.1	0.17	-	-	-	10.5	-	-
7	AQF42	8.0	87.4	-	-	-	-	19.0	-	-	-	-	-	-	11.0	0.3	13.4	0.17	-	-	-	11.0	-	-
8	AQF42	8.0	85.3	-	-	-	-	18.6	-	-	-	-	-	-	11.4	0.3	13.9	0.17	-	-	-	11.4	-	-
9	AQF42	8.5	82.9	-	-	-	-	14.1	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.3	-	-
10	AQF42	11.4	96.2	-	-	-	-	3.7	-	-	-	-	-	-	11.9	0.3	14.6	0.17	-	-	-	12.7	-	-
11	AQF42	11.7	80.4	-	-	-	-	0.3	-	-	-	-	-	-	14.0	0.3	17.0	0.17	-	-	-	14.1	-	-
12	AQF42	11.1	76.2	-	-	-	-	0.2	-	-	-	-	-	-	13.9	-	-	-	-	-	-	-	-	-
1	AQF43	13.3	91.5	-	-	-	-	-	-	-	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-
2	AQF43	13.5	92.4	-	-	-	-	-	-	-	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-
3	AQF43	13.7	93.5	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.5	18.4	0.49	-	-	-	17.0	-	-
4	AQF43	17.0	116.8	-	-	-	-	0.3	-	-	-	-	-	-	14.2	0.4	16.8	0.33	35.7	-	-	15.0	-	-
5	AQF43	17.0	137.6	-	-	-	-	5.9	-	-	-	-	-	-	12.2	0.3	14.8	0.17	-	-	-	12.6	-	-
6	AQF43	10.4	104.6	-	-	-	-	15.7	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.7	-	-
7	AQF43	8.2	89.8	-	-	-	-	19.5	-	-	-	-	-	-	9.4	0.3	11.5	0.17	-	-	-	11.3	-	-
8	AQF43	8.2	90.0	-	-	-	-	19.6	-	-	-	-	-	-	12.4	0.3	15.1	0.17	-	-	-	12.0	-	-
9	AQF43	9.1	85.9	-	-	-	-	13.0	-	-	-	-	-	-	12.0	0.3	14.6	0.17	-	-	-	12.1	-	-
10	AQF43	12.8	95.1	-	-	-	-	3.0	-	-	-	-	-	-	11.7	0.3	14.3	0.17	-	-	-	12.7	-	-
11	AQF43	14.4	98.3	-	-	-	-	-	-	-	-	-	-	-	13.6	0.3	16.5	0.17	-	-	-	13.7	-	-
12	AQF43	13.8	94.9	-	-	-	-	-	-	-	-	-	-	-	14.0	-	-	-	-	-	-	14.6	-	-
1	AQF44	11.3	77.0	-	-	-	-	0.2	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-
2	AQF44	12.4	84.5	-	-	-	-	0.2	-	-	-	-	-	-	15.7	-	-	-	-	-	-	-	-	-
3	AQF44	13.6	92.0	-	-	-	-	0.2	-	-	-	-	-	-	19.2	0.5	26.5	0.49	-	-	-	17.6	-	-
4	AQF44	19.4	133.6	-	-	-	-	0.2	-	-	-	-	-	-	14.7	0.4	20.2	0.33	37.3	-	-	15.2	-	-
5	AQF44	14.3	132.6	-	-	-	-	6.2	-	-	-	-	-	-	10.9	0.3	13.2	0.17	-	-	-	12.3	-	-
6	AQF44	10.6	105.6	-	-	-	-	15.6	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.0	-	-
7	AQF44	8.6	94.1	-	-	-	-	19.8	-	-	-	-	-	-	9.6	0.3	11.7	0.17	-	-	-	11.2	-	-
8	AQF44	8.2	89.1	-	-	-	-	19.3	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	12.1	-	-
9	AQF44	9.2	84.6	-	-	-	-	11.8	-	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.8	-	-
10	AQF44	12.2	90.2	-	-	-	-	2.6	-	-	-	-	-	-	12.5	0.3	15.3	0.17	-	-	-	13.5	-	-
11	AQF44	12.5	85.7	-	-	-	-	0.2	-	-	-	-	-	-	15.6	0.3	19.1	0.17	-	-	-	15.1	-	-
12	AQF44	11.9	81.3	-	-	-	-	0.2	-	-	-	-	-	-	13.9	-	-	-	-	-	-	-	-	-
1	AQF45	12.9	88.2	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-
2	AQF45	13.2	90.4	-	-	-	-	-	-	-	-	-	-	-	14.5	-	-	-	-	-	-	-	-	-
3	AQF45	13.6	92.7	-	-	-	-	0.2	-	-	-	-	-	-	13.7	0.5	19.4	0.49	-	-	-	19.3	-	-
4	AQF45	19.0	135.5	-	-	-	-	0.5	-	-	-	-	-	-	15.5	0.4	16.5	0.33	40.7	-	-	16.2	-	-
5	AQF45	14.4	116.7	-	-	-	-	7.7	-	-	-	-	-	-	10.8	0.3	13.1	0.17	-	-	-	12.8	-	-
6	AQF45	9.6	97.5	-	-	-	-	15.0	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.3	-	-
7	AQF45	6.9	74.5	-	-	-	-	18.9	-	-	-	-	-	-	10.2	0.3	12.5	0.17	-	-	-	11.7	-	-
8	AQF45	7.7	82.5	-	-	-	-	18.9	-	-	-	-	-	-	12.6	0.3	15.4	0.17	-	-	-	12.6	-	-
9	AQF45	8.7	83.7	-	-	-	-	13.7	-	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.8	-	-
10	AQF45	12.9	91.7	-	-																			

90th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

		General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al
		TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite_nitrat e(N) mg/L	Nitrogen(TKN) mg/L	D mg/L	T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_T mg/L	Chromium VI_T mg/L	Cobalt_T mg/L	Copper_T mg/L		
AQF40	-	10.1	-	-	0.095	0.072	0.005	0.071	-	-	0.025	0.050	1.580	0.070	5.3	0.038	0.000108758	0.00032	0.00726	0.000011	0.000025	0.00586	0.000008	4.96509	0.000010	0.00025	-	0.000053	0.00063			
AQF40	-	9.9	-	-	0.060	0.089	0.005	-	-	-	0.021	0.050	1.080	0.072	7.0	0.036	0.000118473	0.00032	0.00741	0.000011	0.000025	0.00591	0.000005	5.21854	0.000011	0.00025	-	0.000054	0.00044			
AQF40	-	9.6	-	-	0.025	0.106	0.005	-	-	-	0.018	0.050	0.578	0.075	8.5	0.034	0.000128235	0.00030	0.00753	0.000011	0.000025	0.00592	0.000003	5.38658	0.000011	0.00025	-	0.000054	0.00025			
AQF40	-	9.1	-	-	0.008	0.099	0.001	-	-	-	0.025	0.006	0.325	0.078	3.3	0.034	0.00005	0.00031	0.00692	0.000011	0.000025	0.00558	0.000009	4.35574	0.000009	0.00025	-	0.000052	0.00025			
AQF40	-	8.7	-	-	0.006	0.038	0.001	0.044	-	-	0.023	0.050	0.273	0.064	1.4	0.055	0.00005	0.00022	0.00608	0.000050	0.000025	0.00516	0.000003	3.51955	0.000006	0.00022	-	0.000051	0.00025			
AQF40	-	9.9	-	-	0.006	0.010	0.005	0.035	-	-	0.015	0.050	0.276	0.056	1.5	0.062	0.00005	0.00020	0.00618	0.000050	0.000025	0.00577	0.000005	3.49009	0.000006	0.00020	-	0.000051	0.00025			
AQF40	-	8.8	-	-	0.012	0.003	0.001	0.220	-	-	0.012	0.050	0.250	0.063	1.9	0.049	0.00005	0.00022	0.00642	0.000050	0.000025	0.00531	0.000003	3.59099	0.000007	0.00016	-	0.000051	0.00025			
AQF40	-	9.2	-	-	0.020	0.003	0.001	0.003	-	-	0.015	0.050	0.205	0.065	1.9	0.034	0.00005	0.00023	0.00543	0.000050	0.000025	0.00531	0.000003	3.27841	0.000007	0.00014	-	0.000051	0.00025			
AQF40	-	9.0	-	-	0.023	0.003	0.001	0.238	-	-	0.012	0.050	0.238	0.063	2.2	0.045	0.00005	0.00024	0.00635	0.000050	0.000025	0.00534	0.000003	3.72969	0.000007	0.00013	-	0.000051	0.00025			
AQF40	-	8.8	-	-	0.016	0.026	0.001	0.038	-	-	0.020	0.050	0.274	0.064	2.4	0.054	0.00005	0.00023	0.00545	0.000050	0.000025	0.00539	0.000003	3.86042	0.000008	0.00025	-	0.000052	0.00025			
AQF40	-	10.1	-	-	0.016	0.025	0.001	0.024	-	-	0.019	0.050	0.278	0.062	3.2	0.081	0.00005	0.00027	0.00864	0.000050	0.000025	0.00560	0.000012	4.37777	0.000009	0.00030	-	0.000052	0.00066			
AQF40	-	10.1	-	-	0.056	0.048	0.003	0.048	-	-	0.022	0.050	0.934	0.066	4.4	0.059	7.94469E-05	0.00030	0.00797	0.000030	0.000025	0.00577	0.000010	4.74777	0.000010	0.00027	-	0.000053	0.00065			
AQF42	-	9.8	-	-	0.051	0.068	0.005	0.067	-	-	0.025	0.050	0.689	0.073	5.1	0.051	0.000226273	0.00032	0.00814	0.000011	0.000025	0.00586	0.000003	5.28826	0.000010	0.00025	-	0.000053	0.00025			
AQF42	-	10.0	-	-	0.037	0.120	0.005	-	-	-	0.025	0.050	0.655	0.072	13.5	0.066	0.000284764	0.00035	0.00882	0.000011	0.000025	0.00591	0.000011	5.51199	0.000011	0.00025	-	0.000054	0.00097			
AQF42	-	10.3	-	-	0.056	0.111	0.005	-	-	-	0.025	0.050	0.529	0.075	4.9	0.122	0.00005	0.00033	0.00947	0.000011	0.000025	0.00592	0.000003	5.39636	0.000024	0.00050	-	0.000122	0.00445			
AQF42	-	9.6	-	-	0.015	0.096	0.001	-	-	-	0.030	0.006	0.325	0.074	3.3	0.038	0.00005	0.00032	0.00779	0.000011	0.000025	0.00558	0.000010	4.50363	0.000009	0.00025	-	0.000052	0.00092			
AQF42	-	9.6	-	-	0.006	0.039	0.001	0.039	-	-	0.015	0.050	0.288	0.063	1.3	0.054	0.00005	0.00025	0.00595	0.000050	0.000025	0.00516	0.000003	3.18087	0.000006	0.00017	-	0.000051	0.00025			
AQF42	-	9.4	-	-	0.006	0.010	0.005	0.035	-	-	0.016	0.050	0.276	0.056	1.5	0.059	0.00005	0.00019	0.00615	0.000050	0.000025	0.00523	0.000003	3.34093	0.000006	0.00024	-	0.000051	0.00025			
AQF42	-	9.1	-	-	0.023	0.003	0.001	0.003	-	-	0.015	0.050	0.345	0.060	1.9	0.048	0.00005	0.00021	0.00593	0.000050	0.000025	0.00531	0.000007	3.22378	0.000007	0.00126	-	0.000051	0.00062			
AQF42	-	9.3	-	-	0.044	0.003	0.001	0.003	-	-	0.014	0.050	0.205	0.064	1.9	0.037	0.00005	0.00025	0.00566	0.000050	0.000025	0.00531	0.000003	3.49676	0.000007	0.00015	-	0.000051	0.00025			
AQF42	-	9.1	-	-	0.007	0.007	0.001	0.007	-	-	0.015	0.050	0.318	0.063	2.0	0.040	0.00005	0.00024	0.00618	0.000050	0.000025	0.00534	0.000003	3.74952	0.000007	0.00014	-	0.000051	0.00025			
AQF42	-	9.9	-	-	0.007	0.019	0.001	0.019	-	-	0.015	0.050	0.255	0.062	2.3	0.042	0.00005	0.00024	0.00564	0.000050	0.000025	0.00539	0.000003	3.88023	0.000008	0.00014	-	0.000052	0.00025			
AQF42	-	9.5	-	-	0.022	0.025	0.001	0.025	-	-	0.015	0.050	0.347	0.062	3.4	0.156	0.000128846	0.00029	0.01465	0.000050	0.000025	0.00560	0.000030	4.55518	0.000023	0.00075	-	0.000121	0.00090			
AQF42	-	9.7	-	-	0.036	0.047	0.003	0.046	-	-	0.020	0.050	0.522	0.067	4.4	0.103	0.000177603	0.00031	0.01138	0.000030	0.000025	0.00577	0.000016	5.00298	0.000017	0.00050	-	0.000087	0.00057			
AQF43	-	10.0	-	-	0.025	0.065	0.005	0.064	-	-	0.025	0.050	0.346	0.071	4.5	0.039	0.00005	0.00028	0.00702	0.000011	0.000025	0.00586	0.000003	5.13157	0.000010	0.00025	-	0.000053	0.00025			
AQF43	-	9.6	-	-	0.018	0.088	0.005	-	-	-	0.021	0.050	0.349	0.073	5.1	0.037	0.00005	0.00029	0.00720	0.000011	0.000025	0.00591	0.000003	5.25767	0.000011	0.00025	-	0.000054	0.00025			
AQF43	-	9.1	-	-	0.012	0.112	0.005	-	-	-	0.018	0.050	0.348	0.074	5.6	0.035	0.00005	0.00029	0.00736	0.000011	0.000025	0.00592	0.000003	5.31812	0.000011	0.00025	-	0.000054	0.00025			
AQF43	-	9.1	-	-	0.008	0.097	0.001	-	-	-	0.012	0.006	0.305	0.077	3.3	0.036	0.00005	0.00031	0.00709	0.000011	0.000025	0.00558	0.000008	4.48391	0.000009	0.00025	-	0.000052	0.00025			
AQF43	-	9.9	-	-	0.006	0.032	0.001	0.032	-	-	0.031	0.050	0.338	0.063	1.3	0.060	0.00005	0.00025	0.00605	0.000050	0.000025	0.00516	0.000003	3.54943	0.000006	0.00018	-	0.000051	0.00025			
AQF43	-	8.8	-	-	0.006	0.010	0.005	0.035	-	-	0.015	0.050	0.276	0.057	1.6	0.068	0.00005	0.00019	0.00610	0.000050	0.000025	0.00523	0.000003	3.40060	0.000006	0.00026	-	0.000051	0.00025			
AQF43	-	9.2	-	-	0.031	0.003	0.001	0.003	-	-	0.015	0.050	0.206	0.061	1.9	0.058	0.00005	0.00023	0.00590	0.000050	0.000025	0.00531	0.000003	3.34288	0.000007	0.00015	-	0.000051	0.00025			
AQF43	-	9.2	-	-	0.015	0.009	0.001	0.009	-	-	0.016	0.050	0.215	0.066	1.9	0.047	0.00005	0.00027	0.00566	0.000050	0.000025	0.00531	0.000003	3.70518	0.000007	0.00025	-	0.000051	0.00025			
AQF43	-	9.1	-	-	0.026	0.003	0.001	0.003	-	-	0.015	0.050	0.228	0.063	2.0	0.049	0.00005	0.00023	0.00633	0.000050	0.000025	0.00534	0.000003	3.75944	0.000007	0.00017	-	0.000051	0.00025			
AQF43	-	9.3	-	-	0.007	0.020	0.001	0.020	-	-	0.015	0.050	0.245	0.063	2.3	0.067	0.00005	0.00024	0.00562	0.000050	0.000025	0.00539	0.000003	3.95947	0.000008	0.00023	-	0.000052	0.00025			
AQF43	-	9.9	-	-	0.033	0.027	0.001	0.027	-	-	0.015	0.050	0.278	0.063	3.2	0.040	0.00005	0.00024	0.00565	0.000050	0.000025	0.00560	0.000003	4.38763	0.000009	0.00016	-	0.000052	0.00025			
AQF43	-	9.9	-	-	0.029	0.046	0.003	0.046	-	-	0.020	0.050	0.316	0.067	4.0	0.039	0.00005	0.00027	0.00636	0.000030	0.000025	0.00577	0.000003	4.83611	0.000010	0.00020	-	0.000053	0.00025			
AQF44	-	10.1	-	-	0.141	0.074	0.005	0.073	-	-	0.025	0.050	1.776	0.069	5.5	0.040	0.00005	0.00029	0.00726	0.000011	0.000025	0.00586	0.000019	5.29805	0.000010	0.00025	-	0.000053	0.00050			
AQF44	-	9.8	-	-	0.079	0.091	0.005	-	-	-	0.018	0.050	1.789	0.071	7.1	0.039	0.00005	0.00030	0.00736	0.000011	0.000025	0.00591	0.000011	5.44352	0.000011	0.00025	-	0.000054	0.00038			
AQF44	-	9.5	-	-	0.018	0.109	0.005	-	-	-	0.010	0.050	1.810	0.073	8.6	0.037	0.00005	0.00030	0.00743	0.000011	0.000025	0.00592	0.000003	5.51371	0.000011	0.00025	-	0.000054	0.00025			
AQF44	-	9.5	-	-	0.008	0.098	0.001	-	-	-	0.025	0.006	0.325	0.076	3.4	0.036	0.00005	0.00029	0.00733	0.000011	0.000025	0.00558	0.000003</									

90th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met I	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met I	Total_Met al	Total_Met Total_Metal	Dissolved_Met I	Dissolved_Met I	Dissolved_Met I
Site	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesium m_T mg/L	Manganes e_T mg/L	Mercury_T mg/L	Molybden um_T mg/L	Nickel_T mg/L	Potassium _T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_ T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L
AQF40	0.29	0.00007	0.00120	1.4	0.028	0.000003	0.00013	0.00025	0.71	0.0012	0.000066	3.2	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00037	0.0012	0.0001	0.0001	0.0003	0.0053	0.0001	0.0201	0.0001	0.0002
AQF40	0.30	0.00005	0.00128	1.5	0.029	0.000002	0.00010	0.00025	0.74	0.0012	0.000046	3.3	0.000005	1.7	0.020	2.0	0.00010	0.000005	0.00005	0.00034	0.0010	0.0001	0.0001	0.0003	0.0057	0.0002	0.0206	0.0001	0.0003
AQF40	0.30	0.00003	0.00135	1.5	0.029	0.000002	0.00007	0.00025	0.76	0.0012	0.000026	3.5	0.000005	1.7	0.020	2.5	0.00010	0.000005	0.00005	0.00031	0.0008	0.0001	0.0001	0.0003	0.0060	0.0002	0.0212	0.0001	0.0003
AQF40	0.28	0.00003	0.00116	1.3	0.024	0.000002	0.00007	0.00025	0.69	0.0012	0.000131	3.1	0.000005	1.5	0.018	1.1	0.00010	0.000005	0.00005	0.00006	0.0008	0.0001	0.0001	0.0003	0.0015	0.0001	0.0203	0.0001	0.0002
AQF40	0.31	0.00003	0.00087	1.0	0.039	0.000002	0.00006	0.00025	0.63	0.0011	0.000025	2.4	0.000005	1.2	0.015	0.5	0.00010	0.000005	0.00005	0.00010	0.0016	0.0001	0.0000	0.0003	0.0015	0.0001	0.0366	0.0001	0.0002
AQF40	0.35	0.00006	0.00152	0.9	0.028	0.000002	0.00008	0.00025	0.57	0.0010	0.000025	2.0	0.000005	1.1	0.012	0.6	0.00010	0.000005	0.00005	0.00024	0.0015	0.0001	0.0000	0.0003	0.0049	0.0001	0.0357	0.0001	0.0002
AQF40	0.21	0.00015	0.00084	1.0	0.026	0.000001	0.00010	0.00025	0.62	0.0012	0.000025	2.1	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00006	0.0014	0.0001	0.0001	0.0003	0.0015	0.0001	0.0266	0.0001	0.0002
AQF40	0.21	0.00003	0.00054	0.9	0.020	0.000002	0.00007	0.00025	0.54	0.0011	0.000025	2.1	0.000005	1.3	0.014	0.7	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0000	0.0003	0.0044	0.0001	0.0203	0.0001	0.0002
AQF40	0.19	0.00003	0.00114	1.1	0.018	0.000003	0.00011	0.00025	0.57	0.0011	0.000025	2.4	0.000005	1.2	0.015	0.8	0.00010	0.000005	0.00005	0.00014	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0316	0.0001	0.0002
AQF40	0.27	0.00004	0.00119	1.1	0.025	0.000001	0.00012	0.00053	0.59	0.0011	0.000025	2.4	0.000005	1.3	0.015	0.9	0.00010	0.000005	0.00005	0.00006	0.0017	0.0001	0.0001	0.0003	0.0015	0.0001	0.0228	0.0001	0.0002
AQF40	0.31	0.00010	0.00057	1.3	0.032	0.000003	0.00011	0.00025	0.64	0.0012	0.000025	2.8	0.000005	1.4	0.017	1.2	0.00010	0.000005	0.00005	0.00006	0.0039	0.0001	0.0001	0.0003	0.0046	0.0001	0.0220	0.0001	0.0002
AQF40	0.30	0.00009	0.00089	1.4	0.031	0.000003	0.00012	0.00025	0.69	0.0012	0.000046	3.0	0.000005	1.5	0.018	1.4	0.00010	0.000005	0.00005	0.00022	0.0025	0.0001	0.0001	0.0003	0.0049	0.0001	0.0210	0.0001	0.0002
AQF42	0.33	0.00003	0.00129	1.5	0.031	0.000003	0.00010	0.00025	0.72	0.0012	0.000060	3.4	0.000005	1.8	0.020	1.8	0.00010	0.000005	0.00005	0.00054	0.0017	0.0001	0.0002	0.0003	0.0039	0.0001	0.0203	0.0001	0.0003
AQF42	0.37	0.00008	0.00130	1.5	0.039	0.000001	0.00008	0.00025	0.86	0.0013	0.000026	3.5	0.000005	1.8	0.021	9.8	0.00010	0.000005	0.00005	0.00206	0.0022	0.0001	0.0001	0.0003	0.0251	0.0001	0.0236	0.0001	0.0003
AQF42	0.60	0.00009	0.00140	1.5	0.068	0.000003	0.00008	0.00079	0.78	0.0014	0.000026	3.7	0.000005	1.7	0.021	1.6	0.00010	0.000005	0.00005	0.00007	0.0058	0.0001	0.0001	0.0003	0.0053	0.0001	0.0352	0.0001	0.0003
AQF42	0.30	0.00007	0.00116	1.3	0.027	0.000003	0.00009	0.00025	0.70	0.0011	0.000131	3.0	0.000005	1.5	0.018	1.1	0.00010	0.000005	0.00005	0.00006	0.0012	0.0001	0.0001	0.0003	0.0032	0.0001	0.0237	0.0001	0.0002
AQF42	0.49	0.00003	0.00112	0.9	0.069	0.000003	0.00009	0.00025	0.56	0.0010	0.000025	2.3	0.000005	1.1	0.013	0.5	0.00010	0.000005	0.00005	0.00026	0.0015	0.0001	0.0000	0.0003	0.0015	0.0001	0.0332	0.0001	0.0002
AQF42	0.36	0.00006	0.00152	0.9	0.020	0.000002	0.00020	0.00025	0.55	0.0010	0.000025	2.1	0.000005	1.1	0.012	0.6	0.00010	0.000005	0.00005	0.00028	0.0017	0.0001	0.0000	0.0003	0.0015	0.0001	0.0339	0.0001	0.0002
AQF42	0.25	0.00003	0.00054	1.0	0.024	0.000002	0.00009	0.00025	0.54	0.0011	0.000025	2.1	0.000005	1.2	0.013	0.7	0.00010	0.000005	0.00005	0.00041	0.0012	0.0001	0.0000	0.0003	0.0060	0.0001	0.0253	0.0001	0.0002
AQF42	0.22	0.00003	0.00054	1.0	0.023	0.000002	0.00008	0.00025	0.56	0.0011	0.000051	2.4	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00006	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0215	0.0001	0.0002
AQF42	0.18	0.00003	0.00054	1.1	0.017	0.000003	0.00010	0.00025	0.57	0.0011	0.000025	2.3	0.000005	1.3	0.015	0.8	0.00010	0.000005	0.00005	0.00006	0.0008	0.0001	0.0001	0.0003	0.0031	0.0001	0.0245	0.0001	0.0002
AQF42	0.24	0.00003	0.00114	1.1	0.023	0.000001	0.00011	0.00025	0.58	0.0011	0.000025	2.6	0.000005	1.3	0.015	0.9	0.00010	0.000005	0.00005	0.00006	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0190	0.0001	0.0002
AQF42	0.43	0.00014	0.00117	1.3	0.085	0.000003	0.00014	0.00025	0.67	0.0013	0.000025	2.8	0.000005	1.4	0.018	1.2	0.00010	0.000005	0.00005	0.00018	0.0078	0.0001	0.0001	0.0003	0.0044	0.0001	0.0315	0.0001	0.0002
AQF42	0.38	0.00008	0.00123	1.4	0.059	0.000003	0.00012	0.00025	0.70	0.0013	0.000043	3.1	0.000005	1.6	0.019	1.6	0.00010	0.000005	0.00005	0.00036	0.0047	0.0001	0.0001	0.0003	0.0042	0.0001	0.0259	0.0001	0.0002
AQF43	0.29	0.00003	0.00129	1.5	0.027	0.000003	0.00008	0.00025	0.69	0.0011	0.000026	3.4	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0001	0.0003	0.0015	0.0001	0.0208	0.0001	0.0002
AQF43	0.30	0.00003	0.00130	1.5	0.029	0.000002	0.00006	0.00025	0.71	0.0012	0.000026	3.4	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0020	0.0001	0.0204	0.0001	0.0002
AQF43	0.31	0.00003	0.00130	1.5	0.029	0.000002	0.00005	0.00025	0.73	0.0012	0.000026	3.5	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0024	0.0001	0.0199	0.0001	0.0003
AQF43	0.29	0.00003	0.00116	1.3	0.026	0.000002	0.00008	0.00025	0.68	0.0012	0.000091	3.0	0.000005	1.5	0.018	1.1	0.00010	0.000005	0.00005	0.00006	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0195	0.0001	0.0002
AQF43	0.36	0.00007	0.00152	1.0	0.032	0.000003	0.00011	0.00025	0.57	0.0010	0.000025	2.3	0.000005	1.1	0.014	0.5	0.00010	0.000005	0.00005	0.00005	0.0018	0.0001	0.0000	0.0003	0.0047	0.0001	0.0299	0.0001	0.0002
AQF43	0.32	0.00003	0.00152	1.0	0.021	0.000002	0.00005	0.00058	0.57	0.0010	0.000025	2.1	0.000005	1.2	0.013	0.6	0.00010	0.000005	0.00005	0.00005	0.0018	0.0001	0.0000	0.0009	0.0015	0.0003	0.0309	0.0001	0.0002
AQF43	0.26	0.00003	0.00054	1.0	0.028	0.000001	0.00008	0.00025	0.56	0.0011	0.000057	2.2	0.000005	1.2	0.013	0.7	0.00010	0.000005	0.00005	0.00006	0.0014	0.0001	0.0000	0.0003	0.0015	0.0001	0.0290	0.0001	0.0002
AQF43	0.22	0.00003	0.00054	1.1	0.027	0.000002	0.00011	0.00067	0.58	0.0011	0.000025	2.3	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00006	0.0015	0.0001	0.0001	0.0003	0.0049	0.0001	0.0228	0.0001	0.0002
AQF43	0.20	0.00003	0.00114	1.1	0.021	0.000003	0.00011	0.00025	0.56	0.0011	0.000118	2.4	0.000005	1.2	0.015	0.8	0.00030	0.000005	0.00005	0.00006	0.0013	0.0001	0.0001	0.0003	0.0015	0.0001	0.0269	0.0001	0.0002
AQF43	0.27	0.00003	0.00114	1.2	0.024	0.000001	0.00014	0.00025	0.60	0.0011	0.000057	2.7	0.000005	1.3	0.015	0.9	0.00010	0.000005	0.00005	0.00006	0.0022	0.0001	0.0001	0.0003	0.0015	0.0001	0.0213	0.0001	0.0002
AQF43	0.22	0.00003	0.00057	1.3	0.022	0.000003	0.00010	0.00025	0.63	0.0011	0.000053	2.9	0.000005	1.4	0.017	1.2	0.00010	0.000005	0.00005	0.00006	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0179	0.0001	0.0002
AQF43	0.25	0.00003	0.00094	1.4	0.026	0.000003	0.00009	0.00025	0.67	0.0011	0.000039	3.1	0.000005	1.6	0.0														

90th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal
	I	I	Dissolved_Metal	I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	I	Dissolved_Metal	I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	al	al	Dissolved_Metal	al	Dissolved_Metal	I	
Site	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L
AQF40	0.0130	1.08E-05	0.000025	0.0059	0.0000025	4.90	1.04E-05	0.00025	5.4E-05	0.0028	0.16	0.00013	0.0013	1.45	0.0238	-	0.00009	0.00025	0.73	0.0011	0.000025	3.14
AQF40	0.0135	1.09E-05	0.000025	0.0060	0.0000025	5.03	1.07E-05	0.00025	5.4E-05	0.0020	0.18	0.00009	0.0011	1.48	0.0253	-	0.00010	0.00025	0.72	0.0011	0.000033	3.15
AQF40	0.0140	1.09E-05	0.000025	0.0060	0.0000025	5.09	1.07E-05	0.00025	5.4E-05	0.0012	0.19	0.00005	0.0010	1.49	0.0261	0.0000010	0.00012	0.00025	0.72	0.0011	0.000041	3.16
AQF40	0.0197	1.06E-05	0.000025	0.0056	1.03876E-05	4.28	8.64E-06	0.00025	5.2E-05	0.0020	0.18	0.00010	0.0012	1.27	0.0215	0.0000014	0.00006	0.00025	0.77	0.0012	0.000025	3.05
AQF40	0.0064	5.00E-05	0.000025	0.0052	0.0000025	3.50	6.01E-06	0.00010	5.1E-05	0.0006	0.21	0.00003	0.0011	1.02	0.0289	0.0000019	0.00013	0.00025	0.62	0.0010	0.000025	2.43
AQF40	0.0055	5.00E-05	0.000025	0.0053	0.0000025	3.25	6.45E-06	0.00013	5.1E-05	0.0003	0.18	0.00003	0.0005	0.92	0.0082	0.0000018	0.00008	0.00025	0.57	0.0009	0.000025	1.99
AQF40	0.0055	5.00E-05	0.000025	0.0053	5.17959E-06	3.52	6.96E-06	0.00011	5.1E-05	0.0003	0.11	0.00007	0.0009	1.00	0.0115	0.0000012	0.00011	0.00025	0.60	0.0011	0.000025	1.92
AQF40	0.0049	5.00E-05	0.000025	0.0053	0.0000025	3.26	6.94E-06	0.00012	5.1E-05	0.0003	0.15	0.00003	0.0005	0.97	0.0115	-	0.00010	0.00025	0.55	0.0010	0.000052	2.08
AQF40	0.0060	5.00E-05	0.000025	0.0054	0.0000025	3.42	7.10E-06	0.00022	5.1E-05	0.0026	0.13	0.00015	0.0005	0.97	0.0129	-	0.00014	0.00025	0.55	0.0011	0.000052	2.25
AQF40	0.0083	5.00E-05	0.000025	0.0054	0.0000025	3.76	7.46E-06	0.00008	5.2E-05	0.0016	0.14	0.00007	0.0008	1.11	0.0116	0.0000010	0.00011	0.00025	0.56	0.0010	0.000042	2.32
AQF40	0.0051	5.00E-05	0.000025	0.0056	0.0000025	4.10	8.73E-06	0.00015	5.2E-05	0.0050	0.14	0.00018	0.0006	1.18	0.0167	-	0.00010	0.00025	0.62	0.0010	0.000025	2.45
AQF40	0.0091	3.04E-05	0.000025	0.0058	0.0000025	4.58	9.77E-06	0.00020	5.3E-05	0.0039	0.15	0.00015	0.0009	1.34	0.0210	-	0.00009	0.00025	0.68	0.0011	0.000025	2.80
AQF42	0.0136	1.08E-05	0.000025	0.0059	0.0000025	4.88	1.04E-05	0.00025	5.4E-05	0.0032	0.18	0.00015	0.0013	1.48	0.0251	-	0.00011	0.00025	0.72	0.0012	0.000025	3.11
AQF42	0.0206	1.09E-05	0.000025	0.0060	0.0000025	5.21	1.07E-05	0.00025	5.4E-05	0.0020	0.20	0.00008	0.0006	1.56	0.0326	0.0000003	0.00008	0.00025	0.89	0.0012	0.000025	3.31
AQF42	0.0086	1.09E-05	0.000025	0.0060	0.0000025	5.19	1.07E-05	0.00025	5.4E-05	0.0004	0.22	0.00003	0.0014	1.49	0.0294	-	0.00008	0.00025	0.71	0.0012	0.000063	3.22
AQF42	0.0193	1.06E-05	0.000025	0.0056	1.18665E-05	4.35	8.64E-06	0.00025	5.2E-05	0.0025	0.19	0.00009	0.0013	1.28	0.0242	-	0.00008	0.00025	0.71	0.0011	0.000025	2.98
AQF42	0.0057	5.00E-05	0.000025	0.0052	0.0000025	3.20	6.01E-06	0.00014	5.1E-05	0.0007	0.30	0.00003	0.0005	0.96	0.0475	0.0000016	0.00009	0.00025	0.58	0.0010	0.000025	2.44
AQF42	0.0057	5.00E-05	0.000025	0.0053	0.0000025	3.05	6.45E-06	0.00013	5.1E-05	0.0003	0.18	0.00003	0.0005	0.86	0.0069	0.0000016	0.00008	0.00025	0.59	0.0009	0.000025	2.00
AQF42	0.0056	5.00E-05	0.000025	0.0053	0.0000025	3.24	6.96E-06	0.00005	5.1E-05	0.0002	0.15	0.00003	0.0005	0.92	0.0110	0.0000015	0.00009	0.00025	0.54	0.0010	0.000025	1.98
AQF42	0.0052	5.00E-05	0.000025	0.0053	0.0000025	3.30	6.94E-06	0.00011	5.1E-05	0.0004	0.15	0.00012	0.0005	0.96	0.0119	-	0.00010	0.00025	0.54	0.0011	0.000025	2.05
AQF42	0.0058	5.00E-05	0.000025	0.0054	0.0000025	3.60	7.10E-06	0.00012	5.1E-05	0.0002	0.12	0.00003	0.0005	1.02	0.0109	-	0.00009	0.00025	0.56	0.0010	0.000061	2.17
AQF42	0.0050	5.00E-05	0.000025	0.0054	0.0000025	3.73	7.46E-06	0.00005	5.2E-05	0.0005	0.12	0.00003	0.0005	1.10	0.0117	0.0000008	0.00011	0.00025	0.52	0.0009	0.000025	2.34
AQF42	0.0151	5.00E-05	0.000025	0.0056	0.0000025	4.27	8.73E-06	0.00077	5.2E-05	0.0015	0.19	0.00007	0.0006	1.23	0.0320	-	0.00090	0.00025	0.61	0.0010	0.000025	2.32
AQF42	0.0144	3.04E-05	0.000025	0.0058	0.0000025	4.65	9.77E-06	0.00051	5.3E-05	0.0024	0.19	0.00011	0.0009	1.38	0.0292	-	0.00050	0.00025	0.67	0.0011	0.000025	2.72
AQF43	0.0068	1.08E-05	0.000025	0.0059	0.0000025	4.85	1.04E-05	0.00025	5.4E-05	0.0004	0.16	0.00003	0.0012	1.46	0.0225	-	0.00007	0.00025	0.68	0.0011	0.000025	3.09
AQF43	0.0100	1.09E-05	0.000025	0.0060	0.0000025	5.00	1.07E-05	0.00025	5.4E-05	0.0007	0.18	0.00003	0.0011	1.48	0.0245	-	0.00006	0.00025	0.69	0.0011	0.000034	3.15
AQF43	0.0132	1.09E-05	0.000025	0.0060	0.0000025	5.08	1.07E-05	0.00025	5.4E-05	0.0010	0.19	0.00004	0.0010	1.48	0.0256	0.0000010	0.00006	0.00025	0.70	0.0011	0.000043	3.20
AQF43	0.0204	1.06E-05	0.000025	0.0056	0.0000025	4.31	8.64E-06	0.00025	5.2E-05	0.0019	0.19	0.00007	0.0012	1.25	0.0227	0.0000018	0.00006	0.00025	0.66	0.0011	0.000025	2.97
AQF43	0.0054	5.00E-05	0.000025	0.0052	0.0000025	3.56	4.59E-05	0.00012	5.1E-05	0.0005	0.21	0.00003	0.0005	1.02	0.0225	0.0000025	0.00010	0.00025	0.59	0.0009	0.000025	2.29
AQF43	0.0055	5.00E-05	0.000025	0.0053	0.0000025	3.40	6.45E-06	0.00012	5.1E-05	0.0002	0.17	0.00003	0.0005	0.96	0.0075	0.0000018	0.00008	0.00025	0.70	0.0009	0.000025	1.94
AQF43	0.0055	5.00E-05	0.000025	0.0053	0.0000025	3.26	6.96E-06	0.00011	5.1E-05	0.0002	0.16	0.00003	0.0005	0.98	0.0107	0.0000015	0.00006	0.00025	0.56	0.0011	0.000025	2.20
AQF43	0.0049	5.00E-05	0.000025	0.0053	0.0000025	3.52	6.94E-06	0.00005	5.1E-05	0.0003	0.14	0.00003	0.0005	1.00	0.0121	-	0.00010	0.00025	0.60	0.0010	0.000025	2.05
AQF43	0.0060	5.00E-05	0.000025	0.0054	0.0000025	3.55	7.10E-06	0.00012	5.1E-05	0.0004	0.12	0.00003	0.0005	1.00	0.0126	-	0.00009	0.00025	0.54	0.0010	0.000025	2.23
AQF43	0.0111	5.00E-05	0.000025	0.0054	0.0000025	3.74	7.46E-06	0.00013	5.2E-05	0.0037	0.13	0.00015	0.0005	1.08	0.0120	0.0000008	0.00014	0.00025	0.55	0.0010	0.000025	2.38
AQF43	0.0051	5.00E-05	0.000025	0.0056	0.0000025	4.17	8.73E-06	0.00011	5.2E-05	0.0050	0.11	0.00617	0.0006	1.22	0.0145	-	0.00009	0.00025	0.59	0.0009	0.000025	2.45
AQF43	0.0060	3.04E-05	0.000025	0.0058	0.0000025	4.59	9.77E-06	0.00018	5.3E-05	0.0027	0.13	0.00308	0.0009	1.36	0.0193	-	0.00008	0.00025	0.64	0.0010	0.000025	2.78
AQF44	0.0138	1.08E-05	0.000025	0.0059	1.16075E-05	5.19	1.04E-05	0.00025	5.4E-05	0.0037	0.17	0.00016	0.0013	1.51	0.0232	-	0.00009	0.00025	0.70	0.0011	0.000025	3.07
AQF44	0.0163	1.09E-05	0.000025	0.0060	7.04856E-06	5.27	1.07E-05	0.00025	5.4E-05	0.0030	0.18	0.00010	0.0011	1.53	0.0248	-	0.00008	0.00025	0.72	0.0011	0.000025	3.13
AQF44	0.0189	1.09E-05	0.000025	0.0060	0.0000025	5.26	1.07E-05	0.00025	5.4E-05	0.0022	0.19	0.00004	0.0010	1.53	0.0256	0.0000009	0.00008	0.00025	0.73	0.0012	0.000025	3.19
AQF44	0.0186	1.06E-05	0.000025	0.0056	0.0000025	4.65	8.64E-06	0.00025	5.2E-05	0.0018	0.18	0.00007	0.0013	1.34	0.0222	0.0000009	0.00008	0.00025	0.69	0.0011	0.000025	2.97
AQF44	0.0055	5.00E-05	0.000025	0.0052	0.0000025	3.48	6.01E-06	0.00012	5.1E-05	0.0004	0.22	0.00003	0.0011	0.99	0.0223	0.0000009	0.00009	0.00025	0.58	0.0009	0.000025	2.37
AQF44	0.0253	5.00E-05	0.000025	0.0053	0.0000025	3.16	6.45E-06	0.00013	5.1E-05	0.0014	0.17	0.00003	0.0005	0.90	0.0074	0.0000017	0.00018	0.00025	0.67	0.0010	0.000025	2.01
AQF44	0.0056	5.00E-05	0.000025	0.0053	0.0000025	3.31	6.96E-06	0.00011	5.1E-05	0.0003	0.16	0.00003	0.0005	0.93	0.0110	0.0000016	0.00010	0.00025	0.55	0.0010	0.000025	2.02
AQF44	0.0050	5.00E-05	0.000025	0.0053	0.0000025	3.55	6.94E-06	0.00012	5.1E-05	0.0003	0.13	0.00012	0.0005	1.01	0.0124	-	0.00015	0.00025	0.59	0.0010	0.000025	2.08
AQF44	0.0068	5.00E-05	0.000025	0.0054	0.0000025	4.04	7.10E-06	0.00012	5.1E-05	0.0003	0.12	0.00003										

90th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

	Site	Dissolved_Metal		Dissolved_Metal	Dissolved_Metal		Dissolved_Metal		Dissolved_Met	Dissolved_Met	Dissolved_Met		Dissolved_Met		Cyanides	Cyanides	Cyanides	Methylme	Methylme	
		Dissolved_Metal	Dissolved_Metal	I	I	Dissolved_Metal	I	Dissolved_Metal	al	al	Dissolved_Metal	Dissolved_Metal	al	Dissolved_Metal						al
		Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L	Zinc_D mg/L						Zirconium_D mg/L
																		Methylme	Methylme	
																		rcury_D mg/L	rcury_T mg/L	
	AQF40	0.000005	1.71	0.02	1.58	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00010	0.00025	0.0045	0.00015	-	-	-	-	
	AQF40	0.000005	1.73	0.02	1.74	0.00010	0.00001	0.00005	0.00009	0.00015	0.00005	0.00011	0.00025	0.0032	0.00015	-	-	-	-	
	AQF40	0.000005	1.74	0.02	1.84	0.00010	0.00001	0.00005	0.00011	0.00015	0.00005	0.00011	0.00025	0.0018	0.00015	-	-	-	-	
	AQF40	0.000005	1.56	0.02	1.15	0.00010	0.00001	0.00005	0.00015	0.00015	0.00005	0.00008	0.00025	0.0028	0.00015	-	-	-	-	
	AQF40	0.000005	1.12	0.01	0.50	0.00010	0.00001	0.00005	0.00013	0.00071	0.00005	0.00004	0.00025	0.0030	0.00010	-	-	-	-	
	AQF40	0.000005	1.06	0.01	0.61	0.00010	0.00001	0.00005	0.00019	0.00051	0.00005	0.00004	0.00025	0.0064	0.00010	-	-	-	-	
	AQF40	0.000005	1.17	0.01	0.89	0.00010	0.00001	0.00005	0.00011	0.00041	0.00005	0.00006	0.00025	0.0037	0.00010	-	-	-	-	
	AQF40	0.000005	1.19	0.02	0.73	0.00010	0.00001	0.00005	0.00024	0.00037	0.00005	0.00005	0.00025	0.0033	0.00010	-	-	-	-	
	AQF40	0.000005	1.17	0.01	0.77	0.00010	0.00001	0.00005	0.00005	0.00055	0.00005	0.00006	0.00025	0.0048	0.00010	-	-	-	-	
	AQF40	0.000005	1.31	0.01	1.06	0.00010	0.00001	0.00005	0.00006	0.00027	0.00005	0.00007	0.00025	0.0021	0.00011	-	-	-	-	
	AQF40	0.000005	1.29	0.02	1.17	0.00010	0.00001	0.00005	0.00006	0.00034	0.00005	0.00008	0.00025	0.0102	0.00010	-	-	-	-	
	AQF40	0.000005	1.52	0.02	1.43	0.00010	0.00001	0.00005	0.00006	0.00024	0.00005	0.00009	0.00025	0.0073	0.00012	-	-	-	-	
	AQF42	0.000005	1.73	0.02	1.58	0.00010	0.00001	0.00005	0.00019	0.00015	0.00005	0.00015	0.00025	0.0046	0.00015	-	-	-	-	
	AQF42	0.000005	1.83	0.02	1.94	0.00010	0.00001	0.00005	0.00019	0.00040	0.00005	0.00012	0.00025	0.0048	0.00015	-	-	-	-	
	AQF42	0.000005	1.73	0.02	1.66	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00012	0.00025	0.0012	0.00015	-	-	-	-	
	AQF42	0.000005	5.37	0.02	1.64	0.00010	0.00001	0.00005	0.00016	0.00035	0.00005	0.00011	0.00025	0.0051	0.00015	-	-	-	-	
	AQF42	0.000005	0.98	0.01	0.50	0.00010	0.00001	0.00005	0.00005	0.00051	0.00005	0.00004	0.00025	0.0012	0.00010	-	-	-	-	
	AQF42	0.000005	1.04	0.01	0.61	0.00010	0.00001	0.00005	0.00030	0.00046	0.00005	0.00004	0.00025	0.0005	0.00010	-	-	-	-	
	AQF42	0.000005	1.04	0.01	1.04	0.00010	0.00001	0.00005	0.00069	0.00044	0.00005	0.00006	0.00025	0.0089	0.00010	-	-	-	-	
	AQF42	0.000005	1.11	0.01	0.73	0.00010	0.00001	0.00005	0.00005	0.00046	0.00005	0.00005	0.00025	0.0030	0.00010	-	-	-	-	
	AQF42	0.000005	1.21	0.01	0.77	0.00010	0.00001	0.00005	0.00005	0.00032	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	
	AQF42	0.000005	1.22	0.01	0.86	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00006	0.00025	0.0011	0.00010	-	-	-	-	
	AQF42	0.000005	1.29	0.02	1.17	0.00010	0.00001	0.00005	0.00006	0.00101	0.00091	0.00012	0.00025	0.0033	0.00010	-	-	-	-	
	AQF42	0.000005	1.52	0.02	1.43	0.00010	0.00001	0.00005	0.00012	0.00058	0.00048	0.00014	0.00025	0.0040	0.00012	-	-	-	-	
	AQF43	0.000005	1.69	0.02	1.58	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00011	0.00025	0.0011	0.00015	-	-	-	-	
	AQF43	0.000005	1.72	0.02	1.65	0.00010	0.00001	0.00005	0.00008	0.00023	0.00005	0.00011	0.00025	0.0013	0.00015	-	-	-	-	
	AQF43	0.000005	1.72	0.02	1.66	0.00010	0.00001	0.00005	0.00010	0.00015	0.00005	0.00011	0.00025	0.0015	0.00015	-	-	-	-	
	AQF43	0.000005	1.51	0.02	1.15	0.00010	0.00001	0.00005	0.00014	0.00031	0.00005	0.00008	0.00025	0.0023	0.00015	-	-	-	-	
	AQF43	0.000005	1.01	0.01	0.85	0.00010	0.00001	0.00005	0.00005	0.00044	0.00005	0.00004	0.00025	0.0015	0.00010	-	-	-	-	
	AQF43	0.000005	1.07	0.01	0.61	0.00010	0.00001	0.00005	0.00037	0.00005	0.00005	0.00004	0.00025	0.0045	0.00010	-	-	-	-	
	AQF43	0.000005	1.21	0.01	0.73	0.00010	0.00001	0.00005	0.00005	0.00045	0.00005	0.00005	0.00025	0.0013	0.00010	-	-	-	-	
	AQF43	0.000005	1.14	0.01	0.73	0.00010	0.00001	0.00005	0.00005	0.00058	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	
	AQF43	0.000005	1.14	0.01	0.77	0.00010	0.00001	0.00005	0.00005	0.00041	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	
	AQF43	0.000005	1.22	0.01	0.86	0.00010	0.00001	0.00005	0.00006	0.00041	0.00005	0.00006	0.00025	0.0022	0.00010	-	-	-	-	
	AQF43	0.000005	1.29	0.02	1.17	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00008	0.00025	0.0048	0.00010	-	-	-	-	
	AQF43	0.000005	1.51	0.02	1.43	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00010	0.00025	0.0029	0.00012	-	-	-	-	
	AQF44	0.000005	1.73	0.02	1.58	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00011	0.00025	0.0039	0.00015	-	-	-	-	
	AQF44	0.000005	1.75	0.02	1.65	0.00010	0.00001	0.00005	0.00009	0.00023	0.00005	0.00011	0.00025	0.0031	0.00015	-	-	-	-	
	AQF44	0.000005	1.75	0.02	1.66	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-	-	
	AQF44	0.000005	1.98	0.02	1.15	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00008	0.00025	0.0028	0.00015	-	-	-	-	
	AQF44	0.000005	0.97	0.01	0.50	0.00010	0.00001	0.00005	0.00005	0.00047	0.00005	0.00004	0.00025	0.0005	0.00010	-	-	-	-	
	AQF44	0.000005	1.07	0.01	0.61	0.00010	0.00001	0.00005	0.00019	0.00041	0.00005	0.00004	0.00025	0.0033	0.00010	-	-	-	-	
	AQF44	0.000005	1.02	0.01	0.73	0.00010	0.00001	0.00005	0.00005	0.00049	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	
	AQF44	0.000005	1.14	0.01	0.73	0.00010	0.00001	0.00005	0.00005	0.00045	0.00005	0.00005	0.00025	0.0026	0.00010	-	-	-	-	
	AQF44	0.000005	1.25	0.01	1.19	0.00010	0.00001	0.00005	0.00005	0.00040	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	
	AQF44	0.000005	1.25	0.02	0.86	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	
	AQF44	0.000005	1.32	0.02	1.17	0.00010	0.00001	0.00005	0.00006	0.00049	0.00005	0.00008	0.00025	0.0050	0.00010	-	-	-	-	
	AQF44	0.000005	1.54	0.02	1.43	0.00010	0.00001	0.00005	0.00006	0.00041	0.00005	0.00010	0.00025	0.0044	0.00012	-	-	-	-	
	AQF45	0.000005	1.76	0.02	1.58	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-	-	
	AQF45	0.000005	1.78	0.02	2.05	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00011	0.00025	0.0019	0.00015	-	-	-	-	
	AQF45	0.000005	1.78	0.02	2.48	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00011	0.00025	0.0015	0.00015	-	-	-	-	
	AQF45	0.000005	1.67	0.02	1.15	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00008	0.00025	0.0016	0.00015	-	-	-	-	
	AQF45	0.000005	0.98	0.01	0.50	0.00010	0.00001	0.00005	0.00005	0.00068	0.00005	0.00004	0.00025	0.0013	0.00010	-	-	-	-	
	AQF45	0.000005	1.02	0.01	0.61	0.00023	0.00001	0.00005	0.00005	0.00056	0.00005	0.00004	0.00025	0.0011	0.00010	-	-	-	-	
	AQF45	0.000005	1.05	0.01	0.73	0.00010	0.00001	0.00005	0.00005	0.00065	0.00005	0.00006	0.00025	0.0021	0.00010	-	-	-	-	
	AQF45	0.000005	1.14	0.01	0.73	0.00010	0.00001	0.00005	0.00005	0.00118	0.00005	0.00006	0.00025	0.0012	0.00010	-	-	-	-	
	AQF45	0.000005	1.29	0.02	0.77	0.00010	0.00001	0.00005	0.00005	0.00116	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	
	AQF45	0.000005	1.27	0.01	0.86	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00006	0.00025	0.0016	0.00010	-	-	-	-	
	AQF45	0.000005	1.34	0.02	1.17	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00008	0.00025	0.0059	0.00010	-	-	-	-	
	AQF45	0.000005	1.58	0.02	1.43	0.00010	0.00001	0.00005	0.00006	0.00034	0.00005	0.00010	0.00025	0.0005	0.000					

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations

		Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	
Month	Site	D_Oxygen_percent_ D_Oxygen_field mg/L	field %	ORP_field mV	pH_field pH	Specific_Conducta nce_field uS/cm	TDS_field mg/L	Temp_field C	Turbidity_ field NTU	Acidity(CaCO 3) mg/L	Alkalinity(CaCO 3)_bicarbonate mg/L	Alkalinity(CaCO 3)_carbonate mg/L	Alkalinity(CaC O3)_hydroxide mg/L	Alkalinity(CaC O3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbo nate mg/L	(HCO3)_bicarbo nate mg/L	(OH)_hydroxi de mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(CaC O3)_D mg/L	Hardness(CaC O3)_T mg/L	pH	TDS_T mg/L
1	AQF40	10.0	68.3	-	-	-	-	-	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-
2	AQF40	10.8	74.3	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-
3	AQF40	11.7	80.4	-	-	-	-	0.2	-	-	-	-	-	-	11.5	0.5	18.6	0.49	-	-	-	17.4	-	-
4	AQF40	20.0	139.5	-	-	-	-	0.6	-	-	-	-	-	-	15.4	0.4	17.8	0.33	39.0	-	-	16.6	-	-
5	AQF40	12.4	94.5	-	-	-	-	3.9	-	-	-	-	-	-	12.2	0.3	14.9	0.17	-	-	-	13.8	-	-
6	AQF40	9.0	90.4	-	-	-	-	15.3	-	-	-	-	-	-	10.9	0.3	13.4	0.17	-	-	-	13.0	-	-
7	AQF40	6.7	71.9	-	-	-	-	18.6	-	-	-	-	-	-	12.2	0.3	14.9	0.17	-	-	-	14.1	-	-
8	AQF40	6.0	66.6	-	-	-	-	19.8	-	-	-	-	-	-	13.0	0.3	15.9	0.17	-	-	-	13.3	-	-
9	AQF40	8.0	78.8	-	-	-	-	13.6	-	-	-	-	-	-	13.2	0.3	16.0	0.17	-	-	-	13.6	-	-
10	AQF40	12.0	90.2	-	-	-	-	3.6	-	-	-	-	-	-	13.5	0.3	16.5	0.17	-	-	-	14.4	-	-
11	AQF40	10.4	71.2	-	-	-	-	0.3	-	-	-	-	-	-	14.2	0.3	17.3	0.17	-	-	-	14.4	-	-
12	AQF40	10.2	69.7	-	-	-	-	0.2	-	-	-	-	-	-	13.2	-	-	-	-	-	-	-	-	-
1	AQF42	10.4	71.8	-	-	-	-	0.2	-	-	-	-	-	-	13.9	-	-	-	-	-	-	-	-	-
2	AQF42	12.1	81.9	-	-	-	-	0.2	-	-	-	-	-	-	10.0	-	-	-	-	-	-	17.8	-	-
3	AQF42	10.5	71.8	-	-	-	-	0.2	-	-	-	-	-	-	17.6	0.5	21.4	0.49	-	-	-	17.6	-	-
4	AQF42	15.5	107.2	-	-	-	-	0.2	-	-	-	-	-	-	15.4	0.4	18.5	0.33	38.6	-	-	16.2	-	-
5	AQF42	13.7	132.9	-	-	-	-	4.4	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.8	-	-
6	AQF42	10.3	102.9	-	-	-	-	15.2	-	-	-	-	-	-	10.6	0.3	12.9	0.17	-	-	-	12.3	-	-
7	AQF42	7.9	86.8	-	-	-	-	18.8	-	-	-	-	-	-	12.7	0.3	15.4	0.17	-	-	-	13.1	-	-
8	AQF42	7.9	84.7	-	-	-	-	18.5	-	-	-	-	-	-	13.0	0.3	15.9	0.17	-	-	-	13.4	-	-
9	AQF42	8.5	82.3	-	-	-	-	14.0	-	-	-	-	-	-	12.7	0.3	15.4	0.17	-	-	-	14.2	-	-
10	AQF42	11.4	95.7	-	-	-	-	3.7	-	-	-	-	-	-	13.1	0.3	16.1	0.17	-	-	-	14.2	-	-
11	AQF42	11.6	80.1	-	-	-	-	0.3	-	-	-	-	-	-	14.7	0.3	17.9	0.17	-	-	-	15.1	-	-
12	AQF42	11.0	76.0	-	-	-	-	0.2	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-
1	AQF43	13.3	91.3	-	-	-	-	-	-	-	-	-	-	-	14.5	-	-	-	-	-	-	-	-	-
2	AQF43	13.5	92.2	-	-	-	-	-	-	-	-	-	-	-	14.4	-	-	-	-	-	-	-	-	-
3	AQF43	13.7	93.3	-	-	-	-	0.2	-	-	-	-	-	-	14.3	0.5	18.6	0.49	-	-	-	17.2	-	-
4	AQF43	16.9	116.0	-	-	-	-	0.3	-	-	-	-	-	-	15.5	0.4	18.4	0.33	38.8	-	-	16.6	-	-
5	AQF43	16.9	136.9	-	-	-	-	5.9	-	-	-	-	-	-	13.3	0.3	16.1	0.17	-	-	-	13.9	-	-
6	AQF43	10.3	103.9	-	-	-	-	15.6	-	-	-	-	-	-	10.9	0.3	13.4	0.17	-	-	-	13.5	-	-
7	AQF43	8.1	89.1	-	-	-	-	19.3	-	-	-	-	-	-	11.1	0.3	13.6	0.17	-	-	-	13.3	-	-
8	AQF43	8.2	89.3	-	-	-	-	19.4	-	-	-	-	-	-	14.0	0.3	17.1	0.17	-	-	-	14.0	-	-
9	AQF43	9.0	85.3	-	-	-	-	12.9	-	-	-	-	-	-	13.6	0.3	16.5	0.17	-	-	-	14.0	-	-
10	AQF43	12.7	94.6	-	-	-	-	3.0	-	-	-	-	-	-	13.0	0.3	15.8	0.17	-	-	-	14.2	-	-
11	AQF43	14.3	97.9	-	-	-	-	-	-	-	-	-	-	-	14.3	0.3	17.4	0.17	-	-	-	14.7	-	-
12	AQF43	13.8	94.6	-	-	-	-	-	-	-	-	-	-	-	14.4	-	-	-	-	-	-	15.1	-	-
1	AQF44	11.2	76.8	-	-	-	-	0.2	-	-	-	-	-	-	12.2	-	-	-	-	-	-	-	-	-
2	AQF44	12.4	84.3	-	-	-	-	0.2	-	-	-	-	-	-	15.9	-	-	-	-	-	-	-	-	-
3	AQF44	13.6	91.8	-	-	-	-	0.2	-	-	-	-	-	-	19.3	0.5	26.7	0.49	-	-	-	17.9	-	-
4	AQF44	19.3	132.7	-	-	-	-	0.2	-	-	-	-	-	-	16.0	0.4	21.7	0.33	40.4	-	-	16.8	-	-
5	AQF44	14.2	131.9	-	-	-	-	6.2	-	-	-	-	-	-	12.0	0.3	14.6	0.17	-	-	-	13.6	-	-
6	AQF44	10.5	104.9	-	-	-	-	15.5	-	-	-	-	-	-	10.9	0.3	13.4	0.17	-	-	-	12.7	-	-
7	AQF44	8.5	93.4	-	-	-	-	19.6	-	-	-	-	-	-	11.3	0.3	13.8	0.17	-	-	-	13.3	-	-
8	AQF44	8.1	88.4	-	-	-	-	19.1	-	-	-	-	-	-	13.9	0.3	17.0	0.17	-	-	-	14.1	-	-
9	AQF44	9.1	84.0	-	-	-	-	11.8	-	-	-	-	-	-	14.4	0.3	17.5	0.17	-	-	-	15.7	-	-
10	AQF44	12.2	89.7	-	-	-	-	2.6	-	-	-	-	-	-	13.7	0.3	16.8	0.17	-	-	-	15.0	-	-
11	AQF44	12.4	85.4	-	-	-	-	0.2	-	-	-	-	-	-	16.4	0.3	20.0	0.17	-	-	-	16.0	-	-
12	AQF44	11.8	81.1	-	-	-	-	0.2	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-
1	AQF45	12.9	88.0	-	-	-	-	-	-	-	-	-	-	-	15.5	-	-	-	-	-	-	-	-	-
2	AQF45	13.2	90.2	-	-	-	-	-	-	-	-	-	-	-	14.7	-	-	-	-	-	-	-	-	-
3	AQF45	13.6	92.5	-	-	-	-	0.2	-	-	-	-	-	-	13.9	0.5	19.7	0.49	-	-	-	19.5	-	-
4	AQF45	18.9	134.6	-	-	-	-	0.5	-	-	-	-	-	-	16.8	0.4	18.1	0.33	43.8	-	-	17.8	-	-
5	AQF45	14.3	116.1	-	-	-	-	7.7	-	-	-	-	-	-	11.9	0.3	14.5	0.17	-	-	-	14.1	-	-
6	AQF45	9.6	96.9	-	-	-	-	14.9	-	-	-	-	-	-	10.9	0.3	13.4	0.17	-	-	-	13.1	-	-
7	AQF45	6.8	74.0	-	-	-	-	18.7	-	-	-	-	-	-	11.9	0.3	14.5	0.17	-	-	-	13.8	-	-
8	AQF45	7.7	82.0	-	-	-	-	18.7	-	-	-	-	-	-	14.2	0.3	17.3	0.17	-	-	-	14.6	-	-
9	AQF45	8.6	83.1	-	-	-	-	13.6	-	-	-	-	-	-	14.4	0.3	17.5	0.17	-	-	-	15.7	-	-
10																								

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	General				Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	
	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite_nitrat e(N) mg/L	Nitrogen(TKN) mg/L	D mg/L	T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_T mg/L	Chromium VI_T mg/L	Cobalt_T mg/L	Copper_T mg/L
AQF40	-	10.1	-	-	0.095	0.072	0.005	0.071	-	-	0.025	0.050	1.585	0.070	5.6	0.038	0.00010866	0.00033	0.00729	0.000011	0.000025	0.00590	0.000008	5.09020	0.000011	0.00025	-	0.000053	0.00063
AQF40	-	9.8	-	-	0.060	0.089	0.005	-	-	-	0.021	0.050	1.084	0.072	7.2	0.036	0.000118388	0.00032	0.00743	0.000011	0.000025	0.00593	0.000005	5.30748	0.000011	0.00025	-	0.000054	0.00044
AQF40	-	9.6	-	-	0.025	0.106	0.005	-	-	-	0.018	0.050	0.582	0.075	8.7	0.034	0.000128137	0.00031	0.00755	0.000011	0.000025	0.00594	0.000003	5.47557	0.000011	0.00025	-	0.000054	0.00025
AQF40	-	9.1	-	-	0.009	0.098	0.001	-	-	-	0.025	0.006	0.361	0.078	4.8	0.034	0.000005	0.00035	0.00711	0.000011	0.000025	0.00589	0.000009	5.02560	0.000011	0.00025	-	0.000053	0.00025
AQF40	-	8.7	-	-	0.007	0.038	0.001	0.044	-	-	0.023	0.050	0.303	0.065	2.6	0.055	0.000005	0.00025	0.00624	0.000050	0.000025	0.00542	0.000003	4.08090	0.000008	0.00022	-	0.000052	0.00025
AQF40	-	9.8	-	-	0.007	0.011	0.005	0.035	-	-	0.015	0.050	0.316	0.057	3.1	0.062	0.000005	0.00025	0.00640	0.000050	0.000025	0.00558	0.000005	4.23642	0.000009	0.00020	-	0.000052	0.00025
AQF40	-	8.8	-	-	0.014	0.003	0.001	0.218	-	-	0.012	0.050	0.297	0.063	3.8	0.048	0.000005	0.00027	0.00666	0.000050	0.000025	0.00571	0.000003	4.44713	0.000009	0.00016	-	0.000053	0.00025
AQF40	-	9.2	-	-	0.022	0.003	0.001	0.003	-	-	0.015	0.050	0.251	0.066	3.7	0.034	0.000005	0.00028	0.00568	0.000050	0.000025	0.00570	0.000003	4.12417	0.000009	0.00014	-	0.000053	0.00025
AQF40	-	8.9	-	-	0.025	0.003	0.001	0.003	-	-	0.012	0.050	0.282	0.064	4.0	0.045	0.000005	0.00029	0.00658	0.000050	0.000025	0.00571	0.000003	4.54180	0.000009	0.00013	-	0.000053	0.00025
AQF40	-	8.8	-	-	0.017	0.026	0.001	0.038	-	-	0.020	0.050	0.308	0.065	3.8	0.054	0.000005	0.00027	0.00563	0.000050	0.000025	0.00568	0.000003	4.48327	0.000009	0.00025	-	0.000053	0.00025
AQF40	-	10.1	-	-	0.016	0.025	0.001	0.025	-	-	0.019	0.050	0.299	0.062	4.1	0.081	0.000005	0.00029	0.00874	0.000050	0.000025	0.00577	0.000012	4.76445	0.000010	0.00030	-	0.000053	0.00066
AQF40	-	10.1	-	-	0.055	0.048	0.003	0.048	-	-	0.022	0.050	0.944	0.066	4.9	0.059	7.93725E-05	0.00031	0.00802	0.000030	0.000025	0.00585	0.000010	4.94849	0.000010	0.00027	-	0.000053	0.00065
AQF42	-	9.8	-	-	0.051	0.068	0.005	0.067	-	-	0.025	0.050	0.696	0.073	5.4	0.051	0.000225981	0.00033	0.00817	0.000011	0.000025	0.00590	0.000003	5.41283	0.000011	0.00025	-	0.000053	0.00025
AQF42	-	10.0	-	-	0.036	0.119	0.005	-	-	-	0.025	0.050	0.660	0.072	13.7	0.066	0.000284472	0.00035	0.00884	0.000011	0.000025	0.00593	0.000011	5.60057	0.000011	0.00025	-	0.000054	0.00097
AQF42	-	10.3	-	-	0.056	0.111	0.005	-	-	-	0.025	0.050	0.534	0.075	5.1	0.122	0.000005	0.00033	0.00948	0.000011	0.000025	0.00594	0.000003	5.48534	0.000024	0.00050	-	0.000122	0.00444
AQF42	-	9.6	-	-	0.015	0.095	0.001	-	-	-	0.030	0.006	0.361	0.074	4.8	0.037	0.000005	0.00036	0.00797	0.000011	0.000025	0.00589	0.000010	5.17231	0.000011	0.00025	-	0.000053	0.00092
AQF42	-	9.5	-	-	0.007	0.039	0.001	0.039	-	-	0.015	0.050	0.318	0.064	2.5	0.054	0.000005	0.00029	0.00611	0.000050	0.000025	0.00542	0.000003	3.74445	0.000008	0.00017	-	0.000052	0.00025
AQF42	-	9.4	-	-	0.007	0.011	0.005	0.035	-	-	0.016	0.050	0.316	0.057	3.1	0.058	0.000005	0.00024	0.00637	0.000050	0.000025	0.00558	0.000003	4.08556	0.000009	0.00024	-	0.000052	0.00025
AQF42	-	9.1	-	-	0.025	0.003	0.001	0.003	-	-	0.015	0.050	0.390	0.061	3.8	0.048	0.000005	0.00026	0.00618	0.000050	0.000025	0.00571	0.000007	4.08360	0.000009	0.00125	-	0.000053	0.00061
AQF42	-	9.3	-	-	0.045	0.003	0.001	0.003	-	-	0.014	0.050	0.251	0.065	3.7	0.037	0.000005	0.00030	0.00591	0.000050	0.000025	0.00570	0.000003	4.34036	0.000009	0.00015	-	0.000053	0.00025
AQF42	-	9.0	-	-	0.008	0.007	0.001	0.007	-	-	0.015	0.050	0.361	0.064	3.8	0.039	0.000005	0.00029	0.00641	0.000050	0.000025	0.00571	0.000003	4.56145	0.000009	0.00014	-	0.000053	0.00025
AQF42	-	9.9	-	-	0.008	0.019	0.001	0.019	-	-	0.015	0.050	0.288	0.063	3.6	0.041	0.000005	0.00028	0.00582	0.000050	0.000025	0.00568	0.000003	4.50293	0.000009	0.00014	-	0.000053	0.00025
AQF42	-	9.5	-	-	0.022	0.025	0.001	0.025	-	-	0.015	0.050	0.367	0.062	4.3	0.155	0.000128479	0.00031	0.01472	0.000050	0.000025	0.00577	0.000030	4.94103	0.000024	0.00075	-	0.000122	0.00090
AQF42	-	9.7	-	-	0.036	0.047	0.003	0.046	-	-	0.020	0.050	0.533	0.067	4.9	0.103	0.000177281	0.00032	0.01142	0.000030	0.000025	0.00585	0.000016	5.20305	0.000017	0.00050	-	0.000088	0.00057
AQF43	-	10.0	-	-	0.024	0.065	0.005	0.064	-	-	0.025	0.050	0.353	0.071	4.8	0.039	0.000005	0.00029	0.00705	0.000011	0.000025	0.00590	0.000003	5.25641	0.000011	0.00025	-	0.000053	0.00025
AQF43	-	9.5	-	-	0.018	0.088	0.005	-	-	-	0.021	0.050	0.355	0.073	5.3	0.037	0.000005	0.00030	0.00722	0.000011	0.000025	0.00593	0.000003	5.34656	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.1	-	-	0.012	0.112	0.005	-	-	-	0.018	0.050	0.353	0.074	5.8	0.035	0.000005	0.00030	0.00738	0.000011	0.000025	0.00594	0.000003	5.40720	0.000011	0.00025	-	0.000054	0.00025
AQF43	-	9.1	-	-	0.009	0.097	0.001	-	-	-	0.012	0.006	0.342	0.077	4.8	0.036	0.000005	0.00035	0.00727	0.000011	0.000025	0.00589	0.000008	5.15275	0.000011	0.00025	-	0.000053	0.00025
AQF43	-	9.9	-	-	0.007	0.032	0.001	0.032	-	-	0.031	0.050	0.368	0.064	2.6	0.060	0.000005	0.00029	0.00621	0.000050	0.000025	0.00542	0.000003	4.11059	0.000008	0.00018	-	0.000052	0.00025
AQF43	-	8.8	-	-	0.007	0.011	0.005	0.035	-	-	0.015	0.050	0.316	0.058	3.2	0.067	0.000005	0.00024	0.00632	0.000050	0.000025	0.00558	0.000003	4.14771	0.000009	0.00026	-	0.000052	0.00025
AQF43	-	9.1	-	-	0.032	0.003	0.001	0.003	-	-	0.015	0.050	0.252	0.062	3.7	0.057	0.000005	0.00028	0.00615	0.000050	0.000025	0.00571	0.000003	4.20150	0.000009	0.00015	-	0.000053	0.00025
AQF43	-	9.2	-	-	0.017	0.009	0.001	0.009	-	-	0.016	0.050	0.261	0.067	3.7	0.047	0.000005	0.00032	0.00591	0.000050	0.000025	0.00570	0.000003	4.54673	0.000009	0.00025	-	0.000053	0.00025
AQF43	-	9.0	-	-	0.028	0.003	0.001	0.003	-	-	0.015	0.050	0.272	0.064	3.8	0.048	0.000005	0.00028	0.00656	0.000050	0.000025	0.00571	0.000003	4.57127	0.000009	0.00017	-	0.000053	0.00025
AQF43	-	9.3	-	-	0.008	0.020	0.001	0.020	-	-	0.015	0.050	0.279	0.064	3.6	0.066	0.000005	0.00028	0.00580	0.000050	0.000025	0.00568	0.000003	4.58159	0.000009	0.00023	-	0.000053	0.00025
AQF43	-	9.9	-	-	0.034	0.027	0.001	0.027	-	-	0.015	0.050	0.299	0.063	4.1	0.040	0.000005	0.00026	0.00576	0.000050	0.000025	0.00577	0.000003	4.77426	0.000010	0.00016	-	0.000053	0.00025
AQF43	-	9.9	-	-	0.029	0.046	0.003	0.046	-	-	0.020	0.050	0.327	0.067	4.5	0.039	0.000005	0.00028	0.00642	0.000030	0.000025	0.00585	0.000003	5.03660	0.000010	0.00020	-	0.000053	0.00025
AQF44	-	10.1	-	-	0.141	0.074	0.005	0.073	-	-	0.025	0.050	1.781	0.069	5.8	0.040	0.000005	0.00030	0.00729	0.000011	0.000025	0.00590	0.000019	5.42261	0.000011	0.00025	-	0.000053	0.00050
AQF44	-	9.8	-	-	0.079	0.091	0.005	-	-	-	0.018	0.050	1.793	0.071	7.3	0.038	0.000005	0.00031	0.00738	0.000011	0.000025	0.00593	0.000011	5.53218	0.000011	0.00025	-	0.000054	0.00038
AQF44	-	9.5	-	-	0.017	0.109	0.005	-	-	-	0.010	0.050	1.813	0.073	8.8	0.037	0.000005	0.00031	0.00745	0.000011	0.000025	0.00594	0.000003	5.60254	0.000011	0.00025	-	0.000054	0.00025
AQF44	-	9.5	-	-	0.009	0.098	0.001	-	-	-	0.025	0.006	0.361	0.076	4.9	0.036	0.000005	0.00033	0.00752	0.000011	0.000025	0.00589	0.000003	5.28968	0.000011				

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	Dissolved_Meta I	Dissolved_Meta I	Dissolved_Meta Dissolved_Metal	Dissolved_Meta I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met Dissolved_Metal	Dissolved_Met al	Dissolved_Metal	Dissolved_Metal I
Site	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_ D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	
AQF40	0.0130	1.09E-05	0.000025	0.0060	0.0000025	5.00	1.06E-05	0.00025	5.4E-05	0.0027	0.16	0.00013	0.0013	1.48	0.0249	-	0.00009	0.00025	0.73	0.0011	0.000025	3.14	
AQF40	0.0135	1.09E-05	0.000025	0.0060	0.0000025	5.10	1.08E-05	0.00025	5.4E-05	0.0020	0.17	0.00009	0.0012	1.50	0.0261	-	0.00010	0.00025	0.73	0.0011	0.000033	3.15	
AQF40	0.0140	1.09E-05	0.000025	0.0060	0.0000025	5.16	1.09E-05	0.00025	5.4E-05	0.0012	0.19	0.00005	0.0010	1.51	0.0269	0.0000010	0.00012	0.00025	0.72	0.0011	0.000041	3.16	
AQF40	0.0197	1.09E-05	0.000025	0.0060	1.03246E-05	4.92	1.05E-05	0.00025	5.4E-05	0.0020	0.18	0.00010	0.0012	1.46	0.0279	0.0000014	0.00007	0.00025	0.82	0.0012	0.000025	3.07	
AQF40	0.0065	5.00E-05	0.000025	0.0055	0.0000025	4.04	7.63E-06	0.00010	5.2E-05	0.0006	0.21	0.00003	0.0011	1.18	0.0342	0.0000019	0.00014	0.00025	0.66	0.0010	0.000025	2.45	
AQF40	0.0057	5.00E-05	0.000025	0.0056	0.0000025	3.97	8.61E-06	0.00013	5.2E-05	0.0003	0.18	0.00003	0.0006	1.14	0.0154	0.0000018	0.00008	0.00025	0.63	0.0010	0.000025	2.02	
AQF40	0.0057	5.00E-05	0.000025	0.0058	5.15274E-06	4.34	9.42E-06	0.00011	5.3E-05	0.0003	0.11	0.00007	0.0009	1.25	0.0197	0.0000012	0.00011	0.00025	0.67	0.0011	0.000025	1.95	
AQF40	0.0051	5.00E-05	0.000025	0.0058	0.0000025	4.07	9.37E-06	0.00012	5.3E-05	0.0003	0.15	0.00003	0.0006	1.21	0.0195	-	0.00010	0.00025	0.62	0.0011	0.000052	2.11	
AQF40	0.0063	5.00E-05	0.000025	0.0058	0.0000025	4.20	9.44E-06	0.00022	5.3E-05	0.0026	0.13	0.00015	0.0006	1.21	0.0207	-	0.00015	0.00025	0.61	0.0012	0.000052	2.27	
AQF40	0.0085	5.00E-05	0.000025	0.0058	0.0000025	4.35	9.24E-06	0.00008	5.3E-05	0.0016	0.14	0.00007	0.0009	1.29	0.0175	0.0000011	0.00011	0.00025	0.61	0.0011	0.000042	2.34	
AQF40	0.0052	5.00E-05	0.000025	0.0059	0.0000025	4.46	9.80E-06	0.00015	5.3E-05	0.0050	0.14	0.00018	0.0006	1.29	0.0203	-	0.00010	0.00025	0.65	0.0010	0.000025	2.47	
AQF40	0.0091	3.04E-05	0.000025	0.0059	0.0000025	4.76	1.03E-05	0.00020	5.4E-05	0.0038	0.15	0.00015	0.0009	1.39	0.0228	-	0.00009	0.00025	0.70	0.0011	0.000025	2.80	
AQF42	0.0136	1.09E-05	0.000025	0.0060	0.0000025	4.98	1.06E-05	0.00025	5.4E-05	0.0032	0.18	0.00015	0.0013	1.50	0.0262	-	0.00011	0.00025	0.73	0.0012	0.000025	3.11	
AQF42	0.0206	1.09E-05	0.000025	0.0060	0.0000025	5.28	1.08E-05	0.00025	5.4E-05	0.0019	0.20	0.00008	0.0006	1.58	0.0333	0.0000003	0.00008	0.00025	0.90	0.0012	0.000025	3.31	
AQF42	0.0086	1.09E-05	0.000025	0.0060	0.0000025	5.26	1.09E-05	0.00025	5.4E-05	0.0004	0.22	0.00003	0.0014	1.51	0.0302	-	0.00008	0.00025	0.71	0.0012	0.000063	3.22	
AQF42	0.0194	1.09E-05	0.000025	0.0060	1.17917E-05	4.99	1.05E-05	0.00025	5.4E-05	0.0025	0.19	0.00009	0.0013	1.47	0.0305	-	0.00009	0.00025	0.76	0.0011	0.000025	3.00	
AQF42	0.0059	5.00E-05	0.000025	0.0055	0.0000025	3.74	7.63E-06	0.00014	5.2E-05	0.0007	0.30	0.00003	0.0006	1.12	0.0527	0.0000016	0.00010	0.00025	0.62	0.0010	0.000025	2.46	
AQF42	0.0059	5.00E-05	0.000025	0.0056	0.0000025	3.77	8.61E-06	0.00013	5.2E-05	0.0003	0.18	0.00003	0.0006	1.07	0.0141	0.0000017	0.00008	0.00025	0.65	0.0010	0.000025	2.03	
AQF42	0.0059	5.00E-05	0.000025	0.0058	0.0000025	4.06	9.42E-06	0.00005	5.3E-05	0.0002	0.15	0.00003	0.0006	1.17	0.0192	0.0000015	0.00009	0.00025	0.60	0.0010	0.000025	2.01	
AQF42	0.0055	5.00E-05	0.000025	0.0058	0.0000025	4.11	9.37E-06	0.00011	5.3E-05	0.0004	0.15	0.00012	0.0006	1.20	0.0199	-	0.00010	0.00025	0.60	0.0012	0.000025	2.08	
AQF42	0.0060	5.00E-05	0.000025	0.0058	0.0000025	4.38	9.44E-06	0.00012	5.3E-05	0.0002	0.12	0.00003	0.0006	1.25	0.0187	-	0.00009	0.00025	0.62	0.0010	0.000060	2.20	
AQF42	0.0052	5.00E-05	0.000025	0.0058	0.0000025	4.32	9.24E-06	0.00005	5.3E-05	0.0005	0.12	0.00003	0.0006	1.28	0.0177	0.0000008	0.00011	0.00025	0.57	0.0010	0.000025	2.36	
AQF42	0.0152	5.00E-05	0.000025	0.0059	0.0000025	4.63	9.80E-06	0.00077	5.3E-05	0.0015	0.19	0.00007	0.0006	1.34	0.0356	-	0.00090	0.00025	0.64	0.0011	0.000025	2.34	
AQF42	0.0144	3.04E-05	0.000025	0.0059	0.0000025	4.82	1.03E-05	0.00051	5.4E-05	0.0023	0.18	0.00011	0.0009	1.43	0.0311	-	0.00050	0.00025	0.68	0.0011	0.000025	2.73	
AQF43	0.0068	1.09E-05	0.000025	0.0060	0.0000025	4.95	1.06E-05	0.00025	5.4E-05	0.0004	0.16	0.00003	0.0012	1.49	0.0236	-	0.00007	0.00025	0.69	0.0011	0.000025	3.09	
AQF43	0.0100	1.09E-05	0.000025	0.0060	0.0000025	5.07	1.08E-05	0.00025	5.4E-05	0.0007	0.18	0.00003	0.0011	1.50	0.0252	-	0.00006	0.00025	0.70	0.0011	0.000034	3.15	
AQF43	0.0132	1.09E-05	0.000025	0.0060	0.0000025	5.15	1.09E-05	0.00025	5.4E-05	0.0010	0.19	0.00004	0.0010	1.50	0.0264	0.0000010	0.00006	0.00025	0.70	0.0011	0.000043	3.20	
AQF43	0.0204	1.09E-05	0.000025	0.0060	0.0000025	4.95	1.05E-05	0.00025	5.4E-05	0.0019	0.18	0.00007	0.0012	1.44	0.0290	0.0000018	0.00007	0.00025	0.71	0.0011	0.000025	2.99	
AQF43	0.0056	5.00E-05	0.000025	0.0055	0.0000025	4.10	4.72E-05	0.00012	5.2E-05	0.0005	0.20	0.00003	0.0006	1.18	0.0278	0.0000025	0.00010	0.00025	0.63	0.0009	0.000025	2.31	
AQF43	0.0057	5.00E-05	0.000025	0.0056	0.0000025	4.11	8.61E-06	0.00012	5.2E-05	0.0002	0.17	0.00003	0.0006	1.17	0.0147	0.0000018	0.00009	0.00025	0.76	0.0010	0.000025	1.97	
AQF43	0.0058	5.00E-05	0.000025	0.0058	0.0000025	4.08	9.42E-06	0.00011	5.3E-05	0.0002	0.16	0.00003	0.0006	1.22	0.0189	0.0000015	0.00007	0.00025	0.62	0.0011	0.000025	2.23	
AQF43	0.0052	5.00E-05	0.000025	0.0058	0.0000025	4.33	9.37E-06	0.00005	5.3E-05	0.0003	0.14	0.00003	0.0006	1.24	0.0202	-	0.00011	0.00025	0.66	0.0011	0.000025	2.08	
AQF43	0.0063	5.00E-05	0.000025	0.0058	0.0000025	4.33	9.44E-06	0.00012	5.3E-05	0.0004	0.12	0.00003	0.0006	1.24	0.0204	-	0.00010	0.00025	0.61	0.0011	0.000025	2.25	
AQF43	0.0112	5.00E-05	0.000025	0.0058	0.0000025	4.33	9.24E-06	0.00013	5.3E-05	0.0036	0.13	0.00015	0.0006	1.26	0.0179	0.0000008	0.00014	0.00025	0.60	0.0010	0.000025	2.40	
AQF43	0.0053	5.00E-05	0.000025	0.0059	0.0000025	4.53	9.80E-06	0.00011	5.3E-05	0.0050	0.11	0.00614	0.0006	1.32	0.0181	-	0.00010	0.00025	0.62	0.0010	0.000025	2.47	
AQF43	0.0060	3.04E-05	0.000025	0.0059	0.0000025	4.77	1.03E-05	0.00018	5.4E-05	0.0027	0.13	0.00307	0.0009	1.41	0.0211	-	0.00008	0.00025	0.66	0.0010	0.000025	2.78	
AQF44	0.0138	1.09E-05	0.000025	0.0060	1.15923E-05	5.29	1.06E-05	0.00025	5.4E-05	0.0037	0.17	0.00016	0.0013	1.54	0.0243	-	0.00009	0.00025	0.71	0.0011	0.000025	3.07	
AQF44	0.0163	1.09E-05	0.000025	0.0060	7.04289E-06	5.33	1.08E-05	0.00025	5.4E-05	0.0029	0.18	0.00010	0.0011	1.55	0.0256	-	0.00008	0.00025	0.73	0.0011	0.000025	3.13	
AQF44	0.0189	1.09E-05	0.000025	0.0060	0.0000025	5.33	1.09E-05	0.00025	5.4E-05	0.0022	0.19	0.00004	0.0010	1.55	0.0264	0.0000009	0.00007	0.00025	0.74	0.0012	0.000025	3.19	
AQF44	0.0187	1.09E-05	0.000025	0.0060	0.0000025	5.28	1.05E-05	0.00025	5.4E-05	0.0018	0.18	0.00007	0.0013	1.53	0.0286	0.0000009	0.00008	0.00025	0.74	0.0012	0.000025	2.99	
AQF44	0.0057	5.00E-05	0.000025	0.0055	0.0000025	4.02	7.63E-06	0.00012	5.2E-05	0.0004	0.22	0.00003	0.0011	1.15	0.0276	0.0000009	0.00009	0.00025	0.62	0.0009	0.000025	2.39	
AQF44	0.0254	5.00E-05	0.000025	0.0056	0.0000025	3.88	8.61E-06	0.00013	5.2E-05	0.0013	0.17	0.00003	0.0006	1.12	0.0146	0.0000017	0.00019	0.00025	0.72	0.0010	0.000025	2.04	
AQF44	0.0058	5.00E-05	0.000025	0.0058	0.0000025	4.13	9.42E-06	0.00011	5.3E-05	0.0003	0.16	0.00003	0.0006	1.18	0.0192	0.0000016	0.00010	0.00025	0.62	0.0011	0.000025	2.05	
AQF44	0.0052	5.00E-05	0.000025	0.0058	0.0000025	4.36	9.37E-06	0.00012	5.3E-05	0.0003	0.13	0.00012	0.0006	1.25	0.0204	-	0.00015	0.00025	0.66	0.0011	0.000025	2.11	
AQF44	0.0070	5.00E-05	0.000025	0.0058	0.0000025	4.81	9.44E-06	0.00012	5.3E-05	0.0003	0.12	0.00003	0.0012	1.37	0.0196	-	0.00008	0.00025	0.66	0.0010	0.000025	2.07	
AQF44	0.																						

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Met		Dissolved_Met		Dissolved_Met		Dissolved_Met		Dissolved_Met		Dissolved_Met		Methylme		Methylme	
		Dissolved_Metal	Dissolved_Metal	I	I	Dissolved_Metal	I	Dissolved_Metal	al	al	Dissolved_Metal	Dissolved_Metal	al	Dissolved_Metal	al	Dissolved_Metal	al	Cyanides	Cyanides	Cyanides	rcury	rcury	
Site		Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L	Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WAD		Methylme rcury_D mg/L	Methylme rcury_T mg/L		
AQF40		0.000005	1.73	0.02	1.65	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00011	0.00025	0.0045	0.00015	-	-	-		-	-		
AQF40		0.000005	1.75	0.02	1.78	0.00010	0.00001	0.00005	0.00008	0.00015	0.00005	0.00011	0.00025	0.0031	0.00015	-	-	-		-	-		
AQF40		0.000005	1.76	0.02	1.89	0.00010	0.00001	0.00005	0.00011	0.00015	0.00005	0.00012	0.00025	0.0018	0.00015	-	-	-		-	-		
AQF40		0.000005	1.70	0.02	1.63	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00011	0.00025	0.0028	0.00015	-	-	-		-	-		
AQF40		0.000005	1.24	0.02	0.90	0.00010	0.00001	0.00005	0.00013	0.00071	0.00005	0.00006	0.00025	0.0030	0.00010	-	-	-		-	-		
AQF40		0.000005	1.23	0.01	1.15	0.00010	0.00001	0.00005	0.00019	0.00050	0.00005	0.00008	0.00025	0.0063	0.00010	-	-	-		-	-		
AQF40		0.000005	1.36	0.02	1.50	0.00010	0.00001	0.00005	0.00011	0.00041	0.00005	0.00010	0.00025	0.0037	0.00010	-	-	-		-	-		
AQF40		0.000005	1.38	0.02	1.34	0.00010	0.00001	0.00005	0.00024	0.00037	0.00005	0.00009	0.00025	0.0033	0.00010	-	-	-		-	-		
AQF40		0.000005	1.36	0.02	1.35	0.00010	0.00001	0.00005	0.00005	0.00054	0.00005	0.00009	0.00025	0.0047	0.00010	-	-	-		-	-		
AQF40		0.000005	1.45	0.02	1.51	0.00010	0.00001	0.00005	0.00005	0.00027	0.00005	0.00010	0.00025	0.0021	0.00011	-	-	-		-	-		
AQF40		0.000005	1.37	0.02	1.44	0.00010	0.00001	0.00005	0.00006	0.00034	0.00005	0.00009	0.00025	0.0101	0.00010	-	-	-		-	-		
AQF40		0.000005	1.56	0.02	1.56	0.00010	0.00001	0.00005	0.00006	0.00024	0.00005	0.00010	0.00025	0.0073	0.00012	-	-	-		-	-		
AQF42		0.000005	1.75	0.02	1.65	0.00010	0.00001	0.00005	0.00018	0.00015	0.00005	0.00015	0.00025	0.0046	0.00015	-	-	-		-	-		
AQF42		0.000005	1.84	0.02	1.99	0.00010	0.00001	0.00005	0.00018	0.00040	0.00005	0.00012	0.00025	0.0048	0.00015	-	-	-		-	-		
AQF42		0.000005	1.75	0.02	1.71	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00012	0.00025	0.0012	0.00015	-	-	-		-	-		
AQF42		0.000005	5.49	0.02	2.12	0.00010	0.00001	0.00005	0.00015	0.00035	0.00005	0.00014	0.00025	0.0051	0.00015	-	-	-		-	-		
AQF42		0.000005	1.11	0.01	0.90	0.00010	0.00001	0.00005	0.00005	0.00051	0.00005	0.00006	0.00025	0.0012	0.00010	-	-	-		-	-		
AQF42		0.000005	1.21	0.01	1.15	0.00010	0.00001	0.00005	0.00030	0.00046	0.00005	0.00008	0.00025	0.0005	0.00010	-	-	-		-	-		
AQF42		0.000005	1.23	0.02	1.65	0.00010	0.00001	0.00005	0.00068	0.00043	0.00005	0.00010	0.00025	0.0089	0.00010	-	-	-		-	-		
AQF42		0.000005	1.30	0.02	1.34	0.00010	0.00001	0.00005	0.00005	0.00045	0.00005	0.00009	0.00025	0.0030	0.00010	-	-	-		-	-		
AQF42		0.000005	1.39	0.02	1.35	0.00010	0.00001	0.00005	0.00005	0.00032	0.00005	0.00009	0.00025	0.0005	0.00010	-	-	-		-	-		
AQF42		0.000005	1.36	0.02	1.30	0.00010	0.00001	0.00005	0.00005	0.00015	0.00005	0.00009	0.00025	0.0011	0.00010	-	-	-		-	-		
AQF42		0.000005	1.37	0.02	1.44	0.00010	0.00001	0.00005	0.00006	0.00100	0.00091	0.00014	0.00025	0.0033	0.00010	-	-	-		-	-		
AQF42		0.000005	1.57	0.02	1.56	0.00010	0.00001	0.00005	0.00012	0.00058	0.00048	0.00014	0.00025	0.0039	0.00012	-	-	-		-	-		
AQF43		0.000005	1.71	0.02	1.65	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00011	0.00025	0.0011	0.00015	-	-	-		-	-		
AQF43		0.000005	1.74	0.02	1.70	0.00010	0.00001	0.00005	0.00007	0.00023	0.00005	0.00012	0.00025	0.0013	0.00015	-	-	-		-	-		
AQF43		0.000005	1.74	0.02	1.71	0.00010	0.00001	0.00005	0.00009	0.00015	0.00005	0.00012	0.00025	0.0015	0.00015	-	-	-		-	-		
AQF43		0.000005	1.66	0.02	1.63	0.00010	0.00001	0.00005	0.00013	0.00031	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-		-	-		
AQF43		0.000005	1.14	0.02	1.25	0.00010	0.00001	0.00005	0.00005	0.00044	0.00005	0.00007	0.00025	0.0015	0.00010	-	-	-		-	-		
AQF43		0.000005	1.24	0.01	1.15	0.00010	0.00001	0.00005	0.00005	0.00037	0.00005	0.00008	0.00025	0.0044	0.00010	-	-	-		-	-		
AQF43		0.000005	1.40	0.02	1.35	0.00010	0.00001	0.00005	0.00005	0.00044	0.00005	0.00009	0.00025	0.0013	0.00010	-	-	-		-	-		
AQF43		0.000005	1.33	0.02	1.34	0.00010	0.00001	0.00005	0.00005	0.00057	0.00005	0.00009	0.00025	0.0005	0.00010	-	-	-		-	-		
AQF43		0.000005	1.32	0.02	1.35	0.00010	0.00001	0.00005	0.00005	0.00041	0.00005	0.00009	0.00025	0.0005	0.00010	-	-	-		-	-		
AQF43		0.000005	1.36	0.02	1.30	0.00010	0.00001	0.00005	0.00005	0.00041	0.00005	0.00009	0.00025	0.0022	0.00010	-	-	-		-	-		
AQF43		0.000005	1.37	0.02	1.44	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00009	0.00025	0.0047	0.00010	-	-	-		-	-		
AQF43		0.000005	1.55	0.02	1.56	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00010	0.00025	0.0029	0.00012	-	-	-		-	-		
AQF44		0.000005	1.75	0.02	1.65	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00011	0.00025	0.0038	0.00015	-	-	-		-	-		
AQF44		0.000005	1.77	0.02	1.70	0.00010	0.00001	0.00005	0.00009	0.00023	0.00005	0.00012	0.00025	0.0031	0.00015	-	-	-		-	-		
AQF44		0.000005	1.77	0.02	1.71	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00012	0.00025	0.0023	0.00015	-	-	-		-	-		
AQF44		0.000005	2.13	0.02	1.63	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00011	0.00025	0.0028	0.00015	-	-	-		-	-		
AQF44		0.000005	1.10	0.02	0.90	0.00010	0.00001	0.00005	0.00005	0.00047	0.00005	0.00007	0.00025	0.0005	0.00010	-	-	-		-	-		
AQF44		0.000005	1.24	0.01	1.15	0.00010	0.00001	0.00005	0.00019	0.00041	0.00005	0.00008	0.00025	0.0033	0.00010	-	-	-		-	-		
AQF44		0.000005	1.22	0.02	1.35	0.00010	0.00001	0.00005	0.00005	0.00048	0.00005	0.00009	0.00025	0.0005	0.00010	-	-	-		-	-		
AQF44		0.000005	1.33	0.02	1.34	0.00010	0.00001	0.00005	0.00005	0.00044	0.00005	0.00009	0.00025	0.0026	0.00010	-	-	-		-	-		
AQF44		0.000005	1.43	0.02	1.77	0.00010	0.00001	0.00005	0.00005	0.00040	0.00005	0.00009	0.00025	0.0005	0.00010	-	-	-		-	-		
AQF44		0.000005	1.39	0.02	1.30	0.00010	0.00001	0.00005	0.00005	0.00015	0.00005	0.00009	0.00025	0.0005	0.00010	-	-	-		-	-		
AQF44		0.000005	1.40	0.02	1.44	0.00010	0.00001	0.00005	0.00006	0.00049	0.00005	0.00009	0.00025	0.0049	0.00010	-	-	-		-	-		
AQF44		0.000005	1.59	0.02	1.56	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00010	0.00025	0.0044	0.00012	-	-	-		-	-		
AQF45		0.000005	1.78	0.02	1.65	0.00010	0.00001	0.00005	0.00011	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-		-	-		
AQF45		0.000005	1.79	0.02	2.10	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00012	0.00025	0.0019	0.00015	-	-	-		-	-		
AQF45		0.000005	1.80	0.02	2.52	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00012	0.00025	0.0014	0.00015	-	-	-		-	-		
AQF45		0.000005	1.82	0.02	1.63	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00011	0.00025	0.0016	0.00015	-	-	-		-	-		
AQF45		0.000005	1.11	0.02	0.90	0.00010	0.00001	0.00005	0.00005	0.00067	0.00005	0.00007	0.00025	0.0013	0.00010	-	-	-		-	-		
AQF45		0.000005	1.19	0.01	1.15	0.00023	0.00001	0.00005	0.00055	0.00005	0.00005	0.00008	0.00025	0.0011	0.00010	-	-	-		-	-		
AQF45		0.000005	1.24	0.02	1.35	0.00010	0.00001	0.00005	0.00005	0.00064	0.00005	0.00010	0.00025	0.0021	0.00010	-	-	-		-	-		
AQF45		0.000005	1.33	0.02	1.34	0.00010	0.00001	0.00005	0.00005	0.00117	0.00005	0.00010	0.00025	0.0012	0.00010	-	-	-		-	-		
AQF45		0.000005	1.47	0.02	1.35	0.00010	0.00001	0.00005	0.00005	0.00115	0.00005	0.00010	0.00025	0.0005	0.00010	-	-	-		-	-		
AQF45		0.000005	1.41	0.02	1.30	0.00010	0.00001	0.00005	0.00005	0.00040	0.00005	0.0											

10th Hughes monthly flow rate, 10th percentile mixed pit concentrations

		Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	
Month	Site	D_Oxygen_percent_ D_Oxygen_field mg/L	field %	ORP_field mV	pH_field pH	Specific_Conducta nce_field uS/cm	TDS_field mg/L	Temp_field C	Turbidity_ field NTU	Acidity(CaCO 3) mg/L	Alkalinity(CaCO 3)_bicarbonate mg/L	Alkalinity(CaCO 3)_carbonate mg/L	Alkalinity(CaC O3)_hydroxide mg/L	Alkalinity(CaC O3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbo nate mg/L	(HCO3)_bicarbo nate mg/L	(OH)_hydroxi de mg/L	Conductivity μS/cm	DOC_D mg/L	Hardness(CaC O3)_D mg/L	Hardness(CaC O3)_T mg/L	pH pH	TDS_T mg/L
1	AQF40	9.9	68.2	-	-	-	-	-	-	-	-	-	-	-	12.3	-	-	-	-	-	-	-	-	-
2	AQF40	10.8	74.3	-	-	-	-	-	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-
3	AQF40	11.7	80.3	-	-	-	-	0.2	-	-	-	-	-	-	11.6	0.5	18.8	0.49	-	-	-	17.6	-	-
4	AQF40	20.0	139.3	-	-	-	-	0.6	-	-	-	-	-	-	15.7	0.4	18.2	0.33	39.8	-	-	17.0	-	-
5	AQF40	12.3	93.9	-	-	-	-	3.9	-	-	-	-	-	-	13.8	0.3	16.8	0.17	-	-	-	15.7	-	-
6	AQF40	9.0	89.9	-	-	-	-	15.3	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	14.6	-	-
7	AQF40	6.7	71.7	-	-	-	-	18.6	-	-	-	-	-	-	13.2	0.3	16.1	0.17	-	-	-	15.2	-	-
8	AQF40	6.0	66.4	-	-	-	-	19.7	-	-	-	-	-	-	14.1	0.3	17.2	0.17	-	-	-	14.6	-	-
9	AQF40	7.9	78.5	-	-	-	-	13.6	-	-	-	-	-	-	14.2	0.3	17.2	0.17	-	-	-	14.7	-	-
10	AQF40	11.9	89.9	-	-	-	-	3.6	-	-	-	-	-	-	14.3	0.3	17.4	0.17	-	-	-	15.3	-	-
11	AQF40	10.4	71.1	-	-	-	-	0.3	-	-	-	-	-	-	14.5	0.3	17.7	0.17	-	-	-	14.8	-	-
12	AQF40	10.2	69.7	-	-	-	-	0.2	-	-	-	-	-	-	13.5	-	-	-	-	-	-	-	-	-
1	AQF42	10.4	71.8	-	-	-	-	0.2	-	-	-	-	-	-	14.1	-	-	-	-	-	-	-	-	-
2	AQF42	12.1	81.9	-	-	-	-	0.2	-	-	-	-	-	-	10.2	-	-	-	-	-	-	18.0	-	-
3	AQF42	10.5	71.7	-	-	-	-	0.2	-	-	-	-	-	-	17.7	0.5	21.6	0.49	-	-	-	17.8	-	-
4	AQF42	15.5	107.1	-	-	-	-	0.2	-	-	-	-	-	-	15.7	0.4	18.9	0.33	39.5	-	-	16.7	-	-
5	AQF42	13.6	131.9	-	-	-	-	4.4	-	-	-	-	-	-	12.7	0.3	15.4	0.17	-	-	-	14.7	-	-
6	AQF42	10.3	102.3	-	-	-	-	15.2	-	-	-	-	-	-	11.9	0.3	14.5	0.17	-	-	-	13.9	-	-
7	AQF42	7.9	86.4	-	-	-	-	18.8	-	-	-	-	-	-	13.7	0.3	16.6	0.17	-	-	-	14.2	-	-
8	AQF42	7.9	84.4	-	-	-	-	18.4	-	-	-	-	-	-	14.1	0.3	17.2	0.17	-	-	-	14.6	-	-
9	AQF42	8.5	82.0	-	-	-	-	14.0	-	-	-	-	-	-	13.7	0.3	16.7	0.17	-	-	-	15.4	-	-
10	AQF42	11.3	95.3	-	-	-	-	3.7	-	-	-	-	-	-	13.9	0.3	17.0	0.17	-	-	-	15.2	-	-
11	AQF42	11.6	80.0	-	-	-	-	0.3	-	-	-	-	-	-	15.0	0.3	18.3	0.17	-	-	-	15.4	-	-
12	AQF42	11.0	75.9	-	-	-	-	0.2	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-
1	AQF43	13.3	91.2	-	-	-	-	-	-	-	-	-	-	-	14.7	-	-	-	-	-	-	-	-	-
2	AQF43	13.5	92.1	-	-	-	-	-	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-
3	AQF43	13.7	93.2	-	-	-	-	0.2	-	-	-	-	-	-	14.4	0.5	18.8	0.49	-	-	-	17.4	-	-
4	AQF43	16.9	115.9	-	-	-	-	0.3	-	-	-	-	-	-	15.8	0.4	18.8	0.33	39.7	-	-	17.0	-	-
5	AQF43	16.7	135.8	-	-	-	-	5.9	-	-	-	-	-	-	14.9	0.3	18.1	0.17	-	-	-	15.8	-	-
6	AQF43	10.3	103.3	-	-	-	-	15.6	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	15.1	-	-
7	AQF43	8.1	88.8	-	-	-	-	19.2	-	-	-	-	-	-	12.1	0.3	14.8	0.17	-	-	-	14.5	-	-
8	AQF43	8.1	88.9	-	-	-	-	19.3	-	-	-	-	-	-	15.1	0.3	18.4	0.17	-	-	-	15.3	-	-
9	AQF43	9.0	85.0	-	-	-	-	12.9	-	-	-	-	-	-	14.6	0.3	17.7	0.17	-	-	-	15.2	-	-
10	AQF43	12.7	94.3	-	-	-	-	3.0	-	-	-	-	-	-	13.7	0.3	16.7	0.17	-	-	-	15.2	-	-
11	AQF43	14.3	97.7	-	-	-	-	-	-	-	-	-	-	-	14.6	0.3	17.8	0.17	-	-	-	15.0	-	-
12	AQF43	13.8	94.5	-	-	-	-	-	-	-	-	-	-	-	14.7	-	-	-	-	-	-	15.4	-	-
1	AQF44	11.2	76.7	-	-	-	-	0.2	-	-	-	-	-	-	12.5	-	-	-	-	-	-	-	-	-
2	AQF44	12.4	84.2	-	-	-	-	0.2	-	-	-	-	-	-	16.0	-	-	-	-	-	-	-	-	-
3	AQF44	13.6	91.7	-	-	-	-	0.2	-	-	-	-	-	-	19.5	0.5	26.9	0.49	-	-	-	18.1	-	-
4	AQF44	19.2	132.4	-	-	-	-	0.2	-	-	-	-	-	-	16.3	0.4	22.1	0.33	41.2	-	-	17.2	-	-
5	AQF44	14.1	130.9	-	-	-	-	6.2	-	-	-	-	-	-	13.6	0.3	16.5	0.17	-	-	-	15.5	-	-
6	AQF44	10.4	104.3	-	-	-	-	15.5	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	14.3	-	-
7	AQF44	8.5	93.1	-	-	-	-	19.5	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	14.5	-	-
8	AQF44	8.1	88.1	-	-	-	-	19.0	-	-	-	-	-	-	15.0	0.3	18.3	0.17	-	-	-	15.4	-	-
9	AQF44	9.1	83.7	-	-	-	-	11.7	-	-	-	-	-	-	15.3	0.3	18.7	0.17	-	-	-	16.9	-	-
10	AQF44	12.1	89.4	-	-	-	-	2.6	-	-	-	-	-	-	14.5	0.3	17.7	0.17	-	-	-	15.9	-	-
11	AQF44	12.4	85.3	-	-	-	-	0.2	-	-	-	-	-	-	16.7	0.3	20.3	0.17	-	-	-	16.4	-	-
12	AQF44	11.8	81.0	-	-	-	-	0.2	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-
1	AQF45	12.9	88.0	-	-	-	-	-	-	-	-	-	-	-	15.7	-	-	-	-	-	-	-	-	-
2	AQF45	13.2	90.2	-	-	-	-	-	-	-	-	-	-	-	14.9	-	-	-	-	-	-	-	-	-
3	AQF45	13.6	92.4	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.5	19.8	0.49	-	-	-	19.7	-	-
4	AQF45	18.8	134.4	-	-	-	-	0.5	-	-	-	-	-	-	17.1	0.4	18.5	0.33	44.6	-	-	18.2	-	-
5	AQF45	14.2	115.2	-	-	-	-	7.7	-	-	-	-	-	-	13.5	0.3	16.4	0.17	-	-	-	16.0	-	-
6	AQF45	9.5	96.4	-	-	-	-	14.9	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	14.7	-	-
7	AQF45	6.8	73.7	-	-	-	-	18.7	-	-	-	-	-	-	12.9	0.3	15.8	0.17	-	-	-	15.0	-	-
8	AQF45	7.6	81.6	-	-	-	-	18.7	-	-	-	-	-	-	15.3	0.3	18.6	0.17	-	-	-	15.9	-	-
9	AQF45	8.6	82.8	-	-	-	-	13.6	-	-	-	-	-	-	15.3	0.3	18.7	0.17	-	-	-	16.9	-	-
10	AQF45	12.8	90.9</																					

10th Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Met al	Total_Metal	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al
Site	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite_nitrat e(N) mg/L	Nitrogen(TKN) mg/L	Phosphorus_D mg/L	Phosphorus_T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_T mg/L	Chromium VI_T mg/L	Cobalt_T mg/L	Copper_T mg/L		
AQF40	-	10.1	-	-	0.095	0.072	0.005	0.071	-	-	0.025	0.050	1.590	0.070	5.8	0.038	0.000108571	0.00034	0.00733	0.000011	0.000025	0.00596	0.000008	5.21822	0.000011	0.00025	-	0.000054	0.00063		
AQF40	-	9.8	-	-	0.060	0.088	0.005	-	-	-	0.021	0.050	1.088	0.072	7.3	0.036	0.000118324	0.00033	0.00745	0.000011	0.000025	0.00597	0.000005	5.38582	0.000011	0.00025	-	0.000054	0.00044		
AQF40	-	9.6	-	-	0.025	0.106	0.005	-	-	-	0.018	0.050	0.587	0.075	8.8	0.034	0.000128061	0.00031	0.00757	0.000011	0.000025	0.00598	0.000003	5.55719	0.000011	0.00025	-	0.000054	0.00025		
AQF40	-	9.1	-	-	0.009	0.098	0.001	-	-	-	0.025	0.006	0.371	0.078	5.2	0.034	0.00005	0.00036	0.00716	0.000011	0.000025	0.00597	0.000009	5.20531	0.000011	0.00025	-	0.000054	0.00025		
AQF40	-	8.7	-	-	0.008	0.038	0.001	0.044	-	-	0.023	0.050	0.347	0.065	4.4	0.054	0.00005	0.00030	0.00648	0.000050	0.000025	0.00581	0.000003	4.90061	0.000010	0.00022	-	0.000053	0.00025		
AQF40	-	9.8	-	-	0.009	0.011	0.005	0.035	-	-	0.015	0.050	0.352	0.057	4.6	0.061	0.00005	0.00029	0.00659	0.000050	0.000025	0.00589	0.000005	4.90270	0.000011	0.00020	-	0.000053	0.00025		
AQF40	-	8.7	-	-	0.015	0.004	0.001	0.217	-	-	0.012	0.050	0.324	0.064	4.9	0.048	0.00005	0.00030	0.00681	0.000050	0.000025	0.00594	0.000003	4.95090	0.000011	0.00016	-	0.000054	0.00025		
AQF40	-	9.2	-	-	0.023	0.004	0.001	0.003	-	-	0.015	0.050	0.281	0.066	4.9	0.033	0.00005	0.00032	0.00584	0.000050	0.000025	0.00596	0.000003	4.67487	0.000011	0.00014	-	0.000054	0.00025		
AQF40	-	8.9	-	-	0.025	0.004	0.001	0.003	-	-	0.012	0.050	0.310	0.064	5.1	0.045	0.00005	0.00033	0.00672	0.000050	0.000025	0.00595	0.000003	5.04760	0.000011	0.00013	-	0.000054	0.00025		
AQF40	-	8.8	-	-	0.017	0.026	0.001	0.038	-	-	0.020	0.050	0.330	0.065	4.6	0.053	0.00005	0.00029	0.00575	0.000050	0.000025	0.00587	0.000003	4.88418	0.000010	0.00025	-	0.000053	0.00025		
AQF40	-	10.1	-	-	0.016	0.025	0.001	0.025	-	-	0.019	0.050	0.308	0.062	4.4	0.081	0.00005	0.00030	0.00878	0.000050	0.000025	0.00585	0.000012	4.92582	0.000010	0.00029	-	0.000053	0.00066		
AQF40	-	10.1	-	-	0.056	0.048	0.003	0.048	-	-	0.022	0.050	0.951	0.066	5.2	0.059	7.93204E-05	0.00032	0.00806	0.000030	0.000025	0.00592	0.000010	5.09862	0.000011	0.00027	-	0.000054	0.00065		
AQF42	-	9.8	-	-	0.051	0.068	0.005	0.067	-	-	0.025	0.050	0.702	0.073	5.7	0.051	0.000225714	0.00034	0.00821	0.000011	0.000025	0.00596	0.000003	5.54036	0.000011	0.00025	-	0.000054	0.00025		
AQF42	-	10.0	-	-	0.036	0.119	0.005	-	-	-	0.025	0.050	0.663	0.072	13.9	0.066	0.000284254	0.00036	0.00886	0.000011	0.000025	0.00597	0.000011	5.67864	0.000011	0.00025	-	0.000054	0.00097		
AQF42	-	10.3	-	-	0.056	0.111	0.005	-	-	-	0.025	0.050	0.538	0.075	5.3	0.122	0.00005	0.00034	0.00950	0.000011	0.000025	0.00598	0.000003	5.56695	0.000024	0.00050	-	0.000122	0.00444		
AQF42	-	9.6	-	-	0.016	0.095	0.001	-	-	-	0.030	0.006	0.371	0.074	5.2	0.037	0.00005	0.00037	0.00802	0.000011	0.000025	0.00597	0.000010	5.35171	0.000011	0.00025	-	0.000054	0.00091		
AQF42	-	9.5	-	-	0.008	0.039	0.001	0.039	-	-	0.015	0.050	0.362	0.064	4.3	0.053	0.00005	0.00034	0.00635	0.000050	0.000025	0.00581	0.000003	4.56738	0.000010	0.00017	-	0.000053	0.00025		
AQF42	-	9.4	-	-	0.009	0.011	0.005	0.035	-	-	0.016	0.050	0.352	0.057	4.6	0.058	0.00005	0.00028	0.00656	0.000050	0.000025	0.00589	0.000003	4.75599	0.000011	0.00024	-	0.000053	0.00025		
AQF42	-	9.1	-	-	0.025	0.004	0.001	0.003	-	-	0.015	0.050	0.417	0.061	4.9	0.047	0.00005	0.00030	0.00633	0.000050	0.000025	0.00594	0.000007	4.58953	0.000011	0.00124	-	0.000054	0.00061		
AQF42	-	9.2	-	-	0.046	0.004	0.001	0.003	-	-	0.014	0.050	0.281	0.065	4.9	0.037	0.00005	0.00034	0.00607	0.000050	0.000025	0.00596	0.000003	4.88967	0.000011	0.00015	-	0.000054	0.00025		
AQF42	-	9.0	-	-	0.009	0.008	0.001	0.007	-	-	0.015	0.050	0.388	0.064	4.9	0.039	0.00005	0.00033	0.00656	0.000050	0.000025	0.00595	0.000003	5.06713	0.000011	0.00014	-	0.000054	0.00025		
AQF42	-	9.9	-	-	0.009	0.019	0.001	0.019	-	-	0.015	0.050	0.310	0.063	4.5	0.041	0.00005	0.00030	0.00594	0.000050	0.000025	0.00587	0.000003	4.90375	0.000010	0.00014	-	0.000053	0.00025		
AQF42	-	9.5	-	-	0.022	0.025	0.001	0.025	-	-	0.015	0.050	0.376	0.062	4.6	0.155	0.000128329	0.00032	0.01475	0.000050	0.000025	0.00585	0.000030	5.10207	0.000024	0.00075	-	0.000122	0.00090		
AQF42	-	9.7	-	-	0.037	0.047	0.003	0.046	-	-	0.020	0.050	0.541	0.068	5.2	0.103	0.000177055	0.00033	0.01145	0.000030	0.000025	0.00592	0.000016	5.35273	0.000018	0.00049	-	0.000088	0.00057		
AQF43	-	10.0	-	-	0.025	0.065	0.005	0.064	-	-	0.025	0.050	0.360	0.071	5.1	0.039	0.00005	0.00030	0.00708	0.000011	0.000025	0.00596	0.000003	5.38417	0.000011	0.00025	-	0.000054	0.00025		
AQF43	-	9.5	-	-	0.018	0.088	0.005	-	-	-	0.021	0.050	0.359	0.073	5.5	0.037	0.00005	0.00030	0.00724	0.000011	0.000025	0.00597	0.000003	5.42486	0.000011	0.00025	-	0.000054	0.00025		
AQF43	-	9.1	-	-	0.012	0.112	0.005	-	-	-	0.018	0.050	0.357	0.074	5.9	0.035	0.00005	0.00031	0.00741	0.000011	0.000025	0.00598	0.000003	5.48889	0.000011	0.00025	-	0.000054	0.00025		
AQF43	-	9.1	-	-	0.009	0.096	0.001	-	-	-	0.012	0.006	0.351	0.077	5.2	0.036	0.00005	0.00036	0.00732	0.000011	0.000025	0.00597	0.000008	5.33219	0.000011	0.00025	-	0.000054	0.00025		
AQF43	-	9.9	-	-	0.008	0.032	0.001	0.032	-	-	0.031	0.050	0.411	0.064	4.4	0.060	0.00005	0.00034	0.00645	0.000050	0.000025	0.00581	0.000003	4.93001	0.000010	0.00018	-	0.000053	0.00025		
AQF43	-	8.8	-	-	0.009	0.011	0.005	0.035	-	-	0.015	0.050	0.352	0.058	4.7	0.067	0.00005	0.00028	0.00651	0.000050	0.000025	0.00589	0.000003	4.81468	0.000011	0.00026	-	0.000053	0.00025		
AQF43	-	9.1	-	-	0.033	0.004	0.001	0.003	-	-	0.015	0.050	0.280	0.062	4.8	0.057	0.00005	0.00031	0.00630	0.000050	0.000025	0.00594	0.000003	4.70673	0.000011	0.00015	-	0.000054	0.00025		
AQF43	-	9.2	-	-	0.018	0.010	0.001	0.009	-	-	0.016	0.050	0.291	0.067	4.9	0.046	0.00005	0.00036	0.00607	0.000050	0.000025	0.00596	0.000003	5.09471	0.000011	0.00025	-	0.000054	0.00025		
AQF43	-	9.0	-	-	0.028	0.004	0.001	0.003	-	-	0.015	0.050	0.300	0.064	4.9	0.048	0.00005	0.00032	0.00670	0.000050	0.000025	0.00595	0.000003	5.07689	0.000011	0.00017	-	0.000054	0.00025		
AQF43	-	9.3	-	-	0.009	0.020	0.001	0.020	-	-	0.015	0.050	0.300	0.064	4.5	0.066	0.00005	0.00030	0.00592	0.000050	0.000025	0.00587	0.000003	4.98204	0.000010	0.00023	-	0.000053	0.00025		
AQF43	-	9.8	-	-	0.034	0.027	0.001	0.027	-	-	0.015	0.050	0.308	0.063	4.4	0.040	0.00005	0.00027	0.00581	0.000050	0.000025	0.00585	0.000003	4.93562	0.000010	0.00016	-	0.000053	0.00025		
AQF43	-	9.9	-	-	0.029	0.046	0.003	0.046	-	-	0.020	0.050	0.335	0.067	4.8	0.039	0.00005	0.00029	0.00646	0.000030	0.000025	0.00592	0.000003	5.18659	0.000011	0.00020	-	0.000054	0.00025		
AQF44	-	10.1	-	-	0.141	0.074	0.005	0.073	-	-	0.025	0.050	1.785	0.069	6.1	0.040	0.00005	0.00031	0.00733	0.000011	0.000025	0.00596	0.000019	5.55013	0.000011	0.00025	-	0.000054	0.00050		
AQF44	-	9.8	-	-	0.079	0.091	0.005	-	-	-	0.018	0.050	1.796	0.071	7.5	0.038	0.00005	0.00031	0.00740	0.000011	0.000025	0.00597	0.000011	5.61031	0.000011	0.00025	-	0.000054	0.00038		
AQF44	-	9.5	-	-	0.017	0.109	0.005	-	-	-	0.010	0.050	1.816	0.073	8.9	0.037	0.00005	0.00031	0.00747	0.000011	0.000025	0.00598	0.000003	5.68404	0.000011	0.00025	-	0.000054	0.00025		
AQF44	-	9.4	-	-	0.009	0.098	0.001	-	-	-	0.025	0																			

10th Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

Site	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met al	Total_Met Total_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesi m_T mg/L	Manganes e_T mg/L	Mercury_T mg/L	Molybden um_T mg/L	Nickel_T mg/L	Potassium _T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_ T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L
AQF40	0.29	0.00007	0.00121	1.5	0.030	0.000003	0.00013	0.00025	0.73	0.0012	0.000065	3.2	0.000005	1.8	0.020	1.7	0.00010	0.000005	0.00005	0.00036	0.0012	0.0001	0.0001	0.0003	0.0053	0.0001	0.0200	0.0001	0.0002
AQF40	0.30	0.00005	0.00129	1.5	0.030	0.000002	0.00010	0.00025	0.75	0.0012	0.000045	3.3	0.000005	1.8	0.021	2.2	0.00010	0.000005	0.00005	0.00033	0.0010	0.0001	0.0001	0.0003	0.0057	0.0002	0.0205	0.0001	0.0003
AQF40	0.30	0.00003	0.00136	1.6	0.031	0.000002	0.00007	0.00025	0.77	0.0012	0.000025	3.5	0.000005	1.8	0.021	2.6	0.00010	0.000005	0.00005	0.00030	0.0008	0.0001	0.0001	0.0003	0.0060	0.0002	0.0211	0.0001	0.0003
AQF40	0.29	0.00003	0.00121	1.5	0.032	0.000002	0.00007	0.00025	0.75	0.0012	0.000129	3.1	0.000005	1.7	0.021	1.7	0.00010	0.000005	0.00005	0.00006	0.0008	0.0001	0.0001	0.0003	0.0015	0.0001	0.0201	0.0001	0.0003
AQF40	0.32	0.00003	0.00094	1.4	0.052	0.000002	0.00007	0.00025	0.74	0.0012	0.000025	2.4	0.000005	1.5	0.019	1.5	0.00010	0.000005	0.00005	0.00010	0.0016	0.0001	0.0001	0.0003	0.0015	0.0001	0.0360	0.0001	0.0002
AQF40	0.36	0.00006	0.00159	1.3	0.041	0.000002	0.00009	0.00025	0.68	0.0011	0.000025	2.1	0.000005	1.4	0.016	1.6	0.00010	0.000005	0.00005	0.00024	0.0015	0.0001	0.0001	0.0003	0.0048	0.0001	0.0351	0.0001	0.0003
AQF40	0.22	0.00015	0.00091	1.4	0.039	0.000001	0.00011	0.00025	0.72	0.0013	0.000025	2.2	0.000005	1.5	0.019	1.7	0.00010	0.000005	0.00005	0.00006	0.0013	0.0001	0.0001	0.0003	0.0015	0.0001	0.0262	0.0001	0.0003
AQF40	0.23	0.00003	0.00062	1.3	0.034	0.000002	0.00007	0.00025	0.64	0.0012	0.000025	2.1	0.000005	1.6	0.018	1.7	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0001	0.0003	0.0043	0.0001	0.0200	0.0001	0.0003
AQF40	0.20	0.00003	0.00121	1.4	0.030	0.000003	0.00012	0.00025	0.67	0.0012	0.000025	2.4	0.000005	1.5	0.019	1.7	0.00010	0.000005	0.00005	0.00014	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0311	0.0001	0.0003
AQF40	0.28	0.00004	0.00125	1.4	0.035	0.000001	0.00013	0.00053	0.67	0.0011	0.000025	2.5	0.000005	1.5	0.018	1.6	0.00010	0.000005	0.00005	0.00006	0.0017	0.0001	0.0001	0.0003	0.0015	0.0001	0.0225	0.0001	0.0003
AQF40	0.31	0.00010	0.00061	1.4	0.038	0.000003	0.00011	0.00025	0.69	0.0012	0.000025	2.8	0.000005	1.5	0.018	1.5	0.00010	0.000005	0.00005	0.00006	0.0039	0.0001	0.0001	0.0003	0.0045	0.0001	0.0219	0.0001	0.0002
AQF40	0.30	0.00009	0.00091	1.5	0.034	0.000003	0.00012	0.00025	0.71	0.0012	0.000045	3.0	0.000005	1.6	0.019	1.7	0.00010	0.000005	0.00005	0.00021	0.0025	0.0001	0.0001	0.0003	0.0049	0.0001	0.0209	0.0001	0.0002
AQF42	0.34	0.00003	0.00130	1.6	0.034	0.000003	0.00010	0.00025	0.74	0.0013	0.000059	3.4	0.000005	1.8	0.021	2.0	0.00010	0.000005	0.00005	0.00054	0.0017	0.0001	0.0002	0.0003	0.0039	0.0001	0.0202	0.0001	0.0003
AQF42	0.37	0.00008	0.00131	1.6	0.040	0.000001	0.00008	0.00025	0.87	0.0013	0.000025	3.5	0.000005	1.8	0.021	9.8	0.00010	0.000005	0.00005	0.00205	0.0022	0.0001	0.0001	0.0003	0.0250	0.0001	0.0236	0.0001	0.0003
AQF42	0.60	0.00009	0.00140	1.6	0.069	0.000003	0.00008	0.00079	0.79	0.0014	0.000025	3.7	0.000005	1.8	0.021	1.8	0.00010	0.000005	0.00005	0.00006	0.0058	0.0001	0.0001	0.0003	0.0053	0.0001	0.0352	0.0001	0.0003
AQF42	0.30	0.00007	0.00121	1.5	0.035	0.000003	0.00010	0.00025	0.76	0.0012	0.000129	3.0	0.000005	1.7	0.021	1.7	0.00010	0.000005	0.00005	0.00006	0.0012	0.0001	0.0001	0.0003	0.0032	0.0001	0.0235	0.0001	0.0003
AQF42	0.50	0.00003	0.00119	1.3	0.081	0.000003	0.00010	0.00025	0.66	0.0010	0.000025	2.3	0.000005	1.4	0.017	1.5	0.00010	0.000005	0.00005	0.00026	0.0015	0.0001	0.0001	0.0003	0.0015	0.0001	0.0327	0.0001	0.0002
AQF42	0.37	0.00006	0.00159	1.3	0.034	0.000002	0.00021	0.00025	0.66	0.0011	0.000025	2.1	0.000005	1.4	0.017	1.6	0.00010	0.000005	0.00005	0.00028	0.0017	0.0001	0.0001	0.0003	0.0015	0.0001	0.0334	0.0001	0.0002
AQF42	0.26	0.00003	0.00062	1.4	0.037	0.000002	0.00009	0.00025	0.65	0.0012	0.000025	2.2	0.000005	1.4	0.017	1.7	0.00010	0.000005	0.00005	0.00041	0.0012	0.0001	0.0001	0.0003	0.0059	0.0001	0.0249	0.0001	0.0002
AQF42	0.24	0.00003	0.00062	1.4	0.036	0.000002	0.00008	0.00025	0.67	0.0012	0.000050	2.4	0.000005	1.5	0.019	1.7	0.00010	0.000005	0.00005	0.00006	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0211	0.0001	0.0002
AQF42	0.19	0.00003	0.00062	1.4	0.030	0.000003	0.00010	0.00025	0.67	0.0011	0.000025	2.3	0.000005	1.5	0.019	1.7	0.00010	0.000005	0.00005	0.00006	0.0008	0.0001	0.0001	0.0003	0.0031	0.0001	0.0242	0.0001	0.0003
AQF42	0.25	0.00003	0.00120	1.4	0.032	0.000001	0.00012	0.00025	0.66	0.0011	0.000025	2.7	0.000005	1.5	0.018	1.6	0.00010	0.000005	0.00005	0.00006	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0188	0.0001	0.0002
AQF42	0.43	0.00014	0.00119	1.5	0.090	0.000003	0.00015	0.00025	0.72	0.0014	0.000025	2.8	0.000005	1.5	0.019	1.5	0.00010	0.000005	0.00005	0.00018	0.0077	0.0001	0.0002	0.0003	0.0043	0.0001	0.0313	0.0001	0.0002
AQF42	0.38	0.00008	0.00125	1.5	0.062	0.000003	0.00013	0.00025	0.73	0.0013	0.000042	3.1	0.000005	1.7	0.020	1.8	0.00010	0.000005	0.00005	0.00036	0.0047	0.0001	0.0002	0.0003	0.0041	0.0001	0.0257	0.0001	0.0002
AQF43	0.29	0.00003	0.00130	1.5	0.030	0.000003	0.00008	0.00025	0.71	0.0011	0.000025	3.4	0.000005	1.7	0.021	1.7	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0002	0.0003	0.0015	0.0001	0.0207	0.0001	0.0002
AQF43	0.30	0.00003	0.00131	1.5	0.030	0.000002	0.00006	0.00025	0.72	0.0012	0.000025	3.4	0.000005	1.7	0.021	1.7	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0001	0.0003	0.0020	0.0001	0.0203	0.0001	0.0002
AQF43	0.31	0.00003	0.00131	1.5	0.031	0.000002	0.00005	0.00025	0.74	0.0012	0.000025	3.5	0.000005	1.8	0.021	1.8	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0001	0.0003	0.0024	0.0001	0.0198	0.0001	0.0003
AQF43	0.29	0.00003	0.00121	1.5	0.034	0.000002	0.00008	0.00025	0.74	0.0012	0.000090	3.0	0.000005	1.6	0.020	1.7	0.00010	0.000005	0.00005	0.00006	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0194	0.0001	0.0002
AQF43	0.37	0.00007	0.00158	1.4	0.045	0.000003	0.00012	0.00025	0.67	0.0011	0.000025	2.4	0.000005	1.4	0.018	1.5	0.00010	0.000005	0.00005	0.00006	0.0018	0.0001	0.0001	0.0003	0.0046	0.0001	0.0294	0.0001	0.0002
AQF43	0.33	0.00003	0.00159	1.4	0.035	0.000002	0.00006	0.00057	0.68	0.0011	0.000025	2.2	0.000005	1.5	0.018	1.6	0.00010	0.000005	0.00005	0.00006	0.0018	0.0001	0.0001	0.0009	0.0015	0.0003	0.0304	0.0001	0.0003
AQF43	0.27	0.00003	0.00062	1.4	0.041	0.000001	0.00009	0.00025	0.66	0.0012	0.000056	2.2	0.000005	1.4	0.017	1.7	0.00010	0.000005	0.00005	0.00006	0.0014	0.0001	0.0001	0.0003	0.0015	0.0001	0.0286	0.0001	0.0002
AQF43	0.23	0.00003	0.00062	1.4	0.040	0.000002	0.00011	0.00066	0.68	0.0012	0.000025	2.4	0.000005	1.5	0.020	1.7	0.00010	0.000005	0.00005	0.00006	0.0015	0.0001	0.0001	0.0003	0.0048	0.0001	0.0225	0.0001	0.0002
AQF43	0.22	0.00003	0.00121	1.4	0.034	0.000003	0.00012	0.00025	0.66	0.0012	0.000117	2.5	0.000005	1.5	0.019	1.7	0.00030	0.000005	0.00005	0.00006	0.0012	0.0001	0.0001	0.0003	0.0015	0.0001	0.0265	0.0001	0.0003
AQF43	0.27	0.00003	0.00120	1.5	0.033	0.000001	0.00015	0.00025	0.68	0.0012	0.000056	2.7	0.000005	1.5	0.018	1.6	0.00010	0.000005	0.00005	0.00006	0.0022	0.0001	0.0001	0.0003	0.0015	0.0001	0.0211	0.0001	0.0003
AQF43	0.22	0.00003	0.00061	1.4	0.028	0.000003	0.00010	0.00025	0.67	0.0011	0.000052	2.9	0.000005	1.5	0.019	1.5	0.00010	0.000005	0.00005	0.00006	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0178	0.0001	

10th Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

Site	Dissolved_Meta I	Dissolved_Meta I	Dissolved_Meta Dissolved_Metal	Dissolved_Meta I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Meta I	Dissolved_Metal	Dissolved_Meta I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal
	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_ D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	
AQF40	0.0130	1.10E-05	0.000025	0.0061	0.0000025	5.12	1.10E-05	0.00025	5.4E-05	0.0027	0.16	0.00013	0.0013	1.51	0.0262	-	0.00009	0.00025	0.74	0.0011	0.000025	3.14	
AQF40	0.0135	1.10E-05	0.000025	0.0061	0.0000025	5.17	1.10E-05	0.00025	5.4E-05	0.0020	0.17	0.00009	0.0012	1.52	0.0268	-	0.00010	0.00025	0.74	0.0011	0.000033	3.15	
AQF40	0.0140	1.10E-05	0.000025	0.0061	0.0000025	5.24	1.11E-05	0.00025	5.4E-05	0.0012	0.19	0.00005	0.0010	1.53	0.0276	0.0000010	0.00012	0.00025	0.73	0.0011	0.000041	3.16	
AQF40	0.0198	1.10E-05	0.000025	0.0061	1.0308E-05	5.09	1.11E-05	0.00025	5.4E-05	0.0020	0.18	0.00010	0.0012	1.51	0.0296	0.0000014	0.00007	0.00025	0.83	0.0012	0.000025	3.08	
AQF40	0.0068	5.00E-05	0.000025	0.0059	0.0000025	4.83	1.00E-05	0.00010	5.3E-05	0.0006	0.21	0.00003	0.0012	1.42	0.0419	0.0000019	0.00014	0.00025	0.72	0.0011	0.000025	2.48	
AQF40	0.0059	5.00E-05	0.000025	0.0060	0.0000025	4.61	1.05E-05	0.00013	5.4E-05	0.0003	0.18	0.00003	0.0006	1.33	0.0218	0.0000018	0.00009	0.00025	0.68	0.0010	0.000025	2.04	
AQF40	0.0059	5.00E-05	0.000025	0.0060	5.13704E-06	4.83	1.09E-05	0.00011	5.4E-05	0.0003	0.11	0.00007	0.0010	1.39	0.0245	0.0000012	0.00011	0.00025	0.70	0.0012	0.000025	1.97	
AQF40	0.0053	5.00E-05	0.000025	0.0061	0.0000025	4.60	1.10E-05	0.00012	5.4E-05	0.0003	0.15	0.00003	0.0006	1.37	0.0248	-	0.00010	0.00025	0.66	0.0011	0.000051	2.13	
AQF40	0.0064	5.00E-05	0.000025	0.0061	0.0000025	4.69	1.09E-05	0.00022	5.4E-05	0.0026	0.13	0.00015	0.0006	1.35	0.0255	-	0.00015	0.00025	0.65	0.0012	0.000051	2.29	
AQF40	0.0086	5.00E-05	0.000025	0.0060	0.0000025	4.74	1.04E-05	0.00008	5.4E-05	0.0016	0.14	0.00007	0.0009	1.40	0.0214	0.0000011	0.00011	0.00025	0.64	0.0011	0.000042	2.35	
AQF40	0.0053	5.00E-05	0.000025	0.0059	0.0000025	4.62	1.03E-05	0.00015	5.4E-05	0.0049	0.14	0.00018	0.0006	1.34	0.0219	-	0.00010	0.00025	0.66	0.0010	0.000025	2.47	
AQF40	0.0092	3.05E-05	0.000025	0.0060	0.0000025	4.90	1.07E-05	0.00020	5.4E-05	0.0038	0.15	0.00015	0.0010	1.43	0.0243	-	0.00009	0.00025	0.71	0.0011	0.000025	2.81	
AQF42	0.0136	1.10E-05	0.000025	0.0061	0.0000025	5.11	1.10E-05	0.00025	5.4E-05	0.0032	0.18	0.00015	0.0013	1.54	0.0274	-	0.00011	0.00025	0.74	0.0012	0.000025	3.11	
AQF42	0.0206	1.10E-05	0.000025	0.0061	0.0000025	5.35	1.10E-05	0.00025	5.4E-05	0.0019	0.20	0.00008	0.0006	1.60	0.0340	0.0000003	0.00008	0.00025	0.91	0.0012	0.000025	3.31	
AQF42	0.0086	1.10E-05	0.000025	0.0061	0.0000025	5.34	1.11E-05	0.00025	5.4E-05	0.0004	0.22	0.00003	0.0014	1.53	0.0310	-	0.00008	0.00025	0.72	0.0012	0.000063	3.22	
AQF42	0.0194	1.10E-05	0.000025	0.0061	1.1772E-05	5.16	1.11E-05	0.00025	5.4E-05	0.0025	0.19	0.00009	0.0013	1.52	0.0322	-	0.00009	0.00025	0.77	0.0011	0.000025	3.01	
AQF42	0.0061	5.00E-05	0.000025	0.0059	0.0000025	4.54	1.00E-05	0.00014	5.3E-05	0.0007	0.30	0.00003	0.0006	1.36	0.0602	0.0000016	0.00010	0.00025	0.68	0.0010	0.000025	2.49	
AQF42	0.0061	5.00E-05	0.000025	0.0060	0.0000025	4.41	1.05E-05	0.00013	5.4E-05	0.0003	0.18	0.00003	0.0006	1.27	0.0205	0.0000017	0.00009	0.00025	0.70	0.0010	0.000025	2.05	
AQF42	0.0060	5.00E-05	0.000025	0.0060	0.0000025	4.55	1.09E-05	0.00005	5.4E-05	0.0002	0.15	0.00003	0.0006	1.31	0.0241	0.0000015	0.00009	0.00025	0.64	0.0011	0.000025	2.03	
AQF42	0.0056	5.00E-05	0.000025	0.0061	0.0000025	4.64	1.10E-05	0.00011	5.4E-05	0.0004	0.15	0.00012	0.0006	1.36	0.0252	-	0.00011	0.00025	0.65	0.0012	0.000025	2.10	
AQF42	0.0061	5.00E-05	0.000025	0.0061	0.0000025	4.87	1.09E-05	0.00012	5.4E-05	0.0002	0.12	0.00003	0.0006	1.40	0.0236	-	0.00009	0.00025	0.66	0.0011	0.000060	2.21	
AQF42	0.0053	5.00E-05	0.000025	0.0060	0.0000025	4.71	1.04E-05	0.00005	5.4E-05	0.0005	0.12	0.00003	0.0006	1.39	0.0216	0.0000008	0.00011	0.00025	0.60	0.0010	0.000025	2.37	
AQF42	0.0152	5.00E-05	0.000025	0.0059	0.0000025	4.78	1.03E-05	0.00076	5.4E-05	0.0015	0.19	0.00007	0.0006	1.39	0.0371	-	0.00089	0.00025	0.65	0.0011	0.000025	2.34	
AQF42	0.0145	3.05E-05	0.000025	0.0060	0.0000025	4.97	1.07E-05	0.00050	5.4E-05	0.0023	0.18	0.00011	0.0010	1.47	0.0325	-	0.00050	0.00025	0.70	0.0011	0.000025	2.73	
AQF43	0.0068	1.10E-05	0.000025	0.0061	0.0000025	5.08	1.10E-05	0.00025	5.4E-05	0.0004	0.16	0.00003	0.0012	1.52	0.0249	-	0.00007	0.00025	0.70	0.0011	0.000025	3.09	
AQF43	0.0100	1.10E-05	0.000025	0.0061	0.0000025	5.15	1.10E-05	0.00025	5.4E-05	0.0007	0.18	0.00003	0.0011	1.52	0.0260	-	0.00006	0.00025	0.70	0.0011	0.000034	3.15	
AQF43	0.0132	1.10E-05	0.000025	0.0061	0.0000025	5.23	1.11E-05	0.00025	5.4E-05	0.0010	0.19	0.00004	0.0010	1.52	0.0272	0.0000010	0.00006	0.00025	0.71	0.0011	0.000043	3.20	
AQF43	0.0204	1.10E-05	0.000025	0.0061	0.0000025	5.12	1.11E-05	0.00025	5.4E-05	0.0019	0.18	0.00007	0.0012	1.49	0.0308	0.0000018	0.00007	0.00025	0.72	0.0011	0.000025	3.00	
AQF43	0.0058	5.00E-05	0.000025	0.0059	0.0000025	4.89	4.92E-05	0.00012	5.3E-05	0.0005	0.20	0.00003	0.0006	1.41	0.0356	0.0000025	0.00010	0.00025	0.69	0.0009	0.000025	2.34	
AQF43	0.0059	5.00E-05	0.000025	0.0060	0.0000025	4.76	1.05E-05	0.00012	5.4E-05	0.0002	0.17	0.00003	0.0006	1.36	0.0211	0.0000018	0.00009	0.00025	0.81	0.0010	0.000025	1.99	
AQF43	0.0059	5.00E-05	0.000025	0.0060	0.0000025	4.57	1.09E-05	0.00011	5.4E-05	0.0002	0.16	0.00003	0.0006	1.37	0.0237	0.0000015	0.00007	0.00025	0.66	0.0011	0.000025	2.25	
AQF43	0.0053	5.00E-05	0.000025	0.0061	0.0000025	4.86	1.10E-05	0.00005	5.4E-05	0.0003	0.14	0.00003	0.0006	1.39	0.0255	-	0.00011	0.00025	0.70	0.0011	0.000025	2.10	
AQF43	0.0064	5.00E-05	0.000025	0.0061	0.0000025	4.82	1.09E-05	0.00012	5.4E-05	0.0004	0.12	0.00003	0.0006	1.38	0.0253	-	0.00010	0.00025	0.64	0.0011	0.000025	2.27	
AQF43	0.0113	5.00E-05	0.000025	0.0060	0.0000025	4.72	1.04E-05	0.00013	5.4E-05	0.0036	0.13	0.00015	0.0006	1.37	0.0218	0.0000008	0.00014	0.00025	0.63	0.0010	0.000025	2.41	
AQF43	0.0053	5.00E-05	0.000025	0.0059	0.0000025	4.68	1.03E-05	0.00011	5.4E-05	0.0050	0.11	0.00613	0.0006	1.37	0.0197	-	0.00010	0.00025	0.63	0.0010	0.000025	2.47	
AQF43	0.0061	3.05E-05	0.000025	0.0060	0.0000025	4.91	1.07E-05	0.00018	5.4E-05	0.0027	0.13	0.00307	0.0009	1.45	0.0226	-	0.00008	0.00025	0.67	0.0010	0.000025	2.79	
AQF44	0.0138	1.10E-05	0.000025	0.0061	1.15786E-05	5.42	1.10E-05	0.00025	5.4E-05	0.0037	0.17	0.00015	0.0013	1.57	0.0256	-	0.00009	0.00025	0.72	0.0011	0.000025	3.07	
AQF44	0.0163	1.10E-05	0.000025	0.0061	7.03866E-06	5.41	1.10E-05	0.00025	5.4E-05	0.0029	0.18	0.00010	0.0011	1.57	0.0263	-	0.00008	0.00025	0.73	0.0011	0.000025	3.13	
AQF44	0.0189	1.10E-05	0.000025	0.0061	0.0000025	5.40	1.11E-05	0.00025	5.4E-05	0.0022	0.19	0.00004	0.0010	1.58	0.0272	0.0000009	0.00008	0.00025	0.75	0.0012	0.000025	3.19	
AQF44	0.0187	1.10E-05	0.000025	0.0061	0.0000025	5.45	1.11E-05	0.00025	5.4E-05	0.0018	0.18	0.00007	0.0013	1.58	0.0303	0.0000009	0.00008	0.00025	0.75	0.0012	0.000025	3.00	
AQF44	0.0059	5.00E-05	0.000025	0.0059	0.0000025	4.81	1.00E-05	0.00012	5.3E-05	0.0004	0.22	0.00003	0.0012	1.39	0.0354	0.0000009	0.00009	0.00025	0.68	0.0009	0.000025	2.42	
AQF44	0.0254	5.00E-05	0.000025	0.0060	0.0000025	4.52	1.05E-05	0.00013	5.4E-05	0.0013	0.17	0.00003	0.0006	1.31	0.0210	0.0000017	0.00019	0.00025	0.77	0.0010	0.000025	2.06	
AQF44	0.0060	5.00E-05	0.000025	0.0060	0.0000025	4.61	1.09E-05	0.00011	5.4E-05	0.0003	0.16	0.00003	0.0006	1.33	0.0240	0.0000016	0.00010	0.00025	0.66	0.0010	0.000025	2.07	
AQF44	0.0054	5.00E-05	0.000025	0.0061	0.0000025	4.88	1.10E-05	0.00012	5.4E-05	0.0003	0.13	0.00012	0.0006	1.41	0.0257	-	0.00016	0.00025	0.70	0.0011	0.000025	2.13	
AQF44	0.0071	5.00E-05	0.000025	0.0061	0.0000025	5.30	1.09E-05	0.00012	5.4E-05	0.0003	0.12	0.00003	0.0012	1.52	0.0245	-	0.00008	0.00025	0.70	0.0011	0.000025	2.09	

10th Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

Site	Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Cyanides		Cyanides		Cyanides		Methylme		Methylme	
	Dissolved_Metal	Dissolved_Metal	I	I	Dissolved_Metal	I	Dissolved_Metal	al	al	Dissolved_Metal	Dissolved_Metal	al	Dissolved_Metal	al	al	al	Cyanides	Cyanides	Cyanides	rcury	rcury	Methylme	Methylme			
	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L	Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WAD mg/L	rcury_D mg/L	rcury_T mg/L							
AQF40	0.000005	1.76	0.02	1.75	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00012	0.00025	0.0045	0.00015	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.76	0.02	1.84	0.00010	0.00001	0.00005	0.00008	0.00015	0.00005	0.00012	0.00025	0.0031	0.00015	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.78	0.02	1.95	0.00010	0.00001	0.00005	0.00011	0.00015	0.00005	0.00012	0.00025	0.0018	0.00015	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.74	0.02	1.76	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00012	0.00025	0.0028	0.00015	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.43	0.02	1.50	0.00010	0.00001	0.00005	0.00013	0.00070	0.00005	0.00010	0.00025	0.0030	0.00010	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.38	0.02	1.63	0.00010	0.00001	0.00005	0.00019	0.00050	0.00005	0.00011	0.00025	0.0063	0.00010	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.48	0.02	1.87	0.00010	0.00001	0.00005	0.00011	0.00040	0.00005	0.00012	0.00025	0.0037	0.00010	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.50	0.02	1.73	0.00010	0.00001	0.00005	0.00024	0.00036	0.00005	0.00012	0.00025	0.0032	0.00010	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.47	0.02	1.72	0.00010	0.00001	0.00005	0.00006	0.00054	0.00005	0.00012	0.00025	0.0047	0.00010	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.54	0.02	1.80	0.00010	0.00001	0.00005	0.00006	0.00027	0.00005	0.00011	0.00025	0.0021	0.00011	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.41	0.02	1.56	0.00010	0.00001	0.00005	0.00006	0.00034	0.00005	0.00010	0.00025	0.0101	0.00010	-	-	-	-	-	-	-	-				
AQF40	0.000005	1.59	0.02	1.67	0.00010	0.00001	0.00005	0.00006	0.00024	0.00005	0.00011	0.00025	0.0073	0.00012	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.78	0.02	1.75	0.00010	0.00001	0.00005	0.00018	0.00015	0.00005	0.00016	0.00025	0.0046	0.00015	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.86	0.02	2.05	0.00010	0.00001	0.00005	0.00018	0.00040	0.00005	0.00013	0.00025	0.0048	0.00015	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.77	0.02	1.77	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00012	0.00025	0.0012	0.00015	-	-	-	-	-	-	-	-				
AQF42	0.000005	5.52	0.02	2.25	0.00010	0.00001	0.00005	0.00015	0.00035	0.00005	0.00015	0.00025	0.0051	0.00015	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.30	0.02	1.50	0.00010	0.00001	0.00005	0.00006	0.00050	0.00005	0.00010	0.00025	0.0012	0.00010	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.36	0.02	1.63	0.00010	0.00001	0.00005	0.00030	0.00045	0.00005	0.00011	0.00025	0.0005	0.00010	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.35	0.02	2.02	0.00010	0.00001	0.00005	0.00068	0.00043	0.00005	0.00012	0.00025	0.0088	0.00010	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.43	0.02	1.73	0.00010	0.00001	0.00005	0.00006	0.00045	0.00005	0.00012	0.00025	0.0029	0.00010	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.51	0.02	1.72	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00012	0.00025	0.0005	0.00010	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.45	0.02	1.60	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00011	0.00025	0.0011	0.00010	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.41	0.02	1.56	0.00010	0.00001	0.00005	0.00006	0.00100	0.00090	0.00014	0.00025	0.0032	0.00010	-	-	-	-	-	-	-	-				
AQF42	0.000005	1.60	0.02	1.67	0.00010	0.00001	0.00005	0.00012	0.00058	0.00048	0.00015	0.00025	0.0039	0.00012	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.74	0.02	1.75	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00012	0.00025	0.0011	0.00015	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.75	0.02	1.75	0.00010	0.00001	0.00005	0.00007	0.00023	0.00005	0.00012	0.00025	0.0013	0.00015	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.76	0.02	1.77	0.00010	0.00001	0.00005	0.00009	0.00015	0.00005	0.00012	0.00025	0.0015	0.00015	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.70	0.02	1.76	0.00010	0.00001	0.00005	0.00013	0.00031	0.00005	0.00012	0.00025	0.0023	0.00015	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.32	0.02	1.84	0.00010	0.00001	0.00005	0.00006	0.00043	0.00005	0.00010	0.00025	0.0015	0.00010	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.39	0.02	1.63	0.00010	0.00001	0.00005	0.00006	0.00037	0.00005	0.00011	0.00025	0.0044	0.00010	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.52	0.02	1.71	0.00010	0.00001	0.00005	0.00006	0.00044	0.00005	0.00012	0.00025	0.0013	0.00010	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.45	0.02	1.73	0.00010	0.00001	0.00005	0.00006	0.00057	0.00005	0.00012	0.00025	0.0005	0.00010	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.44	0.02	1.72	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00011	0.00025	0.0005	0.00010	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.45	0.02	1.60	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00011	0.00025	0.0022	0.00010	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.41	0.02	1.56	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00010	0.00025	0.0047	0.00010	-	-	-	-	-	-	-	-				
AQF43	0.000005	1.58	0.02	1.67	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00011	0.00025	0.0029	0.00012	-	-	-	-	-	-	-	-				
AQF44	0.000005	1.78	0.02	1.75	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00012	0.00025	0.0038	0.00015	-	-	-	-	-	-	-	-				
AQF44	0.000005	1.78	0.02	1.75	0.00010	0.00001	0.00005	0.00009	0.00023	0.00005	0.00012	0.00025	0.0031	0.00015	-	-	-	-	-	-	-	-				
AQF44	0.000005	1.79	0.02	1.77	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00012	0.00025	0.0023	0.00015	-	-	-	-	-	-	-	-				
AQF44	0.000005	2.16	0.02	1.76	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00012	0.00025	0.0028	0.00015	-	-	-	-	-	-	-	-				
AQF44	0.000005	1.29	0.02	1.50	0.00010	0.00001	0.00005	0.00006	0.00046	0.00005	0.00010	0.00025	0.0005	0.00010	-	-	-	-	-	-	-	-				
AQF44	0.000005	1.39	0.02	1.63	0.00010	0.00001	0.00005	0.00019	0.00040	0.00005	0.00011	0.00025	0.0032													

90th Hughes monthly flow rate, 10th percentile mixed pit concentrations

		Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	
Month	Site	D_Oxygen_percent_ field mg/L	D_Oxygen_percent_ field %	ORP_field mV	pH_field pH	Specific_Conducta nce_field uS/cm	TDS_field mg/L	Temp_field C	Turbidity_ field NTU	Acidity(CaCO 3) mg/L	Alkalinity(CaCO 3)_bicarbonate mg/L	Alkalinity(CaCO 3)_carbonate mg/L	Alkalinity(CaC O3)_hydroxide mg/L	Alkalinity(CaC O3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbo nate mg/L	(HCO3)_bicarbo nate mg/L	(OH)_hydroxi de mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(CaC O3)_D mg/L	Hardness(CaC O3)_T mg/L	pH pH	TDS_T mg/L
1	AQF40	10.0	68.4	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-
2	AQF40	10.8	74.4	-	-	-	-	-	-	-	-	-	-	-	11.6	-	-	-	-	-	-	-	-	-
3	AQF40	11.7	80.4	-	-	-	-	0.2	-	-	-	-	-	-	11.3	0.5	18.3	0.49	-	-	-	17.1	-	-
4	AQF40	20.2	140.4	-	-	-	-	0.6	-	-	-	-	-	-	14.1	0.4	16.2	0.33	35.9	-	-	15.0	-	-
5	AQF40	12.5	94.9	-	-	-	-	3.9	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.5	-	-
6	AQF40	9.0	90.9	-	-	-	-	15.4	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.2	-	-
7	AQF40	6.8	72.4	-	-	-	-	18.8	-	-	-	-	-	-	10.5	0.3	12.9	0.17	-	-	-	12.0	-	-
8	AQF40	6.1	67.0	-	-	-	-	20.0	-	-	-	-	-	-	11.4	0.3	13.9	0.17	-	-	-	11.3	-	-
9	AQF40	8.0	79.3	-	-	-	-	13.7	-	-	-	-	-	-	11.6	0.3	14.1	0.17	-	-	-	11.6	-	-
10	AQF40	12.0	90.6	-	-	-	-	3.6	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	12.9	-	-
11	AQF40	10.4	71.4	-	-	-	-	0.3	-	-	-	-	-	-	13.4	0.3	16.4	0.17	-	-	-	13.4	-	-
12	AQF40	10.2	69.8	-	-	-	-	0.2	-	-	-	-	-	-	12.7	-	-	-	-	-	-	-	-	-
1	AQF42	10.5	71.9	-	-	-	-	0.2	-	-	-	-	-	-	13.6	-	-	-	-	-	-	-	-	-
2	AQF42	12.1	82.0	-	-	-	-	0.2	-	-	-	-	-	-	9.8	-	-	-	-	-	-	17.6	-	-
3	AQF42	10.5	71.8	-	-	-	-	0.2	-	-	-	-	-	-	17.4	0.5	21.2	0.49	-	-	-	17.3	-	-
4	AQF42	15.6	107.9	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.4	16.9	0.33	35.5	-	-	14.6	-	-
5	AQF42	13.8	133.6	-	-	-	-	4.4	-	-	-	-	-	-	10.0	0.3	12.1	0.17	-	-	-	11.5	-	-
6	AQF42	10.4	103.6	-	-	-	-	15.3	-	-	-	-	-	-	9.1	0.3	11.1	0.17	-	-	-	10.5	-	-
7	AQF42	8.0	87.4	-	-	-	-	19.0	-	-	-	-	-	-	11.0	0.3	13.4	0.17	-	-	-	11.0	-	-
8	AQF42	7.9	85.3	-	-	-	-	18.6	-	-	-	-	-	-	11.4	0.3	13.9	0.17	-	-	-	11.4	-	-
9	AQF42	8.5	82.9	-	-	-	-	14.1	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.3	-	-
10	AQF42	11.4	96.2	-	-	-	-	3.7	-	-	-	-	-	-	11.9	0.3	14.6	0.17	-	-	-	12.7	-	-
11	AQF42	11.7	80.3	-	-	-	-	0.3	-	-	-	-	-	-	13.9	0.3	17.0	0.17	-	-	-	14.1	-	-
12	AQF42	11.1	76.1	-	-	-	-	0.2	-	-	-	-	-	-	13.9	-	-	-	-	-	-	-	-	-
1	AQF43	13.3	91.4	-	-	-	-	-	-	-	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-
2	AQF43	13.5	92.3	-	-	-	-	-	-	-	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-
3	AQF43	13.7	93.3	-	-	-	-	0.2	-	-	-	-	-	-	14.0	0.5	18.3	0.49	-	-	-	16.9	-	-
4	AQF43	17.0	116.7	-	-	-	-	0.3	-	-	-	-	-	-	14.2	0.4	16.8	0.33	35.7	-	-	15.0	-	-
5	AQF43	16.9	137.6	-	-	-	-	5.9	-	-	-	-	-	-	12.2	0.3	14.8	0.17	-	-	-	12.6	-	-
6	AQF43	10.4	104.6	-	-	-	-	15.7	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.7	-	-
7	AQF43	8.2	89.7	-	-	-	-	19.5	-	-	-	-	-	-	9.4	0.3	11.5	0.17	-	-	-	11.3	-	-
8	AQF43	8.2	89.9	-	-	-	-	19.6	-	-	-	-	-	-	12.4	0.3	15.0	0.17	-	-	-	12.0	-	-
9	AQF43	9.1	85.8	-	-	-	-	13.0	-	-	-	-	-	-	12.0	0.3	14.6	0.17	-	-	-	12.1	-	-
10	AQF43	12.8	95.1	-	-	-	-	3.0	-	-	-	-	-	-	11.7	0.3	14.3	0.17	-	-	-	12.7	-	-
11	AQF43	14.3	98.2	-	-	-	-	-	-	-	-	-	-	-	13.5	0.3	16.5	0.17	-	-	-	13.7	-	-
12	AQF43	13.8	94.8	-	-	-	-	-	-	-	-	-	-	-	14.0	-	-	-	-	-	-	14.5	-	-
1	AQF44	11.2	76.9	-	-	-	-	0.2	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-
2	AQF44	12.4	84.4	-	-	-	-	0.2	-	-	-	-	-	-	15.7	-	-	-	-	-	-	-	-	-
3	AQF44	13.6	91.9	-	-	-	-	0.2	-	-	-	-	-	-	19.1	0.5	26.4	0.49	-	-	-	17.6	-	-
4	AQF44	19.4	133.5	-	-	-	-	0.2	-	-	-	-	-	-	14.7	0.4	20.1	0.33	37.3	-	-	15.2	-	-
5	AQF44	14.3	132.6	-	-	-	-	6.2	-	-	-	-	-	-	10.9	0.3	13.2	0.17	-	-	-	12.3	-	-
6	AQF44	10.6	105.6	-	-	-	-	15.6	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.0	-	-
7	AQF44	8.6	94.1	-	-	-	-	19.8	-	-	-	-	-	-	9.6	0.3	11.7	0.17	-	-	-	11.2	-	-
8	AQF44	8.2	89.0	-	-	-	-	19.3	-	-	-	-	-	-	12.3	0.3	14.9	0.17	-	-	-	12.1	-	-
9	AQF44	9.2	84.5	-	-	-	-	11.8	-	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.8	-	-
10	AQF44	12.2	90.1	-	-	-	-	2.6	-	-	-	-	-	-	12.5	0.3	15.3	0.17	-	-	-	13.5	-	-
11	AQF44	12.5	85.7	-	-	-	-	0.2	-	-	-	-	-	-	15.6	0.3	19.0	0.17	-	-	-	15.1	-	-
12	AQF44	11.8	81.2	-	-	-	-	0.2	-	-	-	-	-	-	13.9	-	-	-	-	-	-	-	-	-
1	AQF45	12.9	88.1	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-
2	AQF45	13.2	90.3	-	-	-	-	-	-	-	-	-	-	-	14.5	-	-	-	-	-	-	-	-	-
3	AQF45	13.6	92.6	-	-	-	-	0.2	-	-	-	-	-	-	13.7	0.5	19.4	0.49	-	-	-	19.3	-	-
4	AQF45	19.0	135.5	-	-	-	-	0.5	-	-	-	-	-	-	15.4	0.4	16.5	0.33	40.7	-	-	16.2	-	-
5	AQF45	14.4	116.7	-	-	-	-	7.7	-	-	-	-	-	-	10.8	0.3	13.1	0.17	-	-	-	12.8	-	-
6	AQF45	9.6	97.5	-	-	-	-	15.0	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.3	-	-
7	AQF45	6.9	74.5	-	-	-	-	18.9	-	-	-	-	-	-	10.2	0.3	12.5	0.17	-	-	-	11.7	-	-
8	AQF45	7.7	82.5	-	-	-	-	18.9	-	-	-	-	-	-	12.6	0.3	15.3	0.17	-	-	-	12.6	-	-
9	AQF45	8.7	83.7	-	-	-	-	13.7	-	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.8	-	-
10	AQF45																							

90th Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Met al	Total_Metal	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al
Site	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite_nitrat e(N) mg/L	Nitrogen(TKN) mg/L	Phosphorus_ D mg/L	Phosphorus_ T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum _T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_ T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_ T mg/L	Chromium VI_T mg/L	Cobalt_T mg/L	Copper_T mg/L		
AQF40	-	10.1	-	-	0.095	0.072	0.005	0.071	-	-	0.025	0.050	1.580	0.070	5.3	0.038	0.000108758	0.00032	0.00725	0.000011	0.000025	0.00584	0.000008	4.94956	0.000010	0.00025	-	0.000053	0.00063		
AQF40	-	9.9	-	-	0.060	0.089	0.005	-	-	-	0.021	0.050	1.080	0.072	6.9	0.036	0.000118473	0.00031	0.00740	0.000011	0.000025	0.00588	0.000005	5.20218	0.000010	0.00025	-	0.000053	0.00044		
AQF40	-	9.6	-	-	0.025	0.106	0.005	-	-	-	0.018	0.050	0.577	0.075	8.4	0.034	0.000128235	0.00030	0.00752	0.000011	0.000025	0.00589	0.000003	5.37003	0.000011	0.00025	-	0.000053	0.00025		
AQF40	-	9.1	-	-	0.007	0.099	0.001	-	-	-	0.025	0.006	0.325	0.077	3.3	0.034	0.00005	0.00030	0.00691	0.000011	0.000025	0.00557	0.000009	4.34520	0.000009	0.00025	-	0.000052	0.00025		
AQF40	-	8.7	-	-	0.006	0.038	0.001	0.044	-	-	0.023	0.050	0.273	0.064	1.4	0.055	0.00005	0.00022	0.00608	0.000050	0.000025	0.00516	0.000003	3.51663	0.000006	0.00022	-	0.000051	0.00025		
AQF40	-	9.9	-	-	0.006	0.010	0.005	0.035	-	-	0.015	0.050	0.276	0.056	1.5	0.062	0.00005	0.00020	0.00618	0.000050	0.000025	0.00523	0.000005	3.48588	0.000006	0.00020	-	0.000051	0.00025		
AQF40	-	8.8	-	-	0.012	0.003	0.001	0.220	-	-	0.012	0.050	0.250	0.063	1.9	0.049	0.00005	0.00022	0.00642	0.000050	0.000025	0.00531	0.000003	3.58532	0.000007	0.00016	-	0.000051	0.00025		
AQF40	-	9.2	-	-	0.020	0.003	0.001	0.003	-	-	0.015	0.050	0.205	0.065	1.9	0.034	0.00005	0.00023	0.00542	0.000050	0.000025	0.00530	0.000003	3.27278	0.000007	0.00014	-	0.000051	0.00025		
AQF40	-	9.0	-	-	0.023	0.003	0.001	0.003	-	-	0.012	0.050	0.238	0.063	2.2	0.045	0.00005	0.00024	0.00634	0.000050	0.000025	0.00533	0.000003	3.72359	0.000007	0.00013	-	0.000051	0.00025		
AQF40	-	8.8	-	-	0.015	0.026	0.001	0.038	-	-	0.020	0.050	0.274	0.064	2.4	0.054	0.00005	0.00023	0.00545	0.000050	0.000025	0.00539	0.000003	3.85329	0.000007	0.00025	-	0.000051	0.00025		
AQF40	-	10.1	-	-	0.015	0.025	0.001	0.024	-	-	0.019	0.050	0.277	0.062	3.2	0.081	0.00005	0.00027	0.00864	0.000050	0.000025	0.00558	0.000012	4.36696	0.000009	0.00030	-	0.000052	0.00066		
AQF40	-	10.1	-	-	0.055	0.048	0.003	0.048	-	-	0.022	0.050	0.934	0.066	4.4	0.059	7.94469E-05	0.00030	0.00796	0.000030	0.000025	0.00575	0.000010	4.73394	0.000010	0.00027	-	0.000053	0.00065		
AQF42	-	9.8	-	-	0.051	0.068	0.005	0.067	-	-	0.025	0.050	0.689	0.073	5.1	0.051	0.000226273	0.00032	0.00813	0.000011	0.000025	0.00584	0.000003	5.27273	0.000010	0.00025	-	0.000053	0.00025		
AQF42	-	10.0	-	-	0.036	0.120	0.005	-	-	-	0.025	0.050	0.654	0.072	13.5	0.066	0.000284764	0.00035	0.00881	0.000011	0.000025	0.00588	0.000011	5.49563	0.000010	0.00025	-	0.000053	0.00097		
AQF42	-	10.3	-	-	0.056	0.111	0.005	-	-	-	0.025	0.050	0.528	0.075	4.9	0.122	0.00005	0.00033	0.00946	0.000011	0.000025	0.00589	0.000003	5.37981	0.000023	0.00050	-	0.000122	0.00445		
AQF42	-	9.6	-	-	0.014	0.096	0.001	-	-	-	0.030	0.006	0.325	0.074	3.3	0.038	0.00005	0.00031	0.00778	0.000011	0.000025	0.00557	0.000010	4.49309	0.000009	0.00025	-	0.000052	0.00092		
AQF42	-	9.6	-	-	0.006	0.039	0.001	0.039	-	-	0.015	0.050	0.288	0.063	1.3	0.054	0.00005	0.00025	0.00595	0.000050	0.000025	0.00516	0.000003	3.17795	0.000006	0.00017	-	0.000051	0.00025		
AQF42	-	9.4	-	-	0.006	0.010	0.005	0.035	-	-	0.016	0.050	0.276	0.056	1.5	0.059	0.00005	0.00019	0.00615	0.000050	0.000025	0.00523	0.000003	3.33673	0.000006	0.00024	-	0.000051	0.00025		
AQF42	-	9.1	-	-	0.023	0.003	0.001	0.003	-	-	0.015	0.050	0.345	0.060	1.9	0.048	0.00005	0.00021	0.00593	0.000050	0.000025	0.00531	0.000007	3.21811	0.000007	0.00126	-	0.000051	0.00062		
AQF42	-	9.3	-	-	0.044	0.003	0.001	0.003	-	-	0.014	0.050	0.205	0.064	1.9	0.037	0.00005	0.00025	0.00566	0.000050	0.000025	0.00530	0.000003	3.49113	0.000007	0.00015	-	0.000051	0.00025		
AQF42	-	9.1	-	-	0.006	0.007	0.001	0.007	-	-	0.015	0.050	0.317	0.063	2.0	0.040	0.00005	0.00024	0.00617	0.000050	0.000025	0.00533	0.000003	3.74343	0.000007	0.00014	-	0.000051	0.00025		
AQF42	-	9.9	-	-	0.007	0.019	0.001	0.019	-	-	0.015	0.050	0.254	0.062	2.3	0.042	0.00005	0.00024	0.00563	0.000050	0.000025	0.00539	0.000003	3.87310	0.000007	0.00014	-	0.000051	0.00025		
AQF42	-	9.5	-	-	0.021	0.025	0.001	0.025	-	-	0.015	0.050	0.346	0.062	3.4	0.156	0.000128846	0.00029	0.01464	0.000050	0.000025	0.00558	0.000030	4.54436	0.000022	0.00075	-	0.000121	0.00090		
AQF42	-	9.7	-	-	0.036	0.047	0.003	0.046	-	-	0.020	0.050	0.522	0.067	4.4	0.103	0.000177603	0.00031	0.01137	0.000030	0.000025	0.00575	0.000016	4.98915	0.000017	0.00050	-	0.000087	0.00057		
AQF43	-	10.0	-	-	0.024	0.065	0.005	0.064	-	-	0.025	0.050	0.346	0.071	4.5	0.039	0.00005	0.00028	0.00701	0.000011	0.000025	0.00584	0.000003	5.11604	0.000010	0.00025	-	0.000053	0.00025		
AQF43	-	9.6	-	-	0.018	0.088	0.005	-	-	-	0.021	0.050	0.349	0.073	5.1	0.037	0.00005	0.00029	0.00719	0.000011	0.000025	0.00588	0.000003	5.24131	0.000010	0.00025	-	0.000053	0.00025		
AQF43	-	9.1	-	-	0.012	0.112	0.005	-	-	-	0.018	0.050	0.347	0.074	5.5	0.035	0.00005	0.00029	0.00735	0.000011	0.000025	0.00589	0.000003	5.30158	0.000011	0.00025	-	0.000053	0.00025		
AQF43	-	9.1	-	-	0.007	0.097	0.001	-	-	-	0.012	0.006	0.305	0.077	3.3	0.036	0.00005	0.00030	0.00708	0.000011	0.000025	0.00557	0.000008	4.47337	0.000009	0.00025	-	0.000052	0.00025		
AQF43	-	9.9	-	-	0.006	0.032	0.001	0.032	-	-	0.031	0.050	0.338	0.063	1.3	0.060	0.00005	0.00025	0.00605	0.000050	0.000025	0.00516	0.000003	3.54651	0.000006	0.00018	-	0.000051	0.00025		
AQF43	-	8.8	-	-	0.006	0.010	0.005	0.035	-	-	0.015	0.050	0.276	0.057	1.6	0.068	0.00005	0.00019	0.00610	0.000050	0.000025	0.00523	0.000003	3.39639	0.000006	0.00026	-	0.000051	0.00025		
AQF43	-	9.2	-	-	0.031	0.003	0.001	0.003	-	-	0.015	0.050	0.206	0.061	1.9	0.058	0.00005	0.00023	0.00590	0.000050	0.000025	0.00531	0.000003	3.33721	0.000007	0.00015	-	0.000051	0.00025		
AQF43	-	9.2	-	-	0.015	0.009	0.001	0.009	-	-	0.016	0.050	0.215	0.066	1.9	0.047	0.00005	0.00027	0.00566	0.000050	0.000025	0.00530	0.000003	3.69955	0.000007	0.00025	-	0.000051	0.00025		
AQF43	-	9.1	-	-	0.026	0.003	0.001	0.003	-	-	0.015	0.050	0.228	0.063	2.0	0.049	0.00005	0.00023	0.00632	0.000050	0.000025	0.00533	0.000003	3.75335	0.000007	0.00017	-	0.000051	0.00025		
AQF43	-	9.3	-	-	0.007	0.020	0.001	0.020	-	-	0.015	0.050	0.245	0.063	2.3	0.067	0.00005	0.00024	0.00561	0.000050	0.000025	0.00539	0.000003	3.95234	0.000007	0.00023	-	0.000051	0.00025		
AQF43	-	9.9	-	-	0.033	0.027	0.001	0.027	-	-	0.015	0.050	0.277	0.063	3.2	0.040	0.00005	0.00024	0.00564	0.000050	0.000025	0.00558	0.000003	4.37681	0.000009	0.00016	-	0.000052	0.00025		
AQF43	-	9.9	-	-	0.029	0.046	0.003	0.046	-	-	0.020	0.050	0.316	0.067	4.0	0.039	0.00005	0.00026	0.00635	0.000030	0.000025	0.00575	0.000003	4.82228	0.000010	0.00020	-	0.000053	0.00025		
AQF44	-	10.1	-	-	0.141	0.074	0.005	0.073	-	-	0.025	0.050	1.776	0.069	5.5	0.040	0.00005	0.00029	0.00725	0.000011	0.000025	0.00584	0.000019	5.28252	0.000010	0.00025	-	0.000053	0.00050		
AQF44	-	9.8	-	-	0.079	0.091	0.005	-	-	-	0.018	0.050	1.789	0.071	7.1	0.038	0.00005	0.00030	0.00735	0.000011	0.000025	0.00588	0.000011	5.42716	0.000010	0.00025	-	0.000053	0.00038		
AQF44	-	9.5	-	-	0.017	0.109	0.005	-	-	-	0.010	0.050	1.809	0.073	8.5	0.037	0.00005	0.00030	0.00742	0.000011	0.000025	0.00589	0.000003	5.49716	0.000011	0.00025	-	0.000053	0.00025		
AQF44	-	9.5	-	-	0.007	0.098</																									

90th Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

Site	Total_Met	Total_Met	Total_Met	Total_Met	Total_Met	Total_Met			Total_Met	Total_Met	Total_Met	Total_Met										Total_Met	Total_Met	Total_Met			Total_Met	Dissolved_Met			Dissolved_Met	Dissolved_Met
	al	al	al	al	al	Total_Met	al	al	al	Total_Met	Total_Met	Total_Met	Total_Met	Total_Met	Total_Met	I	Total_Met	Total_Met	al	al	Total_Met	Total_Met	Total_Met	I	al	Total_Met	I	I	I			
	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesium m_T mg/L	Manganese e_T mg/L	Mercury_T mg/L	Molybden um_T mg/L	Nickel_T mg/L	Potassium _T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_ T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L			
AQF40	0.29	0.00007	0.00119	1.4	0.028	0.000003	0.00013	0.00025	0.71	0.0012	0.000065	3.2	0.000005	1.7	0.020	1.5	0.00010	0.000005	0.00005	0.00036	0.0012	0.0001	0.0001	0.0003	0.0053	0.0001	0.0201	0.0001	0.0002			
AQF40	0.30	0.00005	0.00128	1.5	0.029	0.000002	0.00010	0.00025	0.74	0.0012	0.000045	3.3	0.000005	1.7	0.020	2.0	0.00010	0.000005	0.00005	0.00033	0.0010	0.0001	0.0001	0.0003	0.0057	0.0002	0.0206	0.0001	0.0002			
AQF40	0.30	0.00003	0.00135	1.5	0.029	0.000002	0.00007	0.00025	0.76	0.0012	0.000025	3.5	0.000005	1.7	0.020	2.5	0.00010	0.000005	0.00005	0.00030	0.0008	0.0001	0.0001	0.0003	0.0060	0.0002	0.0212	0.0001	0.0003			
AQF40	0.28	0.00003	0.00116	1.3	0.024	0.000002	0.00007	0.00025	0.69	0.0012	0.000130	3.1	0.000005	1.5	0.018	1.1	0.00010	0.000005	0.00005	0.00006	0.0008	0.0001	0.0001	0.0003	0.0015	0.0001	0.0203	0.0001	0.0002			
AQF40	0.31	0.00003	0.00087	1.0	0.039	0.000002	0.00006	0.00025	0.63	0.0011	0.000025	2.4	0.000005	1.2	0.015	0.5	0.00010	0.000005	0.00005	0.00010	0.0016	0.0001	0.0000	0.0003	0.0015	0.0001	0.0366	0.0001	0.0002			
AQF40	0.35	0.00006	0.00152	0.9	0.028	0.000002	0.00008	0.00025	0.57	0.0010	0.000025	2.0	0.000005	1.1	0.012	0.6	0.00010	0.000005	0.00005	0.00024	0.0015	0.0001	0.0000	0.0003	0.0049	0.0001	0.0357	0.0001	0.0002			
AQF40	0.20	0.00015	0.00084	1.0	0.026	0.000001	0.00010	0.00025	0.62	0.0012	0.000025	2.1	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00005	0.0014	0.0001	0.0001	0.0003	0.0015	0.0001	0.0266	0.0001	0.0002			
AQF40	0.21	0.00003	0.00054	0.9	0.020	0.000002	0.00007	0.00025	0.54	0.0011	0.000025	2.1	0.000005	1.3	0.014	0.7	0.00010	0.000005	0.00005	0.00005	0.0009	0.0001	0.0000	0.0003	0.0044	0.0001	0.0203	0.0001	0.0002			
AQF40	0.19	0.00003	0.00114	1.1	0.018	0.000003	0.00011	0.00025	0.57	0.0011	0.000025	2.4	0.000005	1.2	0.015	0.8	0.00010	0.000005	0.00005	0.00013	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0316	0.0001	0.0002			
AQF40	0.27	0.00004	0.00119	1.1	0.025	0.000001	0.00012	0.00053	0.59	0.0011	0.000025	2.4	0.000005	1.3	0.015	0.8	0.00010	0.000005	0.00005	0.00005	0.0017	0.0001	0.0001	0.0003	0.0015	0.0001	0.0228	0.0001	0.0002			
AQF40	0.31	0.00010	0.00057	1.3	0.032	0.000003	0.00011	0.00025	0.64	0.0012	0.000025	2.8	0.000005	1.3	0.017	1.1	0.00010	0.000005	0.00005	0.00006	0.0039	0.0001	0.0001	0.0003	0.0046	0.0001	0.0220	0.0001	0.0002			
AQF40	0.30	0.00009	0.00089	1.4	0.031	0.000003	0.00012	0.00025	0.68	0.0012	0.000045	3.0	0.000005	1.5	0.018	1.4	0.00010	0.000005	0.00005	0.00021	0.0025	0.0001	0.0001	0.0003	0.0049	0.0001	0.0210	0.0001	0.0002			
AQF42	0.33	0.00003	0.00129	1.5	0.031	0.000003	0.00010	0.00025	0.72	0.0012	0.000059	3.4	0.000005	1.8	0.020	1.8	0.00010	0.000005	0.00005	0.00054	0.0017	0.0001	0.0001	0.0003	0.0039	0.0001	0.0203	0.0001	0.0003			
AQF42	0.37	0.00008	0.00130	1.5	0.039	0.000001	0.00008	0.00025	0.86	0.0013	0.000025	3.5	0.000005	1.8	0.021	9.7	0.00010	0.000005	0.00005	0.00205	0.0022	0.0001	0.0001	0.0003	0.0251	0.0001	0.0236	0.0001	0.0003			
AQF42	0.59	0.00009	0.00139	1.5	0.068	0.000003	0.00008	0.00079	0.78	0.0014	0.000025	3.7	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00006	0.0058	0.0001	0.0001	0.0003	0.0053	0.0001	0.0352	0.0001	0.0003			
AQF42	0.30	0.00007	0.00116	1.3	0.027	0.000003	0.00009	0.00025	0.70	0.0011	0.000130	3.0	0.000005	1.5	0.018	1.1	0.00010	0.000005	0.00005	0.00006	0.0012	0.0001	0.0001	0.0003	0.0032	0.0001	0.0237	0.0001	0.0002			
AQF42	0.49	0.00003	0.00112	0.9	0.069	0.000003	0.00009	0.00025	0.56	0.0010	0.000025	2.3	0.000005	1.1	0.013	0.5	0.00010	0.000005	0.00005	0.00026	0.0015	0.0001	0.0000	0.0003	0.0015	0.0001	0.0332	0.0001	0.0002			
AQF42	0.36	0.00006	0.00152	0.9	0.020	0.000002	0.00020	0.00025	0.55	0.0010	0.000025	2.1	0.000005	1.1	0.012	0.6	0.00010	0.000005	0.00005	0.00028	0.0017	0.0001	0.0000	0.0003	0.0015	0.0001	0.0339	0.0001	0.0002			
AQF42	0.25	0.00003	0.00054	1.0	0.024	0.000002	0.00009	0.00025	0.54	0.0011	0.000025	2.1	0.000005	1.2	0.013	0.7	0.00010	0.000005	0.00005	0.00041	0.0012	0.0001	0.0000	0.0003	0.0060	0.0001	0.0253	0.0001	0.0002			
AQF42	0.22	0.00003	0.00054	1.0	0.023	0.000002	0.00008	0.00025	0.56	0.0011	0.000051	2.4	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00005	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0214	0.0001	0.0002			
AQF42	0.18	0.00003	0.00054	1.1	0.017	0.000003	0.00010	0.00025	0.57	0.0011	0.000025	2.3	0.000005	1.3	0.015	0.8	0.00010	0.000005	0.00005	0.00005	0.0008	0.0001	0.0001	0.0003	0.0031	0.0001	0.0245	0.0001	0.0002			
AQF42	0.24	0.00003	0.00114	1.1	0.022	0.000001	0.00011	0.00025	0.58	0.0011	0.000025	2.6	0.000005	1.3	0.015	0.8	0.00010	0.000005	0.00005	0.00005	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0190	0.0001	0.0002			
AQF42	0.43	0.00014	0.00116	1.3	0.085	0.000003	0.00014	0.00025	0.67	0.0013	0.000025	2.8	0.000005	1.4	0.018	1.1	0.00010	0.000005	0.00005	0.00017	0.0078	0.0001	0.0001	0.0003	0.0044	0.0001	0.0315	0.0001	0.0002			
AQF42	0.38	0.00008	0.00123	1.4	0.059	0.000003	0.00012	0.00025	0.70	0.0013	0.000042	3.1	0.000005	1.6	0.019	1.5	0.00010	0.000005	0.00005	0.00036	0.0047	0.0001	0.0001	0.0003	0.0042	0.0001	0.0258	0.0001	0.0002			
AQF43	0.29	0.00003	0.00129	1.5	0.027	0.000003	0.00008	0.00025	0.68	0.0011	0.000025	3.4	0.000005	1.7	0.020	1.5	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0001	0.0003	0.0015	0.0001	0.0208	0.0001	0.0002			
AQF43	0.30	0.00003	0.00130	1.5	0.028	0.000002	0.00006	0.00025	0.71	0.0012	0.000025	3.4	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0001	0.0003	0.0020	0.0001	0.0204	0.0001	0.0002			
AQF43	0.31	0.00003	0.00130	1.5	0.029	0.000002	0.00005	0.00025	0.73	0.0012	0.000025	3.5	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0001	0.0003	0.0024	0.0001	0.0199	0.0001	0.0003			
AQF43	0.29	0.00003	0.00116	1.3	0.026	0.000002	0.00008	0.00025	0.68	0.0012	0.000091	3.0	0.000005	1.5	0.018	1.1	0.00010	0.000005	0.00005	0.00006	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0195	0.0001	0.0002			
AQF43	0.36	0.00007	0.00152	1.0	0.032	0.000003	0.00011	0.00025	0.57	0.0010	0.000025	2.3	0.000005	1.1	0.014	0.5	0.00010	0.000005	0.00005	0.00005	0.0018	0.0001	0.0000	0.0003	0.0047	0.0001	0.0299	0.0001	0.0002			
AQF43	0.32	0.00003	0.00152	1.0	0.021	0.000002	0.00005	0.00058	0.57	0.0010	0.000025	2.1	0.000005	1.2	0.013	0.6	0.00010	0.000005	0.00005	0.00005	0.0018	0.0001	0.0000	0.0009	0.0015	0.0003	0.0309	0.0001	0.0002			
AQF43	0.26	0.00003	0.00054	1.0	0.028	0.000001	0.00008	0.00025	0.56	0.0011	0.000057	2.2	0.000005	1.2	0.013	0.7	0.00010	0.000005	0.00005	0.00005	0.0014	0.0001	0.0000	0.0003	0.0015	0.0001	0.0290	0.0001	0.0002			
AQF43	0.22	0.00003	0.00054	1.1	0.027	0.000002	0.00011	0.00067	0.58	0.0011	0.000025	2.3	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00005	0.0015	0.0001	0.0001	0.0003	0.0049	0.0001	0.0228	0.0001	0.0002			
AQF43	0.20	0.00003	0.00114	1.1	0.021	0.000003	0.00011	0.00025	0.55	0.0011	0.000118	2.4	0.000005	1.2	0.015	0.8	0.00030	0.000005	0.00005	0.00005	0.0013	0.0001	0.0001	0.0003	0.0015	0.0001	0.0269	0.0001	0.0002			
AQF43	0.27	0.00003	0.00114	1.2	0.023	0.000001	0.00014	0.00025	0.60	0.0011	0.000057	2.7	0.000005	1.3	0.015	0.8	0.00010	0.000005	0.00005	0.00005	0.0022	0.0001	0.0001	0.0003	0.0015	0.0001	0.0213	0.0001	0.0002			
AQF43	0.22	0.00003	0.00057	1.3	0.022	0.000003	0.00010	0.00025	0.63	0.0011	0.000053	2.9	0.000005	1.4	0.017	1.1	0.00010	0.000005	0.00005	0.00006	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0179	0.0001	0.0002			
AQF43	0.25	0.00003	0.00094	1.4	0.025	0.000003	0.00009	0.00025	0.66	0.0011	0.000039	3.1	0.000005	1.5																		

90th Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	
	I	I	Dissolved_Metal	I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	I	Dissolved_Metal	I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	al	al	Dissolved_Metal	al	Dissolved_Metal	I	
Site	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L
AQF40	0.0130	1.08E-05	0.000025	0.0059	0.0000025	4.87	1.02E-05	0.00025	5.4E-05	0.0027	0.16	0.00013	0.0013	1.44	0.0236	-	0.00009	0.00025	0.72	0.0011	0.000025	3.14
AQF40	0.0135	1.09E-05	0.000025	0.0060	0.0000025	5.00	1.05E-05	0.00025	5.4E-05	0.0020	0.17	0.00009	0.0011	1.47	0.0251	-	0.00010	0.00025	0.72	0.0011	0.000033	3.15
AQF40	0.0140	1.09E-05	0.000025	0.0060	0.0000025	5.06	1.06E-05	0.00025	5.4E-05	0.0012	0.19	0.00005	0.0010	1.48	0.0258	0.0000010	0.00012	0.00025	0.71	0.0011	0.000041	3.16
AQF40	0.0197	1.06E-05	0.000025	0.0056	1.03876E-05	4.26	8.55E-06	0.00025	5.2E-05	0.0020	0.18	0.00010	0.0012	1.26	0.0214	0.0000014	0.00006	0.00025	0.77	0.0012	0.000025	3.05
AQF40	0.0064	5.00E-05	0.000025	0.0052	0.0000025	3.49	5.98E-06	0.00010	5.1E-05	0.0006	0.21	0.00003	0.0011	1.02	0.0289	0.0000019	0.00013	0.00025	0.62	0.0010	0.000025	2.43
AQF40	0.0055	5.00E-05	0.000025	0.0053	0.0000025	3.24	6.42E-06	0.00013	5.1E-05	0.0003	0.18	0.00003	0.0005	0.92	0.0082	0.0000018	0.00008	0.00025	0.57	0.0009	0.000025	1.99
AQF40	0.0055	5.00E-05	0.000025	0.0053	5.17959E-06	3.51	6.91E-06	0.00011	5.1E-05	0.0003	0.11	0.00007	0.0009	1.00	0.0114	0.0000012	0.00011	0.00025	0.60	0.0011	0.000025	1.92
AQF40	0.0049	5.00E-05	0.000025	0.0053	0.0000025	3.25	6.89E-06	0.00012	5.1E-05	0.0003	0.15	0.00003	0.0005	0.97	0.0114	-	0.00010	0.00025	0.55	0.0010	0.000052	2.07
AQF40	0.0060	5.00E-05	0.000025	0.0054	0.0000025	3.41	7.05E-06	0.00022	5.1E-05	0.0026	0.13	0.00015	0.0005	0.97	0.0128	-	0.00014	0.00025	0.55	0.0011	0.000052	2.25
AQF40	0.0083	5.00E-05	0.000025	0.0054	0.0000025	3.74	7.40E-06	0.00008	5.2E-05	0.0016	0.14	0.00007	0.0008	1.11	0.0114	0.0000010	0.00010	0.00025	0.56	0.0010	0.000042	2.32
AQF40	0.0051	5.00E-05	0.000025	0.0056	0.0000025	4.08	8.64E-06	0.00015	5.2E-05	0.0050	0.14	0.00018	0.0006	1.18	0.0165	-	0.00010	0.00025	0.62	0.0010	0.000025	2.45
AQF40	0.0091	3.04E-05	0.000025	0.0058	0.0000025	4.55	9.65E-06	0.00020	5.3E-05	0.0038	0.15	0.00015	0.0009	1.33	0.0208	-	0.00009	0.00025	0.68	0.0011	0.000025	2.80
AQF42	0.0136	1.08E-05	0.000025	0.0059	0.0000025	4.85	1.02E-05	0.00025	5.4E-05	0.0032	0.18	0.00015	0.0013	1.46	0.0249	-	0.00011	0.00025	0.72	0.0012	0.000025	3.11
AQF42	0.0206	1.09E-05	0.000025	0.0060	0.0000025	5.17	1.05E-05	0.00025	5.4E-05	0.0019	0.20	0.00008	0.0006	1.55	0.0323	0.0000003	0.00008	0.00025	0.89	0.0012	0.000025	3.30
AQF42	0.0086	1.09E-05	0.000025	0.0060	0.0000025	5.15	1.06E-05	0.00025	5.4E-05	0.0004	0.22	0.00003	0.0014	1.48	0.0292	-	0.00008	0.00025	0.70	0.0012	0.000063	3.22
AQF42	0.0193	1.06E-05	0.000025	0.0056	1.18665E-05	4.33	8.55E-06	0.00025	5.2E-05	0.0025	0.19	0.00009	0.0013	1.27	0.0240	-	0.00008	0.00025	0.71	0.0011	0.000025	2.98
AQF42	0.0057	5.00E-05	0.000025	0.0052	0.0000025	3.20	5.98E-06	0.00014	5.1E-05	0.0007	0.30	0.00003	0.0005	0.96	0.0475	0.0000016	0.00009	0.00025	0.57	0.0010	0.000025	2.44
AQF42	0.0057	5.00E-05	0.000025	0.0053	0.0000025	3.04	6.42E-06	0.00013	5.1E-05	0.0003	0.18	0.00003	0.0005	0.86	0.0068	0.0000016	0.00008	0.00025	0.59	0.0009	0.000025	2.00
AQF42	0.0056	5.00E-05	0.000025	0.0053	0.0000025	3.22	6.91E-06	0.00005	5.1E-05	0.0002	0.15	0.00003	0.0005	0.92	0.0109	0.0000015	0.00009	0.00025	0.54	0.0010	0.000025	1.98
AQF42	0.0052	5.00E-05	0.000025	0.0053	0.0000025	3.29	6.89E-06	0.00011	5.1E-05	0.0004	0.15	0.00012	0.0005	0.96	0.0118	-	0.00010	0.00025	0.54	0.0011	0.000025	2.04
AQF42	0.0058	5.00E-05	0.000025	0.0054	0.0000025	3.59	7.05E-06	0.00012	5.1E-05	0.0002	0.12	0.00003	0.0005	1.02	0.0108	-	0.00009	0.00025	0.56	0.0010	0.000061	2.17
AQF42	0.0050	5.00E-05	0.000025	0.0054	0.0000025	3.71	7.40E-06	0.00005	5.2E-05	0.0005	0.12	0.00003	0.0005	1.10	0.0116	0.0000008	0.00010	0.00025	0.52	0.0009	0.000025	2.34
AQF42	0.0151	5.00E-05	0.000025	0.0056	0.0000025	4.24	8.64E-06	0.00077	5.2E-05	0.0015	0.19	0.00007	0.0006	1.23	0.0318	-	0.00090	0.00025	0.61	0.0010	0.000025	2.32
AQF42	0.0144	3.04E-05	0.000025	0.0058	0.0000025	4.62	9.65E-06	0.00051	5.3E-05	0.0023	0.18	0.00011	0.0009	1.37	0.0290	-	0.00050	0.00025	0.67	0.0011	0.000025	2.72
AQF43	0.0068	1.08E-05	0.000025	0.0059	0.0000025	4.82	1.02E-05	0.00025	5.4E-05	0.0004	0.16	0.00003	0.0012	1.44	0.0223	-	0.00007	0.00025	0.68	0.0011	0.000025	3.09
AQF43	0.0100	1.09E-05	0.000025	0.0060	0.0000025	4.97	1.05E-05	0.00025	5.4E-05	0.0007	0.18	0.00003	0.0011	1.47	0.0242	-	0.00006	0.00025	0.69	0.0011	0.000034	3.15
AQF43	0.0132	1.09E-05	0.000025	0.0060	0.0000025	5.05	1.06E-05	0.00025	5.4E-05	0.0010	0.19	0.00004	0.0010	1.46	0.0254	0.0000010	0.00006	0.00025	0.70	0.0011	0.000043	3.20
AQF43	0.0203	1.06E-05	0.000025	0.0056	0.0000025	4.29	8.55E-06	0.00025	5.2E-05	0.0019	0.18	0.00007	0.0012	1.25	0.0225	0.0000018	0.00006	0.00025	0.66	0.0011	0.000025	2.97
AQF43	0.0054	5.00E-05	0.000025	0.0052	0.0000025	3.55	4.58E-05	0.00012	5.1E-05	0.0005	0.20	0.00003	0.0005	1.01	0.0225	0.0000025	0.00010	0.00025	0.59	0.0009	0.000025	2.29
AQF43	0.0055	5.00E-05	0.000025	0.0053	0.0000025	3.39	6.42E-06	0.00012	5.1E-05	0.0002	0.17	0.00003	0.0005	0.95	0.0074	0.0000018	0.00008	0.00025	0.70	0.0009	0.000025	1.94
AQF43	0.0055	5.00E-05	0.000025	0.0053	0.0000025	3.24	6.91E-06	0.00011	5.1E-05	0.0002	0.16	0.00003	0.0005	0.98	0.0106	0.0000015	0.00006	0.00025	0.56	0.0011	0.000025	2.20
AQF43	0.0049	5.00E-05	0.000025	0.0053	0.0000025	3.51	6.89E-06	0.00005	5.1E-05	0.0003	0.14	0.00003	0.0005	0.99	0.0120	-	0.00010	0.00025	0.60	0.0010	0.000025	2.04
AQF43	0.0060	5.00E-05	0.000025	0.0054	0.0000025	3.54	7.05E-06	0.00012	5.1E-05	0.0004	0.12	0.00003	0.0005	1.00	0.0125	-	0.00009	0.00025	0.54	0.0010	0.000025	2.23
AQF43	0.0111	5.00E-05	0.000025	0.0054	0.0000025	3.72	7.40E-06	0.00013	5.2E-05	0.0037	0.13	0.00015	0.0005	1.08	0.0119	0.0000008	0.00014	0.00025	0.55	0.0010	0.000025	2.38
AQF43	0.0051	5.00E-05	0.000025	0.0056	0.0000025	4.14	8.64E-06	0.00011	5.2E-05	0.0050	0.11	0.00617	0.0006	1.21	0.0143	-	0.00009	0.00025	0.59	0.0009	0.000025	2.45
AQF43	0.0060	3.04E-05	0.000025	0.0058	0.0000025	4.56	9.65E-06	0.00018	5.3E-05	0.0027	0.13	0.00308	0.0009	1.35	0.0190	-	0.00008	0.00025	0.64	0.0010	0.000025	2.78
AQF44	0.0138	1.08E-05	0.000025	0.0059	1.16075E-05	5.16	1.02E-05	0.00025	5.4E-05	0.0037	0.17	0.00016	0.0013	1.50	0.0230	-	0.00009	0.00025	0.70	0.0011	0.000025	3.07
AQF44	0.0163	1.09E-05	0.000025	0.0060	7.04856E-06	5.23	1.05E-05	0.00025	5.4E-05	0.0029	0.18	0.00010	0.0011	1.52	0.0245	-	0.00008	0.00025	0.72	0.0011	0.000025	3.13
AQF44	0.0189	1.09E-05	0.000025	0.0060	0.0000025	5.22	1.06E-05	0.00025	5.4E-05	0.0022	0.19	0.00004	0.0010	1.52	0.0254	0.0000009	0.00007	0.00025	0.73	0.0012	0.000025	3.19
AQF44	0.0186	1.06E-05	0.000025	0.0056	0.0000025	4.63	8.55E-06	0.00025	5.2E-05	0.0018	0.18	0.00007	0.0013	1.33	0.0220	0.0000009	0.00008	0.00025	0.69	0.0011	0.000025	2.97
AQF44	0.0055	5.00E-05	0.000025	0.0052	0.0000025	3.47	5.98E-06	0.00012	5.1E-05	0.0004	0.22	0.00003	0.0011	0.99	0.0223	0.0000009	0.00009	0.00025	0.58	0.0009	0.000025	2.37
AQF44	0.0253	5.00E-05	0.000025	0.0053	0.0000025	3.15	6.42E-06	0.00013	5.1E-05	0.0014	0.17	0.00003	0.0005	0.90	0.0073	0.0000017	0.00018	0.00025	0.66	0.0010	0.000025	2.01
AQF44	0.0056	5.00E-05	0.000025	0.0053	0.0000025	3.29	6.91E-06	0.00011	5.1E-05	0.0003	0.16	0.00003	0.0005	0.93	0.0109	0.0000016	0.00010	0.00025	0.55	0.0010	0.000025	2.02
AQF44	0.0050	5.00E-05	0.000025	0.0053	0.0000025	3.54	6.89E-06	0.00012	5.1E-05	0.0003	0.13	0.00012	0.0005	1.01	0.0123	-	0.00015	0.00025	0.59	0.0010	0.000025	2.07
AQF44	0.0067	5.00E-05	0.000025	0.0054	0.0000025	4.03	7.05E-06	0.00012	5.1E-05	0.0003	0.12	0.00003	0.0011									

90th Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

Site	Dissolved_Metal		Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Cyanides	Cyanides	Cyanides	Methylme	Methylme
	Dissolved_Metal	Dissolved_Metal	I	I	Dissolved_Metal	I	Dissolved_Metal	al	al	Dissolved_Metal	Dissolved_Metal	al	Dissolved_Metal	al						
	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L	Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WAD mg/L	rcury_D mg/L	rcury_T mg/L	
AQF40	0.000005	1.70	0.02	1.55	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00010	0.00025	0.0045	0.00015	-	-	-	-	-	
AQF40	0.000005	1.72	0.02	1.71	0.00010	0.00001	0.00005	0.00008	0.00015	0.00005	0.00011	0.00025	0.0031	0.00015	-	-	-	-	-	
AQF40	0.000005	1.74	0.02	1.81	0.00010	0.00001	0.00005	0.00010	0.00015	0.00005	0.00011	0.00025	0.0018	0.00015	-	-	-	-	-	
AQF40	0.000005	1.55	0.02	1.13	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00008	0.00025	0.0028	0.00015	-	-	-	-	-	
AQF40	0.000005	1.12	0.01	0.49	0.00010	0.00001	0.00005	0.00013	0.00071	0.00005	0.00004	0.00025	0.0030	0.00010	-	-	-	-	-	
AQF40	0.000005	1.06	0.01	0.60	0.00010	0.00001	0.00005	0.00019	0.00051	0.00005	0.00004	0.00025	0.0064	0.00010	-	-	-	-	-	
AQF40	0.000005	1.17	0.01	0.88	0.00010	0.00001	0.00005	0.00011	0.00041	0.00005	0.00006	0.00025	0.0037	0.00010	-	-	-	-	-	
AQF40	0.000005	1.19	0.02	0.72	0.00010	0.00001	0.00005	0.00024	0.00037	0.00005	0.00005	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF40	0.000005	1.17	0.01	0.76	0.00010	0.00001	0.00005	0.00005	0.00055	0.00005	0.00006	0.00025	0.0048	0.00010	-	-	-	-	-	
AQF40	0.000005	1.31	0.01	1.05	0.00010	0.00001	0.00005	0.00005	0.00027	0.00005	0.00007	0.00025	0.0021	0.00011	-	-	-	-	-	
AQF40	0.000005	1.28	0.02	1.16	0.00010	0.00001	0.00005	0.00005	0.00034	0.00005	0.00008	0.00025	0.0102	0.00010	-	-	-	-	-	
AQF40	0.000005	1.51	0.02	1.41	0.00010	0.00001	0.00005	0.00005	0.00024	0.00005	0.00009	0.00025	0.0073	0.00012	-	-	-	-	-	
AQF42	0.000005	1.72	0.02	1.55	0.00010	0.00001	0.00005	0.00018	0.00015	0.00005	0.00014	0.00025	0.0046	0.00015	-	-	-	-	-	
AQF42	0.000005	1.82	0.02	1.91	0.00010	0.00001	0.00005	0.00018	0.00040	0.00005	0.00012	0.00025	0.0048	0.00015	-	-	-	-	-	
AQF42	0.000005	1.73	0.02	1.64	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00012	0.00025	0.0012	0.00015	-	-	-	-	-	
AQF42	0.000005	5.37	0.02	1.63	0.00010	0.00001	0.00005	0.00015	0.00035	0.00005	0.00011	0.00025	0.0051	0.00015	-	-	-	-	-	
AQF42	0.000005	0.98	0.01	0.49	0.00010	0.00001	0.00005	0.00005	0.00051	0.00005	0.00004	0.00025	0.0012	0.00010	-	-	-	-	-	
AQF42	0.000005	1.04	0.01	0.60	0.00010	0.00001	0.00005	0.00030	0.00046	0.00005	0.00004	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF42	0.000005	1.04	0.01	1.03	0.00010	0.00001	0.00005	0.00069	0.00044	0.00005	0.00006	0.00025	0.0089	0.00010	-	-	-	-	-	
AQF42	0.000005	1.11	0.01	0.72	0.00010	0.00001	0.00005	0.00005	0.00046	0.00005	0.00005	0.00025	0.0030	0.00010	-	-	-	-	-	
AQF42	0.000005	1.21	0.01	0.76	0.00010	0.00001	0.00005	0.00005	0.00032	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF42	0.000005	1.22	0.01	0.85	0.00010	0.00001	0.00005	0.00005	0.00015	0.00005	0.00006	0.00025	0.0011	0.00010	-	-	-	-	-	
AQF42	0.000005	1.28	0.02	1.16	0.00010	0.00001	0.00005	0.00005	0.00101	0.00091	0.00012	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF42	0.000005	1.52	0.02	1.41	0.00010	0.00001	0.00005	0.00012	0.00058	0.00048	0.00013	0.00025	0.0039	0.00012	-	-	-	-	-	
AQF43	0.000005	1.68	0.02	1.55	0.00010	0.00001	0.00005	0.00006	0.00031	0.00005	0.00011	0.00025	0.0011	0.00015	-	-	-	-	-	
AQF43	0.000005	1.71	0.02	1.62	0.00010	0.00001	0.00005	0.00007	0.00023	0.00005	0.00011	0.00025	0.0013	0.00015	-	-	-	-	-	
AQF43	0.000005	1.72	0.02	1.64	0.00010	0.00001	0.00005	0.00009	0.00015	0.00005	0.00011	0.00025	0.0015	0.00015	-	-	-	-	-	
AQF43	0.000005	1.50	0.02	1.13	0.00010	0.00001	0.00005	0.00013	0.00031	0.00005	0.00008	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF43	0.000005	1.01	0.01	0.84	0.00010	0.00001	0.00005	0.00005	0.00044	0.00005	0.00004	0.00025	0.0015	0.00010	-	-	-	-	-	
AQF43	0.000005	1.06	0.01	0.60	0.00010	0.00001	0.00005	0.00005	0.00037	0.00005	0.00004	0.00025	0.0045	0.00010	-	-	-	-	-	
AQF43	0.000005	1.21	0.01	0.72	0.00010	0.00001	0.00005	0.00005	0.00045	0.00005	0.00005	0.00025	0.0013	0.00010	-	-	-	-	-	
AQF43	0.000005	1.13	0.01	0.72	0.00010	0.00001	0.00005	0.00005	0.00058	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF43	0.000005	1.13	0.01	0.76	0.00010	0.00001	0.00005	0.00005	0.00041	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF43	0.000005	1.22	0.01	0.85	0.00010	0.00001	0.00005	0.00005	0.00041	0.00005	0.00006	0.00025	0.0022	0.00010	-	-	-	-	-	
AQF43	0.000005	1.28	0.02	1.16	0.00010	0.00001	0.00005	0.00005	0.00031	0.00005	0.00008	0.00025	0.0047	0.00010	-	-	-	-	-	
AQF43	0.000005	1.50	0.02	1.41	0.00010	0.00001	0.00005	0.00005	0.00031	0.00005	0.00009	0.00025	0.0029	0.00012	-	-	-	-	-	
AQF44	0.000005	1.72	0.02	1.55	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00011	0.00025	0.0038	0.00015	-	-	-	-	-	
AQF44	0.000005	1.74	0.02	1.62	0.00010	0.00001	0.00005	0.00009	0.00023	0.00005	0.00011	0.00025	0.0031	0.00015	-	-	-	-	-	
AQF44	0.000005	1.75	0.02	1.64	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF44	0.000005	1.98	0.02	1.13	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00008	0.00025	0.0028	0.00015	-	-	-	-	-	
AQF44	0.000005	0.97	0.01	0.49	0.00010	0.00001	0.00005	0.00005	0.00047	0.00005	0.00004	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.07	0.01	0.60	0.00010	0.00001	0.00005	0.00019	0.00041	0.00005	0.00004	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF44	0.000005	1.02	0.01	0.72	0.00010	0.00001	0.00005	0.00005	0.00049	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.14	0.01	0.72	0.00010	0.00001	0.00005	0.00005	0.00045	0.00005	0.00005	0.00025	0.0026	0.00010	-	-	-	-	-	
AQF44	0.000005	1.25	0.01	1.18	0.00010	0.00001	0.00005	0.00005	0.00040	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.25	0.02	0.85	0.00010	0.00001	0.00005	0.00005	0.00015	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.31	0.02	1.16	0.00010	0.00001	0.00005	0.00005	0.00049	0.00005	0.00008	0.00025	0.0049	0.00010	-	-	-	-	-	
AQF44	0.000005	1.54	0.02	1.41	0.00010	0.00001	0.00005	0.00005	0.00041	0.00005	0.00009	0.00025	0.0044	0.00012	-	-	-	-	-	
AQF45	0.000005	1.75	0.02	1.55	0.00010	0.00001	0.00005	0.00011	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF45	0.000005	1.77	0.02	2.02	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00011	0.00025	0.0019	0.00015	-	-	-	-	-	
AQF45	0.000005	1.78	0.02	2.45	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00011	0.00025	0.0014	0.00015	-	-	-	-	-	
AQF45	0.000005	1.67	0.02	1.13	0.00010	0.00001	0.00005	0.00005	0.00015	0.00005	0.00008	0.00025	0.0016	0.00015	-	-	-	-	-	
AQF45	0.000005	0.98	0.01	0.49	0.00010	0.00001	0.00005	0.00005	0.00068	0.00005	0.00004	0.00025	0.0013	0.00010	-	-	-	-	-	
AQF45	0.000005	1.02	0.01	0.60	0.00023	0.00001	0.00005	0.00005	0.00056	0.00005	0.00004	0.00025	0.0011	0.00010	-	-	-	-	-	
AQF45	0.000005	1.04	0.01	0.72	0.00010	0.00001	0.00005	0.00005	0.00065	0.00005	0.00006	0.00025	0.0021	0.00010	-	-	-	-	-	
AQF45	0.000005	1.14	0.01	0.72	0.00010	0.00001	0.00005	0.00005	0.00118	0.00005	0.00006	0.00025	0.0012	0.00010	-	-	-	-	-	
AQF45	0.000005	1.29	0.02	0.76	0.00010	0.00001	0.00005	0.00005	0.00116	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF45	0.000005	1.27	0.01	0.85	0.00010	0.00001	0.00005	0.00005	0.00040	0.00005	0.00006	0.00025	0.0016	0.00010	-	-	-	-	-	
AQF45	0.000005	1.33	0.02	1.16	0.00010	0.00001	0.00005	0.00005	0.00015	0.00005	0.00008	0.00025	0.0059	0.00010	-	-	-	-	-	
AQF45	0.000005	1.58	0.02	1.41	0.00010	0.00001	0.00005	0.00005	0.00034	0.00005	0.00010	0.00025	0.0005	0.00010	-	-	-	-	-	
Downstream stn Median	0.000005																			

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations

		Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	
Month	Site	D_Oxygen_percent_ D_Oxygen_field mg/L	field %	ORP_field mV	pH_field pH	Specific_Conducta nce_field uS/cm	TDS_field mg/L	Temp_field C	Turbidity_ field NTU	Acidity(CaCO 3) mg/L	Alkalinity(CaCO 3)_bicarbonate mg/L	Alkalinity(CaCO 3)_carbonate mg/L	Alkalinity(CaC O3)_hydroxide mg/L	Alkalinity(CaC O3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbo nate mg/L	(HCO3)_bicarbo nate mg/L	(OH)_hydroxi de mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(CaC O3)_D mg/L	Hardness(CaC O3)_T mg/L	pH	TDS_T mg/L
1	AQF40	10.0	68.5	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-
2	AQF40	10.9	74.5	-	-	-	-	-	-	-	-	-	-	-	11.7	-	-	-	-	-	-	-	-	-
3	AQF40	11.7	80.6	-	-	-	-	0.2	-	-	-	-	-	-	11.3	0.5	18.4	0.49	-	-	-	17.2	-	-
4	AQF40	20.2	140.5	-	-	-	-	0.6	-	-	-	-	-	-	14.1	0.4	16.2	0.33	35.9	-	-	15.1	-	-
5	AQF40	12.5	95.0	-	-	-	-	3.9	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.5	-	-
6	AQF40	9.0	91.0	-	-	-	-	15.4	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.3	-	-
7	AQF40	6.8	72.4	-	-	-	-	18.8	-	-	-	-	-	-	10.6	0.3	12.9	0.17	-	-	-	12.0	-	-
8	AQF40	6.1	67.1	-	-	-	-	20.0	-	-	-	-	-	-	11.4	0.3	13.9	0.17	-	-	-	11.3	-	-
9	AQF40	8.0	79.3	-	-	-	-	13.7	-	-	-	-	-	-	11.6	0.3	14.1	0.17	-	-	-	11.6	-	-
10	AQF40	12.0	90.7	-	-	-	-	3.6	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	12.9	-	-
11	AQF40	10.4	71.5	-	-	-	-	0.3	-	-	-	-	-	-	13.5	0.3	16.4	0.17	-	-	-	13.5	-	-
12	AQF40	10.2	69.9	-	-	-	-	0.2	-	-	-	-	-	-	12.8	-	-	-	-	-	-	-	-	-
1	AQF42	10.5	72.0	-	-	-	-	0.2	-	-	-	-	-	-	13.7	-	-	-	-	-	-	-	-	-
2	AQF42	12.1	82.1	-	-	-	-	0.2	-	-	-	-	-	-	9.9	-	-	-	-	-	-	17.6	-	-
3	AQF42	10.6	71.9	-	-	-	-	0.2	-	-	-	-	-	-	17.4	0.5	21.3	0.49	-	-	-	17.4	-	-
4	AQF42	15.6	107.9	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.4	16.9	0.33	35.5	-	-	14.7	-	-
5	AQF42	13.8	133.6	-	-	-	-	4.4	-	-	-	-	-	-	10.0	0.3	12.1	0.17	-	-	-	11.5	-	-
6	AQF42	10.4	103.6	-	-	-	-	15.3	-	-	-	-	-	-	9.1	0.3	11.1	0.17	-	-	-	10.5	-	-
7	AQF42	8.0	87.4	-	-	-	-	19.0	-	-	-	-	-	-	11.0	0.3	13.4	0.17	-	-	-	11.0	-	-
8	AQF42	8.0	85.3	-	-	-	-	18.6	-	-	-	-	-	-	11.4	0.3	13.9	0.17	-	-	-	11.4	-	-
9	AQF42	8.5	82.9	-	-	-	-	14.1	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.3	-	-
10	AQF42	11.4	96.2	-	-	-	-	3.7	-	-	-	-	-	-	11.9	0.3	14.6	0.17	-	-	-	12.7	-	-
11	AQF42	11.7	80.4	-	-	-	-	0.3	-	-	-	-	-	-	14.0	0.3	17.0	0.17	-	-	-	14.1	-	-
12	AQF42	11.1	76.2	-	-	-	-	0.2	-	-	-	-	-	-	14.0	-	-	-	-	-	-	-	-	-
1	AQF43	13.3	91.5	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-
2	AQF43	13.5	92.4	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-
3	AQF43	13.7	93.5	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.5	18.4	0.49	-	-	-	17.0	-	-
4	AQF43	17.0	116.8	-	-	-	-	0.3	-	-	-	-	-	-	14.2	0.4	16.8	0.33	35.7	-	-	15.1	-	-
5	AQF43	17.0	137.6	-	-	-	-	5.9	-	-	-	-	-	-	12.2	0.3	14.8	0.17	-	-	-	12.6	-	-
6	AQF43	10.4	104.6	-	-	-	-	15.7	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.7	-	-
7	AQF43	8.2	89.8	-	-	-	-	19.5	-	-	-	-	-	-	9.4	0.3	11.5	0.17	-	-	-	11.3	-	-
8	AQF43	8.2	90.0	-	-	-	-	19.6	-	-	-	-	-	-	12.4	0.3	15.1	0.17	-	-	-	12.0	-	-
9	AQF43	9.1	85.9	-	-	-	-	13.0	-	-	-	-	-	-	12.0	0.3	14.6	0.17	-	-	-	12.1	-	-
10	AQF43	12.8	95.1	-	-	-	-	3.0	-	-	-	-	-	-	11.7	0.3	14.3	0.17	-	-	-	12.7	-	-
11	AQF43	14.4	98.3	-	-	-	-	-	-	-	-	-	-	-	13.6	0.3	16.5	0.17	-	-	-	13.7	-	-
12	AQF43	13.8	94.9	-	-	-	-	-	-	-	-	-	-	-	14.1	-	-	-	-	-	-	14.6	-	-
1	AQF44	11.3	77.0	-	-	-	-	0.2	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-
2	AQF44	12.4	84.5	-	-	-	-	0.2	-	-	-	-	-	-	15.7	-	-	-	-	-	-	-	-	-
3	AQF44	13.6	92.0	-	-	-	-	0.2	-	-	-	-	-	-	19.2	0.5	26.5	0.49	-	-	-	17.7	-	-
4	AQF44	19.4	133.6	-	-	-	-	0.2	-	-	-	-	-	-	14.7	0.4	20.2	0.33	37.3	-	-	15.2	-	-
5	AQF44	14.3	132.6	-	-	-	-	6.2	-	-	-	-	-	-	10.9	0.3	13.2	0.17	-	-	-	12.3	-	-
6	AQF44	10.6	105.6	-	-	-	-	15.6	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.0	-	-
7	AQF44	8.6	94.1	-	-	-	-	19.8	-	-	-	-	-	-	9.6	0.3	11.7	0.17	-	-	-	11.2	-	-
8	AQF44	8.2	89.1	-	-	-	-	19.3	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	12.1	-	-
9	AQF44	9.2	84.6	-	-	-	-	11.8	-	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.8	-	-
10	AQF44	12.2	90.2	-	-	-	-	2.6	-	-	-	-	-	-	12.5	0.3	15.3	0.17	-	-	-	13.5	-	-
11	AQF44	12.5	85.7	-	-	-	-	0.2	-	-	-	-	-	-	15.6	0.3	19.1	0.17	-	-	-	15.1	-	-
12	AQF44	11.9	81.3	-	-	-	-	0.2	-	-	-	-	-	-	14.0	-	-	-	-	-	-	-	-	-
1	AQF45	12.9	88.3	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-
2	AQF45	13.2	90.4	-	-	-	-	-	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-
3	AQF45	13.6	92.7	-	-	-	-	0.2	-	-	-	-	-	-	13.8	0.5	19.5	0.49	-	-	-	19.3	-	-
4	AQF45	19.0	135.6	-	-	-	-	0.5	-	-	-	-	-	-	15.5	0.4	16.5	0.33	40.8	-	-	16.2	-	-
5	AQF45	14.4	116.7	-	-	-	-	7.7	-	-	-	-	-	-	10.8	0.3	13.1	0.17	-	-	-	12.8	-	-
6	AQF45	9.6	97.5	-	-	-	-	15.0	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.3	-	-
7	AQF45	6.9	74.5	-	-	-	-	18.9	-	-	-	-	-	-	10.2	0.3	12.5	0.17	-	-	-	11.7	-	-
8	AQF45	7.7	82.5	-	-	-	-	18.9	-	-	-	-	-	-	12.6	0.3	15.4	0.17	-	-	-	12.6	-	-
9	AQF45	8.7	83.7	-	-	-	-	13.7	-	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.8	-	-
10	AQF45	12.9</																						

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Met al	Total_Metal	Total_Met al	Total_Met al	Total_Metal	Total_Met al	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
Site	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite_nitrat e(N) mg/L	Nitrogen(TKN) mg/L	Phosphorus_ D mg/L	Phosphorus_ T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum _T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_ T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_ T mg/L	Chromium VI_T mg/L	Cobalt_T mg/L	Copper_T mg/L		
AQF40	-	10.1	-	-	0.096	0.072	0.005	0.071	-	-	0.025	0.050	1.581	0.070	5.3	0.038	0.000108758	0.00032	0.00728	0.000011	0.000025	0.00589	0.000008	5.00649	0.000011	0.00025	-	0.000054	0.00063		
AQF40	-	9.9	-	-	0.061	0.089	0.005	-	-	-	0.022	0.050	1.081	0.072	7.0	0.036	0.000118473	0.00032	0.00743	0.000011	0.000025	0.00594	0.000005	5.26217	0.000011	0.00025	-	0.000054	0.00044		
AQF40	-	9.6	-	-	0.026	0.106	0.005	-	-	-	0.018	0.050	0.579	0.075	8.5	0.034	0.000128235	0.00031	0.00755	0.000011	0.000025	0.00595	0.000003	5.43070	0.000011	0.00025	-	0.000054	0.00025		
AQF40	-	9.1	-	-	0.008	0.099	0.001	-	-	-	0.025	0.006	0.326	0.078	3.3	0.034	0.000005	0.00031	0.00693	0.000011	0.000025	0.00560	0.000009	4.38385	0.000009	0.00025	-	0.000053	0.00025		
AQF40	-	8.7	-	-	0.006	0.038	0.001	0.044	-	-	0.023	0.050	0.273	0.064	1.4	0.055	0.000005	0.00022	0.00608	0.000050	0.000025	0.00517	0.000003	3.52734	0.000006	0.00022	-	0.000051	0.00025		
AQF40	-	9.9	-	-	0.006	0.010	0.005	0.035	-	-	0.015	0.050	0.276	0.056	1.5	0.062	0.000005	0.00020	0.00619	0.000050	0.000025	0.00524	0.000005	3.50131	0.000007	0.00020	-	0.000051	0.00025		
AQF40	-	8.8	-	-	0.013	0.003	0.001	0.220	-	-	0.012	0.050	0.251	0.063	2.0	0.049	0.000005	0.00022	0.00643	0.000050	0.000025	0.00533	0.000003	3.60611	0.000007	0.00016	-	0.000051	0.00025		
AQF40	-	9.2	-	-	0.021	0.003	0.001	0.003	-	-	0.015	0.050	0.206	0.065	1.9	0.034	0.000005	0.00023	0.00543	0.000050	0.000025	0.00532	0.000003	3.29342	0.000007	0.00014	-	0.000051	0.00025		
AQF40	-	9.0	-	-	0.024	0.003	0.001	0.003	-	-	0.012	0.050	0.239	0.063	2.3	0.045	0.000005	0.00024	0.00635	0.000050	0.000025	0.00535	0.000003	3.74594	0.000007	0.00013	-	0.000051	0.00025		
AQF40	-	8.8	-	-	0.016	0.026	0.001	0.038	-	-	0.020	0.050	0.275	0.064	2.4	0.054	0.000005	0.00023	0.00546	0.000050	0.000025	0.00541	0.000003	3.87944	0.000008	0.00025	-	0.000052	0.00025		
AQF40	-	10.1	-	-	0.016	0.025	0.001	0.024	-	-	0.019	0.050	0.278	0.062	3.2	0.081	0.000005	0.00027	0.00866	0.000050	0.000025	0.00562	0.000012	4.40661	0.000009	0.00030	-	0.000053	0.00066		
AQF40	-	10.1	-	-	0.056	0.048	0.003	0.048	-	-	0.022	0.050	0.935	0.066	4.4	0.059	7.94469E-05	0.00030	0.00799	0.000030	0.000025	0.00579	0.000010	4.78464	0.000010	0.00027	-	0.000053	0.00065		
AQF42	-	9.9	-	-	0.052	0.068	0.005	0.067	-	-	0.025	0.050	0.690	0.073	5.1	0.051	0.000226273	0.00032	0.00816	0.000011	0.000025	0.00589	0.000003	5.32966	0.000011	0.00025	-	0.000054	0.00025		
AQF42	-	10.0	-	-	0.037	0.120	0.005	-	-	-	0.025	0.050	0.656	0.072	13.5	0.066	0.000284764	0.00035	0.00884	0.000011	0.000025	0.00594	0.000011	5.55652	0.000011	0.00025	-	0.000054	0.00097		
AQF42	-	10.3	-	-	0.057	0.111	0.005	-	-	-	0.025	0.050	0.530	0.075	4.9	0.122	0.000005	0.00033	0.00949	0.000011	0.000025	0.00595	0.000003	5.44048	0.000024	0.00050	-	0.000122	0.00445		
AQF42	-	9.6	-	-	0.015	0.096	0.001	-	-	-	0.030	0.006	0.326	0.074	3.3	0.038	0.000005	0.00032	0.00780	0.000011	0.000025	0.00560	0.000010	4.53174	0.000009	0.00025	-	0.000053	0.00092		
AQF42	-	9.6	-	-	0.006	0.039	0.001	0.039	-	-	0.015	0.050	0.288	0.063	1.3	0.054	0.000005	0.00025	0.00595	0.000050	0.000025	0.00517	0.000003	3.18866	0.000006	0.00017	-	0.000051	0.00025		
AQF42	-	9.5	-	-	0.006	0.010	0.005	0.035	-	-	0.016	0.050	0.276	0.056	1.5	0.059	0.000005	0.00019	0.00616	0.000050	0.000025	0.00524	0.000003	3.35216	0.000007	0.00024	-	0.000051	0.00025		
AQF42	-	9.1	-	-	0.024	0.003	0.001	0.003	-	-	0.015	0.050	0.345	0.060	1.9	0.048	0.000005	0.00021	0.00594	0.000050	0.000025	0.00533	0.000007	3.23891	0.000007	0.00126	-	0.000051	0.00062		
AQF42	-	9.3	-	-	0.044	0.003	0.001	0.003	-	-	0.014	0.050	0.206	0.064	1.9	0.037	0.000005	0.00025	0.00567	0.000050	0.000025	0.00532	0.000003	3.51177	0.000007	0.00015	-	0.000051	0.00025		
AQF42	-	9.1	-	-	0.007	0.007	0.001	0.007	-	-	0.015	0.050	0.318	0.063	2.1	0.040	0.000005	0.00024	0.00618	0.000050	0.000025	0.00535	0.000003	3.76578	0.000007	0.00014	-	0.000051	0.00025		
AQF42	-	10.0	-	-	0.007	0.019	0.001	0.019	-	-	0.015	0.050	0.255	0.062	2.3	0.042	0.000005	0.00024	0.00565	0.000050	0.000025	0.00541	0.000003	3.89925	0.000008	0.00014	-	0.000052	0.00025		
AQF42	-	9.5	-	-	0.022	0.025	0.001	0.025	-	-	0.015	0.050	0.347	0.062	3.4	0.156	0.000128846	0.00029	0.01466	0.000050	0.000025	0.00562	0.000030	4.58401	0.000023	0.00075	-	0.000122	0.00090		
AQF42	-	9.7	-	-	0.037	0.047	0.003	0.046	-	-	0.020	0.050	0.523	0.067	4.4	0.103	0.000177603	0.00031	0.01139	0.000030	0.000025	0.00579	0.000016	5.03985	0.000017	0.00050	-	0.000088	0.00057		
AQF43	-	10.0	-	-	0.025	0.065	0.005	0.064	-	-	0.025	0.050	0.347	0.071	4.5	0.039	0.000005	0.00028	0.00704	0.000011	0.000025	0.00589	0.000003	5.17297	0.000011	0.00025	-	0.000054	0.00025		
AQF43	-	9.6	-	-	0.019	0.088	0.005	-	-	-	0.022	0.050	0.351	0.073	5.1	0.037	0.000005	0.00029	0.00722	0.000011	0.000025	0.00594	0.000003	5.30130	0.000011	0.00025	-	0.000054	0.00025		
AQF43	-	9.1	-	-	0.013	0.112	0.005	-	-	-	0.018	0.050	0.349	0.074	5.6	0.035	0.000005	0.00030	0.00738	0.000011	0.000025	0.00595	0.000003	5.36224	0.000011	0.00025	-	0.000054	0.00025		
AQF43	-	9.1	-	-	0.008	0.097	0.001	-	-	-	0.013	0.006	0.306	0.077	3.3	0.036	0.000005	0.00031	0.00710	0.000011	0.000025	0.00560	0.000008	4.51202	0.000009	0.00025	-	0.000053	0.00025		
AQF43	-	9.9	-	-	0.006	0.032	0.001	0.032	-	-	0.031	0.050	0.338	0.063	1.3	0.060	0.000005	0.00025	0.00605	0.000050	0.000025	0.00517	0.000003	3.55722	0.000006	0.00018	-	0.000051	0.00025		
AQF43	-	8.8	-	-	0.006	0.010	0.005	0.035	-	-	0.015	0.050	0.276	0.057	1.6	0.068	0.000005	0.00019	0.00611	0.000050	0.000025	0.00524	0.000003	3.41182	0.000007	0.00026	-	0.000051	0.00025		
AQF43	-	9.2	-	-	0.032	0.003	0.001	0.003	-	-	0.015	0.050	0.206	0.061	1.9	0.058	0.000005	0.00023	0.00591	0.000050	0.000025	0.00533	0.000003	3.35800	0.000007	0.00015	-	0.000051	0.00025		
AQF43	-	9.2	-	-	0.016	0.009	0.001	0.009	-	-	0.016	0.050	0.216	0.066	1.9	0.047	0.000005	0.00027	0.00567	0.000050	0.000025	0.00532	0.000003	3.72019	0.000007	0.00025	-	0.000051	0.00025		
AQF43	-	9.1	-	-	0.027	0.003	0.001	0.003	-	-	0.015	0.050	0.229	0.063	2.0	0.049	0.000005	0.00023	0.00633	0.000050	0.000025	0.00535	0.000003	3.77570	0.000007	0.00017	-	0.000051	0.00025		
AQF43	-	9.3	-	-	0.007	0.020	0.001	0.020	-	-	0.015	0.050	0.245	0.063	2.3	0.067	0.000005	0.00024	0.00563	0.000050	0.000025	0.00541	0.000003	3.97849	0.000008	0.00023	-	0.000052	0.00025		
AQF43	-	9.9	-	-	0.034	0.027	0.001	0.027	-	-	0.015	0.050	0.278	0.063	3.2	0.040	0.000005	0.00024	0.00566	0.000050	0.000025	0.00562	0.000003	4.41647	0.000009	0.00016	-	0.000053	0.00025		
AQF43	-	9.9	-	-	0.030	0.046	0.003	0.046	-	-	0.020	0.050	0.317	0.067	4.1	0.039	0.000005	0.00027	0.00638	0.000030	0.000025	0.00579	0.000003	4.87298	0.000010	0.00020	-	0.000053	0.00025		
AQF44	-	10.1	-	-	0.142	0.074	0.005	0.073	-	-	0.025	0.050	1.777	0.069	5.5	0.040	0.000005	0.00029	0.00728	0.000011	0.000025	0.00589	0.000019	5.33946	0.000011	0.00025	-	0.000054	0.00050		
AQF44	-	9.8	-	-	0.080	0.091	0.005	-	-	-	0.018	0.050	1.790	0.071	7.1	0.039	0.000005	0.00030	0.00738	0.000011	0.000025	0.00594	0.000011	5.48715	0.000011	0.00025	-	0.000054	0.00038		
AQF44	-	9.5	-	-	0.018	0.109	0.005	-	-	-	0.010	0.050	1.811	0.073	8.6	0.037	0.000005	0.00031	0.00745	0.000011	0.000025	0.00595	0.000003	5.55783	0.000011	0.00025	-	0.000054	0.00025		
AQF44	-	9.5	-	-																											

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Site	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met I	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met I	Total_Met al	Total_Met Total_Metal	Dissolved_Met I	Dissolved_Met I	Dissolved_Met I
	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesi m_T mg/L	Manganes e_T mg/L	Mercury_T mg/L	Molybden um_T mg/L	Nickel_T mg/L	Potassium _T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_ T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L
AQF40	0.29	0.00007	0.00120	1.5	0.028	0.000003	0.00013	0.00026	0.72	0.0012	0.000066	3.2	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00038	0.0012	0.0001	0.0001	0.0003	0.0053	0.0001	0.0202	0.0001	0.0003
AQF40	0.30	0.00005	0.00128	1.5	0.029	0.000002	0.00010	0.00026	0.74	0.0012	0.000046	3.3	0.000005	1.7	0.020	2.1	0.00010	0.000005	0.00005	0.00035	0.0010	0.0001	0.0001	0.0003	0.0057	0.0002	0.0206	0.0001	0.0003
AQF40	0.30	0.00003	0.00135	1.5	0.030	0.000002	0.00007	0.00026	0.76	0.0012	0.000026	3.5	0.000005	1.7	0.021	2.5	0.00010	0.000005	0.00005	0.00032	0.0008	0.0001	0.0001	0.0003	0.0060	0.0002	0.0212	0.0001	0.0003
AQF40	0.28	0.00003	0.00117	1.3	0.024	0.000002	0.00007	0.00025	0.69	0.0012	0.000131	3.1	0.000005	1.5	0.018	1.2	0.00010	0.000005	0.00005	0.00006	0.0008	0.0001	0.0001	0.0003	0.0015	0.0001	0.0204	0.0001	0.0002
AQF40	0.31	0.00003	0.00087	1.0	0.039	0.000002	0.00006	0.00025	0.64	0.0011	0.000025	2.4	0.000005	1.2	0.015	0.5	0.00010	0.000005	0.00005	0.00010	0.0016	0.0001	0.0000	0.0003	0.0015	0.0001	0.0366	0.0001	0.0002
AQF40	0.35	0.00006	0.00152	0.9	0.028	0.000002	0.00008	0.00025	0.57	0.0010	0.000025	2.0	0.000005	1.1	0.012	0.6	0.00010	0.000005	0.00005	0.00024	0.0015	0.0001	0.0000	0.0003	0.0049	0.0001	0.0357	0.0001	0.0002
AQF40	0.21	0.00015	0.00084	1.0	0.026	0.000001	0.00010	0.00025	0.62	0.0012	0.000025	2.1	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00006	0.0014	0.0001	0.0001	0.0003	0.0015	0.0001	0.0266	0.0001	0.0002
AQF40	0.21	0.00003	0.00054	0.9	0.020	0.000002	0.00007	0.00025	0.54	0.0011	0.000025	2.1	0.000005	1.3	0.014	0.7	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0000	0.0003	0.0044	0.0001	0.0203	0.0001	0.0002
AQF40	0.19	0.00003	0.00114	1.1	0.018	0.000003	0.00011	0.00025	0.57	0.0011	0.000025	2.4	0.000005	1.2	0.015	0.8	0.00010	0.000005	0.00005	0.00014	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0316	0.0001	0.0002
AQF40	0.27	0.00004	0.00119	1.1	0.025	0.000001	0.00012	0.00053	0.59	0.0011	0.000025	2.4	0.000005	1.3	0.015	0.9	0.00010	0.000005	0.00005	0.00006	0.0017	0.0001	0.0001	0.0003	0.0015	0.0001	0.0228	0.0001	0.0002
AQF40	0.31	0.00010	0.00058	1.3	0.032	0.000003	0.00011	0.00025	0.65	0.0012	0.000026	2.8	0.000005	1.4	0.017	1.2	0.00010	0.000005	0.00005	0.00007	0.0039	0.0001	0.0001	0.0003	0.0046	0.0001	0.0220	0.0001	0.0002
AQF40	0.30	0.00009	0.00089	1.4	0.031	0.000003	0.00012	0.00025	0.69	0.0012	0.000046	3.0	0.000005	1.5	0.019	1.5	0.00010	0.000005	0.00005	0.00022	0.0025	0.0001	0.0001	0.0003	0.0049	0.0001	0.0211	0.0001	0.0003
AQF42	0.33	0.00003	0.00129	1.5	0.032	0.000003	0.00010	0.00026	0.72	0.0012	0.000060	3.4	0.000005	1.8	0.020	1.9	0.00010	0.000005	0.00005	0.00055	0.0017	0.0001	0.0002	0.0003	0.0039	0.0001	0.0204	0.0001	0.0003
AQF42	0.37	0.00008	0.00130	1.5	0.039	0.000001	0.00008	0.00026	0.86	0.0013	0.000026	3.5	0.000005	1.8	0.021	9.8	0.00010	0.000005	0.00005	0.00207	0.0023	0.0001	0.0001	0.0003	0.0251	0.0001	0.0237	0.0001	0.0003
AQF42	0.60	0.00009	0.00140	1.6	0.068	0.000003	0.00008	0.00079	0.78	0.0014	0.000026	3.7	0.000005	1.7	0.021	1.7	0.00010	0.000005	0.00005	0.00007	0.0058	0.0001	0.0001	0.0003	0.0053	0.0001	0.0353	0.0001	0.0003
AQF42	0.30	0.00007	0.00117	1.3	0.027	0.000003	0.00009	0.00025	0.70	0.0011	0.000131	3.0	0.000005	1.5	0.018	1.2	0.00010	0.000005	0.00005	0.00006	0.0012	0.0001	0.0001	0.0003	0.0032	0.0001	0.0237	0.0001	0.0003
AQF42	0.49	0.00003	0.00112	0.9	0.069	0.000003	0.00009	0.00025	0.56	0.0010	0.000025	2.3	0.000005	1.1	0.013	0.5	0.00010	0.000005	0.00005	0.00026	0.0015	0.0001	0.0000	0.0003	0.0015	0.0001	0.0332	0.0001	0.0002
AQF42	0.36	0.00006	0.00152	0.9	0.021	0.000002	0.00020	0.00025	0.55	0.0010	0.000025	2.1	0.000005	1.1	0.012	0.6	0.00010	0.000005	0.00005	0.00028	0.0017	0.0001	0.0000	0.0003	0.0015	0.0001	0.0339	0.0001	0.0002
AQF42	0.25	0.00003	0.00054	1.0	0.024	0.000002	0.00009	0.00025	0.54	0.0011	0.000025	2.1	0.000005	1.2	0.013	0.7	0.00010	0.000005	0.00005	0.00042	0.0012	0.0001	0.0001	0.0003	0.0060	0.0001	0.0253	0.0001	0.0002
AQF42	0.22	0.00003	0.00054	1.0	0.023	0.000002	0.00008	0.00025	0.56	0.0011	0.000051	2.4	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00006	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0215	0.0001	0.0002
AQF42	0.18	0.00003	0.00054	1.1	0.017	0.000003	0.00010	0.00025	0.57	0.0011	0.000025	2.3	0.000005	1.3	0.015	0.8	0.00010	0.000005	0.00005	0.00006	0.0008	0.0001	0.0001	0.0003	0.0031	0.0001	0.0245	0.0001	0.0002
AQF42	0.24	0.00003	0.00114	1.1	0.023	0.000001	0.00011	0.00025	0.58	0.0011	0.000025	2.6	0.000005	1.3	0.015	0.9	0.00010	0.000005	0.00005	0.00006	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0191	0.0001	0.0002
AQF42	0.43	0.00014	0.00117	1.3	0.086	0.000003	0.00014	0.00025	0.68	0.0013	0.000026	2.8	0.000005	1.4	0.018	1.2	0.00010	0.000005	0.00005	0.00018	0.0078	0.0001	0.0001	0.0003	0.0044	0.0001	0.0315	0.0001	0.0002
AQF42	0.38	0.00008	0.00123	1.4	0.059	0.000003	0.00012	0.00025	0.71	0.0013	0.000043	3.1	0.000005	1.6	0.019	1.6	0.00010	0.000005	0.00005	0.00037	0.0047	0.0001	0.0001	0.0003	0.0042	0.0001	0.0259	0.0001	0.0003
AQF43	0.29	0.00003	0.00129	1.5	0.027	0.000003	0.00008	0.00026	0.69	0.0011	0.000026	3.4	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0015	0.0001	0.0209	0.0001	0.0003
AQF43	0.30	0.00003	0.00130	1.5	0.029	0.000002	0.00006	0.00026	0.71	0.0012	0.000026	3.4	0.000005	1.7	0.020	1.7	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0020	0.0001	0.0204	0.0001	0.0003
AQF43	0.31	0.00003	0.00130	1.5	0.030	0.000002	0.00005	0.00026	0.73	0.0012	0.000026	3.5	0.000005	1.7	0.020	1.7	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0024	0.0001	0.0200	0.0001	0.0003
AQF43	0.29	0.00003	0.00117	1.3	0.026	0.000002	0.00008	0.00025	0.68	0.0012	0.000092	3.0	0.000005	1.5	0.018	1.2	0.00010	0.000005	0.00005	0.00006	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0196	0.0001	0.0002
AQF43	0.36	0.00007	0.00152	1.0	0.032	0.000003	0.00011	0.00025	0.57	0.0010	0.000025	2.3	0.000005	1.1	0.014	0.5	0.00010	0.000005	0.00005	0.00005	0.0018	0.0001	0.0000	0.0003	0.0047	0.0001	0.0299	0.0001	0.0002
AQF43	0.32	0.00003	0.00152	1.0	0.021	0.000002	0.00005	0.00058	0.58	0.0010	0.000025	2.1	0.000005	1.2	0.013	0.6	0.00010	0.000005	0.00005	0.00006	0.0018	0.0001	0.0000	0.0009	0.0015	0.0003	0.0310	0.0001	0.0002
AQF43	0.26	0.00003	0.00054	1.0	0.028	0.000001	0.00008	0.00025	0.56	0.0011	0.000057	2.2	0.000005	1.2	0.013	0.7	0.00010	0.000005	0.00005	0.00006	0.0014	0.0001	0.0001	0.0003	0.0015	0.0001	0.0290	0.0001	0.0002
AQF43	0.22	0.00003	0.00054	1.1	0.027	0.000002	0.00011	0.00067	0.58	0.0011	0.000025	2.3	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00006	0.0015	0.0001	0.0001	0.0003	0.0049	0.0001	0.0229	0.0001	0.0002
AQF43	0.20	0.00003	0.00114	1.1	0.021	0.000003	0.00011	0.00025	0.56	0.0011	0.000119	2.4	0.000005	1.2	0.015	0.8	0.00030	0.000005	0.00005	0.00006	0.0013	0.0001	0.0001	0.0003	0.0015	0.0001	0.0269	0.0001	0.0002
AQF43	0.27	0.00003	0.00114	1.2	0.024	0.000001	0.00014	0.00025	0.60	0.0011	0.000057	2.7	0.000005	1.3	0.015	0.9	0.00010	0.000005	0.00005	0.00006	0.0022	0.0001	0.0001	0.0003	0.0015	0.0001	0.0213	0.0001	0.0002
AQF43	0.22	0.00003	0.00058	1.3	0.023	0.000003	0.00010	0.00025	0.63	0.0011	0.000053	2.9	0.000005	1.4	0.017	1.2	0.00010	0.000005	0.00005	0.00007	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0179	0.000	

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

	Dissolved_Meta I	Dissolved_Meta I	Dissolved_Meta Dissolved_Metal	Dissolved_Meta I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal
Site	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L
AQF40	0.0130	1.08E-05	0.000025	0.0059	2.56107E-06	4.91	1.05E-05	0.00025	5.4E-05	0.0028	0.18	0.00013	0.0013	1.46	0.0239	-	0.00009	0.000254658	0.73	0.0011	0.000025	3.14
AQF40	0.0135	1.09E-05	0.000025	0.0060	2.56435E-06	5.05	1.08E-05	0.00025	5.4E-05	0.0020	0.19	0.00009	0.0011	1.49	0.0255	-	0.00010	0.000254908	0.73	0.0011	0.000033	3.15
AQF40	0.0140	1.09E-05	0.000025	0.0060	2.56508E-06	5.11	1.09E-05	0.00025	5.4E-05	0.0012	0.21	0.00005	0.0010	1.50	0.0262	0.0000010	0.00012	0.000254964	0.72	0.0011	0.000041	3.16
AQF40	0.0197	1.06E-05	0.000025	0.0056	1.0429E-05	4.30	8.75E-06	0.00025	5.3E-05	0.0021	0.19	0.00011	0.0012	1.28	0.0216	0.0000015	0.00006	0.000253162	0.77	0.0012	0.000025	3.05
AQF40	0.0064	5.00E-05	0.000025	0.0052	2.51149E-06	3.50	6.04E-06	0.00010	5.1E-05	0.0006	0.21	0.00003	0.0011	1.02	0.0289	0.0000019	0.00013	0.000250876	0.62	0.0010	0.000025	2.43
AQF40	0.0055	5.00E-05	0.000025	0.0053	2.51655E-06	3.25	6.50E-06	0.00013	5.1E-05	0.0003	0.18	0.00003	0.0005	0.93	0.0083	0.0000018	0.00008	0.000251262	0.57	0.0009	0.000025	1.99
AQF40	0.0055	5.00E-05	0.000025	0.0053	5.20189E-06	3.53	7.02E-06	0.00011	5.1E-05	0.0003	0.12	0.00007	0.0009	1.01	0.0115	0.0000012	0.00011	0.000251701	0.60	0.0011	0.000025	1.92
AQF40	0.0049	5.00E-05	0.000025	0.0053	2.52214E-06	3.27	7.00E-06	0.00012	5.1E-05	0.0003	0.15	0.00003	0.0005	0.97	0.0115	-	0.00010	0.000251689	0.55	0.0010	0.000052	2.08
AQF40	0.0061	5.00E-05	0.000025	0.0054	2.52397E-06	3.43	7.17E-06	0.00022	5.1E-05	0.0026	0.14	0.00015	0.0005	0.98	0.0129	-	0.00014	0.000251828	0.55	0.0011	0.000052	2.25
AQF40	0.0083	5.00E-05	0.000025	0.0054	2.52805E-06	3.77	7.54E-06	0.00008	5.2E-05	0.0016	0.14	0.00007	0.0008	1.12	0.0116	0.0000011	0.00011	0.00025214	0.57	0.0010	0.000042	2.32
AQF40	0.0051	5.00E-05	0.000025	0.0056	2.54254E-06	4.11	8.85E-06	0.00015	5.3E-05	0.0050	0.15	0.00018	0.0006	1.19	0.0168	-	0.00010	0.000253244	0.62	0.0010	0.000025	2.45
AQF40	0.0091	3.04E-05	0.000025	0.0058	2.55439E-06	4.59	9.92E-06	0.00020	5.3E-05	0.0039	0.16	0.00015	0.0009	1.35	0.0211	-	0.00009	0.000254148	0.68	0.0011	0.000025	2.80
AQF42	0.0136	1.08E-05	0.000025	0.0059	2.56107E-06	4.89	1.05E-05	0.00025	5.4E-05	0.0032	0.19	0.00015	0.0013	1.49	0.0252	-	0.00011	0.000254658	0.72	0.0012	0.000025	3.11
AQF42	0.0207	1.09E-05	0.000025	0.0060	2.56435E-06	5.22	1.08E-05	0.00025	5.4E-05	0.0020	0.22	0.00008	0.0006	1.57	0.0327	0.0000003	0.00008	0.000254908	0.90	0.0012	0.000025	3.31
AQF42	0.0086	1.09E-05	0.000025	0.0060	2.56508E-06	5.21	1.09E-05	0.00025	5.4E-05	0.0004	0.24	0.00003	0.0014	1.50	0.0295	-	0.00008	0.000254964	0.71	0.0012	0.000063	3.22
AQF42	0.0193	1.06E-05	0.000025	0.0056	1.1908E-05	4.36	8.75E-06	0.00025	5.3E-05	0.0025	0.20	0.00009	0.0013	1.29	0.0243	-	0.00008	0.000253162	0.71	0.0011	0.000025	2.98
AQF42	0.0057	5.00E-05	0.000025	0.0052	2.51149E-06	3.20	6.04E-06	0.00014	5.1E-05	0.0007	0.30	0.00003	0.0005	0.96	0.0476	0.0000016	0.00009	0.000250876	0.58	0.0010	0.000025	2.44
AQF42	0.0057	5.00E-05	0.000025	0.0053	2.51655E-06	3.05	6.50E-06	0.00013	5.1E-05	0.0003	0.19	0.00003	0.0005	0.86	0.0069	0.0000017	0.00008	0.000251262	0.59	0.0009	0.000025	2.00
AQF42	0.0056	5.00E-05	0.000025	0.0053	2.52231E-06	3.24	7.02E-06	0.00005	5.1E-05	0.0002	0.16	0.00003	0.0005	0.93	0.0110	0.0000015	0.00009	0.000251701	0.54	0.0010	0.000025	1.98
AQF42	0.0053	5.00E-05	0.000025	0.0053	2.52214E-06	3.31	7.00E-06	0.00011	5.1E-05	0.0004	0.15	0.00012	0.0005	0.97	0.0119	-	0.00010	0.000251689	0.54	0.0011	0.000025	2.05
AQF42	0.0058	5.00E-05	0.000025	0.0054	2.52397E-06	3.61	7.17E-06	0.00012	5.1E-05	0.0002	0.13	0.00003	0.0005	1.03	0.0109	-	0.00009	0.000251828	0.56	0.0010	0.000061	2.17
AQF42	0.0050	5.00E-05	0.000025	0.0054	2.52805E-06	3.74	7.54E-06	0.00005	5.2E-05	0.0005	0.13	0.00003	0.0005	1.11	0.0118	0.0000008	0.00011	0.00025214	0.52	0.0009	0.000025	2.34
AQF42	0.0152	5.00E-05	0.000025	0.0056	2.54254E-06	4.28	8.85E-06	0.00077	5.3E-05	0.0015	0.20	0.00007	0.0006	1.24	0.0321	-	0.00090	0.000253244	0.61	0.0010	0.000025	2.33
AQF42	0.0145	3.04E-05	0.000025	0.0058	2.55439E-06	4.66	9.92E-06	0.00051	5.3E-05	0.0024	0.20	0.00011	0.0009	1.39	0.0293	-	0.00051	0.000254148	0.67	0.0011	0.000025	2.72
AQF43	0.0068	1.08E-05	0.000025	0.0059	2.56107E-06	4.87	1.05E-05	0.00025	5.4E-05	0.0004	0.18	0.00003	0.0012	1.47	0.0226	-	0.00007	0.000254658	0.68	0.0011	0.000025	3.09
AQF43	0.0100	1.09E-05	0.000025	0.0060	2.56435E-06	5.02	1.08E-05	0.00025	5.4E-05	0.0007	0.19	0.00004	0.0011	1.49	0.0246	-	0.00007	0.000254908	0.70	0.0011	0.000034	3.15
AQF43	0.0133	1.09E-05	0.000025	0.0060	2.56508E-06	5.10	1.09E-05	0.00025	5.4E-05	0.0010	0.21	0.00005	0.0010	1.49	0.0257	0.0000010	0.00006	0.000254964	0.70	0.0011	0.000043	3.20
AQF43	0.0204	1.06E-05	0.000025	0.0056	2.54146E-06	4.32	8.75E-06	0.00025	5.3E-05	0.0019	0.20	0.00007	0.0012	1.26	0.0228	0.0000018	0.00007	0.000253162	0.66	0.0011	0.000025	2.98
AQF43	0.0054	5.00E-05	0.000025	0.0052	2.51149E-06	3.56	4.59E-05	0.00012	5.1E-05	0.0005	0.21	0.00003	0.0005	1.02	0.0226	0.0000025	0.00010	0.000250876	0.59	0.0009	0.000025	2.29
AQF43	0.0055	5.00E-05	0.000025	0.0053	2.51655E-06	3.40	6.50E-06	0.00012	5.1E-05	0.0002	0.17	0.00003	0.0005	0.96	0.0075	0.0000018	0.00008	0.000251262	0.71	0.0009	0.000025	1.94
AQF43	0.0055	5.00E-05	0.000025	0.0053	2.52231E-06	3.26	7.02E-06	0.00011	5.1E-05	0.0002	0.17	0.00003	0.0005	0.98	0.0107	0.0000015	0.00006	0.000251701	0.56	0.0011	0.000025	2.20
AQF43	0.0049	5.00E-05	0.000025	0.0053	2.52214E-06	3.53	7.00E-06	0.00005	5.1E-05	0.0003	0.14	0.00003	0.0005	1.00	0.0122	-	0.00010	0.000251689	0.60	0.0010	0.000025	2.05
AQF43	0.0060	5.00E-05	0.000025	0.0054	2.52397E-06	3.56	7.17E-06	0.00012	5.1E-05	0.0004	0.13	0.00003	0.0005	1.01	0.0127	-	0.00009	0.000251828	0.54	0.0010	0.000025	2.23
AQF43	0.0111	5.00E-05	0.000025	0.0054	2.52805E-06	3.75	7.54E-06	0.00013	5.2E-05	0.0037	0.14	0.00015	0.0005	1.09	0.0120	0.0000008	0.00014	0.00025214	0.55	0.0010	0.000025	2.38
AQF43	0.0052	5.00E-05	0.000025	0.0056	2.54254E-06	4.18	8.85E-06	0.00011	5.3E-05	0.0051	0.12	0.00617	0.0006	1.22	0.0146	-	0.00009	0.000253244	0.59	0.0009	0.000025	2.45
AQF43	0.0060	3.04E-05	0.000025	0.0058	2.55439E-06	4.60	9.92E-06	0.00018	5.3E-05	0.0027	0.15	0.00308	0.0009	1.37	0.0194	-	0.00008	0.000254148	0.64	0.0010	0.000025	2.78
AQF44	0.0138	1.08E-05	0.000025	0.0059	1.16685E-05	5.21	1.05E-05	0.00025	5.4E-05	0.0037	0.18	0.00016	0.0013	1.52	0.0234	-	0.00009	0.000254658	0.70	0.0011	0.000025	3.07
AQF44	0.0164	1.09E-05	0.000025	0.0060	7.11291E-06	5.28	1.08E-05	0.00025	5.4E-05	0.0030	0.20	0.00010	0.0011	1.54	0.0249	-	0.00008	0.000254908	0.72	0.0011	0.000025	3.13
AQF44	0.0189	1.09E-05	0.000025	0.0060	2.56508E-06	5.28	1.09E-05	0.00025	5.4E-05	0.0023	0.20	0.00004	0.0010	1.54	0.0258	0.0000010	0.00008	0.000254964	0.74	0.0012	0.000025	3.19
AQF44	0.0186	1.06E-05	0.000025	0.0056	2.54146E-06	4.66	8.75E-06	0.00025	5.3E-05	0.0018	0.19	0.00007	0.0013	1.35	0.0223	0.0000009	0.00008	0.000253162	0.69	0.0011	0.000025	2.98
AQF44	0.0055	5.00E-05	0.000025	0.0052	2.51149E-06	3.48	6.04E-06	0.00012	5.1E-05	0.0004	0.22	0.00003	0.0011	0.99	0.0224	0.0000009	0.00009	0.000250876	0.58	0.0009	0.000025	2.37
AQF44	0.0253	5.00E-05	0.000025	0.0053	2.51655E-06	3.16	6.50E-06	0.00013	5.1E-05	0.0014	0.18	0.00003	0.0005	0.91	0.0074	0.0000017	0.00018	0.000251262	0.67	0.0010	0.000025	2.01
AQF44	0.0056	5.00E-05	0.000025	0.0053	2.52231E-06	3.31	7.02E-06	0.00011	5.1E-05	0.0003	0.16	0.00003	0.0005	0.94	0.0110	0.0000016	0.00010	0.000251701	0.56	0.0010	0.000025	2.02
AQF44	0.0050	5.00E-05	0.000025	0.0053	2.52214E-06	3.55	7.00E-06	0.00012	5.1E-05	0.0003	0.14	0.00012	0.0005	1.02	0.0124	-	0.00015	0.000251689	0.60	0.0010	0.000025	2.08
AQF44	0.0068	5.00E-05	0.000025	0																		

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Site	Dissolved_Metal		Dissolved_Metal	Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Cyanides		Cyanides	Cyanides	Methylme	Methylme
	Dissolved_Metal	Dissolved_Metal	I	I	Dissolved_Metal	I	Dissolved_Metal	al	al	Dissolved_Metal	Dissolved_Metal	al	Dissolved_Metal	al	al				rcury	rcury	
	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L	Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WAD mg/L	Methylme rcury_D mg/L	Methylme rcury_T mg/L		
AQF40	0.000005	1.73	0.02	1.61	0.00010	0.00001	0.00005	0.00007	0.00015	0.00005	0.00011	0.00025	0.0045	0.00015	-	-	-	-	-		
AQF40	0.000005	1.75	0.02	1.77	0.00010	0.00001	0.00005	0.00010	0.00015	0.00005	0.00011	0.00025	0.0032	0.00015	-	-	-	-	-		
AQF40	0.000005	1.77	0.02	1.87	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00011	0.00025	0.0018	0.00015	-	-	-	-	-		
AQF40	0.000005	1.57	0.02	1.17	0.00010	0.00001	0.00005	0.00016	0.00015	0.00005	0.00008	0.00025	0.0028	0.00015	-	-	-	-	-		
AQF40	0.000005	1.12	0.01	0.51	0.00010	0.00001	0.00005	0.00013	0.00071	0.00005	0.00004	0.00025	0.0030	0.00010	-	-	-	-	-		
AQF40	0.000005	1.07	0.01	0.62	0.00010	0.00001	0.00005	0.00020	0.00051	0.00005	0.00004	0.00025	0.0064	0.00010	-	-	-	-	-		
AQF40	0.000005	1.18	0.01	0.90	0.00010	0.00001	0.00005	0.00011	0.00041	0.00005	0.00006	0.00025	0.0037	0.00010	-	-	-	-	-		
AQF40	0.000005	1.20	0.02	0.74	0.00010	0.00001	0.00005	0.00025	0.00037	0.00005	0.00005	0.00025	0.0033	0.00010	-	-	-	-	-		
AQF40	0.000005	1.18	0.01	0.78	0.00010	0.00001	0.00005	0.00006	0.00055	0.00005	0.00006	0.00025	0.0048	0.00010	-	-	-	-	-		
AQF40	0.000005	1.32	0.01	1.08	0.00010	0.00001	0.00005	0.00006	0.00027	0.00005	0.00007	0.00025	0.0021	0.00011	-	-	-	-	-		
AQF40	0.000005	1.30	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00034	0.00005	0.00008	0.00025	0.0102	0.00010	-	-	-	-	-		
AQF40	0.000005	1.53	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00024	0.00005	0.00010	0.00025	0.0074	0.00012	-	-	-	-	-		
AQF42	0.000005	1.75	0.02	1.61	0.00010	0.00001	0.00005	0.00020	0.00015	0.00005	0.00015	0.00025	0.0046	0.00015	-	-	-	-	-		
AQF42	0.000005	1.85	0.02	1.97	0.00010	0.00001	0.00005	0.00020	0.00040	0.00005	0.00012	0.00025	0.0048	0.00015	-	-	-	-	-		
AQF42	0.000005	1.76	0.02	1.70	0.00010	0.00001	0.00005	0.00008	0.00040	0.00005	0.00012	0.00025	0.0012	0.00015	-	-	-	-	-		
AQF42	0.000005	5.39	0.02	1.66	0.00010	0.00001	0.00005	0.00017	0.00035	0.00005	0.00011	0.00025	0.0052	0.00015	-	-	-	-	-		
AQF42	0.000005	0.98	0.01	0.51	0.00010	0.00001	0.00005	0.00005	0.00051	0.00005	0.00004	0.00025	0.0012	0.00010	-	-	-	-	-		
AQF42	0.000005	1.05	0.01	0.62	0.00010	0.00001	0.00005	0.00031	0.00046	0.00005	0.00004	0.00025	0.0005	0.00010	-	-	-	-	-		
AQF42	0.000005	1.05	0.01	1.05	0.00010	0.00001	0.00005	0.00069	0.00044	0.00005	0.00006	0.00025	0.0089	0.00010	-	-	-	-	-		
AQF42	0.000005	1.12	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00046	0.00005	0.00005	0.00025	0.0030	0.00010	-	-	-	-	-		
AQF42	0.000005	1.22	0.01	0.78	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-		
AQF42	0.000005	1.23	0.01	0.87	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00006	0.00025	0.0011	0.00010	-	-	-	-	-		
AQF42	0.000005	1.30	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00101	0.00091	0.00012	0.00025	0.0033	0.00010	-	-	-	-	-		
AQF42	0.000005	1.54	0.02	1.46	0.00010	0.00001	0.00005	0.00014	0.00058	0.00048	0.00014	0.00025	0.0040	0.00012	-	-	-	-	-		
AQF43	0.000005	1.71	0.02	1.61	0.00010	0.00001	0.00005	0.00007	0.00031	0.00005	0.00011	0.00025	0.0011	0.00015	-	-	-	-	-		
AQF43	0.000005	1.74	0.02	1.68	0.00010	0.00001	0.00005	0.00009	0.00023	0.00005	0.00011	0.00025	0.0013	0.00015	-	-	-	-	-		
AQF43	0.000005	1.75	0.02	1.70	0.00010	0.00001	0.00005	0.00011	0.00015	0.00005	0.00011	0.00025	0.0015	0.00015	-	-	-	-	-		
AQF43	0.000005	1.52	0.02	1.17	0.00010	0.00001	0.00005	0.00015	0.00031	0.00005	0.00008	0.00025	0.0023	0.00015	-	-	-	-	-		
AQF43	0.000005	1.01	0.01	0.85	0.00010	0.00001	0.00005	0.00005	0.00044	0.00005	0.00004	0.00025	0.0015	0.00010	-	-	-	-	-		
AQF43	0.000005	1.07	0.01	0.62	0.00010	0.00001	0.00005	0.00006	0.00037	0.00005	0.00004	0.00025	0.0045	0.00010	-	-	-	-	-		
AQF43	0.000005	1.22	0.01	0.75	0.00010	0.00001	0.00005	0.00006	0.00045	0.00005	0.00005	0.00025	0.0013	0.00010	-	-	-	-	-		
AQF43	0.000005	1.14	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00058	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-		
AQF43	0.000005	1.15	0.01	0.78	0.00010	0.00001	0.00005	0.00006	0.00041	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-		
AQF43	0.000005	1.23	0.01	0.87	0.00010	0.00001	0.00005	0.00006	0.00041	0.00005	0.00006	0.00025	0.0022	0.00010	-	-	-	-	-		
AQF43	0.000005	1.30	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00031	0.00005	0.00008	0.00025	0.0048	0.00010	-	-	-	-	-		
AQF43	0.000005	1.52	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00031	0.00005	0.00010	0.00025	0.0029	0.00012	-	-	-	-	-		
AQF44	0.000005	1.75	0.02	1.61	0.00010	0.00001	0.00005	0.00007	0.00032	0.00005	0.00011	0.00025	0.0039	0.00015	-	-	-	-	-		
AQF44	0.000005	1.77	0.02	1.68	0.00010	0.00001	0.00005	0.00011	0.00023	0.00005	0.00011	0.00025	0.0031	0.00015	-	-	-	-	-		
AQF44	0.000005	1.78	0.02	1.70	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-	-	-		
AQF44	0.000005	2.00	0.02	1.17	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00008	0.00025	0.0028	0.00015	-	-	-	-	-		
AQF44	0.000005	0.98	0.01	0.51	0.00010	0.00001	0.00005	0.00005	0.00047	0.00005	0.00004	0.00025	0.0005	0.00010	-	-	-	-	-		
AQF44	0.000005	1.08	0.01	0.62	0.00010	0.00001	0.00005	0.00020	0.00041	0.00005	0.00004	0.00025	0.0033	0.00010	-	-	-	-	-		
AQF44	0.000005	1.03	0.01	0.75	0.00010	0.00001	0.00005	0.00006	0.00049	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-		
AQF44	0.000005	1.15	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00045	0.00005	0.00005	0.00025	0.0026	0.00010	-	-	-	-	-		
AQF44	0.000005	1.26	0.01	1.20	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-		
AQF44	0.000005	1.26	0.02	0.87	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-		
AQF44	0.000005	1.33	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00049	0.00005	0.00008	0.00025	0.0050	0.00010	-	-	-	-	-		
AQF44	0.000005	1.56	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00041	0.00005	0.00010	0.00025	0.0044	0.00012	-	-	-	-	-		
AQF45	0.000005	1.78	0.02	1.61	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-	-	-		
AQF45	0.000005	1.80	0.02	2.09	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00012	0.00025	0.0019	0.00015	-	-	-	-	-		
AQF45	0.000005	1.81	0.02	2.51	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00012	0.00025	0.0015	0.00015	-	-	-	-	-		
AQF45	0.000005	1.69	0.02	1.17	0.00010	0.00001	0.00005	0.00007	0.00015	0.00005	0.00008	0.00025	0.0016	0.00015	-	-	-	-	-		
AQF45	0.000005	0.99	0.01	0.51	0.00010	0.00001	0.00005	0.00005	0.00068	0.00005	0.00004	0.00025	0.0013	0.00010	-	-	-	-	-		
AQF45	0.000005	1.03	0.01	0.62	0.00023	0.00001	0.00005	0.00006	0.00056	0.00005	0.00004	0.00025	0.0011	0.00010	-	-	-	-	-		
AQF45	0.000005	1.05	0.01	0.75	0.00010	0.00001	0.00005	0.00006	0.00065	0.00005	0.00006	0.00025	0.0021	0.00010	-	-	-	-	-		
AQF45	0.000005	1.15	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00118	0.00005	0.00006	0.00025	0.0012	0.00010	-	-	-	-	-		
AQF45	0.000005	1.30	0.02	0.78	0.00010	0.00001	0.00005	0.00006	0.00116	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-		
AQF45	0.000005	1.28	0.01	0.87	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00006	0.00025	0.0016	0.00010	-	-	-	-	-		
AQF45	0.000005	1.35	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00015	0.00005	0.00008	0.00025	0.0059	0.00010	-	-	-	-	-		
AQF45	0.000005	1.60	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00034	0.00005	0.00010	0.00025	0.0005	0.00010	-	-	-	-	-		
Downstream stn Median	0.000005	1.1																			

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations

		Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	
Month	Site	D_Oxygen_percent_ D_Oxygen_field mg/L	field %	ORP_field mV	pH_field pH	Specific_Conducta nce_field uS/cm	TDS_field mg/L	Temp_field C	Turbidity_ field NTU	Acidity(CaCO 3) mg/L	Alkalinity(CaCO 3)_bicarbonate mg/L	Alkalinity(CaCO 3)_carbonate mg/L	Alkalinity(CaC O3)_hydroxide mg/L	Alkalinity(CaC O3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbo nate mg/L	(HCO3)_bicarbo nate mg/L	(OH)_hydroxi de mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(CaC O3)_D mg/L	Hardness(CaC O3)_T mg/L	pH pH	TDS_T mg/L
1	AQF40	10.0	68.5	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-
2	AQF40	10.9	74.5	-	-	-	-	-	-	-	-	-	-	-	11.7	-	-	-	-	-	-	-	-	-
3	AQF40	11.7	80.6	-	-	-	-	0.2	-	-	-	-	-	-	11.3	0.5	18.4	0.49	-	-	-	17.2	-	-
4	AQF40	20.2	140.5	-	-	-	-	0.6	-	-	-	-	-	-	14.1	0.4	16.2	0.33	35.9	-	-	15.1	-	-
5	AQF40	12.5	95.0	-	-	-	-	3.9	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.5	-	-
6	AQF40	9.0	91.0	-	-	-	-	15.4	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.3	-	-
7	AQF40	6.8	72.4	-	-	-	-	18.8	-	-	-	-	-	-	10.6	0.3	12.9	0.17	-	-	-	12.0	-	-
8	AQF40	6.1	67.1	-	-	-	-	20.0	-	-	-	-	-	-	11.4	0.3	13.9	0.17	-	-	-	11.3	-	-
9	AQF40	8.0	79.3	-	-	-	-	13.7	-	-	-	-	-	-	11.6	0.3	14.1	0.17	-	-	-	11.6	-	-
10	AQF40	12.0	90.7	-	-	-	-	3.6	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	12.9	-	-
11	AQF40	10.4	71.5	-	-	-	-	0.3	-	-	-	-	-	-	13.5	0.3	16.4	0.17	-	-	-	13.5	-	-
12	AQF40	10.2	69.9	-	-	-	-	0.2	-	-	-	-	-	-	12.8	-	-	-	-	-	-	-	-	-
1	AQF42	10.5	72.0	-	-	-	-	0.2	-	-	-	-	-	-	13.7	-	-	-	-	-	-	-	-	-
2	AQF42	12.1	82.1	-	-	-	-	0.2	-	-	-	-	-	-	9.9	-	-	-	-	-	-	17.6	-	-
3	AQF42	10.6	71.9	-	-	-	-	0.2	-	-	-	-	-	-	17.4	0.5	21.3	0.49	-	-	-	17.4	-	-
4	AQF42	15.6	107.9	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.4	16.9	0.33	35.5	-	-	14.7	-	-
5	AQF42	13.8	133.6	-	-	-	-	4.4	-	-	-	-	-	-	10.0	0.3	12.1	0.17	-	-	-	11.5	-	-
6	AQF42	10.4	103.6	-	-	-	-	15.3	-	-	-	-	-	-	9.1	0.3	11.1	0.17	-	-	-	10.5	-	-
7	AQF42	8.0	87.4	-	-	-	-	19.0	-	-	-	-	-	-	11.0	0.3	13.4	0.17	-	-	-	11.0	-	-
8	AQF42	8.0	85.3	-	-	-	-	18.6	-	-	-	-	-	-	11.4	0.3	13.9	0.17	-	-	-	11.4	-	-
9	AQF42	8.5	82.9	-	-	-	-	14.1	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.3	-	-
10	AQF42	11.4	96.2	-	-	-	-	3.7	-	-	-	-	-	-	11.9	0.3	14.6	0.17	-	-	-	12.7	-	-
11	AQF42	11.7	80.4	-	-	-	-	0.3	-	-	-	-	-	-	14.0	0.3	17.0	0.17	-	-	-	14.1	-	-
12	AQF42	11.1	76.2	-	-	-	-	0.2	-	-	-	-	-	-	14.0	-	-	-	-	-	-	-	-	-
1	AQF43	13.3	91.5	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-
2	AQF43	13.5	92.4	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-
3	AQF43	13.7	93.5	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.5	18.4	0.49	-	-	-	17.0	-	-
4	AQF43	17.0	116.8	-	-	-	-	0.3	-	-	-	-	-	-	14.2	0.4	16.8	0.33	35.7	-	-	15.1	-	-
5	AQF43	17.0	137.6	-	-	-	-	5.9	-	-	-	-	-	-	12.2	0.3	14.8	0.17	-	-	-	12.6	-	-
6	AQF43	10.4	104.6	-	-	-	-	15.7	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.7	-	-
7	AQF43	8.2	89.8	-	-	-	-	19.5	-	-	-	-	-	-	9.4	0.3	11.5	0.17	-	-	-	11.3	-	-
8	AQF43	8.2	90.0	-	-	-	-	19.6	-	-	-	-	-	-	12.4	0.3	15.1	0.17	-	-	-	12.0	-	-
9	AQF43	9.1	85.9	-	-	-	-	13.0	-	-	-	-	-	-	12.0	0.3	14.6	0.17	-	-	-	12.1	-	-
10	AQF43	12.8	95.1	-	-	-	-	3.0	-	-	-	-	-	-	11.7	0.3	14.3	0.17	-	-	-	12.7	-	-
11	AQF43	14.4	98.3	-	-	-	-	-	-	-	-	-	-	-	13.6	0.3	16.5	0.17	-	-	-	13.7	-	-
12	AQF43	13.8	94.9	-	-	-	-	-	-	-	-	-	-	-	14.1	-	-	-	-	-	-	14.6	-	-
1	AQF44	11.3	77.0	-	-	-	-	0.2	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-
2	AQF44	12.4	84.5	-	-	-	-	0.2	-	-	-	-	-	-	15.7	-	-	-	-	-	-	-	-	-
3	AQF44	13.6	92.0	-	-	-	-	0.2	-	-	-	-	-	-	19.2	0.5	26.5	0.49	-	-	-	17.7	-	-
4	AQF44	19.4	133.6	-	-	-	-	0.2	-	-	-	-	-	-	14.7	0.4	20.2	0.33	37.3	-	-	15.2	-	-
5	AQF44	14.3	132.6	-	-	-	-	6.2	-	-	-	-	-	-	10.9	0.3	13.2	0.17	-	-	-	12.3	-	-
6	AQF44	10.6	105.6	-	-	-	-	15.6	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.0	-	-
7	AQF44	8.6	94.1	-	-	-	-	19.8	-	-	-	-	-	-	9.6	0.3	11.7	0.17	-	-	-	11.2	-	-
8	AQF44	8.2	89.1	-	-	-	-	19.3	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	12.1	-	-
9	AQF44	9.2	84.6	-	-	-	-	11.8	-	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.8	-	-
10	AQF44	12.2	90.2	-	-	-	-	2.6	-	-	-	-	-	-	12.5	0.3	15.3	0.17	-	-	-	13.5	-	-
11	AQF44	12.5	85.7	-	-	-	-	0.2	-	-	-	-	-	-	15.6	0.3	19.1	0.17	-	-	-	15.1	-	-
12	AQF44	11.9	81.3	-	-	-	-	0.2	-	-	-	-	-	-	14.0	-	-	-	-	-	-	-	-	-
1	AQF45	12.9	88.3	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-
2	AQF45	13.2	90.4	-	-	-	-	-	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-
3	AQF45	13.6	92.7	-	-	-	-	0.2	-	-	-	-	-	-	13.8	0.5	19.5	0.49	-	-	-	19.3	-	-
4	AQF45	19.0	135.6	-	-	-	-	0.5	-	-	-	-	-	-	15.5	0.4	16.5	0.33	40.8	-	-	16.2	-	-
5	AQF45	14.4	116.7	-	-	-	-	7.7	-	-	-	-	-	-	10.8	0.3	13.1	0.17	-	-	-	12.8	-	-
6	AQF45	9.6	97.5	-	-	-	-	15.0	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.3	-	-
7	AQF45	6.9	74.5	-	-	-	-	18.9	-	-	-	-	-	-	10.2	0.3	12.5	0.17	-	-	-	11.7	-	-
8	AQF45	7.7	82.5	-	-	-	-	18.9	-	-	-	-	-	-	12.6	0.3	15.4	0.17	-	-	-	12.6	-	-
9	AQF45	8.7	83.7	-	-	-	-	13.7	-	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.8	-	-
10	AQF45	12.9	91.7	-	-	-	-																	

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

		General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Total_Met al	Total_Metal	Total_Metal al	Total_Metal al	Total_Metal I	Total_Metal I	Total_Metal al	Total_Metal	Total_Metal	Total_Metal al	Total_Metal	Total_Metal al	Total_Metal
Site	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite_nitrat e(N) mg/L	Nitrogen(TKN) mg/L	D mg/L	T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum _T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_ T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_T mg/L	Chromium VI_T mg/L	Cobalt_T mg/L	Copper_T mg/L
AQF40	-	10.1	-	-	0.096	0.072	0.005	0.071	-	-	0.025	0.050	1.581	0.070	5.3	0.038	0.000108758	0.00032	0.00728	0.000011	0.000025	0.00589	0.000008	5.00649	0.000011	0.00025	-	0.000054	0.00063
AQF40	-	9.9	-	-	0.061	0.089	0.005	-	-	-	0.022	0.050	1.081	0.072	7.0	0.036	0.000118473	0.00032	0.00743	0.000011	0.000025	0.00594	0.000005	5.26217	0.000011	0.00025	-	0.000054	0.00044
AQF40	-	9.6	-	-	0.026	0.106	0.005	-	-	-	0.018	0.050	0.579	0.075	8.5	0.034	0.000128235	0.00031	0.00755	0.000011	0.000025	0.00595	0.000003	5.43070	0.000011	0.00025	-	0.000054	0.00025
AQF40	-	9.1	-	-	0.008	0.099	0.001	-	-	-	0.025	0.006	0.326	0.078	3.3	0.034	0.00005	0.00031	0.00693	0.000011	0.000025	0.00560	0.000009	4.38385	0.000009	0.00025	-	0.000053	0.00025
AQF40	-	8.7	-	-	0.006	0.038	0.001	0.044	-	-	0.023	0.050	0.273	0.064	1.4	0.055	0.00005	0.00022	0.00608	0.000050	0.000025	0.00517	0.000003	3.52734	0.000006	0.00022	-	0.000051	0.00025
AQF40	-	9.9	-	-	0.006	0.010	0.005	0.035	-	-	0.015	0.050	0.276	0.056	1.5	0.062	0.00005	0.00020	0.00619	0.000050	0.000025	0.00524	0.000005	3.50131	0.000007	0.00020	-	0.000051	0.00025
AQF40	-	8.8	-	-	0.013	0.003	0.001	0.220	-	-	0.012	0.050	0.251	0.063	2.0	0.049	0.00005	0.00022	0.00643	0.000050	0.000025	0.00533	0.000003	3.60611	0.000007	0.00016	-	0.000051	0.00025
AQF40	-	9.2	-	-	0.021	0.003	0.001	0.003	-	-	0.015	0.050	0.206	0.065	1.9	0.034	0.00005	0.00023	0.00543	0.000050	0.000025	0.00532	0.000003	3.29342	0.000007	0.00014	-	0.000051	0.00025
AQF40	-	9.0	-	-	0.024	0.003	0.001	0.003	-	-	0.012	0.050	0.239	0.063	2.3	0.045	0.00005	0.00024	0.00635	0.000050	0.000025	0.00535	0.000003	3.74594	0.000007	0.00013	-	0.000051	0.00025
AQF40	-	8.8	-	-	0.016	0.026	0.001	0.038	-	-	0.020	0.050	0.275	0.064	2.4	0.054	0.00005	0.00023	0.00546	0.000050	0.000025	0.00541	0.000003	3.87944	0.000008	0.00025	-	0.000052	0.00025
AQF40	-	10.1	-	-	0.016	0.025	0.001	0.024	-	-	0.019	0.050	0.278	0.062	3.2	0.081	0.00005	0.00027	0.00866	0.000050	0.000025	0.00562	0.000012	4.40661	0.000009	0.00030	-	0.000053	0.00066
AQF40	-	10.1	-	-	0.056	0.048	0.003	0.048	-	-	0.022	0.050	0.935	0.066	4.4	0.059	7.94469E-05	0.00030	0.00799	0.000030	0.000025	0.00579	0.000010	4.78464	0.000010	0.00027	-	0.000053	0.0006

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met al	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met I	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met al	Total_Met al	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met Total_Metal	Total_Met I	Total_Met al	Total_Met Total_Metal	Dissolved_Meta I	Dissolved_Meta I	Dissolved_Meta I
Site	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesium m_T mg/L	Manganes e_T mg/L	Mercury_T mg/L	Molybden um_T mg/L	Nickel_T mg/L	Potassium _T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_ T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L
AQF40	0.29	0.00007	0.00120	1.5	0.028	0.000003	0.00013	0.00026	0.72	0.0012	0.000066	3.2	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00038	0.0012	0.0001	0.0001	0.0003	0.0053	0.0001	0.0202	0.0001	0.0003
AQF40	0.30	0.00005	0.00128	1.5	0.029	0.000002	0.00010	0.00026	0.74	0.0012	0.000046	3.3	0.000005	1.7	0.020	2.1	0.00010	0.000005	0.00005	0.00035	0.0010	0.0001	0.0001	0.0003	0.0057	0.0002	0.0206	0.0001	0.0003
AQF40	0.30	0.00003	0.000135	1.5	0.030	0.000002	0.00007	0.00026	0.76	0.0012	0.000026	3.5	0.000005	1.7	0.021	2.5	0.00010	0.000005	0.00005	0.00032	0.0008	0.0001	0.0001	0.0003	0.0060	0.0002	0.0212	0.0001	0.0003
AQF40	0.28	0.00003	0.00117	1.3	0.024	0.000002	0.00007	0.00025	0.69	0.0012	0.000131	3.1	0.000005	1.5	0.018	1.2	0.00010	0.000005	0.00005	0.00006	0.0008	0.0001	0.0001	0.0003	0.0015	0.0001	0.0204	0.0001	0.0002
AQF40	0.31	0.00003	0.00087	1.0	0.039	0.000002	0.00006	0.00025	0.64	0.0011	0.000025	2.4	0.000005	1.2	0.015	0.5	0.00010	0.000005	0.00005	0.00010	0.0016	0.0001	0.0000	0.0003	0.0015	0.0001	0.0366	0.0001	0.0002
AQF40	0.35	0.00006	0.00152	0.9	0.028	0.000002	0.00008	0.00025	0.57	0.0010	0.000025	2.0	0.000005	1.1	0.012	0.6	0.00010	0.000005	0.00005	0.00024	0.0015	0.0001	0.0000	0.0003	0.0049	0.0001	0.0357	0.0001	0.0002
AQF40	0.21	0.00015	0.00084	1.0	0.026	0.000001	0.00010	0.00025	0.62	0.0012	0.000025	2.1	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00006	0.0014	0.0001	0.0001	0.0003	0.0015	0.0001	0.0266	0.0001	0.0002
AQF40	0.21	0.00003	0.00054	0.9	0.020	0.000002	0.00007	0.00025	0.54	0.0011	0.000025	2.1	0.000005	1.3	0.014	0.7	0.00010	0.000005	0.00005	0.00006	0.0009	0.0001	0.0000	0.0003	0.0044	0.0001	0.0203	0.0001	0.0002
AQF40	0.19	0.00003	0.00114	1.1	0.018	0.000003	0.00011	0.00025	0.57	0.0011	0.000025	2.4	0.000005	1.2	0.015	0.8	0.00010	0.000005	0.00005	0.00014	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0316	0.0001	0.0002
AQF40	0.27	0.00004	0.00119	1.1	0.025	0.000001	0.00012	0.00053	0.59	0.0011	0.000025	2.4	0.000005	1.3	0.015	0.9	0.00010	0.000005	0.00005	0.00006	0.0017	0.0001	0.0001	0.0003	0.0015	0.0001	0.0228	0.0001	0.0002
AQF40	0.31	0.00010	0.00058	1.3	0.032	0.000003	0.00011	0.00025	0.65	0.0012	0.000026	2.8	0.000005	1.4	0.017	1.2	0.00010	0.000005	0.00005	0.00007	0.0039	0.0001	0.0001	0.0003	0.0046	0.0001	0.0220	0.0001	0.0002
AQF40	0.30	0.00009	0.00089	1.4	0.031	0.000003	0.00012	0.00025	0.69	0.0012	0.000046	3.0	0.000005	1.5	0.019	1.5	0.00010	0.000005	0.00005	0.00022	0.0025	0.0001	0.0001	0.0003	0.0049	0.0001	0.0211	0.0001	0.0003
AQF42	0.33	0.00003	0.00129	1.5	0.032	0.000003	0.00010	0.00026	0.72	0.0012	0.000060	3.4	0.000005	1.8	0.020	1.9	0.00010	0.000005	0.00005	0.00055	0.0017	0.0001	0.0002	0.0003	0.0039	0.0001	0.0204	0.0001	0.0003
AQF42	0.37	0.00008	0.00130	1.5	0.039	0.000001	0.00008	0.00026	0.86	0.0013	0.000026	3.5	0.000005	1.8	0.021	9.8	0.00010	0.000005	0.00005	0.00207	0.0023	0.0001	0.0001	0.0003	0.0251	0.0001	0.0237	0.0001	0.0003
AQF42	0.60	0.00009	0.00140	1.6	0.068	0.000003	0.00008	0.00079	0.78	0.0014	0.000026	3.7	0.000005	1.7	0.021	1.7	0.00010	0.000005	0.00005	0.00007	0.0058	0.0001	0.0001	0.0003	0.0053	0.0001	0.0353	0.0001	0.0003
AQF42	0.30	0.00007	0.00117	1.3	0.027	0.000003	0.00009	0.00025	0.70	0.0011	0.000131	3.0	0.000005	1.5	0.018	1.2	0.00010	0.000005	0.00005	0.00006	0.0012	0.0001	0.0001	0.0003	0.0032	0.0001	0.0237	0.0001	0.0003
AQF42	0.49	0.00003	0.00112	0.9	0.069	0.000003	0.00009	0.00025	0.56	0.0010	0.000025	2.3	0.000005	1.1	0.013	0.5	0.00010	0.000005	0.00005	0.00026	0.0015	0.0001	0.0000	0.0003	0.0015	0.0001	0.0332	0.0001	0.0002
AQF42	0.36	0.00006	0.00152	0.9	0.021	0.000002	0.00020	0.00025	0.55	0.0010	0.000025	2.1	0.000005	1.1	0.012	0.6	0.00010	0.000005	0.00005	0.00028	0.0017	0.0001	0.0000	0.0003	0.0015	0.0001	0.0339	0.0001	0.0002
AQF42	0.25	0.00003	0.00054	1.0	0.024	0.000002	0.00009	0.00025	0.54	0.0011	0.000025	2.1	0.000005	1.2	0.013	0.7	0.00010	0.000005	0.00005	0.00042	0.0012	0.0001	0.0001	0.0003	0.0060	0.0001	0.0253	0.0001	0.0002
AQF42	0.22	0.00003	0.00054	1.0	0.023	0.000002	0.00008	0.00025	0.56	0.0011	0.000051	2.4	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00006	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0215	0.0001	0.0002
AQF42	0.18	0.00003	0.00054	1.1	0.017	0.000003	0.00010	0.00025	0.57	0.0011	0.000025	2.3	0.000005	1.3	0.015	0.8	0.00010	0.000005	0.00005	0.00006	0.0008	0.0001	0.0001	0.0003	0.0031	0.0001	0.0245	0.0001	0.0002
AQF42	0.24	0.00003	0.00114	1.1	0.023	0.000001	0.00011	0.00025	0.58	0.0011	0.000025	2.6	0.000005	1.3	0.015	0.9	0.00010	0.000005	0.00005	0.00006	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0191	0.0001	0.0002
AQF42	0.43	0.00014	0.00117	1.3	0.086	0.000003	0.00014	0.00025	0.68	0.0013	0.000026	2.8	0.000005	1.4	0.018	1.2	0.00010	0.000005	0.00005	0.00018	0.0078	0.0001	0.0001	0.0003	0.0044	0.0001	0.0315	0.0001	0.0002
AQF42	0.38	0.00008	0.00123	1.4	0.059	0.000003	0.00012	0.00025	0.71	0.0013	0.000043	3.1	0.000005	1.6	0.019	1.6	0.00010	0.000005	0.00005	0.00037	0.0047	0.0001	0.0001	0.0003	0.0042	0.0001	0.0259	0.0001	0.0003
AQF43	0.29	0.00003	0.00129	1.5	0.027	0.000003	0.00008	0.00026	0.69	0.0011	0.000026	3.4	0.000005	1.7	0.020	1.6	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0015	0.0001	0.0209	0.0001	0.0003
AQF43	0.30	0.00003	0.00130	1.5	0.029	0.000002	0.00006	0.00026	0.71	0.0012	0.000026	3.4	0.000005	1.7	0.020	1.7	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0020	0.0001	0.0204	0.0001	0.0003
AQF43	0.31	0.00003	0.00130	1.5	0.030	0.000002	0.00005	0.00026	0.73	0.0012	0.000026	3.5	0.000005	1.7	0.020	1.7	0.00010	0.000005	0.00005	0.00007	0.0009	0.0001	0.0001	0.0003	0.0024	0.0001	0.0200	0.0001	0.0003
AQF43	0.29	0.00003	0.00117	1.3	0.026	0.000002	0.00008	0.00025	0.68	0.0012	0.000092	3.0	0.000005	1.5	0.018	1.2	0.00010	0.000005	0.00005	0.00006	0.0011	0.0001	0.0001	0.0003	0.0015	0.0001	0.0196	0.0001	0.0002
AQF43	0.36	0.00007	0.00152	1.0	0.032	0.000003	0.00011	0.00025	0.57	0.0010	0.000025	2.3	0.000005	1.1	0.014	0.5	0.00010	0.000005	0.00005	0.00005	0.0018	0.0001	0.0000	0.0003	0.0047	0.0001	0.0299	0.0001	0.0002
AQF43	0.32	0.00003	0.00152	1.0	0.021	0.000002	0.00005	0.00058	0.58	0.0010	0.000025	2.1	0.000005	1.2	0.013	0.6	0.00010	0.000005	0.00005	0.00006	0.0018	0.0001	0.0000	0.0009	0.0015	0.0003	0.0310	0.0001	0.0002
AQF43	0.26	0.00003	0.00054	1.0	0.028	0.000001	0.00008	0.00025	0.56	0.0011	0.000057	2.2	0.000005	1.2	0.013	0.7	0.00010	0.000005	0.00005	0.00006	0.0014	0.0001	0.0001	0.0003	0.0015	0.0001	0.0290	0.0001	0.0002
AQF43	0.22	0.00003	0.00054	1.1	0.027	0.000002	0.00011	0.00067	0.58	0.0011	0.000025	2.3	0.000005	1.2	0.015	0.7	0.00010	0.000005	0.00005	0.00006	0.0015	0.0001	0.0001	0.0003	0.0049	0.0001	0.0229	0.0001	0.0002
AQF43	0.20	0.00003	0.00114	1.1	0.021	0.000003	0.00011	0.00025	0.56	0.0011	0.000119	2.4	0.000005	1.2	0.015	0.8	0.00030	0.000005	0.00005	0.00006	0.0013	0.0001	0.0001	0.0003	0.0015	0.0001	0.0269	0.0001	0.0002
AQF43	0.27	0.00003	0.00114	1.2	0.024	0.000001	0.00014	0.00025	0.60	0.0011	0.000057	2.7	0.000005	1.3	0.015	0.9	0.00010	0.000005	0.00005	0.00006	0.0022	0.0001	0.0001	0.0003	0.0015	0.0001	0.0213	0.0001	0.0002
AQF43	0.22	0.00003	0.00058	1.3	0.023	0.000003	0.00010	0.00025	0.63	0.0011	0.000053	2.9	0.000005	1.4	0.017	1.2	0.00010	0.000005	0.00005	0.00007	0.0010	0.0001	0.0001	0.0003	0.0015	0.0001	0.0179	0.0001	0.0002
AQF43	0.25	0.00003	0.00094	1.4	0.026	0.000003	0.00009	0.00025	0.67	0.0011	0.000039	3.1	0.000005	1.6	0.019														

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Site	Dissolved_Meta I	Dissolved_Meta I	Dissolved_Meta Dissolved_Metal		Dissolved_Meta I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Metal al	Dissolved_Metal I
	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_ D mg/L		Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L
AQF40	0.0130	1.08E-05	0.000025	0.0059	2.56107E-06	4.91	1.05E-05	0.00025	5.4E-05	0.0028	0.18	0.00013	0.0013	1.46	0.0239	-	0.00009	0.000254658	0.73	0.0011	0.000025	3.14
AQF40	0.0135	1.09E-05	0.000025	0.0060	2.56435E-06	5.05	1.08E-05	0.00025	5.4E-05	0.0020	0.19	0.00009	0.0011	1.49	0.0255	-	0.00010	0.000254908	0.73	0.0011	0.000033	3.15
AQF40	0.0140	1.09E-05	0.000025	0.0060	2.56508E-06	5.11	1.09E-05	0.00025	5.4E-05	0.0012	0.21	0.00005	0.0010	1.50	0.0262	0.0000010	0.00012	0.000254964	0.72	0.0011	0.000041	3.16
AQF40	0.0197	1.06E-05	0.000025	0.0056	1.0429E-05	4.30	8.75E-06	0.00025	5.3E-05	0.0021	0.19	0.00011	0.0012	1.28	0.0216	0.0000015	0.00006	0.000253162	0.77	0.0012	0.000025	3.05
AQF40	0.0064	5.00E-05	0.000025	0.0052	2.51149E-06	3.50	6.04E-06	0.00010	5.1E-05	0.0006	0.21	0.00003	0.0011	1.02	0.0289	0.0000019	0.00013	0.000250876	0.62	0.0010	0.000025	2.43
AQF40	0.0055	5.00E-05	0.000025	0.0053	2.51655E-06	3.25	6.50E-06	0.00013	5.1E-05	0.0003	0.18	0.00003	0.0005	0.93	0.0083	0.0000018	0.00008	0.000251262	0.57	0.0009	0.000025	1.99
AQF40	0.0055	5.00E-05	0.000025	0.0053	5.20189E-06	3.53	7.02E-06	0.00011	5.1E-05	0.0003	0.12	0.00007	0.0009	1.01	0.0115	0.0000012	0.00011	0.000251701	0.60	0.0011	0.000025	1.92
AQF40	0.0049	5.00E-05	0.000025	0.0053	2.52214E-06	3.27	7.00E-06	0.00012	5.1E-05	0.0003	0.15	0.00003	0.0005	0.97	0.0115	-	0.00010	0.000251689	0.55	0.0010	0.000052	2.08
AQF40	0.0061	5.00E-05	0.000025	0.0054	2.52397E-06	3.43	7.17E-06	0.00022	5.1E-05	0.0026	0.14	0.00015	0.0005	0.98	0.0129	-	0.00014	0.000251828	0.55	0.0011	0.000052	2.25
AQF40	0.0083	5.00E-05	0.000025	0.0054	2.52805E-06	3.77	7.54E-06	0.00008	5.2E-05	0.0016	0.14	0.00007	0.0008	1.12	0.0116	0.0000011	0.00011	0.00025214	0.57	0.0010	0.000042	2.32
AQF40	0.0051	5.00E-05	0.000025	0.0056	2.54254E-06	4.11	8.85E-06	0.00015	5.3E-05	0.0050	0.15	0.00018	0.0006	1.19	0.0168	-	0.00010	0.000253244	0.62	0.0010	0.000025	2.45
AQF40	0.0091	3.04E-05	0.000025	0.0058	2.55439E-06	4.59	9.92E-06	0.00020	5.3E-05	0.0039	0.16	0.00015	0.0009	1.35	0.0211	-	0.00009	0.000254148	0.68	0.0011	0.000025	2.80
AQF42	0.0136	1.08E-05	0.000025	0.0059	2.56107E-06	4.89	1.05E-05	0.00025	5.4E-05	0.0032	0.19	0.00015	0.0013	1.49	0.0252	-	0.00011	0.000254658	0.72	0.0012	0.000025	3.11
AQF42	0.0207	1.09E-05	0.000025	0.0060	2.56435E-06	5.22	1.08E-05	0.00025	5.4E-05	0.0020	0.22	0.00008	0.0006	1.57	0.0327	0.0000003	0.00008	0.000254908	0.90	0.0012	0.000025	3.31
AQF42	0.0086	1.09E-05	0.000025	0.0060	2.56508E-06	5.21	1.09E-05	0.00025	5.4E-05	0.0004	0.24	0.00003	0.0014	1.50	0.0295	-	0.00008	0.000254964	0.71	0.0012	0.000063	3.22
AQF42	0.0193	1.06E-05	0.000025	0.0056	1.1908E-05	4.36	8.75E-06	0.00025	5.3E-05	0.0025	0.20	0.00009	0.0013	1.29	0.0243	-	0.00008	0.000253162	0.71	0.0011	0.000025	2.98
AQF42	0.0057	5.00E-05	0.000025	0.0052	2.51149E-06	3.20	6.04E-06	0.00014	5.1E-05	0.0007	0.30	0.00003	0.0005	0.96	0.0476	0.0000016	0.00009	0.000250876	0.58	0.0010	0.000025	2.44
AQF42	0.0057	5.00E-05	0.000025	0.0053	2.51655E-06	3.05	6.50E-06	0.00013	5.1E-05	0.0003	0.19	0.00003	0.0005	0.86	0.0069	0.0000017	0.00008	0.000251262	0.59	0.0009	0.000025	2.00
AQF42	0.0056	5.00E-05	0.000025	0.0053	2.52231E-06	3.24	7.02E-06	0.00005	5.1E-05	0.0002	0.16	0.00003	0.0005	0.93	0.0110	0.0000015	0.00009	0.000251701	0.54	0.0010	0.000025	1.98
AQF42	0.0053	5.00E-05	0.000025	0.0053	2.52214E-06	3.31	7.00E-06	0.00011	5.1E-05	0.0004	0.15	0.00012	0.0005	0.97	0.0119	-	0.00010	0.000251689	0.54	0.0011	0.000025	2.05
AQF42	0.0058	5.00E-05	0.000025	0.0054	2.52397E-06	3.61	7.17E-06	0.00012	5.1E-05	0.0002	0.13	0.00003	0.0005	1.03	0.0109	-	0.00009	0.000251828	0.56	0.0010	0.000061	2.17
AQF42	0.0050	5.00E-05	0.000025	0.0054	2.52805E-06	3.74	7.54E-06	0.00005	5.2E-05	0.0005	0.13	0.00003	0.0005	1.11	0.0118	0.0000008	0.00011	0.00025214	0.52	0.0009	0.000025	2.34
AQF42	0.0152	5.00E-05	0.000025	0.0056	2.54254E-06	4.28	8.85E-06	0.00077	5.3E-05	0.0015	0.20	0.00007	0.0006	1.24	0.0321	-	0.00090	0.000253244	0.61	0.0010	0.000025	2.33
AQF42	0.0145	3.04E-05	0.000025	0.0058	2.55439E-06	4.66	9.92E-06	0.00051	5.3E-05	0.0024	0.20	0.00011	0.0009	1.39	0.0293	-	0.00051	0.000254148	0.67	0.0011	0.000025	2.72
AQF43	0.0068	1.08E-05	0.000025	0.0059	2.56107E-06	4.87	1.05E-05	0.00025	5.4E-05	0.0004	0.18	0.00003	0.0012	1.47	0.0226	-	0.00007	0.000254658	0.68	0.0011	0.000025	3.09
AQF43	0.0100	1.09E-05	0.000025	0.0060	2.56435E-06	5.02	1.08E-05	0.00025	5.4E-05	0.0007	0.19	0.00004	0.0011	1.49	0.0246	-	0.00007	0.000254908	0.70	0.0011	0.000034	3.15
AQF43	0.0133	1.09E-05	0.000025	0.0060	2.56508E-06	5.10	1.09E-05	0.00025	5.4E-05	0.0010	0.21	0.00005	0.0010	1.49	0.0257	0.0000010	0.00006	0.000254964	0.70	0.0011	0.000043	3.20
AQF43	0.0204	1.06E-05	0.000025	0.0056	2.54146E-06	4.32	8.75E-06	0.00025	5.3E-05	0.0019	0.20	0.00007	0.0012	1.26	0.0228	0.0000018	0.00007	0.000253162	0.66	0.0011	0.000025	2.98
AQF43	0.0054	5.00E-05	0.000025	0.0052	2.51149E-06	3.56	4.59E-05	0.00012	5.1E-05	0.0005	0.21	0.00003	0.0005	1.02	0.0226	0.0000025	0.00010	0.000250876	0.59	0.0009	0.000025	2.29
AQF43	0.0055	5.00E-05	0.000025	0.0053	2.51655E-06	3.40	6.50E-06	0.00012	5.1E-05	0.0002	0.17	0.00003	0.0005	0.96	0.0075	0.0000018	0.00008	0.000251262	0.71	0.0009	0.000025	1.94
AQF43	0.0055	5.00E-05	0.000025	0.0053	2.52231E-06	3.26	7.02E-06	0.00011	5.1E-05	0.0002	0.17	0.00003	0.0005	0.98	0.0107	0.0000015	0.00006	0.000251701	0.56	0.0011	0.000025	2.20
AQF43	0.0049	5.00E-05	0.000025	0.0053	2.52214E-06	3.53	7.00E-06	0.00005	5.1E-05	0.0003	0.14	0.00003	0.0005	1.00	0.0122	-	0.00010	0.000251689	0.60	0.0010	0.000025	2.05
AQF43	0.0060	5.00E-05	0.000025	0.0054	2.52397E-06	3.56	7.17E-06	0.00012	5.1E-05	0.0004	0.13	0.00003	0.0005	1.01	0.0127	-	0.00009	0.000251828	0.54	0.0010	0.000025	2.23
AQF43	0.0111	5.00E-05	0.000025	0.0054	2.52805E-06	3.75	7.54E-06	0.00013	5.2E-05	0.0037	0.14	0.00015	0.0005	1.09	0.0120	0.0000008	0.00014	0.00025214	0.55	0.0010	0.000025	2.38
AQF43	0.0052	5.00E-05	0.000025	0.0056	2.54254E-06	4.18	8.85E-06	0.00011	5.3E-05	0.0051	0.12	0.00617	0.0006	1.22	0.0146	-	0.00009	0.000253244	0.59	0.0009	0.000025	2.45
AQF43	0.0060	3.04E-05	0.000025	0.0058	2.55439E-06	4.60	9.92E-06	0.00018	5.3E-05	0.0027	0.15	0.00308	0.0009	1.37	0.0194	-	0.00008	0.000254148	0.64	0.0010	0.000025	2.78
AQF44	0.0138	1.08E-05	0.000025	0.0059	1.16685E-05	5.21	1.05E-05	0.00025	5.4E-05	0.0037	0.18	0.00016	0.0013	1.52	0.0234	-	0.00009	0.000254658	0.70	0.0011	0.000025	3.07
AQF44	0.0164	1.09E-05	0.000025	0.0060	7.11291E-06	5.28	1.08E-05	0.00025	5.4E-05	0.0030	0.20	0.00010	0.0011	1.54	0.0249	-	0.00008	0.000254908	0.72	0.0011	0.000025	3.13
AQF44	0.0189	1.09E-05	0.000025	0.0060	2.56508E-06	5.28	1.09E-05	0.00025	5.4E-05	0.0023	0.20	0.00004	0.0010	1.54	0.0258	0.0000010	0.00008	0.000254964	0.74	0.0012	0.000025	3.19
AQF44	0.0186	1.06E-05	0.000025	0.0056	2.54146E-06	4.66	8.75E-06	0.00025	5.3E-05	0.0018	0.19	0.00007	0.0013	1.35	0.0223	0.0000009	0.00008	0.000253162	0.69	0.0011	0.000025	2.98
AQF44	0.0055	5.00E-05	0.000025	0.0052	2.51149E-06	3.48	6.04E-06	0.00012	5.1E-05	0.0004	0.22	0.00003	0.0011	0.99	0.0224	0.0000009	0.00009	0.000250876	0.58	0.0009	0.000025	2.37
AQF44	0.0253	5.00E-05	0.000025	0.0053	2.51655E-06	3.16	6.50E-06	0.00013	5.1E-05	0.0014	0.18	0.00003	0.0005	0.91	0.0074	0.0000017	0.00018	0.000251262	0.67	0.0010	0.000025	2.01
AQF44	0.0056	5.00E-05	0.000025	0.0053	2.52231E-06	3.31	7.02E-06	0.00011	5.1E-05	0.0003	0.16	0.00003	0.0005	0.94	0.0110	0.0000016	0.00010	0.000251701	0.56	0.0010	0.000025	2.02
AQF44	0.0050	5.00E-05	0.000025	0.0053	2.52214E-06	3.55	7.00E-06	0.00012	5.1E-05	0.0003	0.14	0.00012	0.0005	1.02	0.0124	-	0.00015	0.000251689	0.60	0.0010	0.000025	

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

	Site	Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Cyanides	Cyanides	Cyanides	Methylme	Methylme
		Dissolved_Metal	Dissolved_Metal	I	I	Dissolved_Metal	I	Dissolved_Metal	al	al	Dissolved_Metal	Dissolved_Metal	al	Dissolved_Metal	al					
		Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L	Zinc_D mg/L	Zirconium_D mg/L					
AQF40	0.000005	1.73	0.02	1.61	0.00010	0.00001	0.00005	0.00007	0.00015	0.00005	0.00011	0.00025	0.0045	0.00015	-	-	-	-	-	
AQF40	0.000005	1.75	0.02	1.77	0.00010	0.00001	0.00005	0.00010	0.00015	0.00005	0.00011	0.00025	0.0032	0.00015	-	-	-	-	-	
AQF40	0.000005	1.77	0.02	1.87	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00011	0.00025	0.0018	0.00015	-	-	-	-	-	
AQF40	0.000005	1.57	0.02	1.17	0.00010	0.00001	0.00005	0.00016	0.00015	0.00005	0.00008	0.00025	0.0028	0.00015	-	-	-	-	-	
AQF40	0.000005	1.12	0.01	0.51	0.00010	0.00001	0.00005	0.00013	0.00071	0.00005	0.00004	0.00025	0.0030	0.00010	-	-	-	-	-	
AQF40	0.000005	1.07	0.01	0.62	0.00010	0.00001	0.00005	0.00020	0.00051	0.00005	0.00004	0.00025	0.0064	0.00010	-	-	-	-	-	
AQF40	0.000005	1.18	0.01	0.90	0.00010	0.00001	0.00005	0.00011	0.00041	0.00005	0.00006	0.00025	0.0037	0.00010	-	-	-	-	-	
AQF40	0.000005	1.20	0.02	0.74	0.00010	0.00001	0.00005	0.00025	0.00037	0.00005	0.00005	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF40	0.000005	1.18	0.01	0.78	0.00010	0.00001	0.00005	0.00006	0.00055	0.00005	0.00006	0.00025	0.0048	0.00010	-	-	-	-	-	
AQF40	0.000005	1.32	0.01	1.08	0.00010	0.00001	0.00005	0.00006	0.00027	0.00005	0.00007	0.00025	0.0021	0.00011	-	-	-	-	-	
AQF40	0.000005	1.30	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00034	0.00005	0.00008	0.00025	0.0102	0.00010	-	-	-	-	-	
AQF40	0.000005	1.53	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00024	0.00005	0.00010	0.00025	0.0074	0.00012	-	-	-	-	-	
AQF42	0.000005	1.75	0.02	1.61	0.00010	0.00001	0.00005	0.00020	0.00015	0.00005	0.00015	0.00025	0.0046	0.00015	-	-	-	-	-	
AQF42	0.000005	1.85	0.02	1.97	0.00010	0.00001	0.00005	0.00020	0.00040	0.00005	0.00012	0.00025	0.0048	0.00015	-	-	-	-	-	
AQF42	0.000005	1.76	0.02	1.70	0.00010	0.00001	0.00005	0.00008	0.00040	0.00005	0.00012	0.00025	0.0012	0.00015	-	-	-	-	-	
AQF42	0.000005	5.39	0.02	1.66	0.00010	0.00001	0.00005	0.00017	0.00035	0.00005	0.00011	0.00025	0.0052	0.00015	-	-	-	-	-	
AQF42	0.000005	0.98	0.01	0.51	0.00010	0.00001	0.00005	0.00005	0.00051	0.00005	0.00004	0.00025	0.0012	0.00010	-	-	-	-	-	
AQF42	0.000005	1.05	0.01	0.62	0.00010	0.00001	0.00005	0.00031	0.00046	0.00005	0.00004	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF42	0.000005	1.05	0.01	1.05	0.00010	0.00001	0.00005	0.00069	0.00044	0.00005	0.00006	0.00025	0.0089	0.00010	-	-	-	-	-	
AQF42	0.000005	1.12	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00046	0.00005	0.00005	0.00025	0.0030	0.00010	-	-	-	-	-	
AQF42	0.000005	1.22	0.01	0.78	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF42	0.000005	1.23	0.01	0.87	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00006	0.00025	0.0011	0.00010	-	-	-	-	-	
AQF42	0.000005	1.30	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00101	0.00091	0.00012	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF42	0.000005	1.54	0.02	1.46	0.00010	0.00001	0.00005	0.00014	0.00058	0.00048	0.00014	0.00025	0.0040	0.00012	-	-	-	-	-	
AQF43	0.000005	1.71	0.02	1.61	0.00010	0.00001	0.00005	0.00007	0.00031	0.00005	0.00011	0.00025	0.0011	0.00015	-	-	-	-	-	
AQF43	0.000005	1.74	0.02	1.68	0.00010	0.00001	0.00005	0.00009	0.00023	0.00005	0.00011	0.00025	0.0013	0.00015	-	-	-	-	-	
AQF43	0.000005	1.75	0.02	1.70	0.00010	0.00001	0.00005	0.00011	0.00015	0.00005	0.00011	0.00025	0.0015	0.00015	-	-	-	-	-	
AQF43	0.000005	1.52	0.02	1.17	0.00010	0.00001	0.00005	0.00015	0.00031	0.00005	0.00008	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF43	0.000005	1.01	0.01	0.85	0.00010	0.00001	0.00005	0.00005	0.00044	0.00005	0.00004	0.00025	0.0015	0.00010	-	-	-	-	-	
AQF43	0.000005	1.07	0.01	0.62	0.00010	0.00001	0.00005	0.00006	0.00037	0.00005	0.00004	0.00025	0.0045	0.00010	-	-	-	-	-	
AQF43	0.000005	1.22	0.01	0.75	0.00010	0.00001	0.00005	0.00006	0.00045	0.00005	0.00005	0.00025	0.0013	0.00010	-	-	-	-	-	
AQF43	0.000005	1.14	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00058	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF43	0.000005	1.15	0.01	0.78	0.00010	0.00001	0.00005	0.00006	0.00041	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF43	0.000005	1.23	0.01	0.87	0.00010	0.00001	0.00005	0.00006	0.00041	0.00005	0.00006	0.00025	0.0022	0.00010	-	-	-	-	-	
AQF43	0.000005	1.30	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00031	0.00005	0.00008	0.00025	0.0048	0.00010	-	-	-	-	-	
AQF43	0.000005	1.52	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00031	0.00005	0.00010	0.00025	0.0029	0.00012	-	-	-	-	-	
AQF44	0.000005	1.75	0.02	1.61	0.00010	0.00001	0.00005	0.00007	0.00032	0.00005	0.00011	0.00025	0.0039	0.00015	-	-	-	-	-	
AQF44	0.000005	1.77	0.02	1.68	0.00010	0.00001	0.00005	0.00011	0.00023	0.00005	0.00011	0.00025	0.0031	0.00015	-	-	-	-	-	
AQF44	0.000005	1.78	0.02	1.70	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF44	0.000005	2.00	0.02	1.17	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00008	0.00025	0.0028	0.00015	-	-	-	-	-	
AQF44	0.000005	0.98	0.01	0.51	0.00010	0.00001	0.00005	0.00005	0.00047	0.00005	0.00004	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.08	0.01	0.62	0.00010	0.00001	0.00005	0.00020	0.00041	0.00005	0.00004	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF44	0.000005	1.03	0.01	0.75	0.00010	0.00001	0.00005	0.00006	0.00049	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.15	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00045	0.00005	0.00005	0.00025	0.0026	0.00010	-	-	-	-	-	
AQF44	0.000005	1.26	0.01	1.20	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.26	0.02	0.87	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.33	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00049	0.00005	0.00008	0.00025	0.0050	0.00010	-	-	-	-	-	
AQF44	0.000005	1.56	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00041	0.00005	0.00010	0.00025	0.0044	0.00012	-	-	-	-	-	
AQF45	0.000005	1.78	0.02	1.61	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF45	0.000005	1.80	0.02	2.09	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00012	0.00025	0.0019	0.00015	-	-	-	-	-	
AQF45	0.000005	1.81	0.02	2.51	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00012	0.00025	0.0015	0.00015	-	-	-	-	-	
AQF45	0.000005	1.69	0.02	1.17	0.00010	0.00001	0.00005	0.00007	0.00015	0.00005	0.00008	0.00025	0.0016	0.00015	-	-	-	-	-	
AQF45	0.000005	0.99	0.01	0.51	0.00010	0.00001	0.00005	0.00005	0.00068	0.00005	0.00004	0.00025	0.0013	0.00010	-	-	-	-	-	
AQF45	0.000005	1.03	0.01	0.62	0.00023	0.00001	0.00005	0.00006	0.00056	0.00005	0.00004	0.00025	0.0011	0.00010	-	-	-	-	-	
AQF45	0.000005	1.05	0.01	0.75	0.00010	0.00001	0.00005	0.00006	0.00065	0.00005	0.00006	0.00025	0.0021	0.00010	-	-	-	-	-	
AQF45	0.000005	1.15	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00118	0.00005	0.00006	0.00025	0.0012	0.00010	-	-	-	-	-	
AQF45	0.000005	1.30	0.02	0.78	0.00010	0.00001	0.00005	0.00006	0.00116	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF45	0.000005	1.28	0.01	0.87	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00006	0.00025	0.0016	0.00010	-	-	-	-	-	
AQF45	0.000005	1.35	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00015	0.00005	0.00008	0.00025	0.0059	0.00010	-	-	-	-	-	
AQF45	0.000005	1.60	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00034	0.00005	0.00010	0.00025	0.0005	0.00010	-	-	-	-	-	
Downstream stn Median	0.000005	1.14	0.01	0.75	0.															

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations

		Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	
Month	Site	D_Oxygen_percent_ D_Oxygen_field mg/L	field %	ORP_field mV	pH_field pH	Specific_Conducta nce_field uS/cm	TDS_field mg/L	Temp_field C	Turbidity_ field NTU	Acidity(CaCO 3) mg/L	Alkalinity(CaCO 3)_bicarbonate mg/L	Alkalinity(CaCO 3)_carbonate mg/L	Alkalinity(CaC O3)_hydroxide mg/L	Alkalinity(CaC O3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbo nate mg/L	(HCO3)_bicarbo nate mg/L	(OH)_hydroxi de mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(CaC O3)_D mg/L	Hardness(CaC O3)_T mg/L	pH pH	TDS_T mg/L
1	AQF40	10.0	68.5	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-
2	AQF40	10.9	74.5	-	-	-	-	-	-	-	-	-	-	-	11.7	-	-	-	-	-	-	-	-	-
3	AQF40	11.7	80.6	-	-	-	-	0.2	-	-	-	-	-	-	11.3	0.5	18.4	0.49	-	-	-	17.2	-	-
4	AQF40	20.2	140.5	-	-	-	-	0.6	-	-	-	-	-	-	14.1	0.4	16.2	0.33	35.9	-	-	15.1	-	-
5	AQF40	12.5	95.0	-	-	-	-	3.9	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.5	-	-
6	AQF40	9.0	91.0	-	-	-	-	15.4	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.3	-	-
7	AQF40	6.8	72.4	-	-	-	-	18.8	-	-	-	-	-	-	10.6	0.3	12.9	0.17	-	-	-	12.0	-	-
8	AQF40	6.1	67.1	-	-	-	-	20.0	-	-	-	-	-	-	11.4	0.3	13.9	0.17	-	-	-	11.3	-	-
9	AQF40	8.0	79.3	-	-	-	-	13.7	-	-	-	-	-	-	11.6	0.3	14.1	0.17	-	-	-	11.6	-	-
10	AQF40	12.0	90.7	-	-	-	-	3.6	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	12.9	-	-
11	AQF40	10.4	71.5	-	-	-	-	0.3	-	-	-	-	-	-	13.5	0.3	16.4	0.17	-	-	-	13.5	-	-
12	AQF40	10.2	69.9	-	-	-	-	0.2	-	-	-	-	-	-	12.8	-	-	-	-	-	-	-	-	-
1	AQF42	10.5	72.0	-	-	-	-	0.2	-	-	-	-	-	-	13.7	-	-	-	-	-	-	-	-	-
2	AQF42	12.1	82.1	-	-	-	-	0.2	-	-	-	-	-	-	9.9	-	-	-	-	-	-	17.6	-	-
3	AQF42	10.6	71.9	-	-	-	-	0.2	-	-	-	-	-	-	17.4	0.5	21.3	0.49	-	-	-	17.4	-	-
4	AQF42	15.6	107.9	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.4	16.9	0.33	35.5	-	-	14.7	-	-
5	AQF42	13.8	133.6	-	-	-	-	4.4	-	-	-	-	-	-	10.0	0.3	12.1	0.17	-	-	-	11.5	-	-
6	AQF42	10.4	103.6	-	-	-	-	15.3	-	-	-	-	-	-	9.1	0.3	11.1	0.17	-	-	-	10.5	-	-
7	AQF42	8.0	87.4	-	-	-	-	19.0	-	-	-	-	-	-	11.0	0.3	13.4	0.17	-	-	-	11.0	-	-
8	AQF42	8.0	85.3	-	-	-	-	18.6	-	-	-	-	-	-	11.4	0.3	13.9	0.17	-	-	-	11.4	-	-
9	AQF42	8.5	82.9	-	-	-	-	14.1	-	-	-	-	-	-	11.1	0.3	13.5	0.17	-	-	-	12.3	-	-
10	AQF42	11.4	96.2	-	-	-	-	3.7	-	-	-	-	-	-	11.9	0.3	14.6	0.17	-	-	-	12.7	-	-
11	AQF42	11.7	80.4	-	-	-	-	0.3	-	-	-	-	-	-	14.0	0.3	17.0	0.17	-	-	-	14.1	-	-
12	AQF42	11.1	76.2	-	-	-	-	0.2	-	-	-	-	-	-	14.0	-	-	-	-	-	-	-	-	-
1	AQF43	13.3	91.5	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-
2	AQF43	13.5	92.4	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-
3	AQF43	13.7	93.5	-	-	-	-	0.2	-	-	-	-	-	-	14.1	0.5	18.4	0.49	-	-	-	17.0	-	-
4	AQF43	17.0	116.8	-	-	-	-	0.3	-	-	-	-	-	-	14.2	0.4	16.8	0.33	35.7	-	-	15.1	-	-
5	AQF43	17.0	137.6	-	-	-	-	5.9	-	-	-	-	-	-	12.2	0.3	14.8	0.17	-	-	-	12.6	-	-
6	AQF43	10.4	104.6	-	-	-	-	15.7	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.7	-	-
7	AQF43	8.2	89.8	-	-	-	-	19.5	-	-	-	-	-	-	9.4	0.3	11.5	0.17	-	-	-	11.3	-	-
8	AQF43	8.2	90.0	-	-	-	-	19.6	-	-	-	-	-	-	12.4	0.3	15.1	0.17	-	-	-	12.0	-	-
9	AQF43	9.1	85.9	-	-	-	-	13.0	-	-	-	-	-	-	12.0	0.3	14.6	0.17	-	-	-	12.1	-	-
10	AQF43	12.8	95.1	-	-	-	-	3.0	-	-	-	-	-	-	11.7	0.3	14.3	0.17	-	-	-	12.7	-	-
11	AQF43	14.4	98.3	-	-	-	-	-	-	-	-	-	-	-	13.6	0.3	16.5	0.17	-	-	-	13.7	-	-
12	AQF43	13.8	94.9	-	-	-	-	-	-	-	-	-	-	-	14.1	-	-	-	-	-	-	14.6	-	-
1	AQF44	11.3	77.0	-	-	-	-	0.2	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-
2	AQF44	12.4	84.5	-	-	-	-	0.2	-	-	-	-	-	-	15.7	-	-	-	-	-	-	-	-	-
3	AQF44	13.6	92.0	-	-	-	-	0.2	-	-	-	-	-	-	19.2	0.5	26.5	0.49	-	-	-	17.7	-	-
4	AQF44	19.4	133.6	-	-	-	-	0.2	-	-	-	-	-	-	14.7	0.4	20.2	0.33	37.3	-	-	15.2	-	-
5	AQF44	14.3	132.6	-	-	-	-	6.2	-	-	-	-	-	-	10.9	0.3	13.2	0.17	-	-	-	12.3	-	-
6	AQF44	10.6	105.6	-	-	-	-	15.6	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.0	-	-
7	AQF44	8.6	94.1	-	-	-	-	19.8	-	-	-	-	-	-	9.6	0.3	11.7	0.17	-	-	-	11.2	-	-
8	AQF44	8.2	89.1	-	-	-	-	19.3	-	-	-	-	-	-	12.3	0.3	15.0	0.17	-	-	-	12.1	-	-
9	AQF44	9.2	84.6	-	-	-	-	11.8	-	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.8	-	-
10	AQF44	12.2	90.2	-	-	-	-	2.6	-	-	-	-	-	-	12.5	0.3	15.3	0.17	-	-	-	13.5	-	-
11	AQF44	12.5	85.7	-	-	-	-	0.2	-	-	-	-	-	-	15.6	0.3	19.1	0.17	-	-	-	15.1	-	-
12	AQF44	11.9	81.3	-	-	-	-	0.2	-	-	-	-	-	-	14.0	-	-	-	-	-	-	-	-	-
1	AQF45	12.9	88.3	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-
2	AQF45	13.2	90.4	-	-	-	-	-	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-
3	AQF45	13.6	92.7	-	-	-	-	0.2	-	-	-	-	-	-	13.8	0.5	19.5	0.49	-	-	-	19.3	-	-
4	AQF45	19.0	135.6	-	-	-	-	0.5	-	-	-	-	-	-	15.5	0.4	16.5	0.33	40.8	-	-	16.2	-	-
5	AQF45	14.4	116.7	-	-	-	-	7.7	-	-	-	-	-	-	10.8	0.3	13.1	0.17	-	-	-	12.8	-	-
6	AQF45	9.6	97.5	-	-	-	-	15.0	-	-	-	-	-	-	9.5	0.3	11.6	0.17	-	-	-	11.3	-	-
7	AQF45	6.9	74.5	-	-	-	-	18.9	-	-	-	-	-	-	10.2	0.3	12.5	0.17	-	-	-	11.7	-	-
8	AQF45	7.7	82.5	-	-	-	-	18.9	-	-	-	-	-	-	12.6	0.3	15.4	0.17	-	-	-	12.6	-	-
9	AQF45	8.7	83.7	-	-	-	-	13.7	-	-	-	-	-	-	12.8	0.3	15.6	0.17	-	-	-	13.8	-	-
10	AQF45	12.9	91.7	-	-	-	-																	

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al
Site	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite_nitrat e(N) mg/L	Nitrogen(TKN) mg/L	Phosphorus_ D mg/L	Phosphorus_ T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum _T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_ T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_ T mg/L	Chromium VI_T mg/L	Cobalt_T mg/L	Copper_T mg/L				
AQF40	-	10.1	-	-	0.096	0.072	0.005	0.071	-	-	0.025	0.050	1.581	0.070	5.3	0.038	0.000108758	0.00032	0.00728	0.000011	0.000025	0.00589	0.000008	5.00649	0.000011	0.00025	-	0.000054	0.00063				
AQF40	-	9.9	-	-	0.061	0.089	0.005	-	-	-	0.022	0.050	1.081	0.072	7.0	0.036	0.000118473	0.00032	0.00743	0.000011	0.000025	0.00594	0.000005	5.26217	0.000011	0.00025	-	0.000054	0.00044				
AQF40	-	9.6	-	-	0.026	0.106	0.005	-	-	-	0.018	0.050	0.579	0.075	8.5	0.034	0.000128235	0.00031	0.00755	0.000011	0.000025	0.00595	0.000003	5.43070	0.000011	0.00025	-	0.000054	0.00025				
AQF40	-	9.1	-	-	0.008	0.099	0.001	-	-	-	0.025	0.006	0.326	0.078	3.3	0.034	0.00005	0.00031	0.00693	0.000011	0.000025	0.00560	0.000009	4.38385	0.000009	0.00025	-	0.000053	0.00025				
AQF40	-	8.7	-	-	0.006	0.038	0.001	0.044	-	-	0.023	0.050	0.273	0.064	1.4	0.055	0.00005	0.00022	0.00608	0.000050	0.000025	0.00517	0.000003	3.52734	0.000006	0.00022	-	0.000051	0.00025				
AQF40	-	9.9	-	-	0.006	0.010	0.005	0.035	-	-	0.015	0.050	0.276	0.056	1.5	0.062	0.00005	0.00020	0.00619	0.000050	0.000025	0.00524	0.000005	3.50131	0.000007	0.00020	-	0.000051	0.00025				
AQF40	-	8.8	-	-	0.013	0.003	0.001	0.220	-	-	0.012	0.050	0.251	0.063	2.0	0.049	0.00005	0.00022	0.00643	0.000050	0.000025	0.00533	0.000003	3.60611	0.000007	0.00016	-	0.000051	0.00025				
AQF40	-	9.2	-	-	0.021	0.003	0.001	0.003	-	-	0.015	0.050	0.206	0.065	1.9	0.034	0.00005	0.00023	0.00543	0.000050	0.000025	0.00532	0.000003	3.29342	0.000007	0.00014	-	0.000051	0.00025				
AQF40	-	9.0	-	-	0.024	0.003	0.001	0.003	-	-	0.012	0.050	0.239	0.063	2.3	0.045	0.00005	0.00024	0.00635	0.000050	0.000025	0.00535	0.000003	3.74594	0.000007	0.00013	-	0.000051	0.00025				
AQF40	-	8.8	-	-	0.016	0.026	0.001	0.038	-	-	0.020	0.050	0.275	0.064	2.4	0.054	0.00005	0.00023	0.00546	0.000050	0.000025	0.00541	0.000003	3.87944	0.000008	0.00025	-	0.000052	0.00025				
AQF40	-	10.1	-	-	0.016	0.025	0.001	0.024	-	-	0.019	0.050	0.278	0.062	3.2	0.081	0.00005	0.00027	0.00866	0.000050	0.000025	0.00562	0.000012	4.40661	0.000009	0.00030	-	0.000053	0.00066				
AQF40	-	10.1	-	-	0.056	0.048	0.003	0.048	-	-	0.022	0.050	0.935	0.066	4.4	0.059	7.94469E-05	0.00030	0.00799	0.000030	0.000025	0.00579	0.000010	4.78464	0.000010	0.00027	-	0.000053	0.00065				
AQF42	-	9.9	-	-	0.052	0.068	0.005	0.067	-	-	0.025	0.050	0.690	0.073	5.1	0.051	0.000226273	0.00032	0.00816	0.000011	0.000025	0.00589	0.000003	5.32966	0.000011	0.00025	-	0.000054	0.00025				
AQF42	-	10.0	-	-	0.037	0.120	0.005	-	-	-	0.025	0.050	0.656	0.072	13.5	0.066	0.000284764	0.00035	0.00884	0.000011	0.000025	0.00594	0.000011	5.55562	0.000011	0.00025	-	0.000054	0.00097				
AQF42	-	10.3	-	-	0.057	0.111	0.005	-	-	-	0.025	0.050	0.530	0.075	4.9	0.122	0.00005	0.00033	0.00949	0.000011	0.000025	0.00595	0.000003	5.44048	0.000024	0.00050	-	0.000122	0.00445				
AQF42	-	9.6	-	-	0.015	0.096	0.001	-	-	-	0.030	0.006	0.326	0.074	3.3	0.038	0.00005	0.00032	0.00780	0.000011	0.000025	0.00560	0.000010	4.53174	0.000009	0.00025	-	0.000053	0.00092				
AQF42	-	9.6	-	-	0.006	0.039	0.001	0.039	-	-	0.015	0.050	0.288	0.063	1.3	0.054	0.00005	0.00025	0.00595	0.000050	0.000025	0.00517	0.000003	3.18866	0.000006	0.00017	-	0.000051	0.00025				
AQF42	-	9.5	-	-	0.006	0.010	0.005	0.035	-	-	0.016	0.050	0.276	0.056	1.5	0.059	0.00005	0.00019	0.00616	0.000050	0.000025	0.00524	0.000003	3.35216	0.000007	0.00024	-	0.000051	0.00025				
AQF42	-	9.1	-	-	0.024	0.003	0.001	0.003	-	-	0.015	0.050	0.345	0.060	1.9	0.048	0.00005	0.00021	0.00594	0.000050	0.000025	0.00533	0.000007	3.23891	0.000007	0.00016	-	0.000051	0.00062				
AQF42	-	9.3	-	-	0.044	0.003	0.001	0.003	-	-	0.014	0.050	0.206	0.064	1.9	0.037	0.00005	0.00025	0.00567	0.000050	0.000025	0.00532	0.000003	3.51177	0.000007	0.00015	-	0.000051	0.00025				
AQF42	-	9.1	-	-	0.007	0.007	0.001	0.007	-	-	0.015	0.050	0.318	0.063	2.1	0.040	0.00005	0.00024	0.00618	0.000050	0.000025	0.00535	0.000003	3.76578	0.000007	0.00014	-	0.000051	0.00025				
AQF42	-	10.0	-	-	0.007	0.019	0.001	0.019	-	-	0.015	0.050	0.255	0.062	2.3	0.042	0.00005	0.00024	0.00565	0.000050	0.000025	0.00541	0.000003	3.89925	0.000008	0.00014	-	0.000052	0.00025				
AQF42	-	9.5	-	-	0.022	0.025	0.001	0.025	-	-	0.015	0.050	0.347	0.062	3.4	0.156	0.000128846	0.00029	0.01466	0.000050	0.000025	0.00562	0.000030	4.58401	0.000023	0.00075	-	0.000122	0.00090				
AQF42	-	9.7	-	-	0.037	0.047	0.003	0.046	-	-	0.020	0.050	0.523	0.067	4.4	0.103	0.000177603	0.00031	0.01139	0.000030	0.000025	0.00579	0.000016	5.03985	0.000017	0.00050	-	0.000088	0.00057				
AQF43	-	10.0	-	-	0.025	0.065	0.005	0.064	-	-	0.025	0.050	0.347	0.071	4.5	0.039	0.00005	0.00028	0.00704	0.000011	0.000025	0.00589	0.000003	5.17297	0.000011	0.00025	-	0.000054	0.00025				
AQF43	-	9.6	-	-	0.019	0.088	0.005	-	-	-	0.022	0.050	0.351	0.073	5.1	0.037	0.00005	0.00029	0.00722	0.000011	0.000025	0.00594	0.000003	5.30130	0.000011	0.00025	-	0.000054	0.00025				
AQF43	-	9.1	-	-	0.013	0.112	0.005	-	-	-	0.018	0.050	0.349	0.074	5.6	0.035	0.00005	0.00030	0.00738	0.000011	0.000025	0.00595	0.000003	5.36224	0.000011	0.00025	-	0.000054	0.00025				
AQF43	-	9.1	-	-	0.008	0.097	0.001	-	-	-	0.013	0.006	0.306	0.077	3.3	0.036	0.00005	0.00031	0.00710	0.000011	0.000025	0.00590	0.000008	4.51202	0.000009	0.00025	-	0.000053	0.00025				
AQF43	-	9.9	-	-	0.006	0.032	0.001	0.032	-	-	0.031	0.050	0.338	0.063	1.3	0.060	0.00005	0.00025	0.00605	0.000050	0.000025	0.00517	0.000003	3.55722	0.000006	0.00018	-	0.000051	0.00025				
AQF43	-	8.8	-	-	0.006	0.010	0.005	0.035	-	-	0.015	0.050	0.276	0.057	1.6	0.068	0.00005	0.00019	0.00611	0.000050	0.000025	0.00524	0.000003	3.41182	0.000007	0.00026	-	0.000051	0.00025				
AQF43	-	9.2	-	-	0.032	0.003	0.001	0.003	-	-	0.015	0.050	0.206	0.061	1.9	0.058	0.00005	0.00023	0.00591	0.000050	0.000025	0.00533	0.000003	3.35800	0.000007	0.00015	-	0.000051	0.00025				
AQF43	-	9.2	-	-	0.016	0.009	0.001	0.009	-	-	0.016	0.050	0.216	0.066	1.9	0.047	0.00005	0.00027	0.00567	0.000050	0.000025	0.00532	0.000003	3.72019	0.000007	0.00025	-	0.000051	0.00025				
AQF43	-	9.1	-	-	0.027	0.003	0.001	0.003	-	-	0.015	0.050	0.229	0.063	2.0	0.049	0.00005	0.00023	0.00633	0.000050	0.000025	0.00535	0.000003	3.77570	0.000007	0.00017	-	0.000051	0.00025				
AQF43	-	9.3	-	-	0.007	0.020	0.001	0.020	-	-	0.015	0.050	0.245	0.063	2.3	0.067	0.00005	0.00024	0.00563	0.000050	0.000025	0.00541	0.000003	3.97849	0.000008	0.00023	-	0.000052	0.00025				
AQF43	-	9.9	-	-	0.034	0.027	0.001	0.027	-	-	0.015	0.050	0.278	0.063	3.2	0.040	0.00005	0.00024	0.00566	0.000050	0.000025	0.00562	0.000003	4.41647	0.000009	0.00016	-	0.000053	0.00025				
AQF43	-	9.9	-	-	0.030	0.046	0.003	0.046	-	-	0.020	0.050	0.317	0.067	4.1	0.039	0.00005	0.00027	0.00638	0.000030	0.000025	0.00579	0.000003	4.87298	0.000010	0.00020	-	0.000053	0.00025				
AQF44	-	10.1	-	-	0.142	0.074	0.005	0.073	-	-	0.025	0.050	1.777	0.069	5.5	0.040	0.00005	0.00029	0.00728	0.000011	0.000025	0.00589	0.000019	5.33946	0.000011	0.00025	-	0.000054	0.00050				
AQF44	-	9.8	-	-	0.080	0.091	0.005	-	-	-	0.018	0.050	1.790	0.071	7.1	0.039	0.00005	0.00030	0.00738	0.000011	0.000025	0.00594	0.000011	5.48715	0.000011	0.00025	-	0.000054	0.00038				
AQF44	-	9.5	-	-	0.018	0.109	0.005	-	-	-	0.010	0.050	1.811	0.073	8.6	0.037	0.00005	0.00031	0.00745	0.000011	0.000025	0.00595	0.000003	5.55783	0.000011	0.00025	-	0.000054	0.00025				
AQF44	-	9.5	-	-	0.008	0.098	0.001	-																									

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

		Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_Met al	Total_M

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Site	Dissolved_Meta I	Dissolved_Meta I	Dissolved_Meta Dissolved_Metal		Dissolved_Meta I	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Metal al	Dissolved_Metal I	
	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_ D		Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L
AQF40	0.0130	1.08E-05	0.000025	0.0059	2.56107E-06	4.91	1.05E-05	0.00025	5.4E-05	0.0028	0.18	0.00013	0.0013	1.46	0.0239	-	0.00009	0.000254658	0.73	0.0011	0.000025	3.14	
AQF40	0.0135	1.09E-05	0.000025	0.0060	2.56435E-06	5.05	1.08E-05	0.00025	5.4E-05	0.0020	0.19	0.00009	0.0011	1.49	0.0255	-	0.00010	0.000254908	0.73	0.0011	0.000033	3.15	
AQF40	0.0140	1.09E-05	0.000025	0.0060	2.56508E-06	5.11	1.09E-05	0.00025	5.4E-05	0.0012	0.21	0.00005	0.0010	1.50	0.0262	0.0000010	0.00012	0.000254964	0.72	0.0011	0.000041	3.16	
AQF40	0.0197	1.06E-05	0.000025	0.0056	1.0429E-05	4.30	8.75E-06	0.00025	5.3E-05	0.0021	0.19	0.00011	0.0012	1.28	0.0216	0.0000015	0.00006	0.000253162	0.77	0.0012	0.000025	3.05	
AQF40	0.0064	5.00E-05	0.000025	0.0052	2.51149E-06	3.50	6.04E-06	0.00010	5.1E-05	0.0006	0.21	0.00003	0.0011	1.02	0.0289	0.0000019	0.00013	0.000250876	0.62	0.0010	0.000025	2.43	
AQF40	0.0055	5.00E-05	0.000025	0.0053	2.51655E-06	3.25	6.50E-06	0.00013	5.1E-05	0.0003	0.18	0.00003	0.0005	0.93	0.0083	0.0000018	0.00008	0.000251262	0.57	0.0009	0.000025	1.99	
AQF40	0.0055	5.00E-05	0.000025	0.0053	5.20189E-06	3.53	7.02E-06	0.00011	5.1E-05	0.0003	0.12	0.00007	0.0009	1.01	0.0115	0.0000012	0.00011	0.000251701	0.60	0.0011	0.000025	1.92	
AQF40	0.0049	5.00E-05	0.000025	0.0053	2.52214E-06	3.27	7.00E-06	0.00012	5.1E-05	0.0003	0.15	0.00003	0.0005	0.97	0.0115	-	0.00010	0.000251689	0.55	0.0010	0.000052	2.08	
AQF40	0.0061	5.00E-05	0.000025	0.0054	2.52397E-06	3.43	7.17E-06	0.00022	5.1E-05	0.0026	0.14	0.00015	0.0005	0.98	0.0129	-	0.00014	0.000251828	0.55	0.0011	0.000052	2.25	
AQF40	0.0083	5.00E-05	0.000025	0.0054	2.52805E-06	3.77	7.54E-06	0.00008	5.2E-05	0.0016	0.14	0.00007	0.0008	1.12	0.0116	0.0000011	0.00011	0.00025214	0.57	0.0010	0.000042	2.32	
AQF40	0.0051	5.00E-05	0.000025	0.0056	2.54254E-06	4.11	8.85E-06	0.00015	5.3E-05	0.0050	0.15	0.00018	0.0006	1.19	0.0168	-	0.00010	0.000253244	0.62	0.0010	0.000025	2.45	
AQF40	0.0091	3.04E-05	0.000025	0.0058	2.55439E-06	4.59	9.92E-06	0.00020	5.3E-05	0.0039	0.16	0.00015	0.0009	1.35	0.0211	-	0.00009	0.000254148	0.68	0.0011	0.000025	2.80	
AQF42	0.0136	1.08E-05	0.000025	0.0059	2.56107E-06	4.89	1.05E-05	0.00025	5.4E-05	0.0032	0.19	0.00015	0.0013	1.49	0.0252	-	0.00011	0.000254658	0.72	0.0012	0.000025	3.11	
AQF42	0.0207	1.09E-05	0.000025	0.0060	2.56435E-06	5.22	1.08E-05	0.00025	5.4E-05	0.0020	0.22	0.00008	0.0006	1.57	0.0327	0.0000003	0.00008	0.000254908	0.90	0.0012	0.000025	3.31	
AQF42	0.0086	1.09E-05	0.000025	0.0060	2.56508E-06	5.21	1.09E-05	0.00025	5.4E-05	0.0004	0.24	0.00003	0.0014	1.50	0.0295	-	0.00008	0.000254964	0.71	0.0012	0.000063	3.22	
AQF42	0.0193	1.06E-05	0.000025	0.0056	1.1908E-05	4.36	8.75E-06	0.00025	5.3E-05	0.0025	0.20	0.00009	0.0013	1.29	0.0243	-	0.00008	0.000253162	0.71	0.0011	0.000025	2.98	
AQF42	0.0057	5.00E-05	0.000025	0.0052	2.51149E-06	3.20	6.04E-06	0.00014	5.1E-05	0.0007	0.30	0.00003	0.0005	0.96	0.0476	0.0000016	0.00009	0.000250876	0.58	0.0010	0.000025	2.44	
AQF42	0.0057	5.00E-05	0.000025	0.0053	2.51655E-06	3.05	6.50E-06	0.00013	5.1E-05	0.0003	0.19	0.00003	0.0005	0.86	0.0069	0.0000017	0.00008	0.000251262	0.59	0.0009	0.000025	2.00	
AQF42	0.0056	5.00E-05	0.000025	0.0053	2.52231E-06	3.24	7.02E-06	0.00005	5.1E-05	0.0002	0.16	0.00003	0.0005	0.93	0.0110	0.0000015	0.00009	0.000251701	0.54	0.0010	0.000025	1.98	
AQF42	0.0053	5.00E-05	0.000025	0.0053	2.52214E-06	3.31	7.00E-06	0.00011	5.1E-05	0.0004	0.15	0.00012	0.0005	0.97	0.0119	-	0.00010	0.000251689	0.54	0.0011	0.000025	2.05	
AQF42	0.0058	5.00E-05	0.000025	0.0054	2.52397E-06	3.61	7.17E-06	0.00012	5.1E-05	0.0002	0.13	0.00003	0.0005	1.03	0.0109	-	0.00009	0.000251828	0.56	0.0010	0.000061	2.17	
AQF42	0.0050	5.00E-05	0.000025	0.0054	2.52805E-06	3.74	7.54E-06	0.00005	5.2E-05	0.0005	0.13	0.00003	0.0005	1.11	0.0118	0.0000008	0.00011	0.00025214	0.52	0.0009	0.000025	2.34	
AQF42	0.0152	5.00E-05	0.000025	0.0056	2.54254E-06	4.28	8.85E-06	0.00077	5.3E-05	0.0015	0.20	0.00007	0.0006	1.24	0.0321	-	0.00090	0.000253244	0.61	0.0010	0.000025	2.33	
AQF42	0.0145	3.04E-05	0.000025	0.0058	2.55439E-06	4.66	9.92E-06	0.00051	5.3E-05	0.0024	0.20	0.00011	0.0009	1.39	0.0293	-	0.00051	0.000254148	0.67	0.0011	0.000025	2.72	
AQF43	0.0068	1.08E-05	0.000025	0.0059	2.56107E-06	4.87	1.05E-05	0.00025	5.4E-05	0.0004	0.18	0.00003	0.0012	1.47	0.0226	-	0.00007	0.000254658	0.68	0.0011	0.000025	3.09	
AQF43	0.0100	1.09E-05	0.000025	0.0060	2.56435E-06	5.02	1.08E-05	0.00025	5.4E-05	0.0007	0.19	0.00004	0.0011	1.49	0.0246	-	0.00007	0.000254908	0.70	0.0011	0.000034	3.15	
AQF43	0.0133	1.09E-05	0.000025	0.0060	2.56508E-06	5.10	1.09E-05	0.00025	5.4E-05	0.0010	0.21	0.00005	0.0010	1.49	0.0257	0.0000010	0.00006	0.000254964	0.70	0.0011	0.000043	3.20	
AQF43	0.0204	1.06E-05	0.000025	0.0056	2.54146E-06	4.32	8.75E-06	0.00025	5.3E-05	0.0019	0.20	0.00007	0.0012	1.26	0.0228	0.0000018	0.00007	0.000253162	0.66	0.0011	0.000025	2.98	
AQF43	0.0054	5.00E-05	0.000025	0.0052	2.51149E-06	3.56	4.59E-05	0.00012	5.1E-05	0.0005	0.21	0.00003	0.0005	1.02	0.0226	0.0000025	0.00010	0.000250876	0.59	0.0009	0.000025	2.29	
AQF43	0.0055	5.00E-05	0.000025	0.0053	2.51655E-06	3.40	6.50E-06	0.00012	5.1E-05	0.0002	0.17	0.00003	0.0005	0.96	0.0075	0.0000018	0.00008	0.000251262	0.71	0.0009	0.000025	1.94	
AQF43	0.0055	5.00E-05	0.000025	0.0053	2.52231E-06	3.26	7.02E-06	0.00011	5.1E-05	0.0002	0.17	0.00003	0.0005	0.98	0.0107	0.0000015	0.00006	0.000251701	0.56	0.0011	0.000025	2.20	
AQF43	0.0049	5.00E-05	0.000025	0.0053	2.52214E-06	3.53	7.00E-06	0.00005	5.1E-05	0.0003	0.14	0.00003	0.0005	1.00	0.0122	-	0.00010	0.000251689	0.60	0.0010	0.000025	2.05	
AQF43	0.0060	5.00E-05	0.000025	0.0054	2.52397E-06	3.56	7.17E-06	0.00012	5.1E-05	0.0004	0.13	0.00003	0.0005	1.01	0.0127	-	0.00009	0.000251828	0.54	0.0010	0.000025	2.23	
AQF43	0.0111	5.00E-05	0.000025	0.0054	2.52805E-06	3.75	7.54E-06	0.00013	5.2E-05	0.0037	0.14	0.00015	0.0005	1.09	0.0120	0.0000008	0.00014	0.00025214	0.55	0.0010	0.000025	2.38	
AQF43	0.0052	5.00E-05	0.000025	0.0056	2.54254E-06	4.18	8.85E-06	0.00011	5.3E-05	0.0051	0.12	0.00617	0.0006	1.22	0.0146	-	0.00009	0.000253244	0.59	0.0009	0.000025	2.45	
AQF43	0.0060	3.04E-05	0.000025	0.0058	2.55439E-06	4.60	9.92E-06	0.00018	5.3E-05	0.0027	0.15	0.00308	0.0009	1.37	0.0194	-	0.00008	0.000254148	0.64	0.0010	0.000025	2.78	
AQF44	0.0138	1.08E-05	0.000025	0.0059	1.16685E-05	5.21	1.05E-05	0.00025	5.4E-05	0.0037	0.18	0.00016	0.0013	1.52	0.0234	-	0.00009	0.000254658	0.70	0.0011	0.000025	3.07	
AQF44	0.0164	1.09E-05	0.000025	0.0060	7.11291E-06	5.28	1.08E-05	0.00025	5.4E-05	0.0030	0.20	0.00010	0.0011	1.54	0.0249	-	0.00008	0.000254908	0.72	0.0011	0.000025	3.13	
AQF44	0.0189	1.09E-05	0.000025	0.0060	2.56508E-06	5.28	1.09E-05	0.00025	5.4E-05	0.0023	0.20	0.00004	0.0010	1.54	0.0258	0.0000010	0.00008	0.000254964	0.74	0.0012	0.000025	3.19	
AQF44	0.0186	1.06E-05	0.000025	0.0056	2.54146E-06	4.66	8.75E-06	0.00025	5.3E-05	0.0018	0.19	0.00007	0.0013	1.35	0.0223	0.0000009	0.00008	0.000253162	0.69	0.0011	0.000025	2.98	
AQF44	0.0055	5.00E-05	0.000025	0.0052	2.51149E-06	3.48	6.04E-06	0.00012	5.1E-05	0.0004	0.22	0.00003	0.0011	0.99	0.0224	0.0000009	0.00009	0.000250876	0.58	0.0009	0.000025	2.37	
AQF44	0.0253	5.00E-05	0.000025	0.0053	2.51655E-06	3.16	6.50E-06	0.00013	5.1E-05	0.0014	0.18	0.00003	0.0005	0.91	0.0074	0.0000017	0.00018	0.000251262	0.67	0.0010	0.000025	2.01	
AQF44	0.0056	5.00E-05	0.000025	0.0053	2.52231E-06	3.31	7.02E-06	0.00011	5.1E-05	0.0003	0.16	0.00003	0.0005	0.94	0.0110	0.0000016	0.00010	0.000251701	0.56	0.0010	0.000025	2.02	
AQF44	0.0050	5.00E-05	0.000025	0.0053	2.52214E-06	3.55	7.00E-06	0.00012	5.1E-05	0.0003	0.14	0.0001											

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Site	Dissolved_Metal		Dissolved_Metal	Dissolved_Metal		Dissolved_Metal		Dissolved_Metal	Dissolved_Metal	Dissolved_Metal		Dissolved_Metal		Dissolved_Metal		Cyanides	Cyanides	Cyanides	Methylme	Methylme
	Dissolved_Metal	Dissolved_Metal	I	I	Dissolved_Metal	I	Dissolved_Metal	al	al	Dissolved_Metal	Dissolved_Metal	al	Dissolved_Metal	al				rcury	rcury	
	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L	Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WAD mg/L	Methylme rcury_D mg/L	Methylme rcury_T mg/L	
AQF40	0.000005	1.73	0.02	1.61	0.00010	0.00001	0.00005	0.00007	0.00015	0.00005	0.00011	0.00025	0.0045	0.00015	-	-	-	-	-	
AQF40	0.000005	1.75	0.02	1.77	0.00010	0.00001	0.00005	0.00010	0.00015	0.00005	0.00011	0.00025	0.0032	0.00015	-	-	-	-	-	
AQF40	0.000005	1.77	0.02	1.87	0.00010	0.00001	0.00005	0.00012	0.00015	0.00005	0.00011	0.00025	0.0018	0.00015	-	-	-	-	-	
AQF40	0.000005	1.57	0.02	1.17	0.00010	0.00001	0.00005	0.00016	0.00015	0.00005	0.00008	0.00025	0.0028	0.00015	-	-	-	-	-	
AQF40	0.000005	1.12	0.01	0.51	0.00010	0.00001	0.00005	0.00013	0.00071	0.00005	0.00004	0.00025	0.0030	0.00010	-	-	-	-	-	
AQF40	0.000005	1.07	0.01	0.62	0.00010	0.00001	0.00005	0.00020	0.00051	0.00005	0.00004	0.00025	0.0064	0.00010	-	-	-	-	-	
AQF40	0.000005	1.18	0.01	0.90	0.00010	0.00001	0.00005	0.00011	0.00041	0.00005	0.00006	0.00025	0.0037	0.00010	-	-	-	-	-	
AQF40	0.000005	1.20	0.02	0.74	0.00010	0.00001	0.00005	0.00025	0.00037	0.00005	0.00005	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF40	0.000005	1.18	0.01	0.78	0.00010	0.00001	0.00005	0.00006	0.00055	0.00005	0.00006	0.00025	0.0048	0.00010	-	-	-	-	-	
AQF40	0.000005	1.32	0.01	1.08	0.00010	0.00001	0.00005	0.00006	0.00027	0.00005	0.00007	0.00025	0.0021	0.00011	-	-	-	-	-	
AQF40	0.000005	1.30	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00034	0.00005	0.00008	0.00025	0.0102	0.00010	-	-	-	-	-	
AQF40	0.000005	1.53	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00024	0.00005	0.00010	0.00025	0.0074	0.00012	-	-	-	-	-	
AQF42	0.000005	1.75	0.02	1.61	0.00010	0.00001	0.00005	0.00020	0.00015	0.00005	0.00015	0.00025	0.0046	0.00015	-	-	-	-	-	
AQF42	0.000005	1.85	0.02	1.97	0.00010	0.00001	0.00005	0.00020	0.00040	0.00005	0.00012	0.00025	0.0048	0.00015	-	-	-	-	-	
AQF42	0.000005	1.76	0.02	1.70	0.00010	0.00001	0.00005	0.00008	0.00040	0.00005	0.00012	0.00025	0.0012	0.00015	-	-	-	-	-	
AQF42	0.000005	5.39	0.02	1.66	0.00010	0.00001	0.00005	0.00017	0.00035	0.00005	0.00011	0.00025	0.0052	0.00015	-	-	-	-	-	
AQF42	0.000005	0.98	0.01	0.51	0.00010	0.00001	0.00005	0.00005	0.00051	0.00005	0.00004	0.00025	0.0012	0.00010	-	-	-	-	-	
AQF42	0.000005	1.05	0.01	0.62	0.00010	0.00001	0.00005	0.00031	0.00046	0.00005	0.00004	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF42	0.000005	1.05	0.01	1.05	0.00010	0.00001	0.00005	0.00069	0.00044	0.00005	0.00006	0.00025	0.0089	0.00010	-	-	-	-	-	
AQF42	0.000005	1.12	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00046	0.00005	0.00005	0.00025	0.0030	0.00010	-	-	-	-	-	
AQF42	0.000005	1.22	0.01	0.78	0.00010	0.00001	0.00005	0.00006	0.00032	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF42	0.000005	1.23	0.01	0.87	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00006	0.00025	0.0011	0.00010	-	-	-	-	-	
AQF42	0.000005	1.30	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00101	0.00091	0.00012	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF42	0.000005	1.54	0.02	1.46	0.00010	0.00001	0.00005	0.00014	0.00058	0.00048	0.00014	0.00025	0.0040	0.00012	-	-	-	-	-	
AQF43	0.000005	1.71	0.02	1.61	0.00010	0.00001	0.00005	0.00007	0.00031	0.00005	0.00011	0.00025	0.0011	0.00015	-	-	-	-	-	
AQF43	0.000005	1.74	0.02	1.68	0.00010	0.00001	0.00005	0.00009	0.00023	0.00005	0.00011	0.00025	0.0013	0.00015	-	-	-	-	-	
AQF43	0.000005	1.75	0.02	1.70	0.00010	0.00001	0.00005	0.00011	0.00015	0.00005	0.00011	0.00025	0.0015	0.00015	-	-	-	-	-	
AQF43	0.000005	1.52	0.02	1.17	0.00010	0.00001	0.00005	0.00015	0.00031	0.00005	0.00008	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF43	0.000005	1.01	0.01	0.85	0.00010	0.00001	0.00005	0.00005	0.00044	0.00005	0.00004	0.00025	0.0015	0.00010	-	-	-	-	-	
AQF43	0.000005	1.07	0.01	0.62	0.00010	0.00001	0.00005	0.00006	0.00037	0.00005	0.00004	0.00025	0.0045	0.00010	-	-	-	-	-	
AQF43	0.000005	1.22	0.01	0.75	0.00010	0.00001	0.00005	0.00006	0.00045	0.00005	0.00005	0.00025	0.0013	0.00010	-	-	-	-	-	
AQF43	0.000005	1.14	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00058	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF43	0.000005	1.15	0.01	0.78	0.00010	0.00001	0.00005	0.00006	0.00041	0.00005	0.00005	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF43	0.000005	1.23	0.01	0.87	0.00010	0.00001	0.00005	0.00006	0.00041	0.00005	0.00006	0.00025	0.0022	0.00010	-	-	-	-	-	
AQF43	0.000005	1.30	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00031	0.00005	0.00008	0.00025	0.0048	0.00010	-	-	-	-	-	
AQF43	0.000005	1.52	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00031	0.00005	0.00010	0.00025	0.0029	0.00012	-	-	-	-	-	
AQF44	0.000005	1.75	0.02	1.61	0.00010	0.00001	0.00005	0.00007	0.00032	0.00005	0.00011	0.00025	0.0039	0.00015	-	-	-	-	-	
AQF44	0.000005	1.77	0.02	1.68	0.00010	0.00001	0.00005	0.00011	0.00023	0.00005	0.00011	0.00025	0.0031	0.00015	-	-	-	-	-	
AQF44	0.000005	1.78	0.02	1.70	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF44	0.000005	2.00	0.02	1.17	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00008	0.00025	0.0028	0.00015	-	-	-	-	-	
AQF44	0.000005	0.98	0.01	0.51	0.00010	0.00001	0.00005	0.00005	0.00047	0.00005	0.00004	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.08	0.01	0.62	0.00010	0.00001	0.00005	0.00020	0.00041	0.00005	0.00004	0.00025	0.0033	0.00010	-	-	-	-	-	
AQF44	0.000005	1.03	0.01	0.75	0.00010	0.00001	0.00005	0.00006	0.00049	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.15	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00045	0.00005	0.00005	0.00025	0.0026	0.00010	-	-	-	-	-	
AQF44	0.000005	1.26	0.01	1.20	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.26	0.02	0.87	0.00010	0.00001	0.00005	0.00006	0.00015	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF44	0.000005	1.33	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00049	0.00005	0.00008	0.00025	0.0050	0.00010	-	-	-	-	-	
AQF44	0.000005	1.56	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00041	0.00005	0.00010	0.00025	0.0044	0.00012	-	-	-	-	-	
AQF45	0.000005	1.78	0.02	1.61	0.00010	0.00001	0.00005	0.00013	0.00015	0.00005	0.00011	0.00025	0.0023	0.00015	-	-	-	-	-	
AQF45	0.000005	1.80	0.02	2.09	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00012	0.00025	0.0019	0.00015	-	-	-	-	-	
AQF45	0.000005	1.81	0.02	2.51	0.00010	0.00001	0.00005	0.00014	0.00015	0.00005	0.00012	0.00025	0.0015	0.00015	-	-	-	-	-	
AQF45	0.000005	1.69	0.02	1.17	0.00010	0.00001	0.00005	0.00007	0.00015	0.00005	0.00008	0.00025	0.0016	0.00015	-	-	-	-	-	
AQF45	0.000005	0.99	0.01	0.51	0.00010	0.00001	0.00005	0.00005	0.00068	0.00005	0.00004	0.00025	0.0013	0.00010	-	-	-	-	-	
AQF45	0.000005	1.03	0.01	0.62	0.00023	0.00001	0.00005	0.00006	0.00056	0.00005	0.00004	0.00025	0.0011	0.00010	-	-	-	-	-	
AQF45	0.000005	1.05	0.01	0.75	0.00010	0.00001	0.00005	0.00006	0.00065	0.00005	0.00006	0.00025	0.0021	0.00010	-	-	-	-	-	
AQF45	0.000005	1.15	0.01	0.74	0.00010	0.00001	0.00005	0.00006	0.00118	0.00005	0.00006	0.00025	0.0012	0.00010	-	-	-	-	-	
AQF45	0.000005	1.30	0.02	0.78	0.00010	0.00001	0.00005	0.00006	0.00116	0.00005	0.00006	0.00025	0.0005	0.00010	-	-	-	-	-	
AQF45	0.000005	1.28	0.01	0.87	0.00010	0.00001	0.00005	0.00006	0.00040	0.00005	0.00006	0.00025	0.0016	0.00010	-	-	-	-	-	
AQF45	0.000005	1.35	0.02	1.20	0.00010	0.00001	0.00005	0.00007	0.00015	0.00005	0.00008	0.00025	0.0059	0.00010	-	-	-	-	-	
AQF45	0.000005	1.60	0.02	1.46	0.00010	0.00001	0.00005	0.00007	0.00034	0.00005	0.00010	0.00025	0.0005	0.00010	-	-	-	-	-	
Downstream stn Median	0.000005	1.14																		

F.2 Full Modelling Results – Doubled Pumping Rate Scenarios



Dewatering rate	784.8 L/s	
Pink fill: parameter of potential concern (PoPC)	Station AQF 41 is upsteram of the discharge point; no mixing scenarios conducted on AQF41	
Light grey fill: river station concentrations less than method detection limit (<MDL)	Paramaters with "_"T" indicates total concentration	
"-" symbol: no geochemistry measurement for river and/or pit; pH cannot be mixed	Parameters with "_"D" indicates dissolved concentration	
Light grey with "-" symbol: river measurement <MDL and no geochemistry measurement for pit		

Median Hughes monthly flow rate, median mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient		
Month	-	D_Oxygen_field mg/L	D_Oxygen_percen	ORP_field mV	pH_field pH	Specific_Con ductance_fiel d us/cm	TDS_field mg/L	Temp_field C	Turbidity_fiel d NTU	Acidity(CaCO 3) mg/L	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca			
			t_field %								CO3)_bicarbo	CO3)_carbon	CO3)_hydrox	CO3)_phenol	CO3)_T	CO3)_carbonat	(HCO3)_bicarbona	(OH)_hydroxide	Conductivity	DOC_D	Hardness(Ca	Hardness(Ca	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia(N)	Nitrate(N)	Nitrite(N)		
1	AQF40	9.8	67.6	-	-	-	-	-	-	-	-	-	-	-	15.8	-	-	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.097	0.071	0.005
2	AQF40	10.7	73.5	-	-	-	-	-	-	-	-	-	-	-	15.7	-	-	-	-	-	-	-	-	-	-	-	-	9.8	-	-	0.064	0.088	0.005
3	AQF40	11.6	79.4	-	-	-	-	0.3	-	-	-	-	-	-	15.4	0.49	23.2	0.48	-	-	-	-	-	-	-	-	-	9.5	-	-	0.029	0.105	0.005
4	AQF40	19.7	137.4	-	-	-	-	0.7	-	-	-	-	-	-	19.0	0.40	22.2	0.33	47.4	-	-	-	-	-	-	-	-	9.0	-	-	0.013	0.097	0.001
5	AQF40	12.3	93.9	-	-	-	-	3.9	-	-	-	-	-	-	13.9	0.30	17.0	0.17	-	-	-	-	-	-	-	-	-	8.7	-	-	0.009	0.038	0.001
6	AQF40	8.9	89.7	-	-	-	-	15.2	-	-	-	-	-	-	13.4	0.30	16.3	0.17	-	-	-	-	-	-	-	-	-	9.8	-	-	0.010	0.011	0.005
7	AQF40	6.7	71.4	-	-	-	-	18.4	-	-	-	-	-	-	15.2	0.30	18.5	0.17	-	-	-	-	-	-	-	-	-	8.7	-	-	0.017	0.004	0.001
8	AQF40	6.0	66.2	-	-	-	-	19.6	-	-	-	-	-	-	15.9	0.30	19.4	0.17	-	-	-	-	-	-	-	-	-	9.1	-	-	0.025	0.004	0.001
9	AQF40	7.9	78.1	-	-	-	-	13.5	-	-	-	-	-	-	16.1	0.30	19.6	0.17	-	-	-	-	-	-	-	-	-	8.9	-	-	0.028	0.004	0.001
10	AQF40	11.8	89.3	-	-	-	-	3.6	-	-	-	-	-	-	16.3	0.30	19.9	0.17	-	-	-	-	-	-	-	-	-	8.7	-	-	0.020	0.027	0.001
11	AQF40	10.3	70.6	-	-	-	-	0.4	-	-	-	-	-	-	17.4	0.30	21.1	0.17	-	-	-	-	-	-	-	-	-	10.0	-	-	0.020	0.025	0.001
12	AQF40	10.1	69.1	-	-	-	-	0.3	-	-	-	-	-	-	16.6	-	-	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.059	0.048	0.003
1	AQF41	12.4	85.8	-	-	-	-	0.4	-	-	-	-	-	-	17.7	-	-	-	-	-	-	-	-	-	-	-	-	10.1	-	-	0.050	0.066	0.005
2	AQF41	12.3	84.3	-	-	-	-	0.3	-	-	-	-	-	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	10.1	-	-	0.042	0.090	0.005
3	AQF41	12.1	82.9	-	-	-	-	0.3	-	-	-	-	-	-	19.0	0.49	23.3	0.48	-	-	-	-	-	-	-	-	-	10.0	-	-	0.034	0.115	0.005
4	AQF41	19.8	139.3	-	-	-	-	0.8	-	-	-	-	-	-	18.9	0.40	21.8	0.33	47.2	-	-	-	-	-	-	-	-	9.4	-	-	0.013	0.098	0.001
5	AQF41	13.9	106.5	-	-	-	-	3.9	-	-	-	-	-	-	13.2	0.30	16.1	0.17	-	-	-	-	-	-	-	-	-	8.7	-	-	0.009	0.039	0.001
6	AQF41	8.3	84.7	-	-	-	-	16.3	-	-	-	-	-	-	12.2	0.30	14.9	0.17	-	-	-	-	-	-	-	-	-	8.8	-	-	0.010	0.011	0.005
7	AQF41	7.3	76.2	-	-	-	-	18.7	-	-	-	-	-	-	14.2	0.30	17.3	0.17	-	-	-	-	-	-	-	-	-	9.2	-	-	0.042	0.004	0.001
8	AQF41	6.1	66.8	-	-	-	-	19.9	-	-	-	-	-	-	15.8	0.30	19.3	0.17	-	-	-	-	-	-	-	-	-	9.2	-	-	0.018	0.004	0.001
9	AQF41	6.9	65.6	-	-	-	-	13.3	-	-	-	-	-	-	16.2	0.30	19.8	0.17	-	-	-	-	-	-	-	-	-	8.9	-	-	0.018	0.004	0.001
10	AQF41	11.4	87.1	-	-	-	-	4.3	-	-	-	-	-	-	15.9	0.30	19.3	0.17	-	-	-	-	-	-	-	-	-	9.2	-	-	0.011	0.020	0.001
11	AQF41	12.3	85.1	-	-	-	-	0.5	-	-	-	-	-	-	17.7	0.30	21.6	0.17	-	-	-	-	-	-	-	-	-	9.0	-	-	0.012	0.033	0.001
12	AQF41	12.4	85.5	-	-	-	-	0.4	-	-	-	-	-	-	17.8	-	-	-	-	-	-	-	-	-	-	-	-	9.6	-	-	0.031	0.049	0.003
1	AQF42	10.3	71.1	-	-	-	-	0.3	-	-	-	-	-	-	17.6	-	-	-	-	-	-	-	-	-	-	-	-	9.7	-	-	0.054	0.067	0.005
2	AQF42	11.9	81.0	-	-	-	-	0.3	-	-	-	-	-	-	13.9	-	-	-	-	-	-	-	-	-	-	-	-	9.9	-	-	0.040	0.118	0.005
3	AQF42	10.4	71.0	-	-	-	-	0.3	-	-	-	-	-	-	21.3	0.49	26.0	0.48	-	-	-	-	-	-	-	-	-	10.2	-	-	0.059	0.109	0.005
4	AQF42	15.3	105.8	-	-	-	-	0.3	-	-	-	-	-	-	19.0	0.40	22.9	0.33	47.0	-	-	-	-	-	-	-	-	9.5	-	-	0.020	0.094	0.001
5	AQF42	13.6	131.9	-	-	-	-	4.4	-	-	-	-	-	-	12.9	0.30	15.6	0.17	-	-	-	-	-	-	-	-	-	9.5	-	-	0.009	0.039	0.001
6	AQF42	10.2	102.0	-	-	-	-	15.1	-	-	-	-	-	-	13.0	0.30	15.8	0.17	-	-	-	-	-	-	-	-	-	9.4	-	-	0.010	0.011	0.005
7	AQF42	7.9	85.9	-	-	-	-	18.6	-	-	-	-	-	-	15.6	0.30	19.0	0.17	-	-	-	-	-	-	-	-	-	9.0	-	-	0.028	0.004	0.001
8	AQF42	7.9	83.9	-	-	-	-	18.2	-	-	-	-	-	-	15.9	0.30	19.4	0.17	-	-	-	-	-	-	-	-	-	9.2	-	-	0.048	0.004	0.001
9	AQF42	8.4	81.6	-	-	-	-	13.9	-	-	-	-	-	-	15.6	0.30	19.0	0.17	-	-	-	-	-	-	-	-	-	9.0	-	-	0.012	0.008	0.001
10	AQF42	11.3	94.7	-	-	-	-	3.7	-	-	-	-	-	-	16.0	0.30	19.5	0.17	-	-	-	-	-	-	-	-	-	9.8	-	-	0.011	0.020	0.001
11	AQF42	11.5	79.3	-	-	-	-	0.4	-	-	-	-	-	-	17.8	0.30	21.7	0.17	-	-	-	-	-	-	-	-	-	9.4	-	-	0.026	0.026	0.001
12	AQF42	10.9	75.2	-	-	-	-	0.3	-	-	-	-	-	-	17.8	-	-	-	-	-	-	-	-	-	-	-	-	9.6	-	-	0.040	0.047	0.003
1	AQF43	13.1	90.1	-	-	-	-	-	-	-	-	-	-	-	18.2	-	-	-	-	-	-	-	-	-	-	-	-	9.9	-	-	0.029	0.065	0.005
2	AQF43	13.3	91.0	-	-	-	-	-	-	-	-	-	-	-	18.2	-	-	-	-	-	-	-	-	-	-	-	-	9.5	-	-	0.023	0.087	0.005
3	AQF43	13.5	92.0	-	-	-	-	0.3	-	-	-	-	-	-	18.1	0.49	23.2																

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

Month	Site	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
		Nitrite_nitrat	Nitrogen(TK	Phosphorus_	Phosphorus_	Bromide	Chloride	Fluoride	Sulfate(SO4)	Aluminum_T	Antimony_T	Arsenic_T	Barium_T	Beryllium_T	Bismuth_T	Boron_T	Cadmium_T	Calcium_T	Cesium_T	Chromium_T	ChromiumVI	Cobalt_T	Copper_T	Iron_T	Lead_T	Lithium_T	Magnesium_T	Manganese_T	Mercury_T	Molybdenum_
		e(N) mg/L	N) mg/L	D mg/L	T mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	AQF40	0.070	-	-	0.025	0.05	1.66	0.071	9.6	0.037	0.00011	0.00045	0.00783	0.000012	0.000025	0.00681	0.0000081	6.97	0.000017	0.00024	-	0.000057	0.00062	0.31	0.000073	0.0013	2.00	0.047	0.0000025	0.00014
2	AQF40	-	-	-	0.021	0.05	1.17	0.073	11.3	0.035	0.00012	0.00044	0.00798	0.000012	0.000025	0.00687	0.0000053	7.24	0.000017	0.00024	-	0.000057	0.00044	0.31	0.000049	0.0014	2.04	0.048	0.0000021	0.00011
3	AQF40	-	-	-	0.018	0.05	0.68	0.076	12.8	0.034	0.00013	0.00043	0.00810	0.000012	0.000025	0.00689	0.0000025	7.42	0.000017	0.00024	-	0.000058	0.00025	0.32	0.000025	0.0015	2.07	0.049	0.0000017	0.00008
4	AQF40	-	-	-	0.025	0.01	0.46	0.079	8.8	0.033	0.00005	0.00046	0.00764	0.000012	0.000025	0.00678	0.0000084	6.87	0.000016	0.00024	-	0.000057	0.00025	0.31	0.000025	0.0013	1.97	0.048	0.0000019	0.00008
5	AQF40	0.044	-	-	0.023	0.05	0.35	0.065	4.6	0.054	0.00005	0.00031	0.00651	0.000050	0.000025	0.00586	0.0000025	4.98	0.000010	0.00022	-	0.000053	0.00025	0.33	0.000025	0.0010	1.45	0.053	0.0000021	0.00007
6	AQF40	0.035	-	-	0.015	0.05	0.38	0.058	5.7	0.061	0.00005	0.00032	0.00676	0.000050	0.000025	0.00617	0.0000051	5.46	0.000012	0.00020	-	0.000055	0.00025	0.36	0.000060	0.0016	1.48	0.046	0.0000022	0.00009
7	AQF40	0.215	-	-	0.012	0.05	0.38	0.064	7.0	0.048	0.00005	0.00037	0.00710	0.000050	0.000025	0.00643	0.0000025	5.94	0.000014	0.00016	-	0.000056	0.00025	0.23	0.000145	0.0010	1.69	0.048	0.0000014	0.00012
8	AQF40	0.004	-	-	0.015	0.05	0.33	0.067	6.9	0.033	0.00005	0.00037	0.00612	0.000050	0.000025	0.00641	0.0000025	5.60	0.000014	0.00014	-	0.000056	0.00025	0.23	0.000025	0.0007	1.58	0.043	0.0000019	0.00008
9	AQF40	0.004	-	-	0.012	0.05	0.36	0.065	7.2	0.044	0.00005	0.00039	0.00701	0.000050	0.000025	0.00643	0.0000025	6.04	0.000014	0.00013	-	0.000056	0.00025	0.21	0.000025	0.0013	1.71	0.040	0.0000025	0.00013
10	AQF40	0.038	-	-	0.020	0.05	0.38	0.066	6.9	0.053	0.00005	0.00035	0.00607	0.000050	0.000025	0.00637	0.0000025	5.91	0.000014	0.00024	-	0.000055	0.00025	0.29	0.000044	0.0013	1.69	0.045	0.0000012	0.00013
11	AQF40	0.025	-	-	0.019	0.05	0.39	0.063	7.6	0.080	0.00005	0.00039	0.00917	0.000050	0.000025	0.00655	0.0000120	6.38	0.000015	0.00029	-	0.000056	0.00065	0.33	0.000095	0.0007	1.83	0.051	0.0000025	0.00012
12	AQF40	0.048	-	-	0.022	0.05	1.03	0.067	8.7	0.058	0.00008	0.00042	0.00851	0.000031	0.000025	0.00670	0.0000101	6.71	0.000016	0.00027	-	0.000057	0.00064	0.32	0.000084	0.0010	1.92	0.050	0.0000025	0.00013
1	AQF41	0.065	-	-	0.025	0.05	0.45	0.071	9.2	0.039	0.00005	0.00044	0.00828	0.000012	0.000025	0.00681	0.0000175	7.19	0.000017	0.00101	-	0.000057	0.00091	0.32	0.000060	0.0014	1.99	0.047	0.0000025	0.00010
2	AQF41	-	-	-	0.025	0.05	0.47	0.074	9.4	0.064	0.00007	0.00047	0.00890	0.000012	0.000025	0.00687	0.0000120	7.27	0.000018	0.00062	-	0.000057	0.00058	0.45	0.000068	0.0014	2.05	0.073	0.0000022	0.00009
3	AQF41	-	-	-	0.025	0.05	0.48	0.077	9.5	0.089	0.00008	0.00049	0.00950	0.000012	0.000025	0.00689	0.0000066	7.27	0.000020	0.00024	-	0.000058	0.00025	0.57	0.000075	0.0015	2.08	0.098	0.0000019	0.00008
4	AQF41	-	-	-	0.012	0.01	0.44	0.078	8.8	0.032	0.00005	0.00045	0.00775	0.000012	0.000025	0.00678	0.0000025	6.95	0.000016	0.00024	-	0.000057	0.00025	0.31	0.000025	0.0013	1.98	0.049	0.0000022	0.00007
5	AQF41	0.039	-	-	0.015	0.05	0.40	0.061	4.5	0.053	0.00005	0.00030	0.00640	0.000050	0.000025	0.00586	0.0000025	4.78	0.000010	0.00018	-	0.000053	0.00090	0.39	0.000056	0.0006	1.36	0.049	0.0000025	0.00009
6	AQF41	0.035	-	-	0.021	0.05	0.84	0.058	5.8	0.092	0.00005	0.00031	0.01060	0.000050	0.000025	0.00617	0.0000087	5.71	0.000012	0.00029	-	0.000055	0.00065	0.50	0.000090	0.0016	1.49	0.085	0.0000036	0.00009
7	AQF41	0.004	-	-	0.014	0.05	0.34	0.063	7.0	0.041	0.00005	0.00035	0.00641	0.000050	0.000025	0.00643	0.0000025	5.71	0.000014	0.00015	-	0.000056	0.00025	0.25	0.000025	0.0007	1.63	0.043	0.0000016	0.00008
8	AQF41	0.004	-	-	0.015	0.05	0.37	0.066	7.0	0.035	0.00005	0.00038	0.00625	0.000050	0.000025	0.00641	0.0000025	5.54	0.000014	0.00026	-	0.000056	0.00025	0.23	0.000025	0.0007	1.56	0.042	0.0000020	0.00008
9	AQF41	0.004	-	-	0.015	0.05	0.35	0.065	7.2	0.055	0.00005	0.00037	0.00724	0.000050	0.000025	0.00643	0.0000025	6.19	0.000014	0.00017	-	0.000056	0.00025	0.24	0.000025	0.0015	1.74	0.041	0.0000025	0.00013
10	AQF41	0.019	-	-	0.016	0.05	0.36	0.064	6.7	0.037	0.00005	0.00037	0.00634	0.000050	0.000025	0.00637	0.0000025	5.96	0.000014	0.00017	-	0.000055	0.00025	0.26	0.000025	0.0013	1.65	0.042	0.0000011	0.00011
11	AQF41	0.032	-	-	0.031	0.05	0.41	0.063	7.6	0.035	0.00005	0.00038	0.00616	0.000050	0.000025	0.00655	0.0000025	6.34	0.000015	0.00014	-	0.000056	0.00025	0.22	0.000025	0.0007	1.77	0.041	0.0000025	0.00010
12	AQF41	0.049	-	-	0.028	0.05	0.44	0.067	8.5	0.037	0.00005	0.00041	0.00723	0.000031	0.000025	0.00670	0.0000101	6.81	0.000016	0.00057	-	0.000057	0.00058	0.27	0.000043	0.0010	1.89	0.044	0.0000025	0.00010
1	AQF42	0.067	-	-	0.025	0.05	0.79	0.074	9.4	0.050	0.00022	0.00045	0.00869	0.000012	0.000025	0.00681	0.0000025	7.28	0.000017	0.00024	-	0.000057	0.00025	0.35	0.000025	0.0014	2.06	0.051	0.0000025	0.00011
2	AQF42	-	-	-	0.025	0.05	0.76	0.073	17.7	0.065	0.00028	0.00047	0.00936	0.000012	0.000025	0.00687	0.0000103	7.53	0.000017	0.00024	-	0.000057	0.00096	0.38	0.000079	0.0014	2.08	0.058	0.0000011	0.00009
3	AQF42	-	-	-	0.025	0.05	0.63	0.076	9.3	0.120	0.00005	0.00046	0.00999	0.000012	0.000025	0.00689	0.0000025	7.43	0.000029	0.00049	-	0.000124	0.00434	0.60	0.000084	0.0015	2.11	0.086	0.0000025	0.00009
4	AQF42	-	-	-	0.030	0.01	0.46	0.075	8.8	0.037	0.00005	0.00047	0.00848	0.000012	0.000025	0.00678	0.0000100	7.02	0.000016	0.00024	-	0.000057	0.00090	0.32	0.000070	0.0013	2.00	0.051	0.0000025	0.00011
5	AQF42	0.039	-	-	0.015	0.05	0.37	0.064	4.5	0.053	0.00005	0.00034	0.00638	0.000050	0.000025	0.00586	0.0000025	4.65	0.000010	0.00017	-	0.000053	0.00025	0.50	0.000025	0.0012	1.34	0.082	0.0000025	0.00010
6	AQF42	0.035	-	-	0.016	0.05	0.38	0.058	5.8	0.057	0.00005	0.00031	0.00673	0.000050	0.000025	0.00617	0.0000025	5.31	0.000012	0.00024	-	0.000055	0.00025	0.38	0.000056	0.0016	1.44	0.039	0.0000020	0.00021
7	AQF42	0.004	-	-	0.015	0.05	0.47	0.062	7.0	0.047	0.00005	0.00036	0.00662	0.000050	0.000025	0.00643	0.0000067	5.58	0.000014	0.00123	-	0.000056	0.00061	0.27	0.000025	0.0007	1.62	0.046	0.0000019	0.00010
8	AQF42	0.004	-	-	0.014	0.05	0.33	0.066	6.9	0.036	0.00005	0.00039	0.00635	0.000050	0.000025	0.00641	0.0000025	5.82	0.000014	0.00015	-	0.000056	0.00025	0.24	0.000025	0.0007	1.66	0.045	0.0000022	0.00009
9	AQF42	0.007	-	-	0.015	0.05	0.44	0.065	7.1	0.039	0.00005	0.00039	0.00685	0.000050	0.000025	0.00643	0.0000025	6.06	0.000014	0.00014	-	0.000056	0.00025	0.20	0.000025	0.0007	1.71	0.040	0.0000025	0.00011
10	AQF42	0.019	-	-	0.015	0.05	0.36	0.064	6.7	0.041	0.00005	0.00037	0.00625	0.000050	0.000025	0.00637	0.0000025	5.93	0.000014	0.00014	-	0.000055	0.00025	0.26	0.000025	0.0013	1.70	0.042	0.0000012	0.00012
11	AQF42	0.025	-	-	0.015	0.05	0.45	0.063	7.8	0.152	0.00013	0.00041	0.01504	0.000050	0.000025	0.00655	0.0000296	6.55	0.000028	0.00073	-	0.000124	0.00089	0.44	0.000138	0.0013	1.89	0.103	0.0000025	0.00015
12	AQF42	0.046	-	-	0.020	0.05	0.62	0.068	8.7	0.101	0.00017	0.00043	0.01184	0.000031	0.000															

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

Month	Site	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
		Nickel_T mg/L	Potassium_T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L		
1	AQF40	0.00025	0.87	0.00129	0.00007	3.23	0.000005	2.11	0.026	3.01	0.0001	0.000005	0.00005	0.00038	0.0012	0.00005	0.00019	0.00025	0.0052	0.00010	0.020	0.00005	0.00033	0.013	0.000012	0.000025	0.0070	0.0000025	6.85		
2	AQF40	0.00025	0.90	0.00129	0.00005	3.38	0.000005	2.13	0.026	3.50	0.0001	0.000005	0.00005	0.00035	0.0010	0.00005	0.00019	0.00025	0.0056	0.00015	0.020	0.00005	0.00034	0.014	0.000012	0.000025	0.0070	0.0000025	7.00		
3	AQF40	0.00025	0.92	0.00129	0.00003	3.52	0.000005	2.15	0.026	3.93	0.0001	0.000005	0.00005	0.00032	0.0008	0.00005	0.00019	0.00025	0.0059	0.00020	0.021	0.00005	0.00035	0.014	0.000012	0.000025	0.0070	0.0000025	7.08		
4	AQF40	0.00025	0.88	0.00129	0.00013	3.19	0.000005	2.02	0.026	2.96	0.0001	0.000005	0.00005	0.00008	0.0008	0.00005	0.00018	0.00025	0.0015	0.00010	0.020	0.00005	0.00034	0.020	0.000012	0.000025	0.0069	0.0000102	6.74		
5	AQF40	0.00025	0.75	0.00118	0.00003	2.45	0.000005	1.54	0.019	1.55	0.0001	0.000005	0.00005	0.00011	0.0016	0.00005	0.00010	0.00025	0.0015	0.00014	0.036	0.00005	0.00023	0.007	0.000050	0.000025	0.0059	0.0000025	4.92		
6	AQF40	0.00025	0.72	0.00110	0.00003	2.07	0.000005	1.49	0.018	2.03	0.0001	0.000005	0.00005	0.00025	0.0015	0.00005	0.00013	0.00025	0.0048	0.00010	0.035	0.00005	0.00028	0.006	0.000050	0.000025	0.0063	0.0000025	5.17		
7	AQF40	0.00025	0.80	0.00131	0.00003	2.23	0.000005	1.70	0.022	2.42	0.0001	0.000005	0.00005	0.00007	0.0013	0.00005	0.00016	0.00025	0.0015	0.00009	0.026	0.00005	0.00032	0.006	0.000050	0.000025	0.0065	0.0000051	5.81		
8	AQF40	0.00025	0.72	0.00122	0.00003	2.18	0.000005	1.80	0.021	2.40	0.0001	0.000005	0.00005	0.00007	0.0009	0.00005	0.00015	0.00025	0.0043	0.00010	0.020	0.00005	0.00030	0.006	0.000050	0.000025	0.0065	0.0000025	5.53		
9	AQF40	0.00025	0.75	0.00122	0.00003	2.43	0.000005	1.73	0.022	2.43	0.0001	0.000005	0.00005	0.00015	0.0010	0.00005	0.00015	0.00025	0.0015	0.00010	0.031	0.00005	0.00033	0.007	0.000050	0.000025	0.0066	0.0000025	5.68		
10	AQF40	0.00053	0.75	0.00120	0.00003	2.49	0.000005	1.75	0.021	2.33	0.0001	0.000005	0.00005	0.00007	0.0017	0.00005	0.00015	0.00025	0.0015	0.00009	0.022	0.00005	0.00030	0.009	0.000050	0.000025	0.0065	0.0000025	5.76		
11	AQF40	0.00025	0.80	0.00132	0.00003	2.87	0.000005	1.77	0.023	2.60	0.0001	0.000005	0.00005	0.00008	0.0038	0.00005	0.00018	0.00025	0.0045	0.00010	0.022	0.00005	0.00031	0.006	0.000050	0.000025	0.0067	0.0000025	6.05		
12	AQF40	0.00025	0.84	0.00130	0.00005	3.06	0.000005	1.95	0.024	2.84	0.0001	0.000005	0.00005	0.00023	0.0025	0.00005	0.00018	0.00025	0.0049	0.00010	0.021	0.00005	0.00032	0.010	0.000031	0.000025	0.0068	0.0000025	6.50		
1	AQF41	0.00025	0.87	0.00120	0.00005	3.33	0.000005	2.13	0.025	3.01	0.0001	0.000005	0.00005	0.00156	0.0010	0.00005	0.00019	0.00025	0.0109	0.00010	0.020	0.00005	0.00041	0.014	0.000012	0.000025	0.0070	0.0000141	6.84		
2	AQF41	0.00025	0.91	0.00132	0.00004	3.44	0.000005	2.14	0.026	3.09	0.0001	0.000005	0.00005	0.00082	0.0023	0.00005	0.00019	0.00025	0.0075	0.00010	0.020	0.00005	0.00042	0.011	0.000012	0.000025	0.0070	0.0000083	7.04		
3	AQF41	0.00025	0.94	0.00144	0.00003	3.54	0.000005	2.13	0.026	3.12	0.0001	0.000005	0.00005	0.00008	0.0037	0.00005	0.00020	0.00025	0.0041	0.00010	0.021	0.00005	0.00043	0.008	0.000012	0.000025	0.0070	0.0000025	7.17		
4	AQF41	0.00025	0.87	0.00126	0.00015	3.21	0.000005	2.03	0.025	2.96	0.0001	0.000005	0.00005	0.00008	0.0008	0.00005	0.00018	0.00025	0.0015	0.00010	0.020	0.00005	0.00032	0.020	0.000012	0.000025	0.0069	0.0000025	6.68		
5	AQF41	0.00025	0.70	0.00102	0.00003	2.43	0.000005	1.25	0.018	1.55	0.0001	0.000005	0.00005	0.00006	0.0016	0.00005	0.00010	0.00025	0.0015	0.00010	0.029	0.00005	0.00021	0.007	0.000050	0.000025	0.0059	0.0000025	4.67		
6	AQF41	0.00025	0.76	0.00120	0.00003	2.14	0.000005	1.49	0.020	2.03	0.0001	0.000005	0.00005	0.00018	0.0033	0.00005	0.00013	0.00025	0.0069	0.00010	0.033	0.00005	0.00026	0.010	0.000050	0.000025	0.0063	0.0000025	5.13		
7	AQF41	0.00025	0.72	0.00109	0.00003	2.20	0.000005	1.62	0.021	2.42	0.0001	0.000005	0.00005	0.00016	0.0008	0.00005	0.00015	0.00025	0.0015	0.00010	0.025	0.00005	0.00029	0.006	0.000050	0.000025	0.0065	0.0000025	5.53		
8	AQF41	0.00025	0.71	0.00123	0.00005	2.18	0.000005	1.83	0.021	2.40	0.0001	0.000005	0.00005	0.00007	0.0008	0.00005	0.00014	0.00025	0.0052	0.00010	0.022	0.00005	0.00030	0.006	0.000050	0.000025	0.0065	0.0000025	5.45		
9	AQF41	0.00025	0.76	0.00130	0.00003	2.59	0.000005	1.78	0.021	2.43	0.0001	0.000005	0.00005	0.00007	0.0016	0.00005	0.00015	0.00025	0.0050	0.00010	0.023	0.00005	0.00030	0.007	0.000050	0.000025	0.0066	0.0000025	5.79		
10	AQF41	0.00025	0.70	0.00113	0.00003	2.53	0.000005	1.70	0.020	2.33	0.0001	0.000005	0.00005	0.00007	0.0011	0.00005	0.00014	0.00025	0.0045	0.00010	0.018	0.00005	0.00028	0.005	0.000050	0.000025	0.0065	0.0000025	5.69		
11	AQF41	0.00025	0.76	0.00117	0.00003	2.70	0.000005	1.74	0.022	2.60	0.0001	0.000005	0.00005	0.00008	0.0009	0.00005	0.00016	0.00025	0.0015	0.00010	0.019	0.00005	0.00030	0.006	0.000050	0.000025	0.0067	0.0000025	5.97		
12	AQF41	0.00025	0.82	0.00119	0.00004	3.02	0.000005	1.95	0.024	2.84	0.0001	0.000005	0.00005	0.00082	0.0009	0.00005	0.00018	0.00025	0.0062	0.00010	0.019	0.00005	0.00036	0.010	0.000031	0.000025	0.0068	0.0000083	6.45		
1	AQF42	0.00025	0.88	0.00134	0.00006	3.41	0.000005	2.17	0.026	3.27	0.0001	0.000005	0.00005	0.00055	0.0017	0.00005	0.00023	0.00025	0.0039	0.00010	0.020	0.00005	0.00035	0.014	0.000012	0.000025	0.0070	0.0000025	6.83		
2	AQF42	0.00025	1.01	0.00136	0.00003	3.52	0.000005	2.20	0.027	11.03	0.0001	0.000005	0.00005	0.00203	0.0022	0.00005	0.00021	0.00025	0.0245	0.00010	0.023	0.00005	0.00037	0.021	0.000012	0.000025	0.0070	0.0000025	7.18		
3	AQF42	0.00077	0.94	0.00150	0.00003	3.72	0.000005	2.15	0.027	3.12	0.0001	0.000005	0.00005	0.00008	0.0057	0.00005	0.00021	0.00025	0.0052	0.00010	0.034	0.00005	0.00039	0.009	0.000012	0.000025	0.0070	0.0000025	7.18		
4	AQF42	0.00025	0.89	0.00126	0.00013	3.06	0.000005	2.04	0.026	2.96	0.0001	0.000005	0.00005	0.00008	0.0012	0.00005	0.00021	0.00025	0.0031	0.00010	0.023	0.00005	0.00035	0.020	0.000012	0.000025	0.0069	0.0000116	6.80		
5	AQF42	0.00025	0.67	0.00103	0.00003	2.33	0.000005	1.43	0.018	1.55	0.0001	0.000005	0.00005	0.00027	0.0015	0.00005	0.00010	0.00025	0.0015	0.00010	0.033	0.00005	0.00024	0.006	0.000050	0.000025	0.0059	0.0000025	4.63		
6	AQF42	0.00025	0.71	0.00109	0.00003	2.16	0.000005	1.49	0.018	2.03	0.0001	0.000005	0.00005	0.00029	0.0017	0.00005	0.00013	0.00025	0.0015	0.00010	0.033	0.00005	0.00027	0.006	0.000050	0.000025	0.0063	0.0000025	4.98		
7	AQF42	0.00025	0.72	0.00121	0.00003	2.21	0.000005	1.65	0.020	2.42	0.0001	0.000005	0.00005	0.00042	0.0012	0.00005	0.00015	0.00025	0.0058	0.00010	0.025	0.00005	0.00028	0.006	0.000050	0.000025	0.0065	0.0000025	5.53		
8	AQF42	0.00025	0.74	0.00123	0.00005	2.43	0.000005	1.69	0.022	2.40	0.0001	0.000005	0.00005	0.00007	0.0010	0.00005	0.00015	0.00025	0.0015	0.00010	0.021	0.00005	0.00030	0.006	0.000050	0.000025	0.0065	0.0000025	5.56		
9	AQF42	0.00025	0.75	0.00117	0.00003	2.38	0.000005	1.73	0.022	2.43	0.0001	0.000005	0.00005	0.00007	0.0007	0.00005	0.00015	0.00025	0.0030	0.00010	0.024	0.00005	0.00031	0.006	0.000050	0.000025	0.0066	0.0000025	5.85		
10	AQF42	0.00025	0.74	0.00116	0.00003	2.70	0.000005	1.68	0.021	2.33	0.0001	0.000005	0.00005	0.00007	0.0011	0.00005	0.00016	0.00025	0.0015	0.00010	0.019	0.00005	0.00029	0.006	0.000050	0.000025	0.0065	0.0000025	5.73		
11	AQF42	0.00025	0.83	0.00142	0.00003	2.85	0.000005	1.78	0.024	2.60	0.0001	0.000005																			

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

		Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
Month	-	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L	
1	AQF40	0.000016	0.00024	0.000057	0.0027	0.16	0.00013	0.00139	2.0	0.043	-	0.00010	0.00025	0.88	0.00122	0.000025	3.2	0.000005	2.2	0.026	3.05	0.00010	0.000005	0.00005	0.000076	0.00015	0.000054	0.00020	0.00025	
2	AQF40	0.000017	0.00024	0.000058	0.0020	0.18	0.00009	0.00125	2.1	0.045	-	0.00011	0.00025	0.88	0.00122	0.000033	3.2	0.000005	2.2	0.026	3.22	0.00010	0.000005	0.00005	0.000101	0.00015	0.000054	0.00021	0.00025	
3	AQF40	0.000017	0.00024	0.000058	0.0012	0.19	0.00005	0.00111	2.1	0.046	0.0000010	0.00013	0.00025	0.87	0.00123	0.000041	3.2	0.000005	2.2	0.026	3.34	0.00010	0.000005	0.00005	0.000125	0.00015	0.000054	0.00021	0.00025	
4	AQF40	0.000016	0.00024	0.000057	0.0020	0.18	0.00010	0.00129	2.0	0.046	0.0000015	0.00008	0.00025	0.96	0.00133	0.000025	3.1	0.000005	2.1	0.025	3.00	0.00010	0.000005	0.00005	0.000162	0.00015	0.000054	0.00020	0.00025	
5	AQF40	0.000010	0.00010	0.000054	0.0006	0.21	0.00003	0.00119	1.4	0.043	0.0000019	0.00014	0.00025	0.73	0.00108	0.000025	2.5	0.000005	1.5	0.018	1.57	0.00010	0.000005	0.00005	0.000136	0.00070	0.000052	0.00011	0.00025	
6	AQF40	0.000012	0.00013	0.000055	0.0004	0.18	0.00003	0.00064	1.5	0.027	0.0000018	0.00009	0.00025	0.72	0.00103	0.000025	2.1	0.000005	1.5	0.018	2.05	0.00010	0.000005	0.00005	0.000203	0.00050	0.000053	0.00014	0.00025	
7	AQF40	0.000014	0.00011	0.000056	0.0004	0.11	0.00007	0.00101	1.7	0.034	0.0000012	0.00012	0.00025	0.78	0.00122	0.000025	2.0	0.000005	1.7	0.021	2.61	0.00010	0.000005	0.00005	0.000124	0.00040	0.000053	0.00017	0.00025	
8	AQF40	0.000014	0.00012	0.000056	0.0003	0.15	0.00003	0.00067	1.6	0.034	-	0.00011	0.00025	0.73	0.00114	0.000051	2.2	0.000005	1.7	0.022	2.43	0.00010	0.000005	0.00005	0.000254	0.00036	0.000053	0.00016	0.00025	
9	AQF40	0.000014	0.00021	0.000056	0.0026	0.13	0.00014	0.00068	1.6	0.035	-	0.00015	0.00025	0.73	0.00124	0.000051	2.3	0.000005	1.7	0.021	2.46	0.00010	0.000005	0.00005	0.000071	0.00054	0.000053	0.00016	0.00025	
10	AQF40	0.000014	0.00008	0.000056	0.0016	0.14	0.00007	0.00096	1.7	0.031	0.0000011	0.00012	0.00025	0.72	0.00112	0.000042	2.4	0.000005	1.8	0.021	2.56	0.00010	0.000005	0.00005	0.000070	0.00027	0.000053	0.00016	0.00025	
11	AQF40	0.000015	0.00015	0.000056	0.0049	0.14	0.00017	0.00069	1.8	0.036	-	0.00011	0.00025	0.78	0.00111	0.000025	2.5	0.000005	1.7	0.022	2.64	0.00010	0.000005	0.00005	0.000072	0.00033	0.000053	0.00017	0.00025	
12	AQF40	0.000016	0.00019	0.000057	0.0038	0.15	0.00015	0.00104	1.9	0.040	-	0.00010	0.00025	0.83	0.00117	0.000025	2.9	0.000005	2.0	0.024	2.88	0.00010	0.000005	0.00005	0.000075	0.00024	0.000054	0.00019	0.00025	
1	AQF41	0.000016	0.00024	0.000057	0.0038	0.17	0.00016	0.00130	2.0	0.043	-	0.00009	0.00052	0.88	0.00127	0.000025	3.2	0.000005	2.2	0.025	3.05	0.00010	0.000005	0.00005	0.000076	0.00015	0.000054	0.00020	0.00025	
2	AQF41	0.000017	0.00024	0.000058	0.0021	0.19	0.00009	0.00118	2.1	0.046	-	0.00008	0.00038	0.89	0.00126	0.000025	3.2	0.000005	2.2	0.026	3.14	0.00010	0.000005	0.00005	0.000077	0.00020	0.000054	0.00021	0.00025	
3	AQF41	0.000017	0.00024	0.000058	0.0004	0.20	0.00003	0.00107	2.1	0.048	0.0000012	0.00008	0.00025	0.89	0.00124	0.000025	3.2	0.000005	2.2	0.026	3.17	0.00010	0.000005	0.00005	0.000077	0.00025	0.000054	0.00021	0.00025	
4	AQF41	0.000016	0.00024	0.000057	0.0017	0.19	0.00008	0.00129	2.0	0.047	0.0000018	0.00009	0.00025	0.86	0.00127	0.000025	3.1	0.000005	2.1	0.025	3.00	0.00010	0.000005	0.00005	0.000143	0.00035	0.000054	0.00020	0.00025	
5	AQF41	0.000010	0.00012	0.000054	0.0017	0.22	0.00003	0.00061	1.4	0.036	0.0000025	0.00013	0.00025	0.71	0.00097	0.000025	2.4	0.000005	1.3	0.017	1.57	0.00010	0.000005	0.00005	0.000062	0.00043	0.000052	0.00011	0.00025	
6	AQF41	0.000012	0.00013	0.000055	0.0006	0.18	0.00003	0.00064	1.5	0.028	0.0000022	0.00008	0.00025	0.70	0.00106	0.000025	2.0	0.000005	1.5	0.018	2.05	0.00010	0.000005	0.00005	0.000067	0.00051	0.000053	0.00014	0.00025	
7	AQF41	0.000014	0.00012	0.000056	0.0003	0.15	0.00003	0.00068	1.6	0.033	0.0000010	0.00009	0.00025	0.71	0.00107	0.000025	2.2	0.000005	1.6	0.020	2.46	0.00010	0.000005	0.00005	0.000071	0.00035	0.000053	0.00016	0.00025	
8	AQF41	0.000014	0.00012	0.000056	0.0003	0.16	0.00003	0.00067	1.6	0.034	-	0.00009	0.00025	0.70	0.00120	0.000025	2.2	0.000005	1.6	0.021	2.43	0.00010	0.000005	0.00005	0.000476	0.00038	0.000053	0.00016	0.00025	
9	AQF41	0.000014	0.00005	0.000056	0.0005	0.12	0.00003	0.00126	1.7	0.034	-	0.00012	0.00025	0.71	0.00113	0.000025	2.2	0.000005	1.7	0.021	2.95	0.00010	0.000005	0.00005	0.000563	0.00033	0.000053	0.00016	0.00025	
10	AQF41	0.000014	0.00012	0.000056	0.0004	0.12	0.00003	0.00067	1.7	0.031	0.0000010	0.00014	0.00025	0.69	0.00102	0.000025	2.4	0.000005	1.7	0.020	2.37	0.00010	0.000005	0.00005	0.000070	0.00015	0.000053	0.00016	0.00025	
11	AQF41	0.000015	0.00005	0.000056	0.0040	0.12	0.00014	0.00069	1.8	0.034	-	0.00009	0.00025	0.74	0.00112	0.000025	2.5	0.000005	1.7	0.022	2.64	0.00010	0.000005	0.00005	0.000072	0.00015	0.000053	0.00017	0.00025	
12	AQF41	0.000016	0.00015	0.000057	0.0039	0.15	0.00015	0.00100	1.9	0.039	-	0.00009	0.00038	0.81	0.00121	0.000025	2.8	0.000005	2.0	0.024	2.88	0.00010	0.000005	0.00005	0.000075	0.00015	0.000054	0.00019	0.00025	
1	AQF42	0.000016	0.00024	0.000057	0.0032	0.18	0.00015	0.00139	2.1	0.045	-	0.00012	0.00025	0.87	0.00128	0.000025	3.2	0.000005	2.2	0.026	3.05	0.00010	0.000005	0.00005	0.000201	0.00015	0.000054	0.00024	0.00025	
2	AQF42	0.000017	0.00024	0.000058	0.0020	0.20	0.00007	0.00073	2.2	0.052	0.0000004	0.00010	0.00025	1.04	0.00131	0.000025	3.4	0.000005	2.3	0.027	3.42	0.00010	0.000005	0.00005	0.000201	0.00040	0.000054	0.00022	0.00025	
3	AQF42	0.000017	0.00024	0.000058	0.0004	0.22	0.00003	0.00150	2.1	0.049	-	0.00009	0.00025	0.86	0.00127	0.000062	3.3	0.000005	2.2	0.026	3.17	0.00010	0.000005	0.00005	0.000077	0.00040	0.000054	0.00021	0.00025	
4	AQF42	0.000016	0.00024	0.000057	0.0025	0.19	0.00009	0.00139	2.0	0.048	-	0.00010	0.00025	0.90	0.00120	0.000025	3.1	0.000005	5.8	0.025	3.48	0.00010	0.000005	0.00005	0.000171	0.00034	0.000054	0.00023	0.00025	
5	AQF42	0.000010	0.00014	0.000054	0.0007	0.30	0.00003	0.00061	1.4	0.061	0.0000016	0.00010	0.00025	0.69	0.00105	0.000025	2.5	0.000005	1.3	0.018	1.57	0.00010	0.000005	0.00005	0.000062	0.00050	0.000052	0.00011	0.00025	
6	AQF42	0.000012	0.00013	0.000055	0.0004	0.18	0.00003	0.00064	1.4	0.026	0.0000017	0.00009	0.00025	0.74	0.00102	0.000025	2.1	0.000005	1.5	0.018	2.05	0.00010	0.000005	0.00005	0.000310	0.00045	0.000053	0.00013	0.00025	
7	AQF42	0.000014	0.00005	0.000056	0.0003	0.16	0.00003	0.00068	1.6	0.034	0.0000015	0.00010	0.00025	0.72	0.00110	0.000025	2.1	0.000005	1.6	0.020	2.75	0.00010	0.000005	0.00005	0.000689	0.00043	0.000053	0.00017	0.00025	
8	AQF42	0.000014	0.00011	0.000056	0.0005	0.15	0.00012	0.00067	1.6	0.034	-	0.00011	0.00025	0.72	0.00122	0.000025	2.1	0.000005	1.6	0.021	2.43	0.00010	0.000005	0.00005	0.000070	0.00045	0.000053	0.00016	0.00025	
9	AQF42	0.000014	0.00012	0.000056	0.0003	0.12	0.00003	0.00068	1.7	0.033	-	0.00010	0.00025	0.74	0.00111	0.000060	2.3	0.000005	1.7	0.021	2.46	0.00010	0.000005	0.00005	0.000071	0.00031	0.000053	0.00016	0.00025	
10	AQF42	0.000014	0.00005	0.000056	0.0005	0.13	0.00003	0.00067	1.7	0.032	0.0000009	0.00012	0.00025	0.68	0.00105	0.000025	2.4	0.000005	1.7	0.020	2.37	0.00010	0.000005	0.00005	0.000070	0.00015	0.000053	0.00016	0.00025	
11	AQF42	0.000015	0.00075	0.000056	0.0015	0.19	0.00006	0.00069	1.8	0.051	-	0.00089	0.00025	0.76	0.00114	0.000025	2.4	0.000005	1.7	0.023	2.64	0.00010	0.000005	0.00005	0.000072	0.00099	0.000891	0.00021	0.00025	
12	AQF42	0.000016	0.00050	0.000057	0.0024	0.19	0.00011	0.00104	2.0	0.																				

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

Month	Site	Dissolved_Met al	Dissolved_Met al	Cyanides	Cyanides	Cyanides	Methylmercu ry	Methylmercu ry
		Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WA D mg/L	Methylmercu ry_D mg/L	Methylmercu ry_T mg/L
1	AQF40	0.0045	0.00015	-	-	-	-	-
2	AQF40	0.0031	0.00015	-	-	-	-	-
3	AQF40	0.0018	0.00015	-	-	-	-	-
4	AQF40	0.0027	0.00015	-	-	-	-	-
5	AQF40	0.0030	0.00010	-	-	-	-	-
6	AQF40	0.0063	0.00010	-	-	-	-	-
7	AQF40	0.0037	0.00010	-	-	-	-	-
8	AQF40	0.0032	0.00010	-	-	-	-	-
9	AQF40	0.0047	0.00010	-	-	-	-	-
10	AQF40	0.0021	0.00011	-	-	-	-	-
11	AQF40	0.0100	0.00010	-	-	-	-	-
12	AQF40	0.0072	0.00012	-	-	-	-	-
1	AQF41	0.0050	0.00015	-	-	-	-	-
2	AQF41	0.0034	0.00015	-	-	-	-	-
3	AQF41	0.0018	0.00015	-	-	-	-	-
4	AQF41	0.0022	0.00015	-	-	-	-	-
5	AQF41	0.0251	0.00010	-	-	-	-	-
6	AQF41	0.0023	0.00010	-	-	-	-	-
7	AQF41	0.0031	0.00010	-	-	-	-	-
8	AQF41	0.0018	0.00025	-	-	-	-	-
9	AQF41	0.0005	0.00010	-	-	-	-	-
10	AQF41	0.0005	0.00010	-	-	-	-	-
11	AQF41	0.0042	0.00010	-	-	-	-	-
12	AQF41	0.0046	0.00012	-	-	-	-	-
1	AQF42	0.0046	0.00015	-	-	-	-	-
2	AQF42	0.0047	0.00015	-	-	-	-	-
3	AQF42	0.0012	0.00015	-	-	-	-	-
4	AQF42	0.0050	0.00015	-	-	-	-	-
5	AQF42	0.0012	0.00010	-	-	-	-	-
6	AQF42	0.0005	0.00010	-	-	-	-	-
7	AQF42	0.0087	0.00010	-	-	-	-	-
8	AQF42	0.0030	0.00010	-	-	-	-	-
9	AQF42	0.0005	0.00010	-	-	-	-	-
10	AQF42	0.0011	0.00010	-	-	-	-	-
11	AQF42	0.0032	0.00010	-	-	-	-	-
12	AQF42	0.0039	0.00012	-	-	-	-	-
1	AQF43	0.0011	0.00015	-	-	-	-	-
2	AQF43	0.0013	0.00015	-	-	-	-	-
3	AQF43	0.0015	0.00015	-	-	-	-	-
4	AQF43	0.0023	0.00015	-	-	-	-	-
5	AQF43	0.0015	0.00010	-	-	-	-	-
6	AQF43	0.0044	0.00010	-	-	-	-	-
7	AQF43	0.0013	0.00010	-	-	-	-	-
8	AQF43	0.0005	0.00010	-	-	-	-	-
9	AQF43	0.0005	0.00010	-	-	-	-	-
10	AQF43	0.0022	0.00010	-	-	-	-	-
11	AQF43	0.0047	0.00010	-	-	-	-	-
12	AQF43	0.0029	0.00012	-	-	-	-	-
1	AQF44	0.0038	0.00015	-	-	-	-	-
2	AQF44	0.0031	0.00015	-	-	-	-	-
3	AQF44	0.0023	0.00015	-	-	-	-	-
4	AQF44	0.0027	0.00015	-	-	-	-	-
5	AQF44	0.0005	0.00010	-	-	-	-	-
6	AQF44	0.0033	0.00010	-	-	-	-	-
7	AQF44	0.0005	0.00010	-	-	-	-	-
8	AQF44	0.0026	0.00010	-	-	-	-	-
9	AQF44	0.0005	0.00010	-	-	-	-	-
10	AQF44	0.0005	0.00010	-	-	-	-	-
11	AQF44	0.0049	0.00010	-	-	-	-	-
12	AQF44	0.0043	0.00012	-	-	-	-	-

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

	Site	Field	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	
Month		D_Oxygen_field mg/L	D_Oxygen_percen	ORP_field mV	pH_field pH	Specific_Con ductance_fiel d uS/cm	TDS_field mg/L	Temp_field C	Turbidity_fiel d NTU	Acidity(CaCO 3) mg/L	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(CaCO3)	(CO3)_carbonat	(HCO3)_bicarbona	(OH)_hydroxide mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(Ca	Hardness(Ca	pH pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N)	Nitrate(N) mg/L	Nitrite(N) mg/L
			CO3)_bicarbo								CO3)_carbon	CO3)_hydrox	CO3)_phenol	CO3)_T	CO3)_T																	
1	AQF45	12.7	87.0	-	-	-	-	-	-	-	-	-	-	-	-	19.1	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.033	0.072	0.005
2	AQF45	13.0	89.1	-	-	-	-	-	-	-	-	-	-	-	-	18.5	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.036	0.088	0.005
3	AQF45	13.4	91.3	-	-	-	-	0.3	-	-	-	-	-	-	-	17.8	0.49	24.3	0.48	-	-	-	-	24.0	-	-	10.1	-	-	0.039	0.105	0.005
4	AQF45	18.6	132.6	-	-	-	-	0.6	-	-	-	-	-	-	-	20.3	0.40	22.5	0.33	52.1	-	-	-	22.0	-	-	9.4	-	-	0.013	0.096	0.001
5	AQF45	14.2	115.3	-	-	-	-	7.7	-	-	-	-	-	-	-	13.6	0.30	16.6	0.17	-	-	-	-	16.2	-	-	9.4	-	-	0.009	0.026	0.001
6	AQF45	9.5	96.1	-	-	-	-	14.8	-	-	-	-	-	-	-	13.4	0.30	16.3	0.17	-	-	-	-	16.0	-	-	8.4	-	-	0.010	0.011	0.005
7	AQF45	6.8	73.4	-	-	-	-	18.5	-	-	-	-	-	-	-	14.8	0.30	18.1	0.17	-	-	-	-	17.2	-	-	9.0	-	-	0.024	0.004	0.001
8	AQF45	7.6	81.2	-	-	-	-	18.5	-	-	-	-	-	-	-	17.1	0.30	20.8	0.17	-	-	-	-	18.0	-	-	9.2	-	-	0.046	0.004	0.001
9	AQF45	8.6	82.4	-	-	-	-	13.5	-	-	-	-	-	-	-	17.3	0.30	21.1	0.17	-	-	-	-	19.2	-	-	9.2	-	-	0.021	0.007	0.001
10	AQF45	12.7	90.4	-	-	-	-	1.3	-	-	-	-	-	-	-	16.8	0.30	20.5	0.17	-	-	-	-	18.7	-	-	9.1	-	-	0.011	0.020	0.001
11	AQF45	12.9	87.7	-	-	-	-	0.3	-	-	-	-	-	-	-	19.2	0.30	23.4	0.17	-	-	-	-	20.0	-	-	9.8	-	-	0.012	0.031	0.001
12	AQF45	13.8	94.1	-	-	-	-	-	-	-	-	-	-	-	-	18.8	0.30	23.0	0.17	-	-	-	-	21.7	-	-	9.4	-	-	0.022	0.041	0.001
May-Oct	All Stn Median	8.9	88.4	-	-	-	-	14.3	-	-	-	-	-	-	-	15.6	0.30	19.0	0.17	-	-	-	-	16.8	-	-	9.1	-	-	0.014	0.011	0.001
May-Oct	All Stn 90P	13.8	110.9	-	-	-	-	19.1	-	-	-	-	-	-	-	16.9	0.30	20.5	0.17	-	-	-	-	18.2	-	-	9.6	-	-	0.039	0.032	0.005
May-Oct	All Stn 10P	6.8	72.4	-	-	-	-	3.7	-	-	-	-	-	-	-	13.3	0.30	16.2	0.17	-	-	-	-	15.6	-	-	8.7	-	-	0.009	0.004	0.001

Median Hughes monthly flow rate, median mixed pit concentrations cont'd																														Median Hughes monthly flow rate, median mixed pit concentrations cont'd									
	Site	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal				
Month		Nitrite_nitrat	Nitrogen(TK	Phosphorus_D	Phosphorus_T	Bromide	Chloride	Fluoride	Sulfate(SO4)	Aluminum_T	Antimony_T	Arsenic_T	Barium_T	Beryllium_T	Bismuth_T	Boron_T	Cadmium_T	Calcium_T	Cesium_T	Chromium_T	ChromiumVI	Cobalt_T	Copper_T	Iron_T	Lead_T	Lithium_T	Magnesium_T	Manganese_T	Mercury_T	Molybdenum_T									
		e(N) mg/L	N) mg/L	D mg/L	T mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L				
1	AQF45	0.071	-	-	0.011	0.05	0.45	0.072	9.0	0.044	0.00005	0.00042	0.00787	0.000012	0.000025	0.00681	0.0000025	7.44	0.000017	0.00024	-	0.000057	0.00025	0.31	0.000025	0.0013	2.13	0.047	0.0000025	0.00011									
2	AQF45	-	-	-	0.011	0.05	1.32	0.073	10.6	0.046	0.00005	0.00042	0.00802	0.000012	0.000025	0.00687	0.0000025	7.77	0.000017	0.00024	-	0.000057	0.00025	0.32	0.000025	0.0014	2.17	0.049	0.0000021	0.00010									
3	AQF45	-	-	-	0.011	0.05	2.19	0.075	12.1	0.047	0.00005	0.00043	0.00816	0.000012	0.000025	0.00689	0.0000025	8.04	0.000017	0.00024	-	0.000058	0.00025	0.34	0.000025	0.0014	2.20	0.050	0.0000018	0.00009									
4	AQF45	-	-	-	0.014	0.01	0.65	0.078	9.1	0.041	0.00005	0.00044	0.00806	0.000012	0.000025	0.00678	0.0000058	7.40	0.000016	0.00024	-	0.000057	0.00085	0.30	0.000025	0.0013	2.10	0.053	0.0000021	0.00009									
5	AQF45	0.026	-	-	0.020	0.05	0.38	0.065	4.5	0.069	0.00005	0.00029	0.00635	0.000050	0.000025	0.00586	0.0000025	4.85	0.000010	0.00019	-	0.000053	0.00025	0.38	0.000025	0.0013	1.41	0.041	0.0000025	0.00009									
6	AQF45	0.035	-	-	0.015	0.05	0.38	0.058	5.9	0.076	0.00005	0.00031	0.00685	0.000050	0.000025	0.00617	0.0000025	5.51	0.000012	0.00024	-	0.000055	0.00025	0.34	0.000052	0.0016	1.50	0.040	0.0000018	0.00009									
7	AQF45	0.004	-	-	0.018	0.05	0.55	0.064	7.1	0.071	0.00005	0.00037	0.00696	0.000050	0.000025	0.00643	0.0000025	5.85	0.000014	0.00019	-	0.000056	0.00025	0.29	0.000025	0.0007	1.70	0.055	0.0000016	0.00009									
8	AQF45	0.004	-	-	0.018	0.05	0.35	0.068	7.0	0.108	0.00005	0.00041	0.00738	0.000050	0.000025	0.00641	0.0000025	6.15	0.000023	0.00072	-	0.000056	0.00025	0.33	0.000065	0.0014	1.79	0.060	0.0000020	0.00011									
9	AQF45	0.006	-	-	0.013	0.05	0.39	0.067	7.1	0.073	0.00005	0.00039	0.00734	0.000050	0.000025	0.00643	0.0000025	6.42	0.000014	0.00020	-	0.000056	0.00025	0.25	0.000025	0.0013	1.84	0.047	0.0000025	0.00011									
10	AQF45	0.019	-	-	0.013	0.05	0.42	0.061	6.8	0.063	0.00005	0.00038	0.00625	0.000050	0.000025	0.00637	0.0000025	6.26	0.000014	0.00023	-	0.000055	0.00025	0.26	0.000025	0.0013	1.80	0.040	0.0000012	0.00013									
11	AQF45	0.030	-	-	0.014	0.05	0.42	0.065	7.7	0.046	0.00005	0.00039	0.00646	0.000050	0.000025	0.00655	0.0000025	6.79	0.000015	0.00017	-	0.000056	0.00025	0.24	0.000025	0.0007	1.95	0.042	0.0000025	0.00012									
12	AQF45	0.041	-	-	0.013	0.05	0.47	0.072	8.4	0.056	0.00005	0.00048	0.00912	0.000050	0.000025	0.00670	0.0000025	8.06	0.000016	0.00021	-	0.000057	0.00025	0.29	0.000059	0.0016	2.33	0.046	0.0000025	0.00010									
May-Oct	All Stn Median	0.019	-	-	0.015	0.05	0.37	0.064	6.9	0.055	0.00005	0.00037	0.00662	0.000050	0.000025	0.00639	0.0000025	5.78	0.000014	0.00019	-	0.000056	0.00025	0.28	0.000025	0.0013	1.66	0.045	0.0000019	0.00010									
May-Oct	All Stn 90P	0.038	-	-	0.020	0.05	0.43	0.067	7.1	0.074	0.00005	0.00039	0.00729	0.000050	0.000025	0.00643	0.0000025	6.23	0.000014	0.00028	-	0.000056	0.00025	0.38	0.000062	0.0016	1.80	0.054	0.0000025	0.00013									
May-Oct	All Stn 10P	0.004	-	-	0.013	0.05	0.34	0.058	4.5	0.038	0.00005	0.00031	0.00625	0.000050	0.000025	0.00586	0.0000025	4.92	0.000010	0.00014	-	0.000053	0.00025	0.23	0.000025	0.0007	1.41	0.040	0.0000012	0.00008									

w rate, median mixed pit concentrations cont'd

	Site	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal
Month		Nickel_T mg/L	Potassium_T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	
1	AQF45	0.00025	0.86	0.00127	0.00007	3.32	0.000005	2.14	0.026	3.01	0.0001	0.000005	0.00005	0.00008	0.0012	0.00005	0.00019	0.00025	0.0015	0.00010	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0070	0.0000025	7.31	
2	AQF45	0.00025	0.89	0.00129	0.00005	3.41	0.000005	2.46	0.027	3.23	0.0001	0.000005	0.00005	0.00010	0.0013	0.00005	0.00019	0.00025	0.0022	0.00010	0.020	0.00005	0.00035	0.011	0.000012	0.000025	0.0070	0.0000025	7.45	
3	AQF45	0.00025	0.91	0.00130	0.00003	3.51	0.000005	2.75	0.027	3.39	0.0001	0.000005	0.00005	0.00011	0.0014	0.00005	0.00019	0.00025	0.0028	0.00010	0.020	0.00005	0.00036	0.008	0.000012	0.000025	0.0070	0.0000025	7.52	
4	AQF45	0.00103	0.93	0.00124	0.00010	3.19	0.000005	2.17	0.026	2.96	0.0001	0.000005	0.00005	0.00008	0.0013	0.00005	0.00019	0.00025	0.0015	0.00010	0.018	0.00005	0.00032	0.014	0.000012	0.000025	0.0069	0.0000025	7.21	
5	AQF45	0.00025	0.67	0.00109	0.00003	2.22	0.000005	1.42	0.019	1.55	0.0001	0.000005	0.00005	0.00006	0.0023	0.00005	0.00011	0.00025	0.0015	0.00010	0.039	0.00005	0.00024	0.006	0.000050	0.000025	0.0059	0.0000025	5.00	
6	AQF45	0.00025	0.70	0.00111	0.00003	2.12	0.000005	1.50	0.019	2.03	0.0001	0.000005	0.00005	0.00007	0.0025	0.00005	0.00013	0.00025	0.0015	0.00010	0.033	0.00005	0.00025	0.006	0.000050	0.000025	0.0063	0.0000025	5.18	
7	AQF45	0.00025	0.72	0.00118	0.00003	2.21	0.000005	1.62	0.021	2.42	0.0001	0.000005	0.00005	0.00007	0.0027	0.00005	0.00016	0.00025	0.0015	0.00010	0.033	0.00005	0.00028	0.006	0.000050	0.000025	0.0065	0.0000025	5.73	
8	AQF45	0.00085	0.77	0.00144	0.00003	2.59	0.000005	1.75	0.023	2.40	0.0001	0.000005	0.00005	0.00007	0.0042	0.00005	0.00016	0.00025	0.0038	0.00024	0.037	0.00005	0.00030	0.006	0.000050	0.000025	0.0065	0.0000025	5.88	
9	AQF45	0.00025	0.77	0.00125	0.00003	2.46	0.000005	1.77	0.022	2.43	0.0001	0.000005	0.00005	0.00007	0.0024	0.00005	0.00016	0.00025	0.0015	0.00010	0.042	0.00005	0.00034	0.007	0.000050	0.000025	0.0066	0.0000025	6.27	
10	AQF45	0.00025	0.73	0.00108	0.00003	2.57	0.000005	1.78	0.022	2.33	0.0001	0.000005	0.00005	0.00007	0.0023	0.00005	0.00015	0.00025	0.0015	0.00010	0.020	0.00005	0.00030	0.012	0.000050	0.000025	0.0065	0.0000025	6.06	
11	AQF45	0.00025	0.81	0.00111	0.00003	2.75	0.000005	1.83	0.024	2.60	0.0001	0.000005	0.00005	0.00008	0.0012	0.00005	0.00016	0.00025	0.0015	0.00010	0.019	0.00005	0.00030	0.006	0.000050	0.000025	0.0067	0.0000025	6.55	
12	AQF45	0.00025	0.95	0.00148	0.00006	3.51	0.000005	2.35	0.028	2.84	0.0001	0.000005	0.00005	0.00008	0.0016	0.00005	0.00019	0.00025	0.0015	0.00010	0.019	0.00005	0.00030	0.007	0.000050	0.000025	0.0068	0.0000025	7.12	
May-Oct	All Stn Median	0.00025	0.74	0.00120	0.00003	2.37	0.000005	1.68	0.021	2.36	0.0001	0.000005	0.00005	0.00007	0.0016	0.00005	0.00015	0.00025	0.0015	0.00010	0.028	0.00005	0.00029	0.006	0.000050	0.000025	0.0065	0.0000025	5.58	
May-Oct	All Stn 90P	0.00039	0.77	0.00130	0.00006	2.59	0.000005	1.78	0.022	2.43	0.0001	0.000005	0.00005	0.00026	0.0026	0.00005	0.00016	0.00025	0.0051	0.00010	0.035	0.00005	0.00032	0.009	0.000050	0.000025	0.0066	0.0000025	5.91	
May-Oct	All Stn 10P	0.00025	0.69	0.00108	0.00003	2.17	0.000005	1.45	0.018	1.55	0.0001	0.000005	0.00005	0.00007	0.0009	0.00005	0.00010	0.00025	0.0015	0.00010	0.020	0.00005	0.00024	0.006	0.000050	0.000025	0.0059	0.0000025	4.95	

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

	Site	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
Month		Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_ D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L
1	AQF45	0.000016	0.00024	0.000057	0.0029	0.15	0.00008	0.00139	2.1	0.042	-	0.00011	0.00025	0.87	0.00120	0.000025	3.1	0.000005	2.2	0.026	3.05	0.00010	0.000005	0.00005	0.000134	0.00015	0.000054	0.00020	0.00025
2	AQF45	0.000017	0.00024	0.000058	0.0016	0.17	0.00005	0.00124	2.2	0.044	-	0.00010	0.00025	0.87	0.00120	0.000034	3.2	0.000005	2.2	0.027	3.53	0.00010	0.000005	0.00005	0.000137	0.00015	0.000054	0.00021	0.00025
3	AQF45	0.000017	0.00024	0.000058	0.0004	0.19	0.00003	0.00107	2.2	0.045	0.0000009	0.00009	0.00025	0.87	0.00121	0.000043	3.2	0.000005	2.2	0.027	3.96	0.00010	0.000005	0.00005	0.000139	0.00015	0.000054	0.00021	0.00025
4	AQF45	0.000016	0.00024	0.000057	0.0026	0.18	0.00008	0.00139	2.1	0.050	0.0000009	0.00010	0.00111	0.92	0.00122	0.000025	3.1	0.000005	2.2	0.026	3.00	0.00010	0.000005	0.00005	0.000076	0.00015	0.000054	0.00020	0.00025
5	AQF45	0.000010	0.00012	0.000054	0.0004	0.22	0.00003	0.00061	1.5	0.030	0.0000008	0.00009	0.00025	0.71	0.00093	0.000025	2.3	0.000005	1.3	0.018	1.57	0.00010	0.000005	0.00005	0.000062	0.00067	0.000052	0.00011	0.00025
6	AQF45	0.000012	0.00012	0.000055	0.0003	0.18	0.00003	0.00064	1.5	0.026	0.0000021	0.00011	0.00025	0.68	0.00106	0.000072	2.0	0.000005	1.5	0.018	2.05	0.00023	0.000005	0.00005	0.000067	0.00055	0.000053	0.00014	0.00025
7	AQF45	0.000014	0.00013	0.000056	0.0004	0.16	0.00003	0.00068	1.7	0.033	0.0000018	0.00010	0.00025	0.71	0.00119	0.000025	2.2	0.000005	1.6	0.020	2.46	0.00010	0.000005	0.00005	0.000071	0.00063	0.000053	0.00017	0.00025
8	AQF45	0.000014	0.00014	0.000056	0.0007	0.16	0.00003	0.00067	1.8	0.040	-	0.00013	0.00025	0.73	0.00130	0.000025	2.2	0.000005	1.7	0.022	2.43	0.00010	0.000005	0.00005	0.000070	0.00115	0.000053	0.00017	0.00025
9	AQF45	0.000014	0.00014	0.000056	0.0003	0.16	0.00003	0.00068	1.8	0.043	-	0.00011	0.00025	0.72	0.00107	0.000025	2.3	0.000005	1.8	0.022	2.46	0.00010	0.000005	0.00005	0.000071	0.00113	0.000053	0.00017	0.00025
10	AQF45	0.000014	0.00011	0.000056	0.0025	0.12	0.00006	0.00067	1.8	0.032	0.0000010	0.00011	0.00025	0.69	0.00097	0.000025	2.4	0.000005	1.7	0.020	2.37	0.00010	0.000005	0.00005	0.000070	0.00039	0.000053	0.00016	0.00025
11	AQF45	0.000015	0.00005	0.000056	0.0041	0.12	0.00015	0.00069	1.9	0.034	-	0.00016	0.00025	0.77	0.00106	0.000025	2.5	0.000005	1.8	0.023	2.64	0.00010	0.000005	0.00005	0.000072	0.00015	0.000053	0.00017	0.00025
12	AQF45	0.000040	0.00005	0.000057	0.0003	0.13	0.00003	0.00196	2.1	0.038	-	0.00010	0.00025	0.84	0.00120	0.000025	2.7	0.000005	2.0	0.025	2.88	0.00010	0.000005	0.00005	0.000075	0.00033	0.000054	0.00019	0.00025
May-Oct	All Stn Median	0.000014	0.00012	0.000056	0.0004	0.16	0.00003	0.00067	1.6	0.034	0.0000016	0.00011	0.00025	0.72	0.00109	0.000025	2.2	0.000005	1.7	0.020	2.43	0.00010	0.000005	0.00005	0.000071	0.00043	0.000053	0.00016	0.00025
May-Oct	All Stn 90P	0.000014	0.00013	0.000056	0.0016	0.21	0.00009	0.00110	1.8	0.038	0.0000021	0.00015	0.00025	0.78	0.00121	0.000046	2.4	0.000005	1.7	0.022	2.58	0.00010	0.000005	0.00005	0.000282	0.00065	0.000053	0.00017	0.00025
May-Oct	All Stn 10P	0.000010	0.00006	0.000054	0.0003	0.12	0.00003	0.00062	1.4	0.027	0.0000009	0.00009	0.00025	0.69	0.00097	0.000025	2.0	0.000005	1.3	0.018	1.57	0.00010	0.000005	0.00005	0.000062	0.00029	0.000052	0.00011	0.00025

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

Month	Site	Dissolved_Met	Dissolved_Met	Cyanides	Cyanides	Cyanides	Methylmercu	Methylmercu
		al	al				ry	ry
		Zinc_D	Zirconium_D				Methylmercu	Methylmercu
		mg/L	mg/L	cyanide_free	cyanide_SAD	D	ry_D	ry_T
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	AQF45	0.0023	0.00015	-	-	-	-	-
2	AQF45	0.0019	0.00015	-	-	-	-	-
3	AQF45	0.0015	0.00015	-	-	-	-	-
4	AQF45	0.0016	0.00015	-	-	-	-	-
5	AQF45	0.0013	0.00010	-	-	-	-	-
6	AQF45	0.0011	0.00010	-	-	-	-	-
7	AQF45	0.0021	0.00010	-	-	-	-	-
8	AQF45	0.0012	0.00010	-	-	-	-	-
9	AQF45	0.0005	0.00010	-	-	-	-	-
10	AQF45	0.0016	0.00010	-	-	-	-	-
11	AQF45	0.0058	0.00010	-	-	-	-	-
12	AQF45	0.0005	0.00010	-	-	-	-	-
May-Oct	All Stn Median	0.0015	0.00010	-	-	-	-	-
May-Oct	All Stn 90P	0.0046	0.00010	-	-	-	-	-
May-Oct	All Stn 10P	0.0005	0.00010	-	-	-	-	-

10th percentile Hughes monthly flow rate, median mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient
Month	-	D_Oxygen_field	D_Oxygen_perce	ORP_field	pH_field	Specific_Con	TDS_field	Temp_field	Turbidity_fiel	Acidity(CaCO	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(CaCO3)	(CO3)_carbonat	(HCO3)_bicarbona	(OH)_hydroxide	Conductivity	DOC_D	Hardness(Ca	Hardness(Ca	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia(N)	Nitrate(N)	Nitrite(N)
	-	mg/L	nt_field	mV	pH	ductance_fiel	mg/L	C	d	3)	CO3)_bicarbo	CO3)_carbon	CO3)_hydrox	CO3)_phenol	T	e	te	mg/L	µS/cm	mg/L	CO3)_D	CO3)_T	pH	mg/L	mg/L	mg/L	mg/L	NTU	_T	mg/L	mg/L
1	AQF40	9.8	67.5	-	-	-	-	-	-	-	-	-	-	-	16.3	-	-	-	-	-	-	-	-	-	10.0	-	-	0.098	0.071	0.005	
2	AQF40	10.7	73.4	-	-	-	-	-	-	-	-	-	-	-	16.0	-	-	-	-	-	-	-	-	-	9.7	-	-	0.064	0.088	0.005	
3	AQF40	11.5	79.3	-	-	-	-	0.3	-	-	-	-	-	-	15.7	0.49	23.6	0.48	-	-	-	22.2	-	9.5	-	-	0.030	0.105	0.005		
4	AQF40	19.6	136.9	-	-	-	-	0.7	-	-	-	-	-	-	19.7	0.40	23.0	0.33	49.0	-	-	21.7	-	9.0	-	-	0.014	0.097	0.001		
5	AQF40	12.2	92.8	-	-	-	-	3.9	-	-	-	-	-	-	17.1	0.30	20.8	0.17	-	-	-	19.6	-	-	-	-	0.012	0.039	0.001		
6	AQF40	8.9	88.8	-	-	-	-	15.0	-	-	-	-	-	-	15.9	0.30	19.5	0.17	-	-	-	18.9	-	-	9.7	-	-	0.013	0.012	0.005	
7	AQF40	6.7	70.9	-	-	-	-	18.2	-	-	-	-	-	-	17.1	0.30	20.9	0.17	-	-	-	19.8	-	-	8.7	-	-	0.019	0.005	0.001	
8	AQF40	6.0	65.7	-	-	-	-	19.4	-	-	-	-	-	-	18.0	0.30	21.9	0.17	-	-	-	19.2	-	-	9.1	-	-	0.027	0.005	0.001	
9	AQF40	7.9	77.6	-	-	-	-	13.4	-	-	-	-	-	-	18.0	0.30	21.9	0.17	-	-	-	19.3	-	-	8.8	-	-	0.030	0.005	0.001	
10	AQF40	11.8	88.8	-	-	-	-	3.6	-	-	-	-	-	-	17.9	0.30	21.7	0.17	-	-	-	19.5	-	-	-	-	-	0.022	0.027	0.001	
11	AQF40	10.2	70.4	-	-	-	-	0.4	-	-	-	-	-	-	18.0	0.30	21.9	0.17	-	-	-	18.8	-	-	10.0	-	-	0.020	0.026	0.001	
12	AQF40	10.0	69.0	-	-	-	-	0.3	-	-	-	-	-	-	17.2	-	-	-	-	-	-	-	-	-	10.0	-	-	0.059	0.049	0.003	
1	AQF41	12.4	85.7	-	-	-	-	0.4	-	-	-	-	-	-	18.2	-	-	-	-	-	-	-	-	-	10.1	-	-	0.050	0.066	0.005	
2	AQF41	12.3	84.2	-	-	-	-	0.4	-	-	-	-	-	-	18.7	-	-	-	-	-	-	-	-	-	10.1	-	-	0.042	0.090	0.005	
3	AQF41	12.1	82.8	-	-	-	-	0.3	-	-	-	-	-	-	19.3	0.49	23.7	0.48	-	-	-	21.9	-	-	10.0	-	-	0.034	0.115	0.005	
4	AQF41	19.7	138.8	-	-	-	-	0.8	-	-	-	-	-	-	19.6	0.40	22.7	0.33	48.8	-	-	21.0	-	-	9.4	-	-	0.014	0.098	0.001	
5	AQF41	13.7	105.1	-	-	-	-	3.9	-	-	-	-	-	-	16.4	0.30	20.0	0.17	-	-	-	18.7	-	-	8.6	-	-	0.012	0.039	0.001	
6	AQF41	8.2	83.9	-	-	-	-	16.1	-	-	-	-	-	-	14.8	0.30	18.0	0.17	-	-	-	18.7	-	-	8.8	-	-	0.013	0.012	0.005	
7	AQF41	7.3	75.7	-	-	-	-	18.5	-	-	-	-	-	-	16.1	0.30	19.6	0.17	-	-	-	18.7	-	-	9.1	-	-	0.044	0.005	0.001	
8	AQF41	6.1	66.4	-	-	-	-	19.7	-	-	-	-	-	-	17.9	0.30	21.8	0.17	-	-	-	18.9	-	-	9.1	-	-	0.020	0.005	0.001	
9	AQF41	6.8	65.2	-	-	-	-	13.2	-	-	-	-	-	-	18.1	0.30	22.1	0.17	-	-	-	19.7	-	-	8.9	-	-	0.020	0.005	0.001	
10	AQF41	11.3	86.6	-	-	-	-	4.3	-	-	-	-	-	-	17.4	0.30	21.1	0.17	-	-	-	19.2	-	-	9.2	-	-	0.013	0.020	0.001	
11	AQF41	12.3	84.9	-	-	-	-	0.5	-	-	-	-	-	-	18.4	0.30	22.4	0.17	-	-	-	18.7	-	-	9.0	-	-	0.013	0.033	0.001	
12	AQF41	12.3	85.3	-	-	-	-	0.4	-	-	-	-	-	-	18.4	-	-	-	-	-	-	-	-	-	9.5	-	-	0.032	0.049	0.003	
1	AQF42	10.3	71.0	-	-	-	-	0.3	-	-	-	-	-	-	18.1	-	-	-	-	-	-	-	-	-	9.7	-	-	0.055	0.067	0.005	
2	AQF42	11.9	80.9	-	-	-	-	0.3	-	-	-	-	-	-	14.2	-	-	-	-	-	-	22.6	-	-	9.9	-	-	0.041	0.118	0.005	
3	AQF42	10.4	70.9	-	-	-	-	0.3	-	-	-	-	-	-	21.6	0.49	26.4	0.48	-	-	-	22.4	-	-	10.2	-	-	0.060	0.109	0.005	
4	AQF42	15.3	105.5	-	-	-	-	0.3	-	-	-	-	-	-	19.7	0.40	23.7	0.33	48.6	-	-	21.3	-	-	9.5	-	-	0.021	0.094	0.001	
5	AQF42	13.4	130.1	-	-	-	-	4.4	-	-	-	-	-	-	16.0	0.30	19.5	0.17	-	-	-	18.7	-	-	9.4	-	-	0.012	0.039	0.001	
6	AQF42	10.1	101.0	-	-	-	-	14.9	-	-	-	-	-	-	15.6	0.30	19.0	0.17	-	-	-	18.2	-	-	9.3	-	-	0.013	0.012	0.005	
7	AQF42	7.9	85.3	-	-	-	-	18.4	-	-	-	-	-	-	17.5	0.30	21.3	0.17	-	-	-	18.8	-	-	9.0	-	-	0.030	0.005	0.001	
8	AQF42	7.8	83.3	-	-	-	-	18.0	-	-	-	-	-	-	18.0	0.30	21.9	0.17	-	-	-	19.3	-	-	9.2	-	-	0.050	0.005	0.001	
9	AQF42	8.4	81.0	-	-	-	-	13.8	-	-	-	-	-	-	17.6	0.30	21.4	0.17	-	-	-	19.9	-	-	8.9	-	-	0.014	0.009	0.001	
10	AQF42	11.2	94.2	-	-	-	-	3.7	-	-	-	-	-	-	17.5	0.30	21.3	0.17	-	-	-	19.3	-	-	9.8	-	-	0.013	0.020	0.001	
11	AQF42	11.5	79.2	-	-	-	-	0.4	-	-	-	-	-	-	18.5	0.30	22.5	0.17	-	-	-	19.5	-	-	9.4	-	-	0.026	0.026	0.001	
12	AQF42	10.9	75.1	-	-	-	-	0.3	-	-	-	-	-	-	18.4	-	-	-	-	-	-	-	-	-	9.6	-	-	0.041	0.047	0.003	
1	AQF43	13.1	90.0	-	-	-	-	-	-	-	-	-	-	-	18.6	-	-	-	-	-	-	-	-	-	9.9	-	-	0.029	0.065	0.005	
2	AQF43	13.3	90.9	-	-	-	-	-	-	-	-	-	-	-	18.5	-	-	-	-	-	-	-	-	-	9.4	-	-	0.023	0.087	0.005	
3	AQF43	13.4	91.9	-	-	-	-	0.3	-	-	-	-	-	-	18.4	0.49	23.6	0.48	-	-	-	22.1	-	-	9.0	-	-	0.017	0.110	0.005	
4	AQF43	16.6	114.0	-	-	-	-	0.4	-	-	-	-	-	-	19.8	0.40	23.6	0.33	48.8	-	-	21.7	-	-	9.0	-	-	0.014	0.096	0.001	
5	AQF43	16.5	133.9	-	-	-	-	5.8	-	-	-	-	-	-	18.1	0.30	22.1	0.17	-	-	-	19.7	-	-	9.8	-	-	0.012	0.033	0.001	
6	AQF43	10.1	101.9	-	-	-	-	15.3	-	-	-	-	-	-	15.9	0.30	19.5	0.17	-	-	-	19.4	-	-	8.7	-	-	0.013	0.012	0.005	
7	AQF43	8.0	87.6	-	-	-	-	18.9	-	-	-	-	-	-	16.0	0.30	19.5	0.17	-	-	-	19.1	-	-	9.0	-	-	0.038	0.005	0.001	
8	AQF43	8.1	87.8	-	-	-	-	19.0	-	-	-	-	-	-	19.0	0.30	23.1	0.17	-	-	-	19.9	-	-	9.1	-	-	0.022	0.011	0.001	
9	AQF43	8.9	83.9	-	-	-	-	12.7	-	-	-	-	-	-	18.4	0.30	22.4	0.17	-	-	-	19.7	-	-	8.9	-	-	0.033	0.005	0.001	
10	AQF43	12.5	93.1	-	-	-	-	3.1	-	-	-	-	-	-	17.3	0.30	21.1	0.17	-	-	-	19.3	-	-	9.2	-	-	0.013	0.021	0.001	
11	AQF43	14.1	96.5	-	-	-	-	-	-	-	-	-	-	-	18.1	0.30	22.0	0.17	-	-	-	19.1	-	-	9.8	-	-	0.038	0.028	0.001	
12	AQF43	13.6	93.2	-	-	-	-	-	-	-	-	-	-	-	18.5	-	-	-	-	-	-	19.8	-	-	9.8	-	-	0.034	0.046	0.003	
1	AQF44	11.1	75.8	-	-	-	-	0.3	-	-	-	-	-	-	16.5	-	-	-	-	-	-	-	-	-	10.0	-	-	0.143	0.073	0.005	
2	AQF44	12.2	83.2	-	-	-	-	0.3	-	-	-	-	-	-	19.9	-	-	-	-	-	-	-	-	-	9.7	-	-	0.082	0.090	0.005	
3	AQF44	13.4	90.5	-	-	-	-	0.3	-	-	-	-	-	-	23.4	0.49	31.5	0.48	-	-	-	22.7	-	-	9.4	-	-	0.022	0.107	0.005	
4	AQF44	18.9	130.3	-	-	-	-	0.3	-	-	-	-	-	-	20.2	0.40	26.8	0.33	50.3	-	-	21.9	-	-	9.4	-	-	0.014	0.097	0.001	
5	AQF44	13.9	129.1	-	-	-	-	6.1	-	-	-	-	-	-	16.9	0.30	20.5	0.17	-	-	-	19.4	-	-	8.7	-	-	0.012	0.033	0.001	
6	AQF44	10.3	102.9	-	-	-	-	15.2	-	-	-	-	-	-	15.9	0.30	19.5	0.17	-	-	-	18.6	-	-	8.3	-	-	0.013	0.012	0.005	
7	AQF44	8.4	91.8	-	-	-	-	19.2	-	-	-	-	-	-	16.2	0.30	19.7	0.17	-	-	-	19.0	-	-	9.0	-	-	0.023	0.005	0.001	
8	AQF																														

10th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

	Site	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
Month	-	Nitrite_nitrat e(N) mg/L	Nitrogen(TK N) mg/L	Phosphorus_ D mg/L	Phosphorus_ T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium _T mg/L	ChromiumVI _T mg/L	Cobalt_T mg/L	Copper_T mg/L	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesium_T mg/L	Manganese_T mg/L	Mercury_T mg/L	Molybdenum_ T mg/L		
1	AQF40	0.070	-	-	0.025	0.05	1.67	0.071	10.1	0.037	0.00011	0.00046	0.00790	0.000012	0.000025	0.00693	0.0000081	7.22	0.000017	0.00024	-	0.000058	0.00062	0.31	0.000073	0.0013	2.06	0.049	0.0000025	0.00014		
2	AQF40	-	-	-	0.021	0.05	1.18	0.073	11.6	0.035	0.00012	0.00045	0.00802	0.000012	0.000025	0.00694	0.0000053	7.39	0.000017	0.00024	-	0.000058	0.00044	0.31	0.000049	0.0014	2.09	0.050	0.0000021	0.00011		
3	AQF40	-	-	-	0.018	0.05	0.69	0.076	13.2	0.034	0.00013	0.00044	0.00815	0.000012	0.000025	0.00696	0.0000025	7.58	0.000017	0.00024	-	0.000058	0.00025	0.32	0.000025	0.0015	2.11	0.051	0.0000017	0.00008		
4	AQF40	-	-	-	0.025	0.01	0.48	0.079	9.5	0.033	0.00005	0.00048	0.00774	0.000012	0.000025	0.00695	0.0000084	7.22	0.000017	0.00024	-	0.000058	0.00025	0.31	0.000025	0.0013	2.06	0.052	0.0000019	0.00008		
5	AQF40	0.044	-	-	0.023	0.05	0.44	0.066	8.0	0.053	0.00005	0.00041	0.00697	0.000050	0.000025	0.00662	0.0000025	6.58	0.000015	0.00021	-	0.000056	0.00025	0.34	0.000025	0.0010	1.89	0.068	0.0000021	0.00008		
6	AQF40	0.035	-	-	0.015	0.05	0.45	0.058	8.6	0.060	0.00005	0.00040	0.00713	0.000050	0.000025	0.00678	0.0000051	6.76	0.000016	0.00019	-	0.000057	0.00025	0.37	0.000059	0.0017	1.84	0.059	0.0000022	0.00010		
7	AQF40	0.213	-	-	0.012	0.05	0.43	0.065	9.2	0.047	0.00005	0.00043	0.00738	0.000050	0.000025	0.00689	0.0000025	6.91	0.000017	0.00016	-	0.000058	0.00025	0.24	0.000143	0.0010	1.96	0.057	0.0000014	0.00012		
8	AQF40	0.004	-	-	0.015	0.05	0.39	0.067	9.2	0.033	0.00005	0.00044	0.00644	0.000050	0.000025	0.00692	0.0000025	6.67	0.000017	0.00014	-	0.000058	0.00025	0.24	0.000025	0.0007	1.87	0.053	0.0000019	0.00009		
9	AQF40	0.004	-	-	0.012	0.05	0.42	0.065	9.4	0.044	0.00005	0.00045	0.00730	0.000050	0.000025	0.00690	0.0000025	7.02	0.000017	0.00013	-	0.000058	0.00025	0.22	0.000025	0.0013	1.98	0.049	0.0000025	0.00013		
10	AQF40	0.038	-	-	0.020	0.05	0.43	0.066	8.6	0.052	0.00005	0.00040	0.00630	0.000050	0.000025	0.00674	0.0000025	6.69	0.000016	0.00024	-	0.000057	0.00025	0.29	0.000044	0.0013	1.91	0.052	0.0000012	0.00014		
11	AQF40	0.025	-	-	0.019	0.05	0.40	0.063	8.3	0.079	0.00005	0.00041	0.00926	0.000050	0.000025	0.00670	0.0000120	6.69	0.000016	0.00029	-	0.000057	0.00065	0.33	0.000095	0.0007	1.91	0.054	0.0000025	0.00012		
12	AQF40	0.048	-	-	0.022	0.05	1.04	0.067	9.3	0.058	0.00008	0.00044	0.00859	0.000031	0.000025	0.00684	0.0000101	7.00	0.000017	0.00027	-	0.000057	0.00064	0.32	0.000084	0.0010	2.00	0.052	0.0000025	0.00013		
1	AQF41	0.065	-	-	0.025	0.05	0.47	0.071	9.7	0.038	0.00005	0.00045	0.00835	0.000012	0.000025	0.00693	0.0000175	7.43	0.000017	0.00100	-	0.000058	0.00091	0.32	0.000060	0.0014	2.06	0.050	0.0000025	0.00010		
2	AQF41	-	-	-	0.025	0.05	0.48	0.074	9.7	0.064	0.00007	0.00048	0.00894	0.000012	0.000025	0.00694	0.0000120	7.42	0.000019	0.00062	-	0.000058	0.00058	0.45	0.000068	0.0014	2.09	0.074	0.0000022	0.00009		
3	AQF41	-	-	-	0.025	0.05	0.48	0.077	9.8	0.089	0.00008	0.00050	0.00954	0.000012	0.000025	0.00696	0.0000066	7.43	0.000020	0.00024	-	0.000058	0.00025	0.57	0.000075	0.0015	2.12	0.099	0.0000019	0.00009		
4	AQF41	-	-	-	0.012	0.01	0.46	0.078	9.5	0.032	0.00005	0.00047	0.00785	0.000012	0.000025	0.00695	0.0000025	7.29	0.000017	0.00024	-	0.000058	0.00025	0.31	0.000025	0.0013	2.08	0.052	0.0000022	0.00008		
5	AQF41	0.038	-	-	0.015	0.05	0.49	0.062	8.0	0.052	0.00005	0.00040	0.00687	0.000050	0.000025	0.00662	0.0000025	6.39	0.000015	0.00018	-	0.000056	0.00088	0.41	0.000056	0.0007	1.80	0.065	0.0000025	0.00010		
6	AQF41	0.035	-	-	0.021	0.05	0.90	0.058	8.6	0.091	0.00005	0.00039	0.01092	0.000050	0.000025	0.00678	0.0000086	7.00	0.000016	0.00029	-	0.000057	0.00064	0.51	0.000089	0.0017	1.85	0.097	0.0000036	0.00009		
7	AQF41	0.004	-	-	0.014	0.05	0.40	0.063	9.1	0.041	0.00005	0.00041	0.00670	0.000050	0.000025	0.00689	0.0000025	6.68	0.000017	0.00015	-	0.000058	0.00025	0.26	0.000025	0.0007	1.90	0.052	0.0000016	0.00009		
8	AQF41	0.004	-	-	0.015	0.05	0.43	0.066	9.3	0.034	0.00005	0.00045	0.00656	0.000050	0.000025	0.00692	0.0000025	6.60	0.000017	0.00026	-	0.000058	0.00025	0.24	0.000025	0.0007	1.86	0.053	0.0000020	0.00009		
9	AQF41	0.004	-	-	0.015	0.05	0.41	0.065	9.3	0.054	0.00005	0.00043	0.00752	0.000050	0.000025	0.00690	0.0000025	7.17	0.000017	0.00017	-	0.000058	0.00025	0.25	0.000025	0.0015	2.01	0.050	0.0000025	0.00014		
10	AQF41	0.020	-	-	0.016	0.05	0.40	0.064	8.4	0.037	0.00005	0.00042	0.00657	0.000050	0.000025	0.00674	0.0000025	6.74	0.000016	0.00017	-	0.000057	0.00025	0.26	0.000025	0.0014	1.87	0.050	0.0000011	0.00011		
11	AQF41	0.033	-	-	0.031	0.05	0.43	0.063	8.3	0.035	0.00005	0.00040	0.00625	0.000050	0.000025	0.00670	0.0000025	6.65	0.000016	0.00014	-	0.000057	0.00025	0.23	0.000025	0.0007	1.86	0.044	0.0000025	0.00010		
12	AQF41	0.049	-	-	0.028	0.05	0.45	0.067	9.1	0.037	0.00005	0.00043	0.00732	0.000031	0.000025	0.00684	0.0000101	7.10	0.000017	0.00057	-	0.000057	0.00058	0.28	0.000043	0.0011	1.97	0.047	0.0000025	0.00010		
1	AQF42	0.066	-	-	0.025	0.05	0.80	0.074	10.0	0.050	0.00022	0.00046	0.00876	0.000012	0.000025	0.00693	0.0000025	7.53	0.000017	0.00024	-	0.000058	0.00025	0.35	0.000025	0.0014	2.12	0.053	0.0000025	0.00012		
2	AQF42	-	-	-	0.025	0.05	0.76	0.073	18.0	0.065	0.00028	0.00048	0.00940	0.000012	0.000025	0.00694	0.0000103	7.68	0.000017	0.00024	-	0.000058	0.00096	0.38	0.000079	0.0014	2.12	0.059	0.0000011	0.00009		
3	AQF42	-	-	-	0.025	0.05	0.64	0.076	9.7	0.119	0.00005	0.00047	0.01003	0.000012	0.000025	0.00696	0.0000025	7.59	0.000030	0.00049	-	0.000124	0.00434	0.61	0.000084	0.0015	2.15	0.088	0.0000025	0.00009		
4	AQF42	-	-	-	0.030	0.01	0.48	0.075	9.5	0.037	0.00005	0.00049	0.00858	0.000012	0.000025	0.00695	0.0000099	7.36	0.000017	0.00024	-	0.000058	0.00090	0.32	0.000070	0.0013	2.09	0.054	0.0000025	0.00011		
5	AQF42	0.039	-	-	0.015	0.05	0.45	0.065	7.9	0.052	0.00005	0.00044	0.00685	0.000050	0.000025	0.00662	0.0000025	6.26	0.000015	0.00017	-	0.000058	0.00025	0.51	0.000025	0.0013	1.78	0.097	0.0000025	0.00011		
6	AQF42	0.035	-	-	0.016	0.05	0.45	0.058	8.6	0.057	0.00005	0.00039	0.00710	0.000050	0.000025	0.00678	0.0000025	6.61	0.000016	0.00023	-	0.000057	0.00025	0.39	0.000056	0.0017	1.80	0.052	0.0000021	0.00022		
7	AQF42	0.004	-	-	0.015	0.05	0.52	0.062	9.1	0.046	0.00005	0.00042	0.00691	0.000050	0.000025	0.00689	0.0000066	6.56	0.000017	0.00122	-	0.000058	0.00060	0.28	0.000025	0.0007	1.89	0.056	0.0000019	0.00011		
8	AQF42	0.004	-	-	0.014	0.05	0.39	0.066	9.2	0.036	0.00005	0.00046	0.00667	0.000050	0.000025	0.00692	0.0000025	6.88	0.000017	0.00015	-	0.000058	0.00025	0.25	0.000025	0.0007	1.95	0.055	0.0000022	0.00010		
9	AQF42	0.008	-	-	0.015	0.05	0.49	0.065	9.2	0.039	0.00005	0.00045	0.00714	0.000050	0.000025	0.00690	0.0000025	7.04	0.000017	0.00014	-	0.000058	0.00025	0.21	0.000025	0.0007	1.98	0.049	0.0000025	0.00012		
10	AQF42	0.019	-	-	0.015	0.05	0.41	0.064	8.4	0.041	0.00005	0.00042	0.00648	0.000050	0.000025	0.00674	0.0000025	6.71	0.000016	0.00014	-	0.000057	0.00025	0.27	0.000025	0.0013	1.92	0.050	0.0000012	0.00013		
11	AQF42	0.025	-	-	0.015	0.05	0.47	0.063	8.5	0.152	0.00013	0.00043	0.01510	0.000050	0.000025	0.00670	0.0000295	6.86	0.000029	0.00073	-	0.000124	0.00088	0.44	0.000137	0.0013	1.97	0.106	0.0000025	0.00016		
12	AQF42	0.046	-	-	0.020	0.05	0.64	0.069	9.3	0.101	0.00017	0.00045	0.01191	0.000031	0.000025	0.00684	0.0000160	7.25	0.000023	0.00049	-	0.000091	0.00057	0.40	0.000081	0.0014	2.06	0.080	0.0000025	0.00014		
1	AQF43	0.064	-	-	0.025	0.05	0.47	0.072	9.4																							

10th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

	Site	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
Month	- -	Nickel_T mg/L	Potassium_T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	
1	AQF40	0.00025	0.89	0.00130	0.00007	3.24	0.000005	2.16	0.026	3.19	0.0001	0.000005	0.00005	0.00038	0.0012	0.00005	0.00020	0.00025	0.0052	0.00010	0.020	0.00005	0.00035	0.013	0.000012	0.000025	0.0071	0.0000025	7.09	
2	AQF40	0.00025	0.91	0.00130	0.00005	3.38	0.000005	2.17	0.027	3.61	0.0001	0.000005	0.00005	0.00035	0.0010	0.00005	0.00020	0.00025	0.0056	0.00015	0.020	0.00005	0.00035	0.014	0.000012	0.000025	0.0071	0.0000025	7.15	
3	AQF40	0.00025	0.93	0.00130	0.00003	3.53	0.000005	2.19	0.027	4.05	0.0001	0.000005	0.00005	0.00032	0.0008	0.00005	0.00020	0.00025	0.0059	0.00020	0.021	0.00005	0.00036	0.014	0.000012	0.000025	0.0071	0.0000025	7.24	
4	AQF40	0.00025	0.91	0.00131	0.00013	3.19	0.000005	2.09	0.027	3.21	0.0001	0.000005	0.00005	0.00008	0.0008	0.00005	0.00019	0.00025	0.0015	0.00010	0.020	0.00005	0.00036	0.020	0.000012	0.000025	0.0071	0.0000101	7.07	
5	AQF40	0.00025	0.87	0.00126	0.00003	2.50	0.000005	1.87	0.024	2.71	0.0001	0.000005	0.00005	0.00012	0.0015	0.00005	0.00017	0.00025	0.0015	0.00014	0.035	0.00005	0.00030	0.007	0.000050	0.000025	0.0068	0.0000025	6.49	
6	AQF40	0.00025	0.82	0.00117	0.00003	2.12	0.000005	1.76	0.022	2.96	0.0001	0.000005	0.00005	0.00026	0.0015	0.00005	0.00018	0.00025	0.0048	0.00010	0.034	0.00005	0.00034	0.006	0.000050	0.000025	0.0069	0.0000025	6.44	
7	AQF40	0.00025	0.87	0.00136	0.00003	2.27	0.000005	1.91	0.025	3.13	0.0001	0.000005	0.00005	0.00008	0.0013	0.00005	0.00020	0.00025	0.0015	0.00009	0.026	0.00005	0.00037	0.006	0.000050	0.000025	0.0071	0.0000051	6.76	
8	AQF40	0.00025	0.80	0.00127	0.00003	2.22	0.000005	2.02	0.024	3.16	0.0001	0.000005	0.00005	0.00008	0.0009	0.00005	0.00019	0.00025	0.0043	0.00010	0.020	0.00005	0.00035	0.006	0.000050	0.000025	0.0071	0.0000025	6.57	
9	AQF40	0.00025	0.82	0.00127	0.00003	2.47	0.000005	1.93	0.025	3.14	0.0001	0.000005	0.00005	0.00016	0.0010	0.00005	0.00019	0.00025	0.0015	0.00010	0.030	0.00005	0.00037	0.007	0.000050	0.000025	0.0071	0.0000025	6.64	
10	AQF40	0.00052	0.81	0.00124	0.00003	2.51	0.000005	1.91	0.024	2.90	0.0001	0.000005	0.00005	0.00008	0.0017	0.00005	0.00018	0.00025	0.0015	0.00009	0.022	0.00005	0.00034	0.009	0.000050	0.000025	0.0069	0.0000025	6.52	
11	AQF40	0.00025	0.82	0.00133	0.00003	2.88	0.000005	1.83	0.024	2.83	0.0001	0.000005	0.00005	0.00008	0.0038	0.00005	0.00019	0.00025	0.0045	0.00010	0.021	0.00005	0.00032	0.006	0.000050	0.000025	0.0068	0.0000025	6.36	
12	AQF40	0.00025	0.86	0.00132	0.00005	3.06	0.000005	2.01	0.025	3.05	0.0001	0.000005	0.00005	0.00023	0.0025	0.00005	0.00019	0.00025	0.0048	0.00010	0.021	0.00005	0.00034	0.010	0.000031	0.000025	0.0070	0.0000025	6.78	
1	AQF41	0.00025	0.89	0.00121	0.00005	3.34	0.000005	2.18	0.026	3.19	0.0001	0.000005	0.00005	0.00156	0.0010	0.00005	0.00020	0.00025	0.0108	0.00010	0.020	0.00005	0.00042	0.014	0.000012	0.000025	0.0071	0.0000140	7.08	
2	AQF41	0.00025	0.92	0.00133	0.00004	3.44	0.000005	2.18	0.026	3.20	0.0001	0.000005	0.00005	0.00082	0.0023	0.00005	0.00020	0.00025	0.0075	0.00010	0.020	0.00005	0.00043	0.011	0.000012	0.000025	0.0071	0.0000083	7.19	
3	AQF41	0.00025	0.96	0.00144	0.00003	3.55	0.000005	2.17	0.027	3.24	0.0001	0.000005	0.00005	0.00008	0.0037	0.00005	0.00021	0.00025	0.0041	0.00010	0.021	0.00005	0.00044	0.008	0.000012	0.000025	0.0071	0.0000025	7.32	
4	AQF41	0.00025	0.90	0.00128	0.00015	3.22	0.000005	2.10	0.026	3.21	0.0001	0.000005	0.00005	0.00008	0.0008	0.00005	0.00020	0.00025	0.0015	0.00010	0.020	0.00005	0.00034	0.020	0.000012	0.000025	0.0071	0.0000025	7.02	
5	AQF41	0.00025	0.82	0.00110	0.00003	2.48	0.000005	1.59	0.023	2.71	0.0001	0.000005	0.00005	0.00008	0.0016	0.00005	0.00017	0.00025	0.0015	0.00010	0.029	0.00005	0.00029	0.007	0.000050	0.000025	0.0068	0.0000025	6.24	
6	AQF41	0.00025	0.86	0.00126	0.00003	2.19	0.000005	1.76	0.024	2.96	0.0001	0.000005	0.00005	0.00019	0.0033	0.00005	0.00019	0.00025	0.0069	0.00010	0.032	0.00005	0.00032	0.010	0.000050	0.000025	0.0069	0.0000025	6.40	
7	AQF41	0.00025	0.79	0.00114	0.00003	2.24	0.000005	1.82	0.024	3.13	0.0001	0.000005	0.00005	0.00017	0.0008	0.00005	0.00019	0.00025	0.0015	0.00010	0.025	0.00005	0.00033	0.006	0.000050	0.000025	0.0071	0.0000025	6.49	
8	AQF41	0.00025	0.80	0.00129	0.00005	2.22	0.000005	2.05	0.024	3.16	0.0001	0.000005	0.00005	0.00008	0.0008	0.00005	0.00019	0.00025	0.0051	0.00010	0.022	0.00005	0.00034	0.006	0.000050	0.000025	0.0071	0.0000025	6.49	
9	AQF41	0.00025	0.84	0.00134	0.00003	2.62	0.000005	1.99	0.024	3.14	0.0001	0.000005	0.00005	0.00008	0.0016	0.00005	0.00020	0.00025	0.0049	0.00010	0.023	0.00005	0.00034	0.007	0.000050	0.000025	0.0071	0.0000025	6.74	
10	AQF41	0.00025	0.76	0.00117	0.00003	2.56	0.000005	1.86	0.023	2.90	0.0001	0.000005	0.00005	0.00008	0.0011	0.00005	0.00018	0.00025	0.0045	0.00010	0.018	0.00005	0.00032	0.006	0.000050	0.000025	0.0069	0.0000025	6.45	
11	AQF41	0.00025	0.78	0.00119	0.00003	2.71	0.000005	1.80	0.023	2.83	0.0001	0.000005	0.00005	0.00008	0.0009	0.00005	0.00017	0.00025	0.0015	0.00010	0.018	0.00005	0.00031	0.006	0.000050	0.000025	0.0068	0.0000025	6.28	
12	AQF41	0.00025	0.84	0.00120	0.00004	3.03	0.000005	2.01	0.025	3.05	0.0001	0.000005	0.00005	0.00082	0.0009	0.00005	0.00019	0.00025	0.0062	0.00010	0.019	0.00005	0.00037	0.010	0.000031	0.000025	0.0070	0.0000083	6.73	
1	AQF42	0.00025	0.89	0.00135	0.00006	3.41	0.000005	2.22	0.027	3.45	0.0001	0.000005	0.00005	0.00055	0.0017	0.00005	0.00024	0.00025	0.0039	0.00010	0.020	0.00005	0.00036	0.014	0.000012	0.000025	0.0071	0.0000025	7.07	
2	AQF42	0.00025	1.02	0.00137	0.00003	3.53	0.000005	2.23	0.027	11.12	0.0001	0.000005	0.00005	0.00203	0.0022	0.00005	0.00021	0.00025	0.0245	0.00010	0.023	0.00005	0.00037	0.021	0.000012	0.000025	0.0071	0.0000025	7.32	
3	AQF42	0.00077	0.95	0.00151	0.00003	3.72	0.000005	2.19	0.027	3.24	0.0001	0.000005	0.00005	0.00008	0.0057	0.00005	0.00022	0.00025	0.0052	0.00010	0.034	0.00005	0.00040	0.009	0.000012	0.000025	0.0071	0.0000025	7.33	
4	AQF42	0.00025	0.92	0.00128	0.00013	3.07	0.000005	2.11	0.027	3.21	0.0001	0.000005	0.00005	0.00008	0.0012	0.00005	0.00023	0.00025	0.0031	0.00010	0.023	0.00005	0.00037	0.020	0.000012	0.000025	0.0071	0.0000116	7.14	
5	AQF42	0.00025	0.79	0.00111	0.00003	2.39	0.000005	1.77	0.022	2.71	0.0001	0.000005	0.00005	0.00028	0.0015	0.00005	0.00017	0.00025	0.0015	0.00010	0.032	0.00005	0.00032	0.007	0.000050	0.000025	0.0068	0.0000025	6.20	
6	AQF42	0.00025	0.81	0.00116	0.00003	2.21	0.000005	1.76	0.022	2.96	0.0001	0.000005	0.00005	0.00030	0.0017	0.00005	0.00018	0.00025	0.0015	0.00010	0.033	0.00005	0.00033	0.007	0.000050	0.000025	0.0069	0.0000025	6.25	
7	AQF42	0.00025	0.80	0.00126	0.00003	2.25	0.000005	1.85	0.023	3.13	0.0001	0.000005	0.00005	0.00043	0.0012	0.00005	0.00019	0.00025	0.0058	0.00010	0.024	0.00005	0.00032	0.007	0.000050	0.000025	0.0071	0.0000025	6.49	
8	AQF42	0.00025	0.83	0.00129	0.00005	2.47	0.000005	1.91	0.025	3.16	0.0001	0.000005	0.00005	0.00008	0.0010	0.00005	0.00019	0.00025	0.0015	0.00010	0.021	0.00005	0.00034	0.006	0.000050	0.000025	0.0071	0.0000025	6.60	
9	AQF42	0.00025	0.83	0.00122	0.00003	2.42	0.000005	1.94	0.025	3.14	0.0001	0.000005	0.00005	0.00008	0.0007	0.00005	0.00019	0.00025	0.0030	0.00010	0.024	0.00005	0.00035	0.007	0.000050	0.000025	0.0071	0.0000025	6.81	
10	AQF42	0.00025	0.80	0.00120	0.00003	2.72	0.000005	1.84	0.024	2.90	0.0001	0.000005	0.00005	0.00008	0.0011	0.00005	0.00019	0.00025	0.0015	0.00010	0.018	0.00005	0.00033	0.006	0.000050	0.000025	0.0069	0.0000025	6.49	
11	AQF42	0.00025	0.85	0.00144	0.00003	2.85	0.000005	1.84	0.025	2.83	0.0001	0.000005	0.00005	0.00019	0.0076	0.00005	0.00024	0.0002												

10th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

	Site	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	
Month	- -	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_ D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L
1	AQF40	0.000017	0.00024	0.000058	0.0027	0.16	0.00013	0.00140	2.1	0.046	-	0.00010	0.00025	0.90	0.00123	0.000025	3.2	0.000005	2.2	0.027	3.23	0.00010	0.000005	0.00005	0.000078	0.00015	0.000054	0.00021	0.00025
2	AQF40	0.000017	0.00024	0.000058	0.0020	0.18	0.00009	0.00126	2.1	0.046	-	0.00011	0.00025	0.89	0.00123	0.000033	3.2	0.000005	2.2	0.026	3.33	0.00010	0.000005	0.00005	0.000102	0.00015	0.000054	0.00021	0.00025
3	AQF40	0.000017	0.00024	0.000058	0.0012	0.19	0.00005	0.00112	2.1	0.047	0.0000010	0.00013	0.00025	0.89	0.00124	0.000041	3.2	0.000005	2.2	0.026	3.45	0.00010	0.000005	0.00005	0.000126	0.00015	0.000054	0.00022	0.00025
4	AQF40	0.000017	0.00024	0.000058	0.0020	0.18	0.00010	0.00131	2.1	0.049	0.0000015	0.00008	0.00025	0.99	0.00135	0.000025	3.1	0.000005	2.2	0.026	3.25	0.00010	0.000005	0.00005	0.000164	0.00015	0.000054	0.00021	0.00025
5	AQF40	0.000015	0.00010	0.000057	0.0006	0.21	0.00003	0.00128	1.9	0.058	0.0000019	0.00015	0.00025	0.85	0.00116	0.000025	2.5	0.000005	1.8	0.023	2.75	0.00010	0.000005	0.00005	0.000145	0.00009	0.000054	0.00018	0.00025
6	AQF40	0.000016	0.00013	0.000057	0.0004	0.18	0.00003	0.00072	1.9	0.040	0.0000018	0.00010	0.00025	0.82	0.00110	0.000025	2.1	0.000005	1.8	0.022	3.01	0.00010	0.000005	0.00005	0.000210	0.00049	0.000054	0.00020	0.00025
7	AQF40	0.000017	0.00011	0.000058	0.0004	0.12	0.00007	0.00107	2.0	0.044	0.0000012	0.00012	0.00025	0.86	0.00126	0.000025	2.0	0.000005	1.9	0.024	3.32	0.00010	0.000005	0.00005	0.000130	0.00040	0.000054	0.00021	0.00025
8	AQF40	0.000017	0.00012	0.000058	0.0004	0.15	0.00003	0.00074	2.0	0.044	-	0.00011	0.00025	0.81	0.00119	0.000051	2.2	0.000005	2.0	0.025	3.21	0.00010	0.000005	0.00005	0.000259	0.00036	0.000054	0.00021	0.00025
9	AQF40	0.000017	0.00021	0.000058	0.0026	0.13	0.00014	0.00073	1.9	0.045	-	0.00016	0.00025	0.80	0.00128	0.000051	2.4	0.000005	1.9	0.024	3.18	0.00010	0.000005	0.00005	0.000077	0.00053	0.000054	0.00021	0.00025
10	AQF40	0.000016	0.00008	0.000057	0.0016	0.14	0.00007	0.00100	1.9	0.039	0.0000011	0.00012	0.00025	0.78	0.00116	0.000042	2.4	0.000005	2.0	0.023	3.13	0.00010	0.000005	0.00005	0.000075	0.00027	0.000054	0.00020	0.00025
11	AQF40	0.000016	0.00015	0.000057	0.0005	0.14	0.00017	0.00071	1.9	0.039	0.00049	0.00017	0.00025	0.80	0.00113	0.000025	2.5	0.000005	1.8	0.023	2.87	0.00010	0.000005	0.00005	0.000075	0.00033	0.000054	0.00019	0.00025
12	AQF40	0.000016	0.00019	0.000058	0.0038	0.15	0.00015	0.00106	2.0	0.043	-	0.00011	0.00025	0.85	0.00118	0.000025	2.9	0.000005	2.0	0.025	3.09	0.00010	0.000005	0.00005	0.000077	0.00024	0.000054	0.00020	0.00025
1	AQF41	0.000017	0.00024	0.000058	0.0038	0.17	0.00016	0.00131	2.1	0.046	-	0.00009	0.00052	0.90	0.00129	0.000025	3.2	0.000005	2.3	0.026	3.23	0.00010	0.000005	0.00005	0.000078	0.00015	0.000054	0.00021	0.00025
2	AQF41	0.000017	0.00024	0.000058	0.0021	0.19	0.00009	0.00119	2.1	0.047	-	0.00009	0.00038	0.90	0.00127	0.000025	3.2	0.000005	2.2	0.026	3.25	0.00010	0.000005	0.00005	0.000078	0.00020	0.000054	0.00021	0.00025
3	AQF41	0.000017	0.00024	0.000058	0.0004	0.20	0.00003	0.00107	2.1	0.049	0.0000012	0.00008	0.00025	0.90	0.00125	0.000025	3.2	0.000005	2.2	0.027	3.28	0.00010	0.000005	0.00005	0.000078	0.00025	0.000054	0.00022	0.00025
4	AQF41	0.000017	0.00024	0.000058	0.0017	0.19	0.00008	0.00131	2.1	0.050	0.0000019	0.00009	0.00025	0.89	0.00129	0.000025	3.1	0.000005	2.1	0.026	3.25	0.00010	0.000005	0.00005	0.000145	0.00035	0.000054	0.00021	0.00025
5	AQF41	0.000015	0.00012	0.000057	0.0017	0.22	0.00003	0.00070	1.8	0.051	0.0000025	0.00014	0.00025	0.83	0.00105	0.000025	2.5	0.000005	1.7	0.022	2.75	0.00010	0.000005	0.00005	0.000073	0.00043	0.000054	0.00018	0.00025
6	AQF41	0.000016	0.00013	0.000057	0.0007	0.18	0.00003	0.00072	1.8	0.041	0.0000022	0.00009	0.00025	0.80	0.00113	0.000025	2.0	0.000005	1.8	0.022	3.01	0.00010	0.000005	0.00005	0.000076	0.00050	0.000054	0.00020	0.00025
7	AQF41	0.000017	0.00012	0.000058	0.0003	0.15	0.00003	0.00073	1.9	0.043	0.0000010	0.00010	0.00025	0.78	0.00112	0.000025	2.2	0.000005	1.8	0.023	3.17	0.00010	0.000005	0.00005	0.000077	0.00035	0.000054	0.00021	0.00025
8	AQF41	0.000017	0.00012	0.000058	0.0003	0.16	0.00003	0.00074	1.9	0.045	-	0.00010	0.00025	0.78	0.00126	0.000025	2.3	0.000005	1.9	0.024	3.21	0.00010	0.000005	0.00005	0.000478	0.00038	0.000054	0.00021	0.00025
9	AQF41	0.000017	0.00005	0.000058	0.0005	0.12	0.00003	0.00131	2.0	0.043	-	0.00012	0.00025	0.79	0.00118	0.000025	2.3	0.000005	1.9	0.024	3.66	0.00010	0.000005	0.00005	0.000054	0.00033	0.000054	0.00021	0.00025
10	AQF41	0.000016	0.00012	0.000057	0.0004	0.12	0.00003	0.00071	1.9	0.038	0.0000010	0.00015	0.00025	0.75	0.00106	0.000025	2.4	0.000005	1.9	0.022	2.94	0.00010	0.000005	0.00005	0.000075	0.00015	0.000054	0.00019	0.00025
11	AQF41	0.000016	0.00005	0.000057	0.0040	0.12	0.00014	0.00071	1.9	0.037	-	0.00010	0.00025	0.76	0.00114	0.000025	2.5	0.000005	1.8	0.023	2.87	0.00010	0.000005	0.00005	0.000075	0.00015	0.000054	0.00018	0.00025
12	AQF41	0.000016	0.00015	0.000058	0.0039	0.15	0.00015	0.00101	2.0	0.042	-	0.00009	0.00038	0.83	0.00122	0.000025	2.8	0.000005	2.0	0.024	3.09	0.00010	0.000005	0.00005	0.000077	0.00015	0.000054	0.00020	0.00025
1	AQF42	0.000017	0.00024	0.000058	0.0032	0.18	0.00015	0.00140	2.1	0.047	-	0.00013	0.00025	0.89	0.00130	0.000025	3.2	0.000005	2.2	0.027	3.23	0.00010	0.000005	0.00005	0.000202	0.00015	0.000054	0.00025	0.00025
2	AQF42	0.000017	0.00024	0.000058	0.0020	0.20	0.00007	0.00074	2.2	0.053	0.0000004	0.00010	0.00025	1.06	0.00132	0.000025	3.4	0.000005	2.3	0.027	3.53	0.00010	0.000005	0.00005	0.000202	0.00040	0.000054	0.00022	0.00025
3	AQF42	0.000017	0.00024	0.000058	0.0004	0.22	0.00003	0.00150	2.1	0.051	-	0.00009	0.00025	0.87	0.00128	0.000062	3.3	0.000005	2.2	0.026	3.28	0.00010	0.000005	0.00005	0.000078	0.00040	0.000054	0.00022	0.00025
4	AQF42	0.000017	0.00024	0.000058	0.0025	0.19	0.00009	0.00141	2.1	0.052	-	0.00010	0.00025	0.93	0.00122	0.000025	3.1	0.000005	5.9	0.026	3.73	0.00010	0.000005	0.00005	0.000173	0.00034	0.000054	0.00024	0.00025
5	AQF42	0.000015	0.00014	0.000057	0.0007	0.30	0.00003	0.00070	1.9	0.076	0.0000016	0.00011	0.00025	0.81	0.00113	0.000025	2.5	0.000005	1.7	0.022	2.75	0.00010	0.000005	0.00005	0.000073	0.00050	0.000054	0.00018	0.00025
6	AQF42	0.000016	0.00013	0.000057	0.0004	0.18	0.00003	0.00072	1.8	0.039	0.0000017	0.00010	0.00025	0.84	0.00109	0.000025	2.1	0.000005	1.8	0.022	3.01	0.00010	0.000005	0.00005	0.000315	0.00045	0.000054	0.00020	0.00025
7	AQF42	0.000017	0.00005	0.000058	0.0003	0.16	0.00003	0.00073	1.9	0.043	0.0000015	0.00010	0.00025	0.80	0.00115	0.000025	2.1	0.000005	1.8	0.023	3.47	0.00010	0.000005	0.00005	0.000688	0.00043	0.000054	0.00021	0.00025
8	AQF42	0.000017	0.00011	0.000058	0.0005	0.15	0.00012	0.00074	2.0	0.045	-	0.00012	0.00025	0.80	0.00128	0.000025	2.2	0.000005	1.9	0.024	3.21	0.00010	0.000005	0.00005	0.000078	0.00045	0.000054	0.00021	0.00025
9	AQF42	0.000017	0.00012	0.000058	0.0003	0.12	0.00003	0.00073	2.0	0.043	-	0.00010	0.00025	0.81	0.00116	0.000059	2.3	0.000005	2.0	0.024	3.18	0.00010	0.000005	0.00005	0.000077	0.00031	0.000054	0.00021	0.00025
10	AQF42	0.000016	0.00005	0.000057	0.0005	0.13	0.00003	0.00071	1.9	0.039	0.0000009	0.00012	0.00025	0.74	0.00109	0.000025	2.4	0.000005	1.9	0.022	2.94	0.00010	0.000005	0.00005	0.000075	0.00015	0.000054	0.00020	0.00025
11	AQF42	0.000016	0.00075	0.000057	0.0015	0.19	0.00006	0.00071	1.9	0.054	-	0.00089	0.00025	0.79	0.00116	0.000025	2.4	0.000005	1.8										

10th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

Month	Site	Dissolved_Met al	Dissolved_Met al	Cyanides	Cyanides	Cyanides	Methylmercu ry	Methylmercu ry
		Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WA D mg/L	Methylmercu ry_D mg/L	Methylmercu ry_T mg/L
		-	-	-	-	-	-	-
1	AQF40	0.0045	0.00015	-	-	-	-	-
2	AQF40	0.0031	0.00015	-	-	-	-	-
3	AQF40	0.0018	0.00015	-	-	-	-	-
4	AQF40	0.0027	0.00015	-	-	-	-	-
5	AQF40	0.0029	0.00010	-	-	-	-	-
6	AQF40	0.0062	0.00010	-	-	-	-	-
7	AQF40	0.0036	0.00010	-	-	-	-	-
8	AQF40	0.0032	0.00010	-	-	-	-	-
9	AQF40	0.0047	0.00010	-	-	-	-	-
10	AQF40	0.0021	0.00011	-	-	-	-	-
11	AQF40	0.0099	0.00010	-	-	-	-	-
12	AQF40	0.0072	0.00012	-	-	-	-	-
1	AQF41	0.0050	0.00015	-	-	-	-	-
2	AQF41	0.0034	0.00015	-	-	-	-	-
3	AQF41	0.0018	0.00015	-	-	-	-	-
4	AQF41	0.0022	0.00015	-	-	-	-	-
5	AQF41	0.0247	0.00010	-	-	-	-	-
6	AQF41	0.0023	0.00010	-	-	-	-	-
7	AQF41	0.0031	0.00010	-	-	-	-	-
8	AQF41	0.0018	0.00025	-	-	-	-	-
9	AQF41	0.0005	0.00010	-	-	-	-	-
10	AQF41	0.0005	0.00010	-	-	-	-	-
11	AQF41	0.0042	0.00010	-	-	-	-	-
12	AQF41	0.0046	0.00012	-	-	-	-	-
1	AQF42	0.0046	0.00015	-	-	-	-	-
2	AQF42	0.0047	0.00015	-	-	-	-	-
3	AQF42	0.0012	0.00015	-	-	-	-	-
4	AQF42	0.0050	0.00015	-	-	-	-	-
5	AQF42	0.0012	0.00010	-	-	-	-	-
6	AQF42	0.0005	0.00010	-	-	-	-	-
7	AQF42	0.0087	0.00010	-	-	-	-	-
8	AQF42	0.0029	0.00010	-	-	-	-	-
9	AQF42	0.0005	0.00010	-	-	-	-	-
10	AQF42	0.0011	0.00010	-	-	-	-	-
11	AQF42	0.0032	0.00010	-	-	-	-	-
12	AQF42	0.0039	0.00012	-	-	-	-	-
1	AQF43	0.0011	0.00015	-	-	-	-	-
2	AQF43	0.0013	0.00015	-	-	-	-	-
3	AQF43	0.0015	0.00015	-	-	-	-	-
4	AQF43	0.0023	0.00015	-	-	-	-	-
5	AQF43	0.0015	0.00010	-	-	-	-	-
6	AQF43	0.0044	0.00010	-	-	-	-	-
7	AQF43	0.0013	0.00010	-	-	-	-	-
8	AQF43	0.0005	0.00010	-	-	-	-	-
9	AQF43	0.0005	0.00010	-	-	-	-	-
10	AQF43	0.0022	0.00010	-	-	-	-	-
11	AQF43	0.0047	0.00010	-	-	-	-	-
12	AQF43	0.0029	0.00012	-	-	-	-	-
1	AQF44	0.0038	0.00015	-	-	-	-	-
2	AQF44	0.0031	0.00015	-	-	-	-	-
3	AQF44	0.0023	0.00015	-	-	-	-	-
4	AQF44	0.0027	0.00015	-	-	-	-	-
5	AQF44	0.0005	0.00010	-	-	-	-	-
6	AQF44	0.0032	0.00010	-	-	-	-	-
7	AQF44	0.0005	0.00010	-	-	-	-	-
8	AQF44	0.0026	0.00010	-	-	-	-	-
9	AQF44	0.0005	0.00010	-	-	-	-	-
10	AQF44	0.0005	0.00010	-	-	-	-	-
11	AQF44	0.0049	0.00010	-	-	-	-	-
12	AQF44	0.0043	0.00012	-	-	-	-	-
1	AQF45	0.0023	0.00015	-	-	-	-	-
2	AQF45	0.0019	0.00015	-	-	-	-	-
3	AQF45	0.0015	0.00015	-	-	-	-	-
4	AQF45	0.0016	0.00015	-	-	-	-	-
5	AQF45	0.0013	0.00010	-	-	-	-	-
6	AQF45	0.0011	0.00010	-	-	-	-	-
7	AQF45	0.0021	0.00010	-	-	-	-	-
8	AQF45	0.0012	0.00010	-	-	-	-	-
9	AQF45	0.0005	0.00010	-	-	-	-	-
10	AQF45	0.0016	0.00010	-	-	-	-	-
11	AQF45	0.0058	0.00010	-	-	-	-	-
12	AQF45	0.0005	0.00010	-	-	-	-	-
May-Oct	All Stn Median	0.0015	0.00010	-	-	-	-	-
May-Oct	All Stn 90P	0.0045	0.00010	-	-	-	-	-
May-Oct	All Stn 10P	0.0005	0.00010	-	-	-	-	-

90th percentile Hughes monthly flow rate, median mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient		
Month	-	D_Oxygen_field mg/L	D_Oxygen_perce n t_field %	ORP_field mV	pH_field pH	Field Specific_Con ductance_fiel d uS/cm	TDS_field mg/L	Temp_field C	Turbidity_fiel d NTU	Acidity(CaCO 3) mg/L	CO3)_bicarbo nate mg/L	CO3)_carbon ate mg/L	CO3)_hydrox ide mg/L	Alkalinity(Ca CO3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbonat e mg/L	(HCO3)_bicarbona te mg/L	(OH)_hydroxide mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(Ca CO3)_D mg/L	Hardness(Ca CO3)_T mg/L	pH pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N) _T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L
1	AQF40	9.9	67.8	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.097	0.071	0.005
2	AQF40	10.7	73.6	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-	-	9.8	-	-	0.063	0.088	0.005
3	AQF40	11.6	79.5	-	-	-	0.3	-	-	-	-	-	-	-	15.0	0.49	22.7	0.49	-	-	-	21.4	-	-	-	9.5	-	-	0.029	0.105	0.005
4	AQF40	20.0	139.0	-	-	-	0.6	-	-	-	-	-	-	-	16.4	0.40	19.1	0.33	41.4	-	-	17.8	-	-	-	9.1	-	-	0.010	0.098	0.001
5	AQF40	12.4	94.7	-	-	-	3.9	-	-	-	-	-	-	-	11.7	0.30	14.3	0.17	-	-	-	13.3	-	-	-	8.7	-	-	0.006	0.038	0.001
6	AQF40	9.0	90.7	-	-	-	15.4	-	-	-	-	-	-	-	10.4	0.30	12.8	0.17	-	-	-	12.4	-	-	-	9.9	-	-	0.007	0.011	0.005
7	AQF40	6.8	72.1	-	-	-	18.7	-	-	-	-	-	-	-	11.8	0.30	14.4	0.17	-	-	-	13.6	-	-	-	8.8	-	-	0.014	0.003	0.001
8	AQF40	6.1	66.8	-	-	-	19.9	-	-	-	-	-	-	-	12.7	0.30	15.4	0.17	-	-	-	12.8	-	-	-	9.2	-	-	0.022	0.003	0.001
9	AQF40	8.0	79.0	-	-	-	13.7	-	-	-	-	-	-	-	13.0	0.30	15.8	0.17	-	-	-	13.3	-	-	-	8.9	-	-	0.025	0.003	0.001
10	AQF40	12.0	90.1	-	-	-	3.6	-	-	-	-	-	-	-	13.9	0.30	16.9	0.17	-	-	-	14.8	-	-	-	8.8	-	-	0.017	0.026	0.001
11	AQF40	10.3	70.9	-	-	-	0.3	-	-	-	-	-	-	-	15.8	0.30	19.3	0.17	-	-	-	16.3	-	-	-	10.1	-	-	0.018	0.025	0.001
12	AQF40	10.1	69.3	-	-	-	0.3	-	-	-	-	-	-	-	15.8	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.058	0.048	0.003
1	AQF41	12.5	86.0	-	-	-	0.4	-	-	-	-	-	-	-	17.1	-	-	-	-	-	-	-	-	-	-	10.1	-	-	0.049	0.066	0.005
2	AQF41	12.3	84.4	-	-	-	0.3	-	-	-	-	-	-	-	18.0	-	-	-	-	-	-	-	-	-	-	10.1	-	-	0.041	0.090	0.005
3	AQF41	12.1	83.0	-	-	-	0.3	-	-	-	-	-	-	-	18.6	0.49	22.8	0.49	-	-	-	21.0	-	-	-	10.0	-	-	0.033	0.115	0.005
4	AQF41	20.1	140.9	-	-	-	0.7	-	-	-	-	-	-	-	16.3	0.40	18.7	0.33	41.2	-	-	17.1	-	-	-	9.4	-	-	0.010	0.099	0.001
5	AQF41	14.0	107.4	-	-	-	3.9	-	-	-	-	-	-	-	11.0	0.30	13.4	0.17	-	-	-	12.3	-	-	-	8.7	-	-	0.006	0.039	0.001
6	AQF41	8.4	85.6	-	-	-	16.5	-	-	-	-	-	-	-	9.2	0.30	11.3	0.17	-	-	-	12.2	-	-	-	8.9	-	-	0.007	0.011	0.005
7	AQF41	7.4	77.0	-	-	-	19.0	-	-	-	-	-	-	-	10.8	0.30	13.2	0.17	-	-	-	12.5	-	-	-	9.2	-	-	0.039	0.003	0.001
8	AQF41	6.2	67.5	-	-	-	20.2	-	-	-	-	-	-	-	12.6	0.30	15.3	0.17	-	-	-	12.5	-	-	-	9.2	-	-	0.015	0.003	0.001
9	AQF41	6.9	66.2	-	-	-	13.5	-	-	-	-	-	-	-	13.1	0.30	16.0	0.17	-	-	-	13.7	-	-	-	9.0	-	-	0.015	0.003	0.001
10	AQF41	11.5	87.9	-	-	-	4.3	-	-	-	-	-	-	-	13.4	0.30	16.3	0.17	-	-	-	14.5	-	-	-	9.2	-	-	0.009	0.020	0.001
11	AQF41	12.4	85.6	-	-	-	0.4	-	-	-	-	-	-	-	16.2	0.30	19.8	0.17	-	-	-	16.1	-	-	-	9.0	-	-	0.010	0.033	0.001
12	AQF41	12.4	85.7	-	-	-	0.4	-	-	-	-	-	-	-	17.0	-	-	-	-	-	-	-	-	-	-	9.6	-	-	0.030	0.049	0.003
1	AQF42	10.3	71.2	-	-	-	0.3	-	-	-	-	-	-	-	17.1	-	-	-	-	-	-	-	-	-	-	9.8	-	-	0.054	0.067	0.005
2	AQF42	12.0	81.1	-	-	-	0.3	-	-	-	-	-	-	-	13.5	-	-	-	-	-	-	21.8	-	-	-	9.9	-	-	0.040	0.118	0.005
3	AQF42	10.4	71.1	-	-	-	0.3	-	-	-	-	-	-	-	20.9	0.49	25.5	0.49	-	-	-	21.6	-	-	-	10.2	-	-	0.059	0.110	0.005
4	AQF42	15.5	106.9	-	-	-	0.2	-	-	-	-	-	-	-	16.4	0.40	19.7	0.33	41.0	-	-	17.4	-	-	-	9.5	-	-	0.017	0.095	0.001
5	AQF42	13.7	133.2	-	-	-	4.4	-	-	-	-	-	-	-	10.6	0.30	12.9	0.17	-	-	-	12.3	-	-	-	9.5	-	-	0.006	0.039	0.001
6	AQF42	10.3	103.2	-	-	-	15.3	-	-	-	-	-	-	-	10.0	0.30	12.3	0.17	-	-	-	11.6	-	-	-	9.4	-	-	0.007	0.011	0.005
7	AQF42	8.0	87.0	-	-	-	18.9	-	-	-	-	-	-	-	12.3	0.30	14.9	0.17	-	-	-	12.5	-	-	-	9.1	-	-	0.025	0.003	0.001
8	AQF42	7.9	84.9	-	-	-	18.5	-	-	-	-	-	-	-	12.7	0.30	15.4	0.17	-	-	-	12.9	-	-	-	9.3	-	-	0.045	0.003	0.001
9	AQF42	8.5	82.5	-	-	-	14.0	-	-	-	-	-	-	-	12.5	0.30	15.2	0.17	-	-	-	13.9	-	-	-	9.0	-	-	0.008	0.007	0.001
10	AQF42	11.4	95.6	-	-	-	3.7	-	-	-	-	-	-	-	13.5	0.30	16.5	0.17	-	-	-	14.6	-	-	-	9.9	-	-	0.009	0.019	0.001
11	AQF42	11.6	79.8	-	-	-	0.3	-	-	-	-	-	-	-	16.3	0.30	19.9	0.17	-	-	-	17.0	-	-	-	9.5	-	-	0.024	0.026	0.001
12	AQF42	11.0	75.4	-	-	-	0.3	-	-	-	-	-	-	-	17.0	-	-	-	-	-	-	-	-	-	-	9.6	-	-	0.039	0.047	0.003
1	AQF43	13.1	90.3	-	-	-	-	-	-	-	-	-	-	-	17.6	-	-	-	-	-	-	-	-	-	-	9.9	-	-	0.028	0.065	0.005
2	AQF43	13.3	91.1	-	-	-	-	-	-	-	-	-	-	-	17.8	-	-	-	-	-	-	-	-	-	-	9.5	-	-	0.022	0.088	0.005
3	AQF43	13.5	92.2	-	-	-	0.3	-	-	-	-	-	-	-	17.7	0.49	22.7	0.49	-	-	-	21.2	-	-	-	9.0	-	-	0.016	0.111	0.005
4	AQF43	16.8	115.7	-	-	-	0.3	-	-	-	-	-	-	-	16.5	0.40	19.6	0.33	41.2	-	-	17.8	-	-	-	9.1	-	-	0.010	0.096	0.001
5	AQF43	16.9	137.2	-	-	-	5.9	-	-	-	-	-	-	-	12.8	0.30	15.6	0.17	-	-	-	13.4	-	-	-	9.9	-	-	0.006	0.032	0.001
6	AQF43	10.3	104.2	-	-	-	15.7	-	-	-	-	-	-	-	10.4	0.30	12.8	0.17	-	-	-	12.9	-	-	-	8.8	-	-	0.007	0.011	0.005
7	AQF43	8.2	89.4	-	-	-	19.4	-	-	-	-	-	-	-	10.7	0.30	13.1	0.17	-	-	-	12.8	-	-	-	9.1	-	-	0.032	0.003	0.001
8	AQF43	8.2	89.6	-	-	-	19.5	-	-	-	-	-	-	-	13.6	0.30	16.6	0.17	-	-	-	13.5	-	-	-	9.2	-	-	0.017	0.009	0.001
9	AQF43	9.0	85.5	-	-	-	13.0	-	-	-	-	-	-	-	13.4	0.30	16.3	0.17	-	-	-	13.7	-	-	-	9.1	-	-	0.028	0.003	0.001
10	AQF43	12.7	94.5	-	-	-	3.0	-	-	-	-	-	-	-	13.3	0.30	16.2	0.17	-	-	-	14.6	-	-	-	9.3	-	-	0.009	0.020	0.001
11	AQF43	14.2	97.3	-	-	-	-	-	-	-	-	-	-	-	15.9	0.30	19.4	0.17	-	-	-	16.6	-	-	-	9.8	-	-	0.036	0.028	0.001
12	AQF43	13.7	93.7	-	-	-	-	-	-	-	-	-	-	-	17.1	-	-	-	-	-	-	18.2	-	-	-	9.8	-	-	0.032	0.046	0.003
1	AQF44	11.1	76.1	-	-	-	0.3	-	-	-	-	-	-	-	15.4	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.142	0.073	0.005
2	AQF44	12.2	83.4	-	-	-	0.3	-	-	-	-	-	-	-	19.2	-	-	-	-	-	-	-	-	-	-	9.7	-	-	0.082	0.090	0.005
3	AQF44	13.4	90.7	-	-	-	0.3	-	-	-	-	-	-	-	22.7	0.49	30.7	0.49	-	-	-	21.9	-	-	-	9.4	-	-	0.021	0.108	0.005
4	AQF44	19.2	132.2	-	-	-	0.2	-	-	-	-	-	-	-	17.0	0.40	22.9	0.33	42.7	-	-	18.0	-	-	-	9.4	-	-	0.010	0.098	0.001
5	AQF44	14.2	132.2	-	-	-	6.2	-	-	-	-	-	-	-	11.5	0.30	14.0	0.17	-	-	-	13.1	-	-	-	8.8	-	-	0.006	0.032	0.001
6	AQF44	10.5	105.2	-	-	-	15.6	-	-	-	-	-	-	-	10.4	0.30	12.8	0.17	-	-	-	12.1	-	-	-	8.4	-	-	0.007	0.011	0.005
7	AQF44	8.5	93.7	-	-	-	19.7	-	-	-	-	-	-	-	10.9	0.30	13.3	0.17	-	-	-</										

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations

90th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

[illegible]

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

90th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

	Site	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
Month	- -	Nickel_T mg/L	Potassium_T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	
1	AQF40	0.00025	0.85	0.00127	0.00007	3.23	0.000005	2.05	0.025	2.81	0.0001	0.000005	0.00005	0.00038	0.0012	0.00005	0.00017	0.00025	0.0052	0.00010	0.020	0.00005	0.00032	0.013	0.000012	0.000025	0.0068	0.0000025	6.59	
2	AQF40	0.00025	0.88	0.00128	0.00005	3.38	0.000005	2.09	0.026	3.35	0.0001	0.000005	0.00005	0.00035	0.0010	0.00005	0.00018	0.00025	0.0056	0.00015	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0069	0.0000025	6.81	
3	AQF40	0.00025	0.90	0.00128	0.00003	3.52	0.000005	2.11	0.026	3.79	0.0001	0.000005	0.00005	0.00032	0.0008	0.00005	0.00018	0.00025	0.0059	0.00021	0.021	0.00005	0.00034	0.014	0.000012	0.000025	0.0069	0.0000025	6.88	
4	AQF40	0.00025	0.78	0.00123	0.00013	3.15	0.000005	1.75	0.022	2.00	0.0001	0.000005	0.00005	0.00007	0.0008	0.00005	0.00012	0.00025	0.0015	0.00010	0.020	0.00005	0.00028	0.020	0.000011	0.000025	0.0062	0.0000103	5.45	
5	AQF40	0.00025	0.66	0.00112	0.00003	2.41	0.000005	1.31	0.016	0.74	0.0001	0.000005	0.00005	0.00010	0.0016	0.00005	0.00006	0.00025	0.0015	0.00014	0.036	0.00005	0.00018	0.006	0.000050	0.000025	0.0053	0.0000025	3.83	
6	AQF40	0.00025	0.61	0.00103	0.00003	2.02	0.000005	1.18	0.014	0.95	0.0001	0.000005	0.00005	0.00025	0.0015	0.00005	0.00006	0.00025	0.0049	0.00010	0.036	0.00005	0.00021	0.006	0.000050	0.000025	0.0055	0.0000025	3.72	
7	AQF40	0.00025	0.67	0.00123	0.00003	2.17	0.000005	1.35	0.017	1.20	0.0001	0.000005	0.00005	0.00006	0.0014	0.00005	0.00009	0.00025	0.0015	0.00009	0.026	0.00005	0.00024	0.006	0.000050	0.000025	0.0057	0.0000052	4.16	
8	AQF40	0.00025	0.59	0.00113	0.00003	2.12	0.000005	1.46	0.016	1.19	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00008	0.00025	0.0044	0.00010	0.020	0.00005	0.00023	0.005	0.000050	0.000025	0.0057	0.0000025	3.89	
9	AQF40	0.00025	0.62	0.00114	0.00003	2.38	0.000005	1.39	0.017	1.27	0.0001	0.000005	0.00005	0.00014	0.0010	0.00005	0.00009	0.00025	0.0015	0.00010	0.031	0.00005	0.00025	0.006	0.000050	0.000025	0.0057	0.0000025	4.11	
10	AQF40	0.00053	0.65	0.00114	0.00003	2.44	0.000005	1.49	0.018	1.44	0.0001	0.000005	0.00005	0.00006	0.0017	0.00005	0.00010	0.00025	0.0015	0.00009	0.023	0.00005	0.00024	0.009	0.000050	0.000025	0.0058	0.0000025	4.55	
11	AQF40	0.00025	0.74	0.00128	0.00003	2.85	0.000005	1.60	0.020	2.04	0.0001	0.000005	0.00005	0.00007	0.0038	0.00005	0.00014	0.00025	0.0045	0.00010	0.022	0.00005	0.00027	0.005	0.000050	0.000025	0.0063	0.0000025	5.29	
12	AQF40	0.00025	0.81	0.00128	0.00005	3.04	0.000005	1.86	0.023	2.53	0.0001	0.000005	0.00005	0.00022	0.0025	0.00005	0.00017	0.00025	0.0049	0.00010	0.021	0.00005	0.00030	0.009	0.000031	0.000025	0.0066	0.0000025	6.09	
1	AQF41	0.00025	0.85	0.00119	0.00005	3.32	0.000005	2.07	0.024	2.81	0.0001	0.000005	0.00005	0.00157	0.0010	0.00005	0.00017	0.00025	0.0109	0.00010	0.020	0.00005	0.00040	0.014	0.000012	0.000025	0.0068	0.0000141	6.58	
2	AQF41	0.00025	0.89	0.00131	0.00004	3.43	0.000005	2.10	0.025	2.94	0.0001	0.000005	0.00005	0.00082	0.0024	0.00005	0.00019	0.00025	0.0075	0.00010	0.020	0.00005	0.00041	0.011	0.000012	0.000025	0.0069	0.0000083	6.84	
3	AQF41	0.00025	0.93	0.00143	0.00003	3.54	0.000005	2.09	0.026	2.97	0.0001	0.000005	0.00005	0.00008	0.0037	0.00005	0.00019	0.00025	0.0041	0.00010	0.021	0.00005	0.00042	0.008	0.000012	0.000025	0.0069	0.0000025	6.97	
4	AQF41	0.00025	0.77	0.00120	0.00015	3.18	0.000005	1.76	0.021	2.00	0.0001	0.000005	0.00005	0.00007	0.0008	0.00005	0.00013	0.00025	0.0015	0.00010	0.020	0.00005	0.00026	0.020	0.000011	0.000025	0.0062	0.0000025	5.39	
5	AQF41	0.00025	0.61	0.00096	0.00003	2.39	0.000005	1.02	0.015	0.74	0.0001	0.000005	0.00005	0.00006	0.0016	0.00005	0.00006	0.00025	0.0015	0.00010	0.030	0.00005	0.00016	0.007	0.000050	0.000025	0.0053	0.0000025	3.57	
6	AQF41	0.00025	0.65	0.00113	0.00003	2.09	0.000005	1.18	0.016	0.95	0.0001	0.000005	0.00005	0.00017	0.0034	0.00005	0.00007	0.00025	0.0070	0.00010	0.033	0.00005	0.00019	0.010	0.000050	0.000025	0.0055	0.0000025	3.68	
7	AQF41	0.00025	0.59	0.00101	0.00003	2.14	0.000005	1.26	0.016	1.20	0.0001	0.000005	0.00005	0.00015	0.0009	0.00005	0.00008	0.00025	0.0015	0.00010	0.026	0.00005	0.00021	0.006	0.000050	0.000025	0.0057	0.0000025	3.87	
8	AQF41	0.00025	0.58	0.00115	0.00005	2.12	0.000005	1.49	0.016	1.19	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00007	0.00025	0.0052	0.00010	0.023	0.00005	0.00022	0.005	0.000050	0.000025	0.0057	0.0000025	3.81	
9	AQF41	0.00025	0.64	0.00122	0.00003	2.54	0.000005	1.45	0.016	1.27	0.0001	0.000005	0.00005	0.00006	0.0017	0.00005	0.00009	0.00025	0.0050	0.00010	0.023	0.00005	0.00022	0.006	0.000050	0.000025	0.0057	0.0000025	4.21	
10	AQF41	0.00025	0.61	0.00107	0.00003	2.49	0.000005	1.44	0.017	1.44	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00009	0.00025	0.0045	0.00010	0.019	0.00005	0.00023	0.005	0.000050	0.000025	0.0058	0.0000025	4.49	
11	AQF41	0.00025	0.70	0.00113	0.00003	2.68	0.000005	1.58	0.020	2.04	0.0001	0.000005	0.00005	0.00007	0.0009	0.00005	0.00013	0.00025	0.0015	0.00010	0.019	0.00005	0.00026	0.005	0.000050	0.000025	0.0063	0.0000025	5.22	
12	AQF41	0.00025	0.79	0.00117	0.00004	3.01	0.000005	1.86	0.023	2.53	0.0001	0.000005	0.00005	0.00082	0.0009	0.00005	0.00016	0.00025	0.0062	0.00010	0.019	0.00005	0.00034	0.010	0.000031	0.000025	0.0066	0.0000083	6.04	
1	AQF42	0.00025	0.85	0.00133	0.00006	3.40	0.000005	2.11	0.025	3.08	0.0001	0.000005	0.00005	0.00055	0.0017	0.00005	0.00022	0.00025	0.0039	0.00010	0.020	0.00005	0.00034	0.014	0.000012	0.000025	0.0068	0.0000025	6.57	
2	AQF42	0.00025	1.00	0.00135	0.00003	3.52	0.000005	2.16	0.026	10.90	0.0001	0.000005	0.00005	0.00203	0.0022	0.00005	0.00020	0.00025	0.0246	0.00010	0.023	0.00005	0.00036	0.021	0.000012	0.000025	0.0069	0.0000025	6.98	
3	AQF42	0.00078	0.92	0.00149	0.00003	3.71	0.000005	2.11	0.026	2.97	0.0001	0.000005	0.00005	0.00008	0.0057	0.00005	0.00020	0.00025	0.0052	0.00010	0.035	0.00005	0.00038	0.009	0.000012	0.000025	0.0069	0.0000025	6.98	
4	AQF42	0.00025	0.79	0.00120	0.00013	3.02	0.000005	1.77	0.022	2.00	0.0001	0.000005	0.00005	0.00007	0.0012	0.00005	0.00016	0.00025	0.0032	0.00010	0.023	0.00005	0.00029	0.019	0.000011	0.000025	0.0062	0.0000117	5.51	
5	AQF42	0.00025	0.58	0.00097	0.00003	2.29	0.000005	1.20	0.014	0.74	0.0001	0.000005	0.00005	0.00026	0.0015	0.00005	0.00005	0.00025	0.0015	0.00010	0.033	0.00005	0.00019	0.006	0.000050	0.000025	0.0053	0.0000025	3.53	
6	AQF42	0.00025	0.59	0.00102	0.00003	2.11	0.000005	1.18	0.014	0.95	0.0001	0.000005	0.00005	0.00029	0.0017	0.00005	0.00006	0.00025	0.0015	0.00010	0.034	0.00005	0.00020	0.006	0.000050	0.000025	0.0055	0.0000025	3.52	
7	AQF42	0.00025	0.59	0.00112	0.00003	2.15	0.000005	1.29	0.015	1.20	0.0001	0.000005	0.00005	0.00042	0.0012	0.00005	0.00008	0.00025	0.0059	0.00010	0.025	0.00005	0.00020	0.006	0.000050	0.000025	0.0057	0.0000025	3.87	
8	AQF42	0.00025	0.61	0.00115	0.00005	2.37	0.000005	1.34	0.017	1.19	0.0001	0.000005	0.00005	0.00006	0.0010	0.00005	0.00008	0.00025	0.0015	0.00010	0.021	0.00005	0.00022	0.005	0.000050	0.000025	0.0057	0.0000025	3.93	
9	AQF42	0.00025	0.63	0.00109	0.00003	2.33	0.000005	1.40	0.017	1.27	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00008	0.00025	0.0031	0.00010	0.024	0.00005	0.00023	0.006	0.000050	0.000025	0.0057	0.0000025	4.28	
10	AQF42	0.00025	0.64	0.00110	0.00003	2.66	0.000005	1.42	0.017	1.44	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00011	0.00025	0.0015	0.00010	0.019	0.00005	0.00023	0.005	0.000050	0.000025	0.0058	0.0000025	4.52	
11	AQF42	0.00025	0.77	0.00139	0.00003	2.82	0.000005	1.61	0.021	2.04	0.0001	0.000005	0.00005	0.00019	0.0077	0.00005	0.00019	0.0002												

90th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

	Site	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
Month	-	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L
1	AQF40	0.000016	0.00024	0.000057	0.0027	0.16	0.00013	0.00138	2.0	0.041	-	0.00010	0.00025	0.86	0.00120	0.000025	3.2	0.000005	2.1	0.025	2.85	0.00010	0.000005	0.00005	0.000074	0.00015	0.000054	0.00019	0.00025
2	AQF40	0.000016	0.00024	0.000057	0.0020	0.18	0.00009	0.00124	2.0	0.043	-	0.00011	0.00025	0.86	0.00121	0.000033	3.2	0.000005	2.1	0.025	3.07	0.00010	0.000005	0.00005	0.000100	0.00015	0.000054	0.00020	0.00025
3	AQF40	0.000016	0.00024	0.000057	0.0012	0.19	0.00005	0.00110	2.0	0.044	0.0000010	0.00013	0.00025	0.86	0.00122	0.000041	3.2	0.000005	2.2	0.025	3.19	0.00010	0.000005	0.00005	0.000124	0.00015	0.000054	0.00020	0.00025
4	AQF40	0.000012	0.00024	0.000055	0.0020	0.18	0.00010	0.00122	1.6	0.033	0.0000014	0.00007	0.00025	0.86	0.00127	0.000025	3.1	0.000005	1.8	0.021	2.03	0.00010	0.000005	0.00005	0.000154	0.00015	0.000052	0.00014	0.00025
5	AQF40	0.000007	0.00010	0.000051	0.0006	0.21	0.00003	0.00113	1.1	0.032	0.0000019	0.00014	0.00025	0.64	0.00102	0.000025	2.4	0.000005	1.2	0.015	0.75	0.00010	0.000005	0.00005	0.000129	0.00071	0.000051	0.00005	0.00025
6	AQF40	0.000008	0.00013	0.000052	0.0003	0.18	0.00003	0.00056	1.1	0.013	0.0000018	0.00008	0.00025	0.61	0.00096	0.000025	2.0	0.000005	1.2	0.014	0.97	0.00010	0.000005	0.00005	0.000195	0.00051	0.000051	0.00007	0.00025
7	AQF40	0.000009	0.00011	0.000053	0.0003	0.11	0.00007	0.00092	1.2	0.018	0.0000012	0.00011	0.00025	0.65	0.00113	0.000025	1.9	0.000005	1.3	0.016	1.36	0.00010	0.000005	0.00005	0.000113	0.00041	0.000051	0.00009	0.00025
8	AQF40	0.000009	0.00012	0.000053	0.0003	0.15	0.00003	0.00058	1.2	0.018	-	0.00010	0.00025	0.60	0.00105	0.000052	2.1	0.000005	1.3	0.017	1.20	0.00010	0.000005	0.00005	0.000246	0.00037	0.000051	0.00008	0.00025
9	AQF40	0.000009	0.00022	0.000053	0.0026	0.13	0.00015	0.00058	1.2	0.020	-	0.00015	0.00025	0.60	0.00116	0.000052	2.3	0.000005	1.3	0.016	1.28	0.00010	0.000005	0.00005	0.000060	0.00054	0.000051	0.00009	0.00025
10	AQF40	0.000010	0.00008	0.000053	0.0016	0.14	0.00007	0.00089	1.4	0.019	0.0000011	0.00011	0.00025	0.63	0.00106	0.000042	2.3	0.000005	1.5	0.017	1.66	0.00010	0.000005	0.00005	0.000061	0.00027	0.000052	0.00011	0.00025
11	AQF40	0.000012	0.00015	0.000055	0.0002	0.14	0.00018	0.00064	1.5	0.029	-	0.00010	0.00025	0.72	0.00107	0.000025	2.5	0.000005	1.6	0.020	2.07	0.00010	0.000005	0.00005	0.000067	0.00033	0.000053	0.00013	0.00025
12	AQF40	0.000014	0.00019	0.000056	0.0038	0.15	0.00015	0.00102	1.8	0.036	-	0.00010	0.00025	0.80	0.00115	0.000025	2.8	0.000005	1.9	0.023	2.57	0.00010	0.000005	0.00005	0.000072	0.00024	0.000053	0.00017	0.00025
1	AQF41	0.000016	0.00024	0.000057	0.0038	0.17	0.00016	0.00128	1.9	0.041	-	0.00009	0.00052	0.86	0.00126	0.000025	3.2	0.000005	2.1	0.024	2.85	0.00010	0.000005	0.00005	0.000074	0.00015	0.000054	0.00019	0.00025
2	AQF41	0.000016	0.00024	0.000057	0.0021	0.19	0.00009	0.00117	2.0	0.044	-	0.00008	0.00038	0.87	0.00125	0.000025	3.2	0.000005	2.2	0.025	2.99	0.00010	0.000005	0.00005	0.000076	0.00020	0.000054	0.00020	0.00025
3	AQF41	0.000016	0.00024	0.000057	0.0004	0.20	0.00003	0.00106	2.0	0.046	0.0000012	0.00008	0.00025	0.87	0.00123	0.000025	3.2	0.000005	2.2	0.026	3.02	0.00010	0.000005	0.00005	0.000076	0.00025	0.000054	0.00020	0.00025
4	AQF41	0.000012	0.00024	0.000055	0.0017	0.19	0.00008	0.00122	1.6	0.034	0.0000018	0.00008	0.00025	0.76	0.00121	0.000025	3.1	0.000005	1.8	0.021	2.03	0.00010	0.000005	0.00005	0.000135	0.00035	0.000052	0.00014	0.00025
5	AQF41	0.000007	0.00012	0.000051	0.0017	0.22	0.00003	0.00054	1.0	0.025	0.0000025	0.00012	0.00025	0.62	0.00091	0.000025	2.4	0.000005	1.1	0.014	0.75	0.00010	0.000005	0.00005	0.000055	0.00044	0.000051	0.00005	0.00025
6	AQF41	0.000008	0.00013	0.000052	0.0006	0.18	0.00003	0.00056	1.0	0.014	0.0000022	0.00007	0.00025	0.58	0.00099	0.000025	1.9	0.000005	1.2	0.013	0.97	0.00010	0.000005	0.00005	0.000057	0.00052	0.000051	0.00007	0.00025
7	AQF41	0.000009	0.00012	0.000053	0.0002	0.15	0.00003	0.00058	1.1	0.017	0.0000010	0.00008	0.00025	0.57	0.00099	0.000025	2.1	0.000005	1.2	0.015	1.21	0.00010	0.000005	0.00005	0.000059	0.00036	0.000051	0.00008	0.00025
8	AQF41	0.000009	0.00012	0.000053	0.0003	0.15	0.00003	0.00058	1.1	0.018	-	0.00008	0.00025	0.57	0.00112	0.000025	2.1	0.000005	1.3	0.016	1.20	0.00010	0.000005	0.00005	0.0000473	0.00039	0.000051	0.00009	0.00025
9	AQF41	0.000009	0.00005	0.000053	0.0004	0.12	0.00003	0.00117	1.2	0.018	-	0.00011	0.00025	0.59	0.00105	0.000025	2.2	0.000005	1.3	0.017	1.78	0.00010	0.000005	0.00005	0.000061	0.00034	0.000051	0.00009	0.00025
10	AQF41	0.000010	0.00012	0.000053	0.0003	0.13	0.00003	0.00060	1.3	0.019	0.0000010	0.00014	0.00025	0.59	0.00095	0.000025	2.4	0.000005	1.4	0.016	1.46	0.00010	0.000005	0.00005	0.000061	0.00015	0.000052	0.00010	0.00025
11	AQF41	0.000012	0.00005	0.000055	0.0040	0.12	0.00014	0.00064	1.5	0.027	-	0.00009	0.00025	0.68	0.00108	0.000025	2.5	0.000005	1.5	0.019	2.07	0.00010	0.000005	0.00005	0.000067	0.00015	0.000053	0.00013	0.00025
12	AQF41	0.000014	0.00015	0.000056	0.0039	0.15	0.00015	0.00097	1.8	0.035	-	0.00009	0.00038	0.78	0.00119	0.000025	2.8	0.000005	1.9	0.022	2.57	0.00010	0.000005	0.00005	0.000072	0.00015	0.000053	0.00017	0.00025
1	AQF42	0.000016	0.00024	0.000057	0.0032	0.18	0.00015	0.00138	2.0	0.042	-	0.00012	0.00025	0.85	0.00127	0.000025	3.2	0.000005	2.1	0.025	2.85	0.00010	0.000005	0.00005	0.000199	0.00015	0.000054	0.00023	0.00025
2	AQF42	0.000016	0.00024	0.000057	0.0020	0.20	0.00007	0.00072	2.1	0.050	0.0000003	0.00009	0.00025	1.03	0.00130	0.000025	3.4	0.000005	2.2	0.026	3.27	0.00010	0.000005	0.00005	0.000200	0.00040	0.000054	0.00021	0.00025
3	AQF42	0.000016	0.00024	0.000057	0.0004	0.22	0.00003	0.00149	2.0	0.047	-	0.00009	0.00025	0.85	0.00126	0.000062	3.3	0.000005	2.1	0.025	3.02	0.00010	0.000005	0.00005	0.000076	0.00040	0.000054	0.00020	0.00025
4	AQF42	0.000012	0.00024	0.000055	0.0025	0.19	0.00009	0.00132	1.6	0.036	-	0.00009	0.00025	0.80	0.00114	0.000025	3.0	0.000005	5.6	0.021	2.51	0.00010	0.000005	0.00005	0.000164	0.00034	0.000052	0.00016	0.00025
5	AQF42	0.000007	0.00014	0.000051	0.0007	0.30	0.00003	0.00054	1.1	0.051	0.0000016	0.00010	0.00025	0.60	0.00099	0.000025	2.5	0.000005	1.1	0.014	0.75	0.00010	0.000005	0.00005	0.000055	0.00051	0.000051	0.00005	0.00025
6	AQF42	0.000008	0.00013	0.000052	0.0003	0.18	0.00003	0.00056	1.0	0.012	0.0000016	0.00008	0.00025	0.63	0.00095	0.000025	2.0	0.000005	1.2	0.013	0.97	0.00010	0.000005	0.00005	0.0000304	0.00046	0.000051	0.00006	0.00025
7	AQF42	0.000009	0.00005	0.000053	0.0002	0.15	0.00003	0.00058	1.1	0.017	0.0000015	0.00009	0.00025	0.59	0.00102	0.000025	2.0	0.000005	1.2	0.015	1.52	0.00010	0.000005	0.00005	0.0000689	0.00044	0.000051	0.00009	0.00025
8	AQF42	0.000009	0.00011	0.000053	0.0004	0.15	0.00012	0.00058	1.2	0.018	-	0.00010	0.00025	0.59	0.00114	0.000025	2.1	0.000005	1.3	0.016	1.20	0.00010	0.000005	0.00005	0.000059	0.00046	0.000051	0.00008	0.00025
9	AQF42	0.000009	0.00012	0.000053	0.0002	0.12	0.00003	0.00058	1.2	0.018	-	0.00009	0.00025	0.61	0.00103	0.000060	2.2	0.000005	1.4	0.016	1.28	0.00010	0.000005	0.00005	0.000060	0.00032	0.000051	0.00009	0.00025
10	AQF42	0.000010	0.00005	0.000053	0.0005	0.12	0.00003	0.00060	1.3	0.020	0.0000008	0.00011	0.00025	0.58	0.00098	0.000025	2.4	0.000005	1.4	0.016	1.46	0.00010	0.000005	0.00005	0.000061	0.00015	0.000052	0.00010	0.00025
11	AQF42	0.000012	0.00076	0.000055	0.0015	0.19	0.00006	0.00064	1.6	0.044	-	0.00089	0.00025	0.70	0.00110	0.000025	2.4	0.000005	1.6										

90th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

Month	Site	Dissolved_Met al	Dissolved_Met al	Cyanides	Cyanides	Cyanides	Methylmercu ry	Methylmercu ry
		Zinc_D	Zirconium_D	cyanide_free	cyanide_SAD	cyanide_WA	Methylmercu	Methylmercu
		mg/L	mg/L	mg/L	mg/L	D mg/L	ry_D mg/L	ry_T mg/L
1	AQF40	0.0045	0.00015	-	-	-	-	-
2	AQF40	0.0031	0.00015	-	-	-	-	-
3	AQF40	0.0018	0.00015	-	-	-	-	-
4	AQF40	0.0028	0.00015	-	-	-	-	-
5	AQF40	0.0030	0.00010	-	-	-	-	-
6	AQF40	0.0063	0.00010	-	-	-	-	-
7	AQF40	0.0037	0.00010	-	-	-	-	-
8	AQF40	0.0033	0.00010	-	-	-	-	-
9	AQF40	0.0047	0.00010	-	-	-	-	-
10	AQF40	0.0021	0.00011	-	-	-	-	-
11	AQF40	0.0101	0.00010	-	-	-	-	-
12	AQF40	0.0072	0.00012	-	-	-	-	-
1	AQF41	0.0051	0.00015	-	-	-	-	-
2	AQF41	0.0034	0.00015	-	-	-	-	-
3	AQF41	0.0018	0.00015	-	-	-	-	-
4	AQF41	0.0022	0.00015	-	-	-	-	-
5	AQF41	0.0254	0.00010	-	-	-	-	-
6	AQF41	0.0023	0.00010	-	-	-	-	-
7	AQF41	0.0032	0.00010	-	-	-	-	-
8	AQF41	0.0018	0.00026	-	-	-	-	-
9	AQF41	0.0005	0.00010	-	-	-	-	-
10	AQF41	0.0005	0.00010	-	-	-	-	-
11	AQF41	0.0042	0.00010	-	-	-	-	-
12	AQF41	0.0046	0.00012	-	-	-	-	-
1	AQF42	0.0046	0.00015	-	-	-	-	-
2	AQF42	0.0048	0.00015	-	-	-	-	-
3	AQF42	0.0012	0.00015	-	-	-	-	-
4	AQF42	0.0051	0.00015	-	-	-	-	-
5	AQF42	0.0012	0.00010	-	-	-	-	-
6	AQF42	0.0005	0.00010	-	-	-	-	-
7	AQF42	0.0089	0.00010	-	-	-	-	-
8	AQF42	0.0030	0.00010	-	-	-	-	-
9	AQF42	0.0005	0.00010	-	-	-	-	-
10	AQF42	0.0011	0.00010	-	-	-	-	-
11	AQF42	0.0033	0.00010	-	-	-	-	-
12	AQF42	0.0039	0.00012	-	-	-	-	-
1	AQF43	0.0011	0.00015	-	-	-	-	-
2	AQF43	0.0013	0.00015	-	-	-	-	-
3	AQF43	0.0015	0.00015	-	-	-	-	-
4	AQF43	0.0023	0.00015	-	-	-	-	-
5	AQF43	0.0015	0.00010	-	-	-	-	-
6	AQF43	0.0045	0.00010	-	-	-	-	-
7	AQF43	0.0013	0.00010	-	-	-	-	-
8	AQF43	0.0005	0.00010	-	-	-	-	-
9	AQF43	0.0005	0.00010	-	-	-	-	-
10	AQF43	0.0022	0.00010	-	-	-	-	-
11	AQF43	0.0047	0.00010	-	-	-	-	-
12	AQF43	0.0029	0.00012	-	-	-	-	-
1	AQF44	0.0038	0.00015	-	-	-	-	-
2	AQF44	0.0031	0.00015	-	-	-	-	-
3	AQF44	0.0023	0.00015	-	-	-	-	-
4	AQF44	0.0028	0.00015	-	-	-	-	-
5	AQF44	0.0005	0.00010	-	-	-	-	-
6	AQF44	0.0033	0.00010	-	-	-	-	-
7	AQF44	0.0005	0.00010	-	-	-	-	-
8	AQF44	0.0026	0.00010	-	-	-	-	-
9	AQF44	0.0005	0.00010	-	-	-	-	-
10	AQF44	0.0005	0.00010	-	-	-	-	-
11	AQF44	0.0049	0.00010	-	-	-	-	-
12	AQF44	0.0043	0.00012	-	-	-	-	-
1	AQF45	0.0023	0.00015	-	-	-	-	-
2	AQF45	0.0019	0.00015	-	-	-	-	-
3	AQF45	0.0015	0.00015	-	-	-	-	-
4	AQF45	0.0016	0.00015	-	-	-	-	-
5	AQF45	0.0013	0.00010	-	-	-	-	-
6	AQF45	0.0011	0.00010	-	-	-	-	-
7	AQF45	0.0021	0.00010	-	-	-	-	-
8	AQF45	0.0012	0.00010	-	-	-	-	-
9	AQF45	0.0005	0.00010	-	-	-	-	-
10	AQF45	0.0016	0.00010	-	-	-	-	-
11	AQF45	0.0059	0.00010	-	-	-	-	-
12	AQF45	0.0005	0.00010	-	-	-	-	-
May-Oct	All Stn Median	0.0015	0.00010	-	-	-	-	-
May-Oct	All Stn 90P	0.0046	0.00010	-	-	-	-	-
May-Oct	All Stn 10P	0.0005	0.00010	-	-	-	-	-

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	Site	Field	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	
Month	-	D_Oxygen_field mg/L	D_Oxygen_percen t_field %	ORP_field mV	pH_field pH	Specific_Con ductance_fiel d uS/cm	TDS_field mg/L	Temp_field C	Turbidity_fiel d NTU	Acidity(CaCO 3) mg/L	Alkalinity(Ca CO3)_bicarbo nate mg/L	Alkalinity(Ca CO3)_carbon ate mg/L	Alkalinity(Ca CO3)_hydrox ide mg/L	Alkalinity(Ca CO3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbonat e mg/L	(HCO3)_bicarbona te mg/L	(OH)_hydroxide mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(Ca CO3)_D mg/L	Hardness(Ca CO3)_T mg/L	pH pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N) _T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L
1	AQF40	9.8	67.4	-	-	-	-	-	-	-	-	-	-	-	15.7	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.096	0.071	0.005
2	AQF40	10.7	73.3	-	-	-	-	-	-	-	-	-	-	-	15.6	-	-	-	-	-	-	-	-	-	-	9.8	-	-	0.062	0.088	0.005
3	AQF40	11.5	79.2	-	-	-	-	0.3	-	-	-	-	-	-	15.3	0.49	23.1	0.48	-	-	-	21.9	-	-	-	9.5	-	-	0.028	0.105	0.005
4	AQF40	19.7	137.1	-	-	-	-	0.7	-	-	-	-	-	-	18.9	0.40	22.1	0.33	47.4	-	-	20.9	-	-	-	9.0	-	-	0.012	0.097	0.001
5	AQF40	12.3	93.8	-	-	-	-	3.9	-	-	-	-	-	-	13.9	0.30	17.0	0.17	-	-	-	15.9	-	-	-	8.7	-	-	0.008	0.038	0.001
6	AQF40	8.9	89.5	-	-	-	-	15.2	-	-	-	-	-	-	13.3	0.30	16.3	0.17	-	-	-	15.8	-	-	-	9.8	-	-	0.010	0.011	0.005
7	AQF40	6.7	71.2	-	-	-	-	18.4	-	-	-	-	-	-	15.1	0.30	18.4	0.17	-	-	-	17.5	-	-	-	8.7	-	-	0.016	0.004	0.001
8	AQF40	6.0	66.0	-	-	-	-	19.6	-	-	-	-	-	-	15.9	0.30	19.3	0.17	-	-	-	16.7	-	-	-	9.1	-	-	0.024	0.004	0.001
9	AQF40	7.9	77.9	-	-	-	-	13.5	-	-	-	-	-	-	16.1	0.30	19.5	0.17	-	-	-	17.0	-	-	-	8.9	-	-	0.027	0.004	0.001
10	AQF40	11.8	89.1	-	-	-	-	3.6	-	-	-	-	-	-	16.3	0.30	19.8	0.17	-	-	-	17.7	-	-	-	8.7	-	-	0.019	0.027	0.001
11	AQF40	10.2	70.4	-	-	-	-	0.4	-	-	-	-	-	-	17.3	0.30	21.1	0.17	-	-	-	18.1	-	-	-	10.0	-	-	0.019	0.025	0.001
12	AQF40	10.0	68.9	-	-	-	-	0.3	-	-	-	-	-	-	16.6	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.058	0.048	0.003
1	AQF41	12.4	85.6	-	-	-	-	0.4	-	-	-	-	-	-	17.6	-	-	-	-	-	-	-	-	-	-	10.1	-	-	0.049	0.066	0.005
2	AQF41	12.3	84.1	-	-	-	-	0.3	-	-	-	-	-	-	18.3	-	-	-	-	-	-	-	-	-	-	10.1	-	-	0.041	0.090	0.005
3	AQF41	12.1	82.6	-	-	-	-	0.3	-	-	-	-	-	-	18.9	0.49	23.2	0.48	-	-	-	21.5	-	-	-	10.0	-	-	0.033	0.115	0.005
4	AQF41	19.8	139.1	-	-	-	-	0.8	-	-	-	-	-	-	18.8	0.40	21.7	0.33	47.2	-	-	20.2	-	-	-	9.4	-	-	0.012	0.098	0.001
5	AQF41	13.9	106.4	-	-	-	-	3.9	-	-	-	-	-	-	13.2	0.30	16.1	0.17	-	-	-	14.9	-	-	-	8.7	-	-	0.008	0.039	0.001
6	AQF41	8.3	84.6	-	-	-	-	16.3	-	-	-	-	-	-	12.2	0.30	14.8	0.17	-	-	-	15.6	-	-	-	8.8	-	-	0.010	0.011	0.005
7	AQF41	7.3	76.0	-	-	-	-	18.7	-	-	-	-	-	-	14.1	0.30	17.2	0.17	-	-	-	16.4	-	-	-	9.2	-	-	0.042	0.004	0.001
8	AQF41	6.1	66.7	-	-	-	-	19.9	-	-	-	-	-	-	15.8	0.30	19.2	0.17	-	-	-	16.4	-	-	-	9.2	-	-	0.017	0.004	0.001
9	AQF41	6.8	65.4	-	-	-	-	13.3	-	-	-	-	-	-	16.2	0.30	19.7	0.17	-	-	-	17.4	-	-	-	8.9	-	-	0.017	0.004	0.001
10	AQF41	11.3	86.9	-	-	-	-	4.3	-	-	-	-	-	-	15.8	0.30	19.2	0.17	-	-	-	17.4	-	-	-	9.2	-	-	0.010	0.020	0.001
11	AQF41	12.3	84.9	-	-	-	-	0.5	-	-	-	-	-	-	17.7	0.30	21.6	0.17	-	-	-	17.9	-	-	-	9.0	-	-	0.011	0.033	0.001
12	AQF41	12.3	85.3	-	-	-	-	0.4	-	-	-	-	-	-	17.7	-	-	-	-	-	-	-	-	-	-	9.6	-	-	0.030	0.049	0.003
1	AQF42	10.3	70.9	-	-	-	-	0.3	-	-	-	-	-	-	17.5	-	-	-	-	-	-	-	-	-	-	9.7	-	-	0.053	0.067	0.005
2	AQF42	11.9	80.7	-	-	-	-	0.3	-	-	-	-	-	-	13.8	-	-	-	-	-	-	22.2	-	-	-	9.9	-	-	0.039	0.118	0.005
3	AQF42	10.4	70.8	-	-	-	-	0.3	-	-	-	-	-	-	21.3	0.49	25.9	0.48	-	-	-	22.1	-	-	-	10.2	-	-	0.058	0.109	0.005
4	AQF42	15.3	105.6	-	-	-	-	0.3	-	-	-	-	-	-	18.9	0.40	22.8	0.33	47.0	-	-	20.5	-	-	-	9.5	-	-	0.019	0.094	0.001
5	AQF42	13.6	131.8	-	-	-	-	4.4	-	-	-	-	-	-	12.8	0.30	15.6	0.17	-	-	-	14.9	-	-	-	9.5	-	-	0.008	0.039	0.001
6	AQF42	10.2	101.9	-	-	-	-	15.1	-	-	-	-	-	-	12.9	0.30	15.8	0.17	-	-	-	15.1	-	-	-	9.4	-	-	0.010	0.011	0.005
7	AQF42	7.9	85.8	-	-	-	-	18.6	-	-	-	-	-	-	15.6	0.30	18.9	0.17	-	-	-	16.5	-	-	-	9.0	-	-	0.027	0.004	0.001
8	AQF42	7.8	83.8	-	-	-	-	18.2	-	-	-	-	-	-	15.9	0.30	19.3	0.17	-	-	-	16.8	-	-	-	9.2	-	-	0.047	0.004	0.001
9	AQF42	8.4	81.4	-	-	-	-	13.9	-	-	-	-	-	-	15.6	0.30	19.0	0.17	-	-	-	17.6	-	-	-	9.0	-	-	0.011	0.008	0.001
10	AQF42	11.2	94.6	-	-	-	-	3.7	-	-	-	-	-	-	15.9	0.30	19.4	0.17	-	-	-	17.5	-	-	-	9.8	-	-	0.010	0.020	0.001
11	AQF42	11.5	79.1	-	-	-	-	0.4	-	-	-	-	-	-	17.8	0.30	21.7	0.17	-	-	-	18.8	-	-	-	9.4	-	-	0.025	0.026	0.001
12	AQF42	10.9	75.0	-	-	-	-	0.3	-	-	-	-	-	-	17.7	-	-	-	-	-	-	-	-	-	-	9.6	-	-	0.039	0.047	0.003
1	AQF43	13.1	89.9	-	-	-	-	-	-	-	-	-	-	-	18.1	-	-	-	-	-	-	-	-	-	-	9.9	-	-	0.028	0.065	0.005
2	AQF43	13.3	90.8	-	-	-	-	-	-	-	-	-	-	-	18.1	-	-	-	-	-	-	-	-	-	-	9.5	-	-	0.022	0.087	0.005
3	AQF43	13.4	91.8	-	-	-	-	0.3	-	-	-	-	-	-	18.0	0.49	23.1	0.48	-	-	-	21.7	-	-	-	9.0	-	-	0.015	0.110	0.005
4	AQF43	16.6	114.2	-	-	-	-	0.4	-	-	-	-	-	-	19.0	0.40	22.7	0.33	47.2	-	-	20.9	-	-	-	9.0	-	-	0.012	0.096	0.001
5	AQF43	16.7	135.7	-	-	-	-	5.9	-	-	-	-	-	-	15.0	0.30	18.2	0.17	-	-	-	16.0	-	-	-	9.9	-	-	0.008	0.032	0.001
6	AQF43	10.2	102.9	-	-	-	-	15.5	-	-	-	-	-	-	13.3	0.30	16.3	0.17	-	-	-	16.3	-	-	-	8.7	-	-	0.010	0.011	0.005
7	AQF43	8.1	88.1	-	-	-	-	19.1	-	-	-	-	-	-	14.0	0.30	17.1	0.17	-	-	-	16.8	-	-	-	9.1	-	-	0.035	0.004	0.001
8	AQF43	8.1	88.3	-	-	-	-	19.2	-	-	-	-	-	-	16.8	0.30	20.5	0.17	-	-	-	17.4	-	-	-	9.1	-	-	0.019	0.010	0.001
9	AQF43	8.9	84.3	-	-	-	-	12.8	-	-	-	-	-	-	16.5	0.30	20.0	0.17	-	-	-	17.4	-	-	-	9.0	-	-	0.030	0.004	0.001
10	AQF43	12.6	93.5	-	-	-	-	3.0	-	-	-	-	-	-	15.7	0.30	19.1	0.17	-	-	-	17.5	-	-	-	9.2	-	-	0.010	0.021	0.001
11	AQF43	14.1	96.6	-	-	-	-	-	-	-	-	-	-	-	17.4	0.30	21.2	0.17	-	-	-	18.4	-	-	-	9.8	-	-	0.036	0.028	0.001
12	AQF43	13.6	93.2	-	-	-	-	-	-	-	-	-	-	-	17.8	-	-	-	-	-	-	19.1	-	-	-	9.8	-	-	0.032	0.046	0.003
1	AQF44	11.1	75.8	-	-	-	-	0.3	-	-	-	-	-	-	15.9	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.141	0.073	0.005
2	AQF44	12.2	83.0	-	-	-	-	0.3	-	-	-	-	-	-	19.6	-	-	-	-	-	-	-	-	-	-	9.7	-	-	0.081	0.090	0.005
3	AQF44	13.3	90.4	-	-	-	-	0.3	-	-	-	-	-	-	23.0	0.49	31.1	0.48	-	-	-	22.3	-	-	-	9.4	-	-	0.021	0.107	0.005
4	AQF44	18.9	130.4	-	-	-	-	0.3	-	-	-	-	-	-	19.5	0.40	26.0	0.33	48.7	-	-	21.1	-	-	-	9.4	-	-	0.012	0.097	0.001
5	AQF44	14.1	130.8	-	-	-	-	6.2	-	-	-	-	-	-	13.7	0.30	16.7	0.17	-	-	-	15.7	-	-	-	8.8	-	-	0.008	0.032	0.001
6	AQF44	10.4	103.8	-	-	-	-	15.4	-	-	-	-	-	-	13.3	0.30	16.3	0.17	-	-	-	15.6	-	-	-	8.3	-	-	0.010	0.011	0.005
7	A																														

	Site	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
Month	-	Nitrite_nitrat e(N) mg/L	Nitrogen(TK N) mg/L	Phosphorus_ D mg/L	Phosphorus_ T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_T mg/L	ChromiumVI _T mg/L	Cobalt_T mg/L	Copper_T mg/L	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesium_T mg/L	Manganese_T mg/L	Mercury_T mg/L	Molybdenum_ T mg/L
1	AQF40	0.070	-	-	0.025	0.05	1.66	0.071	9.6	0.037	0.00011	0.00044	0.00781	0.000012	0.000025	0.00677	0.0000081	6.94	0.000016	0.00024	-	0.000057	0.00062	0.31	0.000073	0.0013	1.99	0.047	0.0000025	0.00014
2	AQF40	-	-	-	0.021	0.05	1.17	0.073	11.3	0.035	0.00012	0.00044	0.00796	0.000012	0.000025	0.00682	0.0000053	7.21	0.000016	0.00024	-	0.000057	0.00044	0.31	0.000049	0.0014	2.03	0.048	0.0000021	0.00011
3	AQF40	-	-	-	0.018	0.05	0.68	0.076	12.8	0.034	0.00013	0.00043	0.00808	0.000012	0.000025	0.00684	0.0000025	7.39	0.000016	0.00024	-	0.000057	0.00025	0.32	0.000025	0.0014	2.06	0.049	0.0000017	0.00008
4	AQF40	-	-	-	0.025	0.01	0.46	0.079	8.7	0.033	0.00005	0.00046	0.00762	0.000012	0.000025	0.00674	0.0000084	6.84	0.000016	0.00024	-	0.000057	0.00025	0.30	0.000025	0.0013	1.96	0.048	0.0000019	0.00008
5	AQF40	0.044	-	-	0.023	0.05	0.35	0.065	4.5	0.054	0.00005	0.00031	0.00650	0.000050	0.000025	0.00584	0.0000025	4.96	0.000010	0.00022	-	0.000053	0.00025	0.33	0.000025	0.0009	1.44	0.053	0.0000021	0.00007
6	AQF40	0.035	-	-	0.015	0.05	0.38	0.058	5.7	0.061	0.00005	0.00032	0.00674	0.000050	0.000025	0.00614	0.0000051	5.44	0.000012	0.00020	-	0.000054	0.00025	0.36	0.000060	0.0016	1.47	0.046	0.0000022	0.00009
7	AQF40	0.215	-	-	0.012	0.05	0.38	0.064	7.0	0.048	0.00005	0.00036	0.00708	0.000050	0.000025	0.00639	0.0000025	5.91	0.000014	0.00016	-	0.000055	0.00025	0.23	0.000145	0.0010	1.68	0.048	0.0000014	0.00012
8	AQF40	0.004	-	-	0.015	0.05	0.33	0.067	6.9	0.033	0.00005	0.00037	0.00611	0.000050	0.000025	0.00638	0.0000025	5.58	0.000014	0.00014	-	0.000055	0.00025	0.23	0.000025	0.0007	1.57	0.042	0.0000019	0.00008
9	AQF40	0.004	-	-	0.012	0.05	0.36	0.065	7.2	0.044	0.00005	0.00038	0.00700	0.000050	0.000025	0.00640	0.0000025	6.01	0.000014	0.00013	-	0.000055	0.00025	0.21	0.000025	0.0013	1.70	0.040	0.0000025	0.00012
10	AQF40	0.038	-	-	0.020	0.05	0.38	0.066	6.8	0.053	0.00005	0.00035	0.00605	0.000050	0.000025	0.00634	0.0000025	5.89	0.000013	0.00024	-	0.000055	0.00025	0.29	0.000044	0.0013	1.68	0.045	0.0000012	0.00013
11	AQF40	0.025	-	-	0.019	0.05	0.38	0.063	7.5	0.080	0.00005	0.00039	0.00916	0.000050	0.000025	0.00651	0.0000120	6.35	0.000014	0.00029	-	0.000056	0.00065	0.32	0.000095	0.0007	1.82	0.051	0.0000025	0.00012
12	AQF40	0.048	-	-	0.022	0.05	1.02	0.067	8.6	0.058	0.00008	0.00042	0.00849	0.000031	0.000025	0.00666	0.0000101	6.68	0.000015	0.00027	-	0.000056	0.00064	0.32	0.000084	0.0010	1.91	0.049	0.0000025	0.00013
1	AQF41	0.065	-	-	0.025	0.05	0.45	0.071	9.1	0.039	0.00005	0.00043	0.00826	0.000012	0.000025	0.00677	0.0000175	7.16	0.000016	0.00101	-	0.000057	0.00091	0.32	0.000060	0.0014	1.98	0.047	0.0000025	0.00010
2	AQF41	-	-	-	0.025	0.05	0.47	0.074	9.4	0.064	0.00007	0.00046	0.00888	0.000012	0.000025	0.00682	0.0000120	7.23	0.000018	0.00062	-	0.000057	0.00058	0.45	0.000068	0.0014	2.03	0.073	0.0000022	0.00009
3	AQF41	-	-	-	0.025	0.05	0.48	0.077	9.4	0.089	0.00008	0.00049	0.00948	0.000012	0.000025	0.00684	0.0000066	7.24	0.000019	0.00024	-	0.000057	0.00025	0.57	0.000075	0.0014	2.07	0.098	0.0000019	0.00008
4	AQF41	-	-	-	0.012	0.01	0.44	0.078	8.7	0.032	0.00005	0.00045	0.00773	0.000012	0.000025	0.00674	0.0000025	6.92	0.000016	0.00024	-	0.000057	0.00025	0.31	0.000025	0.0013	1.97	0.049	0.0000022	0.00007
5	AQF41	0.039	-	-	0.015	0.05	0.40	0.061	4.4	0.053	0.00005	0.00030	0.00639	0.000050	0.000025	0.00584	0.0000025	4.77	0.000010	0.00018	-	0.000053	0.00090	0.39	0.000056	0.0006	1.35	0.049	0.0000025	0.00009
6	AQF41	0.035	-	-	0.021	0.05	0.84	0.058	5.8	0.092	0.00005	0.00031	0.01059	0.000050	0.000025	0.00614	0.0000087	5.69	0.000012	0.00029	-	0.000054	0.00065	0.50	0.000090	0.0016	1.49	0.085	0.0000036	0.00008
7	AQF41	0.004	-	-	0.013	0.05	0.34	0.063	6.9	0.041	0.00005	0.00035	0.00640	0.000050	0.000025	0.00639	0.0000025	5.68	0.000014	0.00015	-	0.000055	0.00025	0.25	0.000025	0.0007	1.62	0.043	0.0000016	0.00008
8	AQF41	0.004	-	-	0.015	0.05	0.37	0.066	6.9	0.035	0.00005	0.00038	0.00623	0.000050	0.000025	0.00638	0.0000025	5.51	0.000014	0.00026	-	0.000055	0.00025	0.23	0.000025	0.0007	1.55	0.042	0.0000020	0.00008
9	AQF41	0.004	-	-	0.015	0.05	0.35	0.065	7.1	0.055	0.00005	0.00037	0.00722	0.000050	0.000025	0.00640	0.0000025	6.17	0.000014	0.00017	-	0.000055	0.00025	0.24	0.000025	0.0014	1.73	0.041	0.0000025	0.00013
10	AQF41	0.019	-	-	0.015	0.05	0.35	0.064	6.7	0.037	0.00005	0.00037	0.00632	0.000050	0.000025	0.00634	0.0000025	5.94	0.000013	0.00017	-	0.000055	0.00025	0.26	0.000025	0.0013	1.64	0.042	0.0000011	0.00011
11	AQF41	0.032	-	-	0.031	0.05	0.41	0.063	7.6	0.035	0.00005	0.00038	0.00614	0.000050	0.000025	0.00651	0.0000025	6.31	0.000014	0.00014	-	0.000056	0.00025	0.22	0.000025	0.0007	1.76	0.040	0.0000025	0.00010
12	AQF41	0.049	-	-	0.028	0.05	0.43	0.067	8.4	0.037	0.00005	0.00041	0.00722	0.000031	0.000025	0.00666	0.0000101	6.78	0.000015	0.00057	-	0.000056	0.00058	0.27	0.000043	0.0010	1.88	0.044	0.0000025	0.00010
1	AQF42	0.067	-	-	0.025	0.05	0.79	0.074	9.4	0.050	0.00022	0.00044	0.00867	0.000012	0.000025	0.00677	0.0000025	7.25	0.000016	0.00024	-	0.000057	0.00025	0.35	0.000025	0.0014	2.04	0.050	0.0000025	0.00011
2	AQF42	-	-	-	0.025	0.05	0.75	0.073	17.7	0.065	0.00028	0.00047	0.00934	0.000012	0.000025	0.00682	0.0000103	7.49	0.000016	0.00024	-	0.000057	0.00096	0.38	0.000079	0.0014	2.07	0.058	0.0000011	0.00009
3	AQF42	-	-	-	0.025	0.05	0.63	0.076	9.3	0.120	0.00005	0.00045	0.00997	0.000012	0.000025	0.00684	0.0000025	7.40	0.000029	0.00049	-	0.000124	0.00434	0.60	0.000084	0.0015	2.10	0.086	0.0000025	0.00009
4	AQF42	-	-	-	0.030	0.01	0.46	0.075	8.7	0.037	0.00005	0.00047	0.00846	0.000012	0.000025	0.00674	0.0000100	6.98	0.000016	0.00024	-	0.000057	0.00090	0.32	0.000070	0.0013	1.99	0.050	0.0000025	0.00010
5	AQF42	0.039	-	-	0.015	0.05	0.37	0.064	4.4	0.053	0.00005	0.00034	0.00637	0.000050	0.000025	0.00584	0.0000025	4.63	0.000010	0.00017	-	0.000053	0.00025	0.50	0.000025	0.0012	1.33	0.082	0.0000025	0.00010
6	AQF42	0.035	-	-	0.016	0.05	0.38	0.058	5.7	0.057	0.00005	0.00031	0.00671	0.000050	0.000025	0.00614	0.0000025	5.29	0.000012	0.00023	-	0.000054	0.00025	0.38	0.000056	0.0016	1.43	0.039	0.0000020	0.00021
7	AQF42	0.004	-	-	0.015	0.05	0.47	0.062	7.0	0.047	0.00005	0.00035	0.00661	0.000050	0.000025	0.00639	0.0000067	5.55	0.000014	0.00123	-	0.000055	0.00061	0.27	0.000025	0.0007	1.62	0.046	0.0000019	0.00010
8	AQF42	0.004	-	-	0.014	0.05	0.33	0.066	6.9	0.036	0.00005	0.00039	0.00634	0.000050	0.000025	0.00638	0.0000025	5.79	0.000014	0.00015	-	0.000055	0.00025	0.24	0.000025	0.0007	1.65	0.045	0.0000022	0.00009
9	AQF42	0.007	-	-	0.015	0.05	0.44	0.065	7.0	0.039	0.00005	0.00038	0.00683	0.000050	0.000025	0.00640	0.0000025	6.03	0.000014	0.00014	-	0.000055	0.00025	0.20	0.000025	0.0007	1.70	0.039	0.0000025	0.00011
10	AQF42	0.019	-	-	0.015	0.05	0.36	0.064	6.7	0.041	0.00005	0.00037	0.00624	0.000050	0.000025	0.00634	0.0000025	5.91	0.000013	0.00014	-	0.000055	0.00025	0.26	0.000025	0.0012	1.69	0.042	0.0000012	0.00012
11	AQF42	0.025	-	-	0.015	0.05	0.45	0.063	7.7	0.152	0.00013	0.00041	0.01502	0.000050	0.000025	0.00651	0.0000296	6.52	0.000028	0.00073	-	0.000123	0.00089	0.44	0.000138	0.0013	1.88	0.103	0.0000025	0.00015
12	AQF42	0.046	-	-	0.020	0.05	0.62	0.068	8.7	0.101	0.00017	0.00043	0.01182	0.000031	0.000025	0.00666	0.0000160	6.93	0.000022	0.00049	-	0.000090	0.00057	0.40	0.000081	0.0013	1.97	0.077	0.0000025	0.00

	Site	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal
Month	-	Nickel_T mg/L	Potassium_T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L
1	AQF40	0.00025	0.86	0.00128	0.00006	3.23	0.000005	2.11	0.025	2.96	0.0001	0.000005	0.00005	0.00036	0.0012	0.00005	0.00018	0.00025	0.0052	0.00010	0.020	0.00005	0.00032	0.013	0.000012	0.000025	0.0070	0.0000025	6.78
2	AQF40	0.00025	0.89	0.00129	0.00004	3.38	0.000005	2.13	0.026	3.45	0.0001	0.000005	0.00005	0.00034	0.0010	0.00005	0.00019	0.00025	0.0056	0.00015	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0070	0.0000025	6.93
3	AQF40	0.00025	0.91	0.00129	0.00003	3.52	0.000005	2.15	0.026	3.89	0.0001	0.000005	0.00005	0.00031	0.0008	0.00005	0.00019	0.00025	0.0059	0.00020	0.021	0.00005	0.00034	0.014	0.000012	0.000025	0.0070	0.0000025	7.01
4	AQF40	0.00025	0.88	0.00129	0.00013	3.18	0.000005	2.02	0.026	2.91	0.0001	0.000005	0.00005	0.00007	0.0008	0.00005	0.00018	0.00025	0.0015	0.00010	0.020	0.00005	0.00033	0.020	0.000012	0.000025	0.0069	0.0000102	6.67
5	AQF40	0.00025	0.74	0.00118	0.00003	2.45	0.000005	1.54	0.019	1.53	0.0001	0.000005	0.00005	0.00010	0.0016	0.00005	0.00010	0.00025	0.0015	0.00014	0.036	0.00005	0.00022	0.007	0.000050	0.000025	0.0059	0.0000025	4.89
6	AQF40	0.00025	0.72	0.00110	0.00003	2.07	0.000005	1.49	0.018	2.00	0.0001	0.000005	0.00005	0.00025	0.0015	0.00005	0.00012	0.00025	0.0048	0.00010	0.035	0.00005	0.00028	0.006	0.000050	0.000025	0.0063	0.0000025	5.13
7	AQF40	0.00025	0.79	0.00131	0.00003	2.23	0.000005	1.70	0.022	2.39	0.0001	0.000005	0.00005	0.00006	0.0013	0.00005	0.00016	0.00025	0.0015	0.00009	0.026	0.00005	0.00031	0.006	0.000050	0.000025	0.0065	0.0000051	5.76
8	AQF40	0.00025	0.71	0.00121	0.00003	2.18	0.000005	1.80	0.021	2.36	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00014	0.00025	0.0043	0.00010	0.020	0.00005	0.00030	0.006	0.000050	0.000025	0.0065	0.0000025	5.47
9	AQF40	0.00025	0.75	0.00121	0.00003	2.43	0.000005	1.72	0.022	2.40	0.0001	0.000005	0.00005	0.00014	0.0010	0.00005	0.00015	0.00025	0.0015	0.00010	0.031	0.00005	0.00032	0.007	0.000050	0.000025	0.0066	0.0000025	5.62
10	AQF40	0.00053	0.74	0.00120	0.00003	2.48	0.000005	1.74	0.021	2.30	0.0001	0.000005	0.00005	0.00006	0.0017	0.00005	0.00015	0.00025	0.0015	0.00009	0.022	0.00005	0.00029	0.009	0.000050	0.000025	0.0065	0.0000025	5.71
11	AQF40	0.00025	0.79	0.00131	0.00003	2.87	0.000005	1.76	0.023	2.57	0.0001	0.000005	0.00005	0.00006	0.0038	0.00005	0.00018	0.00025	0.0045	0.00010	0.022	0.00005	0.00030	0.006	0.000050	0.000025	0.0067	0.0000025	5.99
12	AQF40	0.00025	0.83	0.00130	0.00004	3.05	0.000005	1.94	0.024	2.79	0.0001	0.000005	0.00005	0.00021	0.0025	0.00005	0.00018	0.00025	0.0049	0.00010	0.021	0.00005	0.00031	0.010	0.000031	0.000025	0.0068	0.0000025	6.43
1	AQF41	0.00025	0.87	0.00119	0.00005	3.33	0.000005	2.13	0.025	2.96	0.0001	0.000005	0.00005	0.00155	0.0010	0.00005	0.00018	0.00025	0.0109	0.00010	0.020	0.00005	0.00040	0.014	0.000012	0.000025	0.0070	0.0000141	6.77
2	AQF41	0.00025	0.91	0.00131	0.00004	3.44	0.000005	2.14	0.026	3.05	0.0001	0.000005	0.00005	0.00081	0.0023	0.00005	0.00019	0.00025	0.0075	0.00010	0.020	0.00005	0.00041	0.011	0.000012	0.000025	0.0070	0.0000083	6.97
3	AQF41	0.00025	0.94	0.00143	0.00003	3.54	0.000005	2.13	0.026	3.08	0.0001	0.000005	0.00005	0.00007	0.0037	0.00005	0.00020	0.00025	0.0041	0.00010	0.021	0.00005	0.00042	0.008	0.000012	0.000025	0.0070	0.0000025	7.10
4	AQF41	0.00025	0.87	0.00126	0.00015	3.21	0.000005	2.03	0.025	2.91	0.0001	0.000005	0.00005	0.00007	0.0008	0.00005	0.00018	0.00025	0.0015	0.00010	0.020	0.00005	0.00031	0.020	0.000012	0.000025	0.0069	0.0000025	6.61
5	AQF41	0.00025	0.70	0.00102	0.00003	2.43	0.000005	1.25	0.018	1.53	0.0001	0.000005	0.00005	0.00006	0.0016	0.00005	0.00010	0.00025	0.0015	0.00010	0.029	0.00005	0.00021	0.007	0.000050	0.000025	0.0059	0.0000025	4.63
6	AQF41	0.00025	0.76	0.00120	0.00003	2.14	0.000005	1.48	0.020	2.00	0.0001	0.000005	0.00005	0.00017	0.0033	0.00005	0.00013	0.00025	0.0069	0.00010	0.033	0.00005	0.00026	0.010	0.000050	0.000025	0.0063	0.0000025	5.09
7	AQF41	0.00025	0.71	0.00109	0.00003	2.20	0.000005	1.61	0.021	2.39	0.0001	0.000005	0.00005	0.00015	0.0008	0.00005	0.00015	0.00025	0.0015	0.00010	0.025	0.00005	0.00028	0.006	0.000050	0.000025	0.0065	0.0000025	5.48
8	AQF41	0.00025	0.71	0.00123	0.00005	2.18	0.000005	1.83	0.021	2.36	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00014	0.00025	0.0052	0.00010	0.022	0.00005	0.00029	0.006	0.000050	0.000025	0.0065	0.0000025	5.39
9	AQF41	0.00025	0.76	0.00129	0.00003	2.59	0.000005	1.78	0.021	2.40	0.0001	0.000005	0.00005	0.00006	0.0016	0.00005	0.00015	0.00025	0.0050	0.00010	0.023	0.00005	0.00029	0.007	0.000050	0.000025	0.0066	0.0000025	5.73
10	AQF41	0.00025	0.70	0.00113	0.00003	2.53	0.000005	1.69	0.020	2.30	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00014	0.00025	0.0045	0.00010	0.018	0.00005	0.00027	0.005	0.000050	0.000025	0.0065	0.0000025	5.64
11	AQF41	0.00025	0.76	0.00117	0.00003	2.70	0.000005	1.73	0.022	2.57	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00016	0.00025	0.0015	0.00010	0.019	0.00005	0.00029	0.006	0.000050	0.000025	0.0067	0.0000025	5.91
12	AQF41	0.00025	0.81	0.00118	0.00004	3.02	0.000005	1.94	0.024	2.79	0.0001	0.000005	0.00005	0.00081	0.0009	0.00005	0.00017	0.00025	0.0062	0.00010	0.019	0.00005	0.00035	0.010	0.000031	0.000025	0.0068	0.0000083	6.38
1	AQF42	0.00025	0.87	0.00134	0.00006	3.40	0.000005	2.16	0.026	3.23	0.0001	0.000005	0.00005	0.00054	0.0017	0.00005	0.00023	0.00025	0.0039	0.00010	0.020	0.00005	0.00034	0.014	0.000012	0.000025	0.0070	0.0000025	6.76
2	AQF42	0.00025	1.01	0.00135	0.00003	3.52	0.000005	2.20	0.027	10.98	0.0001	0.000005	0.00005	0.00202	0.0022	0.00005	0.00021	0.00025	0.0245	0.00010	0.023	0.00005	0.00036	0.021	0.000012	0.000025	0.0070	0.0000025	7.10
3	AQF42	0.00077	0.93	0.00150	0.00003	3.71	0.000005	2.15	0.027	3.08	0.0001	0.000005	0.00005	0.00007	0.0007	0.00005	0.00021	0.00025	0.0052	0.00010	0.034	0.00005	0.00038	0.009	0.000012	0.000025	0.0070	0.0000025	7.11
4	AQF42	0.00025	0.89	0.00126	0.00013	3.06	0.000005	2.03	0.026	2.91	0.0001	0.000005	0.00005	0.00007	0.0012	0.00005	0.00021	0.00025	0.0031	0.00010	0.023	0.00005	0.00034	0.020	0.000012	0.000025	0.0069	0.0000116	6.74
5	AQF42	0.00025	0.67	0.00103	0.00003	2.33	0.000005	1.43	0.018	1.53	0.0001	0.000005	0.00005	0.00026	0.0015	0.00005	0.00010	0.00025	0.0015	0.00010	0.033	0.00005	0.00024	0.006	0.000050	0.000025	0.0059	0.0000025	4.60
6	AQF42	0.00025	0.70	0.00109	0.00003	2.16	0.000005	1.49	0.018	2.00	0.0001	0.000005	0.00005	0.00028	0.0017	0.00005	0.00013	0.00025	0.0015	0.00010	0.033	0.00005	0.00027	0.006	0.000050	0.000025	0.0063	0.0000025	4.93
7	AQF42	0.00025	0.72	0.00120	0.00003	2.21	0.000005	1.64	0.020	2.39	0.0001	0.000005	0.00005	0.00041	0.0012	0.00005	0.00015	0.00025	0.0058	0.00010	0.025	0.00005	0.00027	0.006	0.000050	0.000025	0.0065	0.0000025	5.48
8	AQF42	0.00025	0.74	0.00123	0.00005	2.43	0.000005	1.68	0.022	2.36	0.0001	0.000005	0.00005	0.00006	0.0010	0.00005	0.00015	0.00025	0.0015	0.00010	0.021	0.00005	0.00029	0.006	0.000050	0.000025	0.0065	0.0000025	5.51
9	AQF42	0.00025	0.75	0.00117	0.00003	2.38	0.000005	1.73	0.022	2.40	0.0001	0.000005	0.00005	0.00006	0.0007	0.00005	0.00015	0.00025	0.0030	0.00010	0.024	0.00005	0.00030	0.006	0.000050	0.000025	0.0066	0.0000025	5.80
10	AQF42	0.00025	0.74	0.00116	0.00003	2.70	0.000005	1.68	0.021	2.30	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00016	0.00025	0.0015	0.00010	0.019	0.00005	0.00028	0.006	0.000050	0.000025	0.0065	0.0000025	5.68
11	AQF42	0.00025	0.82	0.00142	0.00003	2.84	0.000005	1.77	0.024	2.57	0.0001	0.000005	0.00005	0.00018	0.0076	0.00005	0.00022	0.00025	0.0043	0.00010	0.031	0.00005	0.000						

		Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
Month	-	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L		
1	AQF40	0.000016	0.00024	0.000057	0.0027	0.16	0.00013	0.00138	2.0	0.043	-	0.00010	0.00025	0.88	0.00121	0.000025	3.2	0.000005	2.1	0.026	2.99	0.00010	0.000005	0.00005	0.00005	0.000062	0.00015	0.000054	0.00020	0.00025	
2	AQF40	0.000016	0.00024	0.000058	0.0019	0.17	0.00009	0.00125	2.0	0.044	-	0.00011	0.00025	0.88	0.00122	0.000033	3.2	0.000005	2.2	0.026	3.16	0.00010	0.000005	0.00005	0.000086	0.00015	0.000054	0.00020	0.00025		
3	AQF40	0.000016	0.00024	0.000058	0.0012	0.19	0.00005	0.00110	2.1	0.045	0.0000010	0.00013	0.00025	0.87	0.00123	0.000041	3.2	0.000005	2.2	0.026	3.28	0.00010	0.000005	0.00005	0.000110	0.00015	0.000054	0.00021	0.00025		
4	AQF40	0.000016	0.00024	0.000057	0.0020	0.18	0.00010	0.00128	2.0	0.045	0.0000015	0.00008	0.00025	0.96	0.00133	0.000025	3.1	0.000005	2.1	0.025	2.94	0.00010	0.000005	0.00005	0.000148	0.00015	0.000054	0.00020	0.00025		
5	AQF40	0.000010	0.00010	0.000054	0.0006	0.21	0.00003	0.00119	1.4	0.042	0.0000009	0.00014	0.00025	0.73	0.00108	0.000025	2.5	0.000005	1.4	0.018	1.55	0.00010	0.000005	0.00005	0.000129	0.00015	0.000052	0.00011	0.00025		
6	AQF40	0.000012	0.00013	0.000055	0.0003	0.18	0.00003	0.00064	1.5	0.027	0.0000018	0.00009	0.00025	0.72	0.00103	0.000025	2.1	0.000005	1.5	0.018	2.02	0.00010	0.000005	0.00005	0.000194	0.00015	0.000052	0.00013	0.00025		
7	AQF40	0.000014	0.00011	0.000056	0.0003	0.11	0.00007	0.00101	1.7	0.034	0.0000012	0.00012	0.00025	0.78	0.00121	0.000025	2.0	0.000005	1.7	0.021	2.56	0.00010	0.000005	0.00005	0.000112	0.00015	0.000053	0.00017	0.00025		
8	AQF40	0.000014	0.00012	0.000056	0.0003	0.15	0.00003	0.00067	1.6	0.033	-	0.00011	0.00025	0.73	0.00113	0.000051	2.2	0.000005	1.7	0.022	2.39	0.00010	0.000005	0.00005	0.000243	0.00015	0.000053	0.00016	0.00025		
9	AQF40	0.000014	0.00021	0.000056	0.0026	0.13	0.00014	0.00067	1.6	0.035	-	0.00015	0.00025	0.72	0.00123	0.000051	2.3	0.000005	1.7	0.021	2.42	0.00010	0.000005	0.00005	0.000059	0.00015	0.000053	0.00016	0.00025		
10	AQF40	0.000013	0.00008	0.000056	0.0015	0.14	0.00007	0.00095	1.7	0.031	0.0000011	0.00011	0.00025	0.72	0.00112	0.000042	2.4	0.000005	1.8	0.021	2.52	0.00010	0.000005	0.00005	0.000059	0.00015	0.000053	0.00016	0.00025		
11	AQF40	0.000014	0.00015	0.000056	0.0049	0.14	0.00017	0.00068	1.7	0.036	-	0.00011	0.00025	0.77	0.00111	0.000025	2.5	0.000005	1.7	0.022	2.59	0.00010	0.000005	0.00005	0.000060	0.00033	0.000053	0.00017	0.00025		
12	AQF40	0.000015	0.00019	0.000057	0.0038	0.15	0.00015	0.00104	1.9	0.040	-	0.00010	0.00025	0.83	0.00116	0.000025	2.9	0.000005	1.9	0.024	2.82	0.00010	0.000005	0.00005	0.000061	0.00024	0.000053	0.00018	0.00025		
1	AQF41	0.000016	0.00024	0.000057	0.0037	0.17	0.00016	0.00129	2.0	0.043	-	0.00009	0.00052	0.88	0.00127	0.000025	3.2	0.000005	2.2	0.025	2.99	0.00010	0.000005	0.00005	0.000062	0.00015	0.000054	0.00020	0.00025		
2	AQF41	0.000016	0.00024	0.000058	0.0020	0.19	0.00009	0.00117	2.0	0.045	-	0.00008	0.00038	0.88	0.00126	0.000025	3.2	0.000005	2.2	0.026	3.08	0.00010	0.000005	0.00005	0.000062	0.00020	0.000054	0.00020	0.00025		
3	AQF41	0.000016	0.00024	0.000058	0.0004	0.20	0.00003	0.00106	2.1	0.047	0.0000012	0.00008	0.00025	0.88	0.00124	0.000025	3.2	0.000005	2.2	0.026	3.11	0.00010	0.000005	0.00005	0.000062	0.00025	0.000054	0.00021	0.00025		
4	AQF41	0.000016	0.00024	0.000057	0.0017	0.19	0.00008	0.00128	2.0	0.046	0.0000018	0.00009	0.00025	0.86	0.00127	0.000025	3.1	0.000005	2.0	0.025	2.94	0.00010	0.000005	0.00005	0.000128	0.00035	0.000054	0.00020	0.00025		
5	AQF41	0.000010	0.00012	0.000054	0.0016	0.22	0.00003	0.00060	1.4	0.036	0.0000025	0.00013	0.00025	0.71	0.00097	0.000025	2.4	0.000005	1.3	0.017	1.55	0.00010	0.000005	0.00005	0.000055	0.00043	0.000052	0.00010	0.00025		
6	AQF41	0.000012	0.00013	0.000055	0.0006	0.18	0.00003	0.00064	1.5	0.028	0.0000022	0.00008	0.00025	0.69	0.00106	0.000025	2.0	0.000005	1.5	0.018	2.02	0.00010	0.000005	0.00005	0.000057	0.00051	0.000052	0.00014	0.00025		
7	AQF41	0.000014	0.00012	0.000056	0.0002	0.15	0.00003	0.00067	1.6	0.033	0.0000010	0.00009	0.00025	0.70	0.00107	0.000025	2.2	0.000005	1.6	0.020	2.41	0.00010	0.000005	0.00005	0.000059	0.00035	0.000053	0.00016	0.00025		
8	AQF41	0.000014	0.00012	0.000056	0.0003	0.15	0.00003	0.00067	1.6	0.034	-	0.00009	0.00025	0.70	0.00120	0.000025	2.2	0.000005	1.6	0.021	2.39	0.00010	0.000005	0.00005	0.000465	0.00038	0.000053	0.00016	0.00025		
9	AQF41	0.000014	0.00005	0.000056	0.0004	0.12	0.00003	0.00125	1.7	0.033	-	0.00012	0.00025	0.71	0.00113	0.000025	2.2	0.000005	1.7	0.021	2.90	0.00010	0.000005	0.00005	0.000552	0.00033	0.000053	0.00016	0.00025		
10	AQF41	0.000013	0.00012	0.000056	0.0003	0.12	0.00003	0.00066	1.7	0.030	0.0000010	0.00014	0.00025	0.68	0.00101	0.000025	2.4	0.000005	1.7	0.019	2.32	0.00010	0.000005	0.00005	0.000059	0.00015	0.000053	0.00015	0.00025		
11	AQF41	0.000014	0.00005	0.000056	0.0040	0.12	0.00014	0.00068	1.7	0.034	-	0.00009	0.00025	0.73	0.00112	0.000025	2.5	0.000005	1.7	0.022	2.59	0.00010	0.000005	0.00005	0.000060	0.00015	0.000053	0.00017	0.00025		
12	AQF41	0.000015	0.00015	0.000057	0.0038	0.15	0.00015	0.00099	1.9	0.039	-	0.00009	0.00038	0.81	0.00120	0.000025	2.8	0.000005	2.0	0.023	2.82	0.00010	0.000005	0.00005	0.000061	0.00015	0.000053	0.00018	0.00025		
1	AQF42	0.000016	0.00024	0.000057	0.0031	0.18	0.00015	0.00138	2.0	0.044	-	0.00012	0.00025	0.87	0.00128	0.000025	3.2	0.000005	2.2	0.026	2.99	0.00010	0.000005	0.00005	0.000186	0.00015	0.000054	0.00024	0.00025		
2	AQF42	0.000016	0.00024	0.000058	0.0019	0.20	0.00007	0.00072	2.1	0.051	0.0000004	0.00009	0.00025	1.04	0.00131	0.000025	3.4	0.000005	2.3	0.026	3.36	0.00010	0.000005	0.00005	0.000186	0.00040	0.000054	0.00021	0.00025		
3	AQF42	0.000016	0.00024	0.000058	0.0004	0.22	0.00003	0.00149	2.1	0.049	-	0.00009	0.00025	0.86	0.00127	0.000062	3.3	0.000005	2.2	0.026	3.11	0.00010	0.000005	0.00005	0.000062	0.00040	0.000054	0.00021	0.00025		
4	AQF42	0.000016	0.00024	0.000057	0.0024	0.19	0.00009	0.00138	2.0	0.048	-	0.00010	0.00025	0.90	0.00120	0.000025	3.1	0.000005	5.8	0.025	3.42	0.00010	0.000005	0.00005	0.000157	0.00034	0.000054	0.00022	0.00025		
5	AQF42	0.000010	0.00014	0.000054	0.0007	0.30	0.00003	0.00060	1.4	0.061	0.0000016	0.00010	0.00025	0.69	0.00105	0.000025	2.5	0.000005	1.3	0.017	1.55	0.00010	0.000005	0.00005	0.000055	0.00050	0.000052	0.00011	0.00025		
6	AQF42	0.000012	0.00013	0.000055	0.0003	0.18	0.00003	0.00064	1.4	0.026	0.0000017	0.00009	0.00025	0.74	0.00102	0.000025	2.1	0.000005	1.5	0.018	2.02	0.00010	0.000005	0.00005	0.000300	0.00045	0.000052	0.00013	0.00025		
7	AQF42	0.000014	0.00005	0.000056	0.0002	0.15	0.00003	0.00067	1.6	0.033	0.0000015	0.00010	0.00025	0.72	0.00110	0.000025	2.1	0.000005	1.6	0.020	2.71	0.00010	0.000005	0.00005	0.000677	0.00043	0.000053	0.00016	0.00025		
8	AQF42	0.000014	0.00011	0.000056	0.0004	0.15	0.00012	0.00067	1.6	0.034	-	0.00011	0.00025	0.72	0.00122	0.000025	2.1	0.000005	1.6	0.021	2.39	0.00010	0.000005	0.00005	0.000059	0.00045	0.000053	0.00016	0.00025		
9	AQF42	0.000014	0.00012	0.000056	0.0002	0.12	0.00003	0.00067	1.7	0.033	-	0.00010	0.00025	0.73	0.00111	0.000060	2.2	0.000005	1.7	0.021	2.42	0.00010	0.000005	0.00005	0.000059	0.00031	0.000053	0.00016	0.00025		
10	AQF42	0.000013	0.00005	0.000056	0.0005	0.12	0.00003	0.00066	1.7	0.031	0.0000009	0.00011	0.00025	0.68	0.00104	0.000025	2.4	0.000005	1.7	0.020	2.32	0.00010	0.000005	0.00005	0.000059	0.00015	0.000053	0.00016	0.00025		
11	AQF42	0.000014	0.00014	0.000056	0.0015	0.19	0.00006	0.00068	1.8	0.051	-	0.00089	0.00025	0.76	0.00114	0.000025	2.4	0.000005	1.7	0.022	2.59	0.00010	0.000005	0.00005	0.000060	0.00099	0.000089	0.00021	0.00025		
12	AQF42	0.000015	0.00050	0.000057	0.0023	0.18	0.00011																								

Month	Site	Dissolved_Met al	Dissolved_Met al	Cyanides	Cyanides	Cyanides	Methylmercu ry	Methylmercu ry
		Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WA D mg/L	Methylmercu ry_D mg/L	Methylmercu ry_T mg/L
1	AQF40	0.0044	0.00015	-	-	-	-	-
2	AQF40	0.0031	0.00015	-	-	-	-	-
3	AQF40	0.0018	0.00015	-	-	-	-	-
4	AQF40	0.0027	0.00015	-	-	-	-	-
5	AQF40	0.0030	0.00010	-	-	-	-	-
6	AQF40	0.0062	0.00010	-	-	-	-	-
7	AQF40	0.0036	0.00010	-	-	-	-	-
8	AQF40	0.0032	0.00010	-	-	-	-	-
9	AQF40	0.0047	0.00010	-	-	-	-	-
10	AQF40	0.0021	0.00011	-	-	-	-	-
11	AQF40	0.0099	0.00010	-	-	-	-	-
12	AQF40	0.0072	0.00012	-	-	-	-	-
1	AQF41	0.0050	0.00015	-	-	-	-	-
2	AQF41	0.0034	0.00015	-	-	-	-	-
3	AQF41	0.0018	0.00015	-	-	-	-	-
4	AQF41	0.0021	0.00015	-	-	-	-	-
5	AQF41	0.0251	0.00010	-	-	-	-	-
6	AQF41	0.0023	0.00010	-	-	-	-	-
7	AQF41	0.0031	0.00010	-	-	-	-	-
8	AQF41	0.0018	0.00025	-	-	-	-	-
9	AQF41	0.0005	0.00010	-	-	-	-	-
10	AQF41	0.0005	0.00010	-	-	-	-	-
11	AQF41	0.0042	0.00010	-	-	-	-	-
12	AQF41	0.0046	0.00012	-	-	-	-	-
1	AQF42	0.0045	0.00015	-	-	-	-	-
2	AQF42	0.0047	0.00015	-	-	-	-	-
3	AQF42	0.0012	0.00015	-	-	-	-	-
4	AQF42	0.0050	0.00015	-	-	-	-	-
5	AQF42	0.0012	0.00010	-	-	-	-	-
6	AQF42	0.0005	0.00010	-	-	-	-	-
7	AQF42	0.0087	0.00010	-	-	-	-	-
8	AQF42	0.0029	0.00010	-	-	-	-	-
9	AQF42	0.0005	0.00010	-	-	-	-	-
10	AQF42	0.0011	0.00010	-	-	-	-	-
11	AQF42	0.0032	0.00010	-	-	-	-	-
12	AQF42	0.0039	0.00012	-	-	-	-	-
1	AQF43	0.0011	0.00015	-	-	-	-	-
2	AQF43	0.0013	0.00015	-	-	-	-	-
3	AQF43	0.0015	0.00015	-	-	-	-	-
4	AQF43	0.0022	0.00015	-	-	-	-	-
5	AQF43	0.0015	0.00010	-	-	-	-	-
6	AQF43	0.0044	0.00010	-	-	-	-	-
7	AQF43	0.0013	0.00010	-	-	-	-	-
8	AQF43	0.0005	0.00010	-	-	-	-	-
9	AQF43	0.0005	0.00010	-	-	-	-	-
10	AQF43	0.0022	0.00010	-	-	-	-	-
11	AQF43	0.0047	0.00010	-	-	-	-	-
12	AQF43	0.0029	0.00012	-	-	-	-	-
1	AQF44	0.0038	0.00015	-	-	-	-	-
2	AQF44	0.0030	0.00015	-	-	-	-	-
3	AQF44	0.0023	0.00015	-	-	-	-	-
4	AQF44	0.0027	0.00015	-	-	-	-	-
5	AQF44	0.0005	0.00010	-	-	-	-	-
6	AQF44	0.0032	0.00010	-	-	-	-	-
7	AQF44	0.0005	0.00010	-	-	-	-	-
8	AQF44	0.0025	0.00010	-	-	-	-	-
9	AQF44	0.0005	0.00010	-	-	-	-	-
10	AQF44	0.0005	0.00010	-	-	-	-	-
11	AQF44	0.0048	0.00010	-	-	-	-	-
12	AQF44	0.0043	0.00012	-	-	-	-	-
1	AQF45	0.0022	0.00015	-	-	-	-	-
2	AQF45	0.0018	0.00015	-	-	-	-	-
3	AQF45	0.0014	0.00015	-	-	-	-	-
4	AQF45	0.0016	0.00015	-	-	-	-	-
5	AQF45	0.0013	0.00010	-	-	-	-	-
6	AQF45	0.0011	0.00010	-	-	-	-	-
7	AQF45	0.0021	0.00010	-	-	-	-	-
8	AQF45	0.0012	0.00010	-	-	-	-	-
9	AQF45	0.0005	0.00010	-	-	-	-	-
10	AQF45	0.0016	0.00010	-	-	-	-	-
11	AQF45	0.0058	0.00010	-	-	-	-	-
12	AQF45	0.0005	0.00010	-	-	-	-	-
May-Oct	All Stn Median	0.0015	0.00010	-	-	-	-	-
May-Oct	All Stn 90P	0.0045	0.00010	-	-	-	-	-
May-Oct	All Stn 10P	0.0005	0.00010	-	-	-	-	-

10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations

Month	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient
		D_Oxygen_field	D_Oxygen_perce	ORP_field	pH_field	Specific_Con	TDS_field	Temp_field	Turbidity_fiel	Acidity(CaCO	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(CaCO3)	(CO3)_carbonat	(HCO3)_bicarbona	(OH)_hydroxide	Conductivity	DOC_D	Hardness(Ca	Hardness(Ca	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia(N)	Nitrate(N)	Nitrite(N)
		mg/L	%	mV	pH	d	mg/L	C	d	3)	nate	ate	ide	CO3)_phenol	_T	e	te	mg/L	µS/cm	mg/L	CO3)_D	CO3)_T	pH	mg/L	mg/L	mg/L	mg/L	NTU	_T	mg/L	mg/L
1	AQF40	9.8	67.3	-	-	-	-	-	-	-	-	-	-	-	16.2	-	-	-	-	-	-	-	-	-	10.0	-	-	0.097	0.071	0.005	
2	AQF40	10.7	73.2	-	-	-	-	-	-	-	-	-	-	-	15.9	-	-	-	-	-	-	-	-	-	9.7	-	-	0.063	0.088	0.005	
3	AQF40	11.5	79.1	-	-	-	-	0.3	-	-	-	-	-	-	15.6	0.49	23.5	0.48	-	-	-	22.2	-	-	9.5	-	-	0.029	0.105	0.005	
4	AQF40	19.6	136.7	-	-	-	-	0.7	-	-	-	-	-	-	19.6	0.40	22.9	0.33	48.9	-	-	21.7	-	-	9.0	-	-	0.013	0.097	0.001	
5	AQF40	12.2	92.6	-	-	-	-	3.9	-	-	-	-	-	-	17.0	0.30	20.8	0.17	-	-	-	19.6	-	-	8.6	-	-	0.011	0.039	0.001	
6	AQF40	8.8	88.6	-	-	-	-	15.0	-	-	-	-	-	-	15.9	0.30	19.4	0.17	-	-	-	18.9	-	-	9.7	-	-	0.012	0.012	0.005	
7	AQF40	6.7	70.7	-	-	-	-	18.2	-	-	-	-	-	-	17.0	0.30	20.8	0.17	-	-	-	19.8	-	-	8.7	-	-	0.018	0.005	0.001	
8	AQF40	6.0	65.5	-	-	-	-	19.4	-	-	-	-	-	-	17.9	0.30	21.8	0.17	-	-	-	19.2	-	-	9.1	-	-	0.026	0.005	0.001	
9	AQF40	7.8	77.4	-	-	-	-	13.4	-	-	-	-	-	-	18.0	0.30	21.9	0.17	-	-	-	19.3	-	-	8.8	-	-	0.029	0.005	0.001	
10	AQF40	11.7	88.6	-	-	-	-	3.6	-	-	-	-	-	-	17.8	0.30	21.6	0.17	-	-	-	19.5	-	-	-	-	-	0.021	0.027	0.001	
11	AQF40	10.2	70.2	-	-	-	-	0.4	-	-	-	-	-	-	17.9	0.30	21.8	0.17	-	-	-	18.8	-	-	10.0	-	-	0.019	0.026	0.001	
12	AQF40	10.0	68.7	-	-	-	-	0.3	-	-	-	-	-	-	17.1	-	-	-	-	-	-	-	-	-	10.0	-	-	0.058	0.049	0.003	
1	AQF41	12.4	85.4	-	-	-	-	0.4	-	-	-	-	-	-	18.1	-	-	-	-	-	-	-	-	-	10.1	-	-	0.049	0.065	0.005	
2	AQF41	12.3	84.0	-	-	-	-	0.4	-	-	-	-	-	-	18.6	-	-	-	-	-	-	-	-	-	10.1	-	-	0.041	0.090	0.005	
3	AQF41	12.1	82.5	-	-	-	-	0.3	-	-	-	-	-	-	19.2	0.49	23.6	0.48	-	-	-	21.8	-	-	10.0	-	-	0.033	0.115	0.005	
4	AQF41	19.7	138.6	-	-	-	-	0.8	-	-	-	-	-	-	19.5	0.40	22.6	0.33	48.8	-	-	21.0	-	-	9.4	-	-	0.013	0.098	0.001	
5	AQF41	13.7	104.9	-	-	-	-	3.9	-	-	-	-	-	-	16.3	0.30	19.9	0.17	-	-	-	18.6	-	-	8.6	-	-	0.011	0.039	0.001	
6	AQF41	8.2	83.7	-	-	-	-	16.1	-	-	-	-	-	-	14.7	0.30	17.9	0.17	-	-	-	18.7	-	-	8.8	-	-	0.012	0.012	0.005	
7	AQF41	7.3	75.5	-	-	-	-	18.5	-	-	-	-	-	-	16.0	0.30	19.5	0.17	-	-	-	18.7	-	-	9.1	-	-	0.043	0.005	0.001	
8	AQF41	6.1	66.2	-	-	-	-	19.7	-	-	-	-	-	-	17.8	0.30	21.7	0.17	-	-	-	18.9	-	-	9.1	-	-	0.019	0.005	0.001	
9	AQF41	6.8	65.0	-	-	-	-	13.2	-	-	-	-	-	-	18.1	0.30	22.0	0.17	-	-	-	19.7	-	-	8.9	-	-	0.019	0.005	0.001	
10	AQF41	11.3	86.4	-	-	-	-	4.3	-	-	-	-	-	-	17.3	0.30	21.1	0.17	-	-	-	19.2	-	-	9.2	-	-	0.012	0.020	0.001	
11	AQF41	12.2	84.7	-	-	-	-	0.5	-	-	-	-	-	-	18.3	0.30	22.3	0.17	-	-	-	18.6	-	-	9.0	-	-	0.012	0.033	0.001	
12	AQF41	12.3	85.1	-	-	-	-	0.4	-	-	-	-	-	-	18.3	-	-	-	-	-	-	-	-	-	9.5	-	-	0.030	0.049	0.003	
1	AQF42	10.3	70.8	-	-	-	-	0.3	-	-	-	-	-	-	18.0	-	-	-	-	-	-	-	-	-	9.7	-	-	0.054	0.067	0.005	
2	AQF42	11.9	80.7	-	-	-	-	0.3	-	-	-	-	-	-	14.1	-	-	-	-	-	-	22.6	-	-	9.9	-	-	0.039	0.118	0.005	
3	AQF42	10.4	70.7	-	-	-	-	0.3	-	-	-	-	-	-	21.6	0.49	26.3	0.48	-	-	-	22.4	-	-	10.2	-	-	0.059	0.109	0.005	
4	AQF42	15.2	105.2	-	-	-	-	0.3	-	-	-	-	-	-	19.6	0.40	23.6	0.33	48.6	-	-	21.3	-	-	9.5	-	-	0.019	0.094	0.001	
5	AQF42	13.4	129.9	-	-	-	-	4.4	-	-	-	-	-	-	16.0	0.30	19.4	0.17	-	-	-	18.6	-	-	9.4	-	-	0.011	0.039	0.001	
6	AQF42	10.1	100.8	-	-	-	-	14.9	-	-	-	-	-	-	15.5	0.30	18.9	0.17	-	-	-	18.2	-	-	9.3	-	-	0.012	0.012	0.005	
7	AQF42	7.8	85.1	-	-	-	-	18.4	-	-	-	-	-	-	17.5	0.30	21.2	0.17	-	-	-	18.8	-	-	9.0	-	-	0.029	0.005	0.001	
8	AQF42	7.8	83.1	-	-	-	-	18.0	-	-	-	-	-	-	17.9	0.30	21.8	0.17	-	-	-	19.2	-	-	9.2	-	-	0.049	0.005	0.001	
9	AQF42	8.3	80.8	-	-	-	-	13.8	-	-	-	-	-	-	17.5	0.30	21.3	0.17	-	-	-	19.9	-	-	8.9	-	-	0.013	0.009	0.001	
10	AQF42	11.2	93.9	-	-	-	-	3.7	-	-	-	-	-	-	17.4	0.30	21.3	0.17	-	-	-	19.3	-	-	9.8	-	-	0.012	0.020	0.001	
11	AQF42	11.5	79.0	-	-	-	-	0.4	-	-	-	-	-	-	18.4	0.30	22.4	0.17	-	-	-	19.5	-	-	9.4	-	-	0.025	0.026	0.001	
12	AQF42	10.9	74.9	-	-	-	-	0.3	-	-	-	-	-	-	18.3	-	-	-	-	-	-	-	-	-	9.6	-	-	0.040	0.047	0.003	
1	AQF43	13.0	89.7	-	-	-	-	-	-	-	-	-	-	-	18.6	-	-	-	-	-	-	-	-	-	9.9	-	-	0.028	0.065	0.005	
2	AQF43	13.2	90.7	-	-	-	-	-	-	-	-	-	-	-	18.4	-	-	-	-	-	-	-	-	-	9.4	-	-	0.022	0.087	0.005	
3	AQF43	13.4	91.7	-	-	-	-	0.3	-	-	-	-	-	-	18.3	0.49	23.5	0.48	-	-	-	22.0	-	-	9.0	-	-	0.016	0.110	0.005	
4	AQF43	16.6	113.8	-	-	-	-	0.4	-	-	-	-	-	-	19.7	0.40	23.5	0.33	48.8	-	-	21.7	-	-	9.0	-	-	0.013	0.096	0.001	
5	AQF43	16.5	133.7	-	-	-	-	5.8	-	-	-	-	-	-	18.1	0.30	22.0	0.17	-	-	-	19.7	-	-	9.8	-	-	0.011	0.033	0.001	
6	AQF43	10.1	101.7	-	-	-	-	15.3	-	-	-	-	-	-	15.9	0.30	19.4	0.17	-	-	-	19.3	-	-	8.7	-	-	0.012	0.012	0.005	
7	AQF43	8.0	87.4	-	-	-	-	18.9	-	-	-	-	-	-	15.9	0.30	19.4	0.17	-	-	-	19.1	-	-	9.0	-	-	0.036	0.005	0.001	
8	AQF43	8.0	87.6	-	-	-	-	19.0	-	-	-	-	-	-	18.9	0.30	23.0	0.17	-	-	-	19.9	-	-	9.1	-	-	0.021	0.011	0.001	
9	AQF43	8.9	83.7	-	-	-	-	12.7	-	-	-	-	-	-	18.4	0.30	22.3	0.17	-	-	-	19.7	-	-	8.9	-	-	0.032	0.005	0.001	
10	AQF43	12.5	92.9	-	-	-	-	3.1	-	-	-	-	-	-	17.2	0.30	21.0	0.17	-	-	-	19.3	-	-	9.2	-	-	0.012	0.021	0.001	
11	AQF43	14.1	96.3	-	-	-	-	-	-	-	-	-	-	-	18.0	0.30	21.9	0.17	-	-	-	19.1	-	-	9.8	-	-	0.037	0.028	0.001	
12	AQF43	13.5	93.0	-	-	-	-	-	-	-	-	-	-	-	18.4	-	-	-	-	-	-	19.8	-	-	9.8	-	-	0.032	0.046	0.003	
1	AQF44	11.0	75.6	-	-	-	-	0.3	-	-	-	-	-	-	16.4	-	-	-	-	-	-	-	-	-	10.0	-	-	0.141	0.073	0.005	
2	AQF44	12.2	82.9	-	-	-	-	0.3	-	-	-	-	-	-	19.9	-	-	-	-	-	-	-	-	-	9.7	-	-	0.081	0.090	0.005	
3	AQF44	13.3	90.2	-	-	-	-	0.3	-	-	-	-	-	-	23.3	0.49	31.4	0.48	-	-	-	22.7	-	-	9.4	-	-	0.021	0.107	0.005	
4	AQF44	18.9	130.0	-	-	-	-	0.3	-	-	-	-	-	-	20.2	0.40	26.8	0.33	50.3	-	-	21.9	-	-	9.4	-	-	0.013	0.097	0.001	
5	AQF44	13.9	128.9	-	-	-	-	6.1	-	-	-	-	-	-	16.8	0.30	20.5	0.17	-	-	-	19.4	-	-	8.7	-	-	0.011	0.033	0.001	
6	AQF44	10.3	102.7	-	-	-	-	15.2	-	-	-	-	-	-	15.9	0.30	19.4	0.17	-	-	-	18.6	-	-	8.3	-	-	0.012	0.012	0.005	
7	AQF44	8.4	91.6	-	-	-	-	19.2	-	-	-	-	-	-	16.1	0.30	19.6	0.17	-	-	-	19.0	-	-	9.0	-	-	0.0			

10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	Site	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
Month	-	Nitrite_nitrat e(N) mg/L	Nitrogen(TK N) mg/L	Phosphorus_ D mg/L	Phosphorus_ T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium _T mg/L	ChromiumVI _T mg/L	Cobalt_T mg/L	Copper_T mg/L	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesium_T mg/L	Manganese_T mg/L	Mercury_T mg/L	Molybdenum_ T mg/L		
1	AQF40	0.070	-	-	0.025	0.05	1.67	0.071	10.1	0.037	0.00011	0.00046	0.00788	0.000012	0.000025	0.00688	0.0000081	7.18	0.000017	0.00024	-	0.000057	0.00062	0.31	0.000073	0.0013	2.05	0.049	0.0000025	0.00014		
2	AQF40	-	-	-	0.021	0.05	1.18	0.073	11.6	0.035	0.00012	0.00045	0.00800	0.000012	0.000025	0.00689	0.0000053	7.36	0.000017	0.00024	-	0.000057	0.00044	0.31	0.000049	0.0014	2.07	0.049	0.0000021	0.00011		
3	AQF40	-	-	-	0.018	0.05	0.69	0.076	13.1	0.034	0.00013	0.00044	0.00813	0.000012	0.000025	0.00692	0.0000025	7.55	0.000017	0.00024	-	0.000057	0.00025	0.32	0.000025	0.0015	2.10	0.050	0.0000017	0.00008		
4	AQF40	-	-	-	0.025	0.01	0.48	0.079	9.5	0.033	0.00005	0.00048	0.00772	0.000012	0.000025	0.00690	0.0000084	7.18	0.000017	0.00024	-	0.000057	0.00025	0.31	0.000025	0.0013	2.05	0.051	0.0000019	0.00008		
5	AQF40	0.044	-	-	0.023	0.05	0.44	0.066	8.0	0.053	0.00005	0.00040	0.00696	0.000050	0.000025	0.00658	0.0000025	6.55	0.000015	0.00021	-	0.000056	0.00025	0.34	0.000025	0.0010	1.88	0.067	0.0000021	0.00008		
6	AQF40	0.035	-	-	0.015	0.05	0.45	0.058	8.5	0.020	0.00005	0.00040	0.00711	0.000050	0.000025	0.00674	0.0000051	6.72	0.000016	0.00019	-	0.000057	0.00025	0.37	0.000059	0.0017	1.83	0.058	0.0000022	0.00010		
7	AQF40	0.213	-	-	0.012	0.05	0.43	0.065	9.1	0.047	0.00005	0.00042	0.00736	0.000050	0.000025	0.00685	0.0000025	6.88	0.000016	0.00015	-	0.000057	0.00025	0.24	0.000143	0.0010	1.95	0.057	0.0000014	0.00009		
8	AQF40	0.004	-	-	0.015	0.05	0.39	0.067	9.2	0.033	0.00005	0.00044	0.00642	0.000050	0.000025	0.00687	0.0000025	6.63	0.000017	0.00014	-	0.000057	0.00025	0.24	0.000025	0.0007	1.86	0.052	0.0000019	0.00012		
9	AQF40	0.004	-	-	0.012	0.05	0.41	0.065	9.3	0.044	0.00005	0.00044	0.00728	0.000050	0.000025	0.00685	0.0000025	6.98	0.000017	0.00013	-	0.000057	0.00025	0.22	0.000025	0.0013	1.97	0.049	0.0000025	0.00013		
10	AQF40	0.038	-	-	0.020	0.05	0.43	0.066	8.5	0.052	0.00005	0.00040	0.00628	0.000050	0.000025	0.00670	0.0000025	6.66	0.000016	0.00024	-	0.000057	0.00025	0.29	0.000044	0.0013	1.90	0.052	0.0000012	0.00013		
11	AQF40	0.025	-	-	0.019	0.05	0.40	0.063	8.2	0.079	0.00005	0.00041	0.00924	0.000050	0.000025	0.00666	0.0000120	6.66	0.000015	0.00029	-	0.000056	0.00065	0.33	0.000095	0.0007	1.90	0.054	0.0000025	0.00012		
12	AQF40	0.048	-	-	0.022	0.05	1.04	0.067	9.3	0.058	0.00008	0.00044	0.00857	0.000031	0.000025	0.00679	0.0000101	6.97	0.000016	0.00027	-	0.000057	0.00064	0.32	0.000084	0.0010	1.99	0.052	0.0000025	0.00013		
1	AQF41	0.065	-	-	0.025	0.05	0.47	0.071	9.6	0.038	0.00005	0.00045	0.00833	0.000012	0.000025	0.00688	0.0000175	7.40	0.000017	0.00100	-	0.000057	0.00091	0.32	0.000060	0.0014	2.05	0.049	0.0000025	0.00010		
2	AQF41	-	-	-	0.025	0.05	0.47	0.074	9.7	0.064	0.00007	0.00047	0.00892	0.000012	0.000025	0.00689	0.0000120	7.38	0.000018	0.00062	-	0.000057	0.00058	0.45	0.000068	0.0014	2.08	0.074	0.0000022	0.00009		
3	AQF41	-	-	-	0.025	0.05	0.48	0.077	9.8	0.089	0.00008	0.00050	0.00952	0.000012	0.000025	0.00692	0.0000066	7.39	0.000020	0.00024	-	0.000057	0.00025	0.57	0.000075	0.0015	2.11	0.099	0.0000019	0.00008		
4	AQF41	-	-	-	0.012	0.01	0.46	0.078	9.5	0.032	0.00005	0.00047	0.00783	0.000012	0.000025	0.00690	0.0000025	7.26	0.000017	0.00024	-	0.000057	0.00025	0.31	0.000025	0.0013	2.06	0.052	0.0000022	0.00007		
5	AQF41	0.038	-	-	0.015	0.05	0.49	0.062	7.9	0.052	0.00005	0.00040	0.00685	0.000050	0.000025	0.00658	0.0000025	6.36	0.000015	0.00017	-	0.000056	0.00088	0.40	0.000056	0.0007	1.79	0.064	0.0000025	0.00010		
6	AQF41	0.035	-	-	0.020	0.05	0.90	0.058	8.6	0.091	0.00005	0.00039	0.01090	0.000050	0.000025	0.00674	0.0000086	6.97	0.000016	0.00029	-	0.000057	0.00064	0.51	0.000089	0.0017	1.84	0.097	0.0000036	0.00009		
7	AQF41	0.004	-	-	0.014	0.05	0.39	0.063	9.0	0.041	0.00005	0.00041	0.00668	0.000050	0.000025	0.00685	0.0000025	6.65	0.000016	0.00015	-	0.000057	0.00025	0.26	0.000025	0.0007	1.89	0.052	0.0000016	0.00008		
8	AQF41	0.004	-	-	0.015	0.05	0.43	0.066	9.2	0.034	0.00005	0.00045	0.00654	0.000050	0.000025	0.00687	0.0000025	6.57	0.000017	0.00026	-	0.000057	0.00025	0.24	0.000025	0.0007	1.85	0.052	0.0000020	0.00008		
9	AQF41	0.004	-	-	0.015	0.05	0.40	0.065	9.3	0.054	0.00005	0.00043	0.00750	0.000050	0.000025	0.00685	0.0000025	7.14	0.000017	0.00016	-	0.000057	0.00025	0.25	0.000025	0.0015	2.00	0.050	0.0000025	0.00013		
10	AQF41	0.020	-	-	0.015	0.05	0.40	0.064	8.4	0.037	0.00005	0.00041	0.00655	0.000050	0.000025	0.00670	0.0000025	6.71	0.000016	0.00016	-	0.000057	0.00025	0.26	0.000025	0.0014	1.86	0.050	0.0000011	0.00011		
11	AQF41	0.033	-	-	0.030	0.05	0.43	0.063	8.3	0.035	0.00005	0.00040	0.00624	0.000050	0.000025	0.00666	0.0000025	6.62	0.000015	0.00014	-	0.000056	0.00025	0.23	0.000025	0.0007	1.84	0.043	0.0000025	0.00010		
12	AQF41	0.049	-	-	0.028	0.05	0.45	0.067	9.1	0.037	0.00005	0.00043	0.00730	0.000031	0.000025	0.00679	0.0000101	7.07	0.000016	0.00057	-	0.000057	0.00058	0.28	0.000043	0.0011	1.96	0.047	0.0000025	0.00010		
1	AQF42	0.066	-	-	0.025	0.05	0.80	0.074	9.9	0.050	0.00022	0.00046	0.00874	0.000012	0.000025	0.00688	0.0000025	7.50	0.000017	0.00024	-	0.000057	0.00025	0.35	0.000025	0.0014	2.11	0.053	0.0000025	0.00011		
2	AQF42	-	-	-	0.025	0.05	0.76	0.073	18.0	0.065	0.00028	0.00048	0.00938	0.000012	0.000025	0.00689	0.0000103	7.64	0.000017	0.00024	-	0.000057	0.00096	0.38	0.000079	0.0014	2.11	0.059	0.0000011	0.00009		
3	AQF42	-	-	-	0.025	0.05	0.64	0.076	9.6	0.119	0.00005	0.00046	0.01001	0.000012	0.000025	0.00692	0.0000025	7.56	0.000029	0.00049	-	0.000124	0.00434	0.61	0.000084	0.0015	2.14	0.088	0.0000025	0.00009		
4	AQF42	-	-	-	0.030	0.01	0.48	0.075	9.5	0.037	0.00005	0.00049	0.00855	0.000012	0.000025	0.00690	0.0000099	7.33	0.000017	0.00024	-	0.000057	0.00090	0.32	0.000070	0.0013	2.08	0.054	0.0000025	0.00011		
5	AQF42	0.039	-	-	0.015	0.05	0.45	0.065	7.9	0.052	0.00005	0.00044	0.00683	0.000050	0.000025	0.00658	0.0000025	6.23	0.000015	0.00017	-	0.000056	0.00025	0.50	0.000025	0.0013	1.77	0.096	0.0000025	0.00011		
6	AQF42	0.035	-	-	0.016	0.05	0.45	0.058	8.5	0.057	0.00005	0.00039	0.00708	0.000050	0.000025	0.00674	0.0000025	6.58	0.000016	0.00023	-	0.000057	0.00025	0.39	0.000056	0.0017	1.79	0.051	0.0000021	0.00022		
7	AQF42	0.004	-	-	0.015	0.05	0.52	0.062	9.1	0.046	0.00005	0.00041	0.00689	0.000050	0.000025	0.00685	0.0000066	6.53	0.000016	0.00121	-	0.000057	0.00060	0.28	0.000025	0.0007	1.88	0.055	0.0000019	0.00010		
8	AQF42	0.004	-	-	0.014	0.05	0.39	0.066	9.2	0.036	0.00005	0.00046	0.00665	0.000050	0.000025	0.00687	0.0000025	6.84	0.000017	0.00015	-	0.000057	0.00025	0.25	0.000025	0.0007	1.94	0.055	0.0000022	0.00009		
9	AQF42	0.008	-	-	0.015	0.05	0.49	0.065	9.1	0.038	0.00005	0.00044	0.00712	0.000050	0.000025	0.00685	0.0000025	7.00	0.000017	0.00014	-	0.000057	0.00025	0.21	0.000025	0.0007	1.97	0.049	0.0000025	0.00011		
10	AQF42	0.019	-	-	0.015	0.05	0.41	0.064	8.4	0.041	0.00005	0.00041	0.00646	0.000050	0.000025	0.00670	0.0000025	6.68	0.000016	0.00014	-	0.000057	0.00025	0.27	0.000025	0.0013	1.91	0.049	0.0000012	0.00013		
11	AQF42	0.025	-	-	0.015	0.05	0.47	0.063	8.4	0.152	0.00013	0.00043	0.01508	0.000050	0.000025	0.00666	0.0000295	6.83	0.000029	0.00073	-	0.000123	0.00088	0.44	0.000137	0.0013	1.96	0.106	0.0000025	0.00016		
12	AQF42	0.046	-	-	0.020	0.05	0.64	0.069	9.3	0.101	0.00017	0.00045	0.01189	0.000031	0.000025	0.00679	0.0000160	7.22	0.000023	0.00048	-	0.000090	0.00057	0.40	0.000081	0.0013	2.05	0.080	0.0000025	0.00013		
1	AQF43	0.064	-	-	0.025	0.05	0.47	0.072	9.4	0																						

90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	Site	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
Month	-	Nickel_T mg/L	Potassium_T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L	
1	AQF40	0.00025	0.88	0.00129	0.00006	3.24	0.000005	2.16	0.026	3.14	0.0001	0.000005	0.00005	0.00036	0.0012	0.00005	0.00019	0.00025	0.0052	0.00010	0.020	0.00005	0.00033	0.013	0.000012	0.000025	0.0071	0.0000025	7.02	
2	AQF40	0.00025	0.90	0.00129	0.00004	3.38	0.000005	2.16	0.026	3.56	0.0001	0.000005	0.00005	0.00034	0.0010	0.00005	0.00019	0.00025	0.0056	0.00015	0.020	0.00005	0.00034	0.014	0.000012	0.000025	0.0071	0.0000025	7.08	
3	AQF40	0.00025	0.93	0.00130	0.00003	3.53	0.000005	2.18	0.027	4.00	0.0001	0.000005	0.00005	0.00031	0.0008	0.00005	0.00019	0.00025	0.0059	0.00020	0.021	0.00005	0.00035	0.014	0.000012	0.000025	0.0071	0.0000025	7.16	
4	AQF40	0.00025	0.90	0.00130	0.00013	3.19	0.000005	2.09	0.027	3.16	0.0001	0.000005	0.00005	0.00007	0.0008	0.00005	0.00019	0.00025	0.0015	0.00010	0.020	0.00005	0.00035	0.020	0.000012	0.000025	0.0071	0.0000101	7.00	
5	AQF40	0.00025	0.87	0.00125	0.00003	2.50	0.000005	1.87	0.024	2.67	0.0001	0.000005	0.00005	0.00011	0.0015	0.00005	0.00017	0.00025	0.0015	0.00014	0.035	0.00005	0.00029	0.007	0.000050	0.000025	0.0068	0.0000025	6.42	
6	AQF40	0.00025	0.82	0.00116	0.00003	2.12	0.000005	1.76	0.022	2.92	0.0001	0.000005	0.00005	0.00025	0.0015	0.00005	0.00018	0.00025	0.0048	0.00010	0.034	0.00005	0.00033	0.006	0.000050	0.000025	0.0069	0.0000025	6.37	
7	AQF40	0.00025	0.87	0.00136	0.00003	2.26	0.000005	1.90	0.025	3.08	0.0001	0.000005	0.00005	0.00007	0.0013	0.00005	0.00020	0.00025	0.0015	0.00009	0.026	0.00005	0.00035	0.006	0.000050	0.000025	0.0071	0.0000051	6.69	
8	AQF40	0.00025	0.79	0.00126	0.00003	2.22	0.000005	2.02	0.024	3.12	0.0001	0.000005	0.00005	0.00007	0.0009	0.00005	0.00019	0.00025	0.0043	0.00010	0.020	0.00005	0.00034	0.006	0.000050	0.000025	0.0071	0.0000025	6.49	
9	AQF40	0.00025	0.82	0.00126	0.00003	2.46	0.000005	1.92	0.025	3.09	0.0001	0.000005	0.00005	0.00014	0.0010	0.00005	0.00019	0.00025	0.0015	0.00010	0.030	0.00005	0.00036	0.007	0.000050	0.000025	0.0071	0.0000025	6.56	
10	AQF40	0.00052	0.80	0.00124	0.00003	2.51	0.000005	1.90	0.024	2.85	0.0001	0.000005	0.00005	0.00007	0.0017	0.00005	0.00018	0.00025	0.0015	0.00009	0.022	0.00005	0.00033	0.009	0.000050	0.000025	0.0069	0.0000025	6.45	
11	AQF40	0.00025	0.82	0.00133	0.00003	2.88	0.000005	1.83	0.024	2.79	0.0001	0.000005	0.00005	0.00007	0.0038	0.00005	0.00019	0.00025	0.0045	0.00010	0.021	0.00005	0.00031	0.006	0.000050	0.000025	0.0068	0.0000025	6.29	
12	AQF40	0.00025	0.86	0.00131	0.00004	3.06	0.000005	2.00	0.025	3.00	0.0001	0.000005	0.00005	0.00022	0.0025	0.00005	0.00019	0.00025	0.0048	0.00010	0.021	0.00005	0.00033	0.010	0.000031	0.000025	0.0070	0.0000025	6.71	
1	AQF41	0.00025	0.88	0.00121	0.00005	3.33	0.000005	2.18	0.026	3.14	0.0001	0.000005	0.00005	0.00155	0.0010	0.00005	0.00019	0.00025	0.0108	0.00010	0.020	0.00005	0.00041	0.014	0.000012	0.000025	0.0071	0.0000140	7.01	
2	AQF41	0.00025	0.92	0.00132	0.00004	3.44	0.000005	2.17	0.026	3.15	0.0001	0.000005	0.00005	0.00081	0.0023	0.00005	0.00020	0.00025	0.0075	0.00010	0.020	0.00005	0.00042	0.011	0.000012	0.000025	0.0071	0.0000083	7.11	
3	AQF41	0.00025	0.95	0.00144	0.00003	3.54	0.000005	2.16	0.027	3.19	0.0001	0.000005	0.00005	0.00007	0.0037	0.00005	0.00020	0.00025	0.0041	0.00010	0.021	0.00005	0.00043	0.008	0.000012	0.000025	0.0071	0.0000025	7.25	
4	AQF41	0.00025	0.90	0.00127	0.00015	3.22	0.000005	2.10	0.026	3.16	0.0001	0.000005	0.00005	0.00007	0.0008	0.00005	0.00019	0.00025	0.0015	0.00010	0.020	0.00005	0.00033	0.020	0.000012	0.000025	0.0071	0.0000025	6.94	
5	AQF41	0.00025	0.82	0.00110	0.00003	2.48	0.000005	1.59	0.023	2.67	0.0001	0.000005	0.00005	0.00007	0.0016	0.00005	0.00017	0.00025	0.0015	0.00010	0.029	0.00005	0.00028	0.007	0.000050	0.000025	0.0068	0.0000025	6.17	
6	AQF41	0.00025	0.86	0.00126	0.00003	2.19	0.000005	1.75	0.024	2.92	0.0001	0.000005	0.00005	0.00017	0.0033	0.00005	0.00018	0.00025	0.0069	0.00010	0.032	0.00005	0.00031	0.010	0.000050	0.000025	0.0069	0.0000025	6.33	
7	AQF41	0.00025	0.79	0.00114	0.00003	2.23	0.000005	1.82	0.024	3.08	0.0001	0.000005	0.00005	0.00015	0.0008	0.00005	0.00019	0.00025	0.0015	0.00010	0.025	0.00005	0.00032	0.006	0.000050	0.000025	0.0071	0.0000025	6.41	
8	AQF41	0.00025	0.79	0.00128	0.00005	2.22	0.000005	2.05	0.024	3.12	0.0001	0.000005	0.00005	0.00007	0.0008	0.00005	0.00019	0.00025	0.0051	0.00010	0.022	0.00005	0.00033	0.006	0.000050	0.000025	0.0071	0.0000025	6.42	
9	AQF41	0.00025	0.84	0.00134	0.00003	2.62	0.000005	1.98	0.024	3.09	0.0001	0.000005	0.00005	0.00007	0.0016	0.00005	0.00019	0.00025	0.0049	0.00010	0.023	0.00005	0.00033	0.007	0.000050	0.000025	0.0071	0.0000025	6.67	
10	AQF41	0.00025	0.76	0.00117	0.00003	2.56	0.000005	1.85	0.023	2.85	0.0001	0.000005	0.00005	0.00007	0.0011	0.00005	0.00018	0.00025	0.0045	0.00010	0.018	0.00005	0.00031	0.006	0.000050	0.000025	0.0069	0.0000025	6.39	
11	AQF41	0.00025	0.78	0.00118	0.00003	2.71	0.000005	1.80	0.023	2.79	0.0001	0.000005	0.00005	0.00007	0.0009	0.00005	0.00017	0.00025	0.0015	0.00010	0.018	0.00005	0.00030	0.006	0.000050	0.000025	0.0068	0.0000025	6.21	
12	AQF41	0.00025	0.84	0.00120	0.00004	3.02	0.000005	2.00	0.025	3.00	0.0001	0.000005	0.00005	0.00081	0.0009	0.00005	0.00019	0.00025	0.0062	0.00010	0.019	0.00005	0.00036	0.010	0.000031	0.000025	0.0070	0.0000083	6.66	
1	AQF42	0.00025	0.89	0.00135	0.00006	3.41	0.000005	2.21	0.026	3.41	0.0001	0.000005	0.00005	0.00054	0.0017	0.00005	0.00024	0.00025	0.0039	0.00010	0.020	0.00005	0.00035	0.014	0.000012	0.000025	0.0071	0.0000025	7.00	
2	AQF42	0.00025	1.02	0.00136	0.00003	3.52	0.000005	2.23	0.027	11.08	0.0001	0.000005	0.00005	0.00201	0.0022	0.00005	0.00021	0.00025	0.0245	0.00010	0.023	0.00005	0.00036	0.021	0.000012	0.000025	0.0071	0.0000025	7.25	
3	AQF42	0.00077	0.95	0.00151	0.00003	3.72	0.000005	2.18	0.027	3.19	0.0001	0.000005	0.00005	0.00007	0.0017	0.00005	0.00021	0.00025	0.0052	0.00010	0.034	0.00005	0.00039	0.009	0.000012	0.000025	0.0071	0.0000025	7.26	
4	AQF42	0.00025	0.92	0.00127	0.00013	3.07	0.000005	2.11	0.027	3.16	0.0001	0.000005	0.00005	0.00007	0.0012	0.00005	0.00022	0.00025	0.0031	0.00010	0.023	0.00005	0.00036	0.020	0.000012	0.000025	0.0071	0.0000116	7.07	
5	AQF42	0.00025	0.79	0.00111	0.00003	2.39	0.000005	1.76	0.022	2.67	0.0001	0.000005	0.00005	0.00027	0.0015	0.00005	0.00017	0.00025	0.0015	0.00010	0.032	0.00005	0.00031	0.007	0.000050	0.000025	0.0068	0.0000025	6.14	
6	AQF42	0.00025	0.80	0.00115	0.00003	2.21	0.000005	1.76	0.022	2.92	0.0001	0.000005	0.00005	0.00029	0.0017	0.00005	0.00018	0.00025	0.0015	0.00010	0.033	0.00005	0.00032	0.007	0.000050	0.000025	0.0069	0.0000025	6.18	
7	AQF42	0.00025	0.79	0.00125	0.00003	2.24	0.000005	1.84	0.023	3.08	0.0001	0.000005	0.00005	0.00041	0.0012	0.00005	0.00019	0.00025	0.0058	0.00010	0.024	0.00005	0.00031	0.007	0.000050	0.000025	0.0071	0.0000025	6.41	
8	AQF42	0.00025	0.82	0.00128	0.00005	2.47	0.000005	1.90	0.025	3.12	0.0001	0.000005	0.00005	0.00007	0.0010	0.00005	0.00019	0.00025	0.0015	0.00010	0.021	0.00005	0.00033	0.006	0.000050	0.000025	0.0071	0.0000025	6.53	
9	AQF42	0.00025	0.82	0.00121	0.00003	2.42	0.000005	1.93	0.025	3.09	0.0001	0.000005	0.00005	0.00007	0.0007	0.00005	0.00019	0.00025	0.0030	0.00010	0.024	0.00005	0.00034	0.007	0.000050	0.000025	0.0071	0.0000025	6.74	
10	AQF42	0.00025	0.80	0.00120	0.00003	2.72	0.000005	1.84	0.023	2.85	0.0001	0.000005	0.00005	0.00007	0.0011	0.00005	0.00019	0.00025	0.0015	0.00010	0.018	0.00005	0.00032	0.006	0.000050	0.000025	0.0069	0.0000025	6.43	
11	AQF42	0.00025	0.85	0.00143	0.00003	2.85	0.000005	1.84	0.025	2.79	0.0001	0.000005	0.00005	0.00018	0.0076	0.00005	0.00023	0.000												

10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

Month	Site	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	
		Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L
1	AQF40	0.000017	0.00024	0.000058	0.0027	0.16	0.00013	0.00140	2.1	0.045	-	0.00010	0.00025	0.89	0.00123	0.000025	3.2	0.000005	2.2	0.026	3.17	0.00010	0.000005	0.00005	0.000062	0.00015	0.000054	0.00021	0.00025
2	AQF40	0.000017	0.00024	0.000058	0.0019	0.17	0.00009	0.00125	2.1	0.046	-	0.00011	0.00025	0.89	0.00123	0.000033	3.2	0.000005	2.2	0.026	3.27	0.00010	0.000005	0.00005	0.000086	0.00015	0.000054	0.00021	0.00025
3	AQF40	0.000017	0.00024	0.000058	0.0012	0.19	0.00005	0.00111	2.1	0.047	0.0000010	0.00013	0.00025	0.88	0.00124	0.000041	3.2	0.000005	2.2	0.026	3.39	0.00010	0.000005	0.00005	0.000110	0.00015	0.000054	0.00021	0.00025
4	AQF40	0.000017	0.00024	0.000058	0.0020	0.18	0.00010	0.00130	2.1	0.049	0.0000015	0.00008	0.00025	0.98	0.00134	0.000025	3.1	0.000005	2.2	0.026	3.19	0.00010	0.000005	0.00005	0.000148	0.00015	0.000054	0.00021	0.00025
5	AQF40	0.000015	0.00010	0.000057	0.0006	0.21	0.00003	0.00127	1.9	0.057	0.0000019	0.00015	0.00025	0.85	0.00116	0.000025	2.5	0.000005	1.8	0.023	2.70	0.00010	0.000005	0.00005	0.000132	0.00069	0.000053	0.00018	0.00025
6	AQF40	0.000016	0.00013	0.000057	0.0003	0.18	0.00003	0.00071	1.9	0.039	0.0000018	0.00010	0.00025	0.82	0.00110	0.000025	2.1	0.000005	1.8	0.022	2.95	0.00010	0.000005	0.00005	0.000195	0.00049	0.000054	0.00019	0.00025
7	AQF40	0.000017	0.00011	0.000058	0.0003	0.11	0.00007	0.00106	1.9	0.043	0.0000012	0.00012	0.00025	0.85	0.00126	0.000025	2.0	0.000005	1.9	0.024	3.26	0.00010	0.000005	0.00005	0.000115	0.00040	0.000054	0.00021	0.00025
8	AQF40	0.000017	0.00012	0.000058	0.0003	0.15	0.00003	0.00073	1.9	0.044	-	0.00011	0.00025	0.81	0.00119	0.000051	2.2	0.000005	1.9	0.025	3.15	0.00010	0.000005	0.00005	0.000243	0.00036	0.000054	0.00021	0.00025
9	AQF40	0.000017	0.00021	0.000058	0.0025	0.13	0.00014	0.00072	1.9	0.044	-	0.00016	0.00025	0.80	0.00128	0.000051	2.4	0.000005	1.9	0.024	3.12	0.00010	0.000005	0.00005	0.000062	0.00053	0.000054	0.00021	0.00025
10	AQF40	0.000016	0.00008	0.000057	0.0015	0.14	0.00007	0.00099	1.9	0.039	0.0000011	0.00012	0.00025	0.78	0.00116	0.000042	2.4	0.000005	1.9	0.023	3.08	0.00010	0.000005	0.00005	0.000061	0.00027	0.000054	0.00020	0.00025
11	AQF40	0.000015	0.00015	0.000057	0.0049	0.14	0.00017	0.00070	1.8	0.039	-	0.00011	0.00025	0.80	0.00113	0.000025	2.5	0.000005	1.8	0.023	2.82	0.00010	0.000005	0.00005	0.000061	0.00033	0.000053	0.00018	0.00025
12	AQF40	0.000016	0.00019	0.000058	0.0038	0.15	0.00015	0.00105	2.0	0.042	-	0.00010	0.00025	0.85	0.00118	0.000025	2.9	0.000005	2.0	0.025	3.03	0.00010	0.000005	0.00005	0.000062	0.00024	0.000054	0.00020	0.00025
1	AQF41	0.000017	0.00024	0.000058	0.0037	0.17	0.00016	0.00130	2.1	0.045	-	0.00009	0.00052	0.90	0.00128	0.000025	3.2	0.000005	2.2	0.026	3.17	0.00010	0.000005	0.00005	0.000062	0.00015	0.000054	0.00021	0.00025
2	AQF41	0.000017	0.00024	0.000058	0.0020	0.19	0.00009	0.00118	2.1	0.047	-	0.00008	0.00038	0.89	0.00127	0.000025	3.2	0.000005	2.2	0.026	3.19	0.00010	0.000005	0.00005	0.000062	0.00020	0.000054	0.00021	0.00025
3	AQF41	0.000017	0.00024	0.000058	0.0004	0.20	0.00003	0.00107	2.1	0.048	0.0000012	0.00008	0.00025	0.90	0.00125	0.000025	3.2	0.000005	2.2	0.026	3.22	0.00010	0.000005	0.00005	0.000063	0.00025	0.000054	0.00021	0.00025
4	AQF41	0.000017	0.00024	0.000058	0.0017	0.19	0.00008	0.00130	2.1	0.050	0.0000019	0.00009	0.00025	0.89	0.00128	0.000019	3.1	0.000005	2.1	0.026	3.19	0.00010	0.000005	0.00005	0.000129	0.00035	0.000054	0.00021	0.00025
5	AQF41	0.000015	0.00012	0.000057	0.0016	0.22	0.00003	0.00069	1.8	0.051	0.0000025	0.00014	0.00025	0.83	0.00105	0.000025	2.5	0.000005	1.7	0.022	2.70	0.00010	0.000005	0.00005	0.000060	0.00043	0.000053	0.00018	0.00025
6	AQF41	0.000016	0.00013	0.000057	0.0006	0.18	0.00003	0.00071	1.8	0.040	0.0000022	0.00009	0.00025	0.79	0.00113	0.000025	2.0	0.000005	1.8	0.021	2.95	0.00010	0.000005	0.00005	0.000061	0.00050	0.000054	0.00020	0.00025
7	AQF41	0.000017	0.00012	0.000058	0.0002	0.15	0.00003	0.00072	1.9	0.042	0.0000010	0.00010	0.00025	0.78	0.00112	0.000025	2.2	0.000005	1.8	0.023	3.11	0.00010	0.000005	0.00005	0.000062	0.00035	0.000054	0.00021	0.00025
8	AQF41	0.000017	0.00012	0.000058	0.0003	0.15	0.00003	0.00073	1.9	0.044	-	0.00010	0.00025	0.78	0.00125	0.000025	2.2	0.000005	1.9	0.024	3.15	0.00010	0.000005	0.00005	0.000463	0.00038	0.000054	0.00021	0.00025
9	AQF41	0.000017	0.00005	0.000058	0.0004	0.12	0.00003	0.00130	1.9	0.043	-	0.00012	0.00025	0.78	0.00118	0.000025	2.3	0.000005	1.9	0.024	3.60	0.00010	0.000005	0.00005	0.000549	0.00033	0.000054	0.00020	0.00025
10	AQF41	0.000016	0.00012	0.000057	0.0003	0.12	0.00003	0.00071	1.9	0.038	0.0000010	0.00014	0.00025	0.74	0.00105	0.000025	2.4	0.000005	1.9	0.022	2.88	0.00010	0.000005	0.00005	0.000061	0.00015	0.000054	0.00019	0.00025
11	AQF41	0.000015	0.00005	0.000057	0.0040	0.12	0.00014	0.00070	1.8	0.037	-	0.00009	0.00025	0.76	0.00114	0.000025	2.5	0.000005	1.8	0.023	2.82	0.00010	0.000005	0.00005	0.000061	0.00015	0.000053	0.00018	0.00025
12	AQF41	0.000016	0.00015	0.000058	0.0038	0.15	0.00015	0.00100	2.0	0.042	-	0.00009	0.00038	0.83	0.00122	0.000025	2.8	0.000005	2.0	0.024	3.03	0.00010	0.000005	0.00005	0.000062	0.00015	0.000054	0.00020	0.00025
1	AQF42	0.000017	0.00024	0.000058	0.0031	0.18	0.00015	0.00140	2.1	0.046	-	0.00012	0.00025	0.89	0.00129	0.000025	3.2	0.000005	2.2	0.026	3.17	0.00010	0.000005	0.00005	0.000186	0.00015	0.000054	0.00025	0.00025
2	AQF42	0.000017	0.00024	0.000058	0.0019	0.20	0.00007	0.00073	2.2	0.053	0.0000004	0.00009	0.00025	1.05	0.00131	0.000025	3.4	0.000005	2.3	0.027	3.47	0.00010	0.000005	0.00005	0.000186	0.00040	0.000054	0.00022	0.00025
3	AQF42	0.000017	0.00024	0.000058	0.0004	0.22	0.00003	0.00149	2.1	0.050	-	0.00009	0.00025	0.87	0.00128	0.000062	3.3	0.000005	2.2	0.026	3.22	0.00010	0.000005	0.00005	0.000063	0.00040	0.000054	0.00022	0.00025
4	AQF42	0.000017	0.00024	0.000058	0.0024	0.19	0.00009	0.00140	2.1	0.051	-	0.00010	0.00025	0.92	0.00122	0.000025	3.1	0.000005	5.9	0.026	3.67	0.00010	0.000005	0.00005	0.000158	0.00034	0.000054	0.00024	0.00025
5	AQF42	0.000015	0.00014	0.000057	0.0007	0.30	0.00003	0.00069	1.8	0.075	0.0000016	0.00011	0.00025	0.81	0.00113	0.000025	2.5	0.000005	1.7	0.022	2.70	0.00010	0.000005	0.00005	0.000060	0.00050	0.000053	0.00018	0.00025
6	AQF42	0.000016	0.00013	0.000057	0.0003	0.18	0.00003	0.00071	1.8	0.038	0.0000017	0.00010	0.00025	0.84	0.00109	0.000025	2.1	0.000005	1.8	0.022	2.95	0.00010	0.000005	0.00005	0.000301	0.00045	0.000054	0.00019	0.00025
7	AQF42	0.000017	0.00005	0.000058	0.0002	0.15	0.00003	0.00072	1.9	0.043	0.0000015	0.00010	0.00025	0.79	0.00115	0.000025	2.1	0.000005	1.8	0.023	3.41	0.00010	0.000005	0.00005	0.000673	0.00043	0.000054	0.00021	0.00025
8	AQF42	0.000017	0.00011	0.000058	0.0004	0.15	0.00012	0.00073	1.9	0.044	-	0.00012	0.00025	0.80	0.00127	0.000025	2.2	0.000005	1.9	0.024	3.15	0.00010	0.000005	0.00005	0.000062	0.00045	0.000054	0.00021	0.00025
9	AQF42	0.000017	0.00012	0.000058	0.0002	0.12	0.00003	0.00072	2.0	0.042	-	0.00010	0.00025	0.81	0.00116	0.000059	2.3	0.000005	1.9	0.024	3.12	0.00010	0.000005	0.00005	0.000062	0.00031	0.000054	0.00021	0.00025
10	AQF42	0.000016	0.00005	0.000057	0.0005	0.12	0.00003	0.00071	1.9	0.039	0.0000009	0.00012	0.00025	0.74	0.00108	0.000025	2.4	0.000005	1.9	0.022	2.88	0.00010	0.000005	0.00005	0.000061	0.00015	0.000054	0.00019	0.00025
11	AQF42	0.000015	0.00075	0.000057	0.0015	0.19	0.00006	0.00070	1.9	0.053	-	0.00089	0.00025	0.78	0.00115	0.000025	2.4	0.000005	1.8	0.023	2.82	0.00010	0.000005	0.00005	0.000061	0.00098	0.00088		

10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

Month	Site	Dissolved_Met al	Dissolved_Met al	Cyanides	Cyanides	Cyanides	Methylmercu ry	Methylmercu ry
		Zinc_D	Zirconium_D				Methylmercu	Methylmercu
		mg/L	mg/L	mg/L	mg/L	mg/L	ry_D	ry_T
1	AQF40	0.0044	0.00015	-	-	-	-	-
2	AQF40	0.0031	0.00015	-	-	-	-	-
3	AQF40	0.0018	0.00015	-	-	-	-	-
4	AQF40	0.0027	0.00015	-	-	-	-	-
5	AQF40	0.0029	0.00010	-	-	-	-	-
6	AQF40	0.0062	0.00010	-	-	-	-	-
7	AQF40	0.0036	0.00010	-	-	-	-	-
8	AQF40	0.0032	0.00010	-	-	-	-	-
9	AQF40	0.0046	0.00010	-	-	-	-	-
10	AQF40	0.0020	0.00011	-	-	-	-	-
11	AQF40	0.0099	0.00010	-	-	-	-	-
12	AQF40	0.0072	0.00012	-	-	-	-	-
1	AQF41	0.0050	0.00015	-	-	-	-	-
2	AQF41	0.0034	0.00015	-	-	-	-	-
3	AQF41	0.0018	0.00015	-	-	-	-	-
4	AQF41	0.0021	0.00015	-	-	-	-	-
5	AQF41	0.0246	0.00010	-	-	-	-	-
6	AQF41	0.0022	0.00010	-	-	-	-	-
7	AQF41	0.0031	0.00010	-	-	-	-	-
8	AQF41	0.0018	0.00025	-	-	-	-	-
9	AQF41	0.0005	0.00010	-	-	-	-	-
10	AQF41	0.0005	0.00010	-	-	-	-	-
11	AQF41	0.0042	0.00010	-	-	-	-	-
12	AQF41	0.0046	0.00012	-	-	-	-	-
1	AQF42	0.0045	0.00015	-	-	-	-	-
2	AQF42	0.0047	0.00015	-	-	-	-	-
3	AQF42	0.0012	0.00015	-	-	-	-	-
4	AQF42	0.0050	0.00015	-	-	-	-	-
5	AQF42	0.0012	0.00010	-	-	-	-	-
6	AQF42	0.0005	0.00010	-	-	-	-	-
7	AQF42	0.0086	0.00010	-	-	-	-	-
8	AQF42	0.0029	0.00010	-	-	-	-	-
9	AQF42	0.0005	0.00010	-	-	-	-	-
10	AQF42	0.0011	0.00010	-	-	-	-	-
11	AQF42	0.0032	0.00010	-	-	-	-	-
12	AQF42	0.0039	0.00012	-	-	-	-	-
1	AQF43	0.0011	0.00015	-	-	-	-	-
2	AQF43	0.0013	0.00015	-	-	-	-	-
3	AQF43	0.0015	0.00015	-	-	-	-	-
4	AQF43	0.0022	0.00015	-	-	-	-	-
5	AQF43	0.0015	0.00010	-	-	-	-	-
6	AQF43	0.0043	0.00010	-	-	-	-	-
7	AQF43	0.0013	0.00010	-	-	-	-	-
8	AQF43	0.0005	0.00010	-	-	-	-	-
9	AQF43	0.0005	0.00010	-	-	-	-	-
10	AQF43	0.0021	0.00010	-	-	-	-	-
11	AQF43	0.0046	0.00010	-	-	-	-	-
12	AQF43	0.0029	0.00012	-	-	-	-	-
1	AQF44	0.0038	0.00015	-	-	-	-	-
2	AQF44	0.0030	0.00015	-	-	-	-	-
3	AQF44	0.0023	0.00015	-	-	-	-	-
4	AQF44	0.0027	0.00015	-	-	-	-	-
5	AQF44	0.0005	0.00010	-	-	-	-	-
6	AQF44	0.0032	0.00010	-	-	-	-	-
7	AQF44	0.0005	0.00010	-	-	-	-	-
8	AQF44	0.0025	0.00010	-	-	-	-	-
9	AQF44	0.0005	0.00010	-	-	-	-	-
10	AQF44	0.0005	0.00010	-	-	-	-	-
11	AQF44	0.0048	0.00010	-	-	-	-	-
12	AQF44	0.0043	0.00012	-	-	-	-	-
1	AQF45	0.0022	0.00015	-	-	-	-	-
2	AQF45	0.0018	0.00015	-	-	-	-	-
3	AQF45	0.0014	0.00015	-	-	-	-	-
4	AQF45	0.0016	0.00015	-	-	-	-	-
5	AQF45	0.0013	0.00010	-	-	-	-	-
6	AQF45	0.0011	0.00010	-	-	-	-	-
7	AQF45	0.0020	0.00010	-	-	-	-	-
8	AQF45	0.0012	0.00010	-	-	-	-	-
9	AQF45	0.0005	0.00010	-	-	-	-	-
10	AQF45	0.0016	0.00010	-	-	-	-	-
11	AQF45	0.0058	0.00010	-	-	-	-	-
12	AQF45	0.0005	0.00010	-	-	-	-	-
May-Oct	All Stn Median	0.0015	0.00010	-	-	-	-	-
May-Oct	All Stn 90P	0.0045	0.00010	-	-	-	-	-
May-Oct	All Stn 10P	0.0005	0.00010	-	-	-	-	-

90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Month	-	D_Oxygen_field mg/L	D_Oxygen_percent t_field %	ORP_field mV	pH_field pH	Specific_Conductance_fiel d us/cm	TDS_field mg/L	Temp_field C	Turbidity_fiel d NTU	Acidity(CaCO3) mg/L	Alkalinity(CaCO3)_bicarbonate mg/L	Alkalinity(CaCO3)_carbonate mg/L	Alkalinity(CaCO3)_hydroxide mg/L	Alkalinity(CaCO3)_phenol mg/L	Alkalinity(CaCO3)_T mg/L	(CO3)_carbonate mg/L	(HCO3)_bicarbonate mg/L	(OH)_hydroxide mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(CaCO3)_D mg/L	Hardness(CaCO3)_T mg/L	pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N) _T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

	Site	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
Month	-	Nitrite_nitrat e(N) mg/L	Nitrogen(TK N) mg/L	Phosphorus_ D mg/L	Phosphorus_ T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium_T mg/L	ChromiumVI _T mg/L	Cobalt_T mg/L	Copper_T mg/L	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesium_T mg/L	Manganese_T mg/L	Mercury_T mg/L	Molybdenum_ T mg/L	
1	AQF40	0.070	-	-	0.025	0.05	1.65	0.071	9.0	0.037	0.00011	0.00043	0.00773	0.000012	0.000025	0.00664	0.0000082	6.67	0.000015	0.00024	-	0.000056	0.00062	0.30	0.000073	0.0013	1.91	0.044	0.0000025	0.00013	
2	AQF40	-	-	-	0.021	0.05	1.16	0.073	10.8	0.035	0.00012	0.00043	0.00790	0.000012	0.000025	0.00673	0.0000053	7.00	0.000016	0.00024	-	0.000057	0.00044	0.31	0.000049	0.0014	1.98	0.046	0.0000021	0.00011	
3	AQF40	-	-	-	0.018	0.05	0.67	0.076	12.3	0.034	0.00013	0.00042	0.00803	0.000012	0.000025	0.00675	0.0000025	7.19	0.000016	0.00024	-	0.000057	0.00025	0.32	0.000025	0.0014	2.00	0.047	0.0000017	0.00008	
4	AQF40	-	-	-	0.025	0.01	0.39	0.078	5.9	0.033	0.00005	0.00038	0.00725	0.000011	0.000025	0.00612	0.0000085	5.53	0.000012	0.00024	-	0.000054	0.00025	0.29	0.000025	0.0012	1.59	0.035	0.0000019	0.00007	
5	AQF40	0.044	-	-	0.023	0.05	0.29	0.064	2.1	0.055	0.00005	0.00024	0.00617	0.000050	0.000025	0.00531	0.0000025	3.85	0.000007	0.00022	-	0.000051	0.00025	0.32	0.000025	0.0009	1.13	0.042	0.0000021	0.00007	
6	AQF40	0.035	-	-	0.015	0.05	0.30	0.057	2.5	0.062	0.00005	0.00023	0.00632	0.000050	0.000025	0.00545	0.0000052	3.97	0.000008	0.00020	-	0.000052	0.00025	0.35	0.000061	0.0015	1.07	0.032	0.0000022	0.00008	
7	AQF40	0.218	-	-	0.012	0.05	0.29	0.063	3.3	0.048	0.00005	0.00026	0.00660	0.000050	0.000025	0.00561	0.0000025	4.23	0.000009	0.00016	-	0.000052	0.00025	0.21	0.000147	0.0009	1.22	0.032	0.0000013	0.00011	
8	AQF40	0.003	-	-	0.015	0.05	0.24	0.066	3.3	0.034	0.00005	0.00027	0.00561	0.000050	0.000025	0.00560	0.0000025	3.92	0.000009	0.00014	-	0.000052	0.00025	0.22	0.000025	0.0006	1.11	0.026	0.0000019	0.00007	
9	AQF40	0.003	-	-	0.012	0.05	0.28	0.064	3.7	0.045	0.00005	0.00029	0.00654	0.000050	0.000025	0.00565	0.0000025	4.42	0.000009	0.00013	-	0.000052	0.00025	0.20	0.000025	0.0012	1.26	0.024	0.0000025	0.00012	
10	AQF40	0.038	-	-	0.020	0.05	0.32	0.065	4.2	0.054	0.00005	0.00028	0.00569	0.000050	0.000025	0.00576	0.0000025	4.66	0.000010	0.00025	-	0.000053	0.00025	0.28	0.000044	0.0012	1.35	0.033	0.0000012	0.00012	
11	AQF40	0.025	-	-	0.019	0.05	0.34	0.062	5.9	0.080	0.00005	0.00034	0.00896	0.000050	0.000025	0.00615	0.0000121	5.58	0.000012	0.00029	-	0.000054	0.00066	0.32	0.000096	0.0006	1.61	0.044	0.0000025	0.00011	
12	AQF40	0.048	-	-	0.022	0.05	1.01	0.067	7.7	0.058	0.00008	0.00039	0.00838	0.000031	0.000025	0.00647	0.0000101	6.27	0.000014	0.00027	-	0.000056	0.00064	0.31	0.000084	0.0010	1.80	0.045	0.0000025	0.00013	
1	AQF41	0.065	-	-	0.025	0.05	0.44	0.071	8.5	0.039	0.00005	0.00042	0.00818	0.000012	0.000025	0.00664	0.0000176	6.89	0.000015	0.00101	-	0.000056	0.00091	0.32	0.000060	0.0014	1.91	0.044	0.0000025	0.00010	
2	AQF41	-	-	-	0.025	0.05	0.46	0.074	8.9	0.064	0.00007	0.00045	0.00883	0.000012	0.000025	0.00673	0.0000121	7.03	0.000017	0.00062	-	0.000057	0.00058	0.45	0.000068	0.0014	1.98	0.071	0.0000022	0.00009	
3	AQF41	-	-	-	0.025	0.05	0.46	0.077	9.0	0.089	0.00008	0.00048	0.00942	0.000012	0.000025	0.00675	0.0000066	7.03	0.000019	0.00024	-	0.000057	0.00025	0.57	0.000075	0.0014	2.01	0.096	0.0000019	0.00008	
4	AQF41	-	-	-	0.012	0.01	0.37	0.077	5.9	0.032	0.00005	0.00037	0.00736	0.000011	0.000025	0.00612	0.0000025	5.60	0.000012	0.00024	-	0.000054	0.00025	0.30	0.000025	0.0012	1.61	0.036	0.0000022	0.00007	
5	AQF41	0.039	-	-	0.015	0.05	0.35	0.060	2.0	0.054	0.00005	0.00023	0.00607	0.000050	0.000025	0.00531	0.0000025	3.65	0.000007	0.00018	-	0.000051	0.00090	0.39	0.000057	0.0005	1.04	0.039	0.0000025	0.00009	
6	AQF41	0.035	-	-	0.021	0.05	0.77	0.057	2.6	0.094	0.00005	0.00022	0.01023	0.000050	0.000025	0.00545	0.0000088	4.22	0.000008	0.00030	-	0.000052	0.00066	0.49	0.000091	0.0015	1.08	0.072	0.0000036	0.00008	
7	AQF41	0.003	-	-	0.013	0.05	0.25	0.062	3.3	0.042	0.00005	0.00024	0.00590	0.000050	0.000025	0.00561	0.0000025	3.99	0.000009	0.00015	-	0.000052	0.00025	0.24	0.000025	0.0006	1.16	0.027	0.0000015	0.00007	
8	AQF41	0.003	-	-	0.015	0.05	0.28	0.065	3.3	0.035	0.00005	0.00028	0.00574	0.000050	0.000025	0.00560	0.0000025	3.85	0.000009	0.00027	-	0.000052	0.00025	0.22	0.000025	0.0006	1.10	0.026	0.0000020	0.00007	
9	AQF41	0.003	-	-	0.015	0.05	0.27	0.064	3.7	0.056	0.00005	0.00027	0.00677	0.000050	0.000025	0.00565	0.0000025	4.57	0.000009	0.00017	-	0.000052	0.00025	0.22	0.000025	0.0014	1.29	0.025	0.0000025	0.00012	
10	AQF41	0.019	-	-	0.015	0.05	0.29	0.063	4.0	0.038	0.00005	0.00029	0.00596	0.000050	0.000025	0.00576	0.0000025	4.71	0.000010	0.00017	-	0.000053	0.00025	0.25	0.000025	0.0013	1.31	0.030	0.0000011	0.00010	
11	AQF41	0.032	-	-	0.031	0.05	0.37	0.062	5.9	0.036	0.00005	0.00033	0.00591	0.000050	0.000025	0.00615	0.0000025	5.54	0.000012	0.00014	-	0.000054	0.00025	0.22	0.000025	0.0006	1.55	0.033	0.0000025	0.00010	
12	AQF41	0.049	-	-	0.028	0.05	0.41	0.067	7.5	0.037	0.00005	0.00038	0.00710	0.000031	0.000025	0.00647	0.0000101	6.37	0.000014	0.00058	-	0.000056	0.00058	0.27	0.000043	0.0010	1.77	0.040	0.0000025	0.00010	
1	AQF42	0.067	-	-	0.025	0.05	0.77	0.074	8.8	0.050	0.00022	0.00043	0.00860	0.000012	0.000025	0.00664	0.0000025	6.98	0.000015	0.00024	-	0.000056	0.00025	0.35	0.000025	0.0014	1.97	0.048	0.0000025	0.00011	
2	AQF42	-	-	-	0.025	0.05	0.74	0.073	17.3	0.065	0.00028	0.00046	0.00929	0.000012	0.000025	0.00673	0.0000103	7.29	0.000016	0.00024	-	0.000057	0.00096	0.38	0.000080	0.0014	2.01	0.056	0.0000011	0.00009	
3	AQF42	-	-	-	0.025	0.05	0.62	0.076	8.8	0.120	0.00005	0.00044	0.00992	0.000012	0.000025	0.00675	0.0000025	7.20	0.000028	0.00049	-	0.000124	0.00435	0.60	0.000084	0.0015	2.04	0.084	0.0000025	0.00009	
4	AQF42	-	-	-	0.030	0.01	0.39	0.074	5.9	0.037	0.00005	0.00039	0.00810	0.000011	0.000025	0.00612	0.0000101	5.67	0.000012	0.00024	-	0.000054	0.00091	0.31	0.000071	0.0012	1.63	0.038	0.0000025	0.00010	
5	AQF42	0.039	-	-	0.015	0.05	0.31	0.063	2.0	0.054	0.00005	0.00027	0.00605	0.000050	0.000025	0.00531	0.0000025	3.51	0.000007	0.00017	-	0.000051	0.00025	0.49	0.000025	0.0011	1.02	0.072	0.0000025	0.00009	
6	AQF42	0.035	-	-	0.016	0.05	0.30	0.057	2.5	0.058	0.00005	0.00022	0.00629	0.000050	0.000025	0.00545	0.0000025	3.82	0.000008	0.00024	-	0.000052	0.00025	0.37	0.000057	0.0015	1.03	0.025	0.0000020	0.00020	
7	AQF42	0.003	-	-	0.015	0.05	0.38	0.061	3.3	0.048	0.00005	0.00025	0.00612	0.000050	0.000025	0.00561	0.0000067	3.87	0.000009	0.00125	-	0.000052	0.00061	0.26	0.000025	0.0006	1.15	0.030	0.0000018	0.00009	
8	AQF42	0.003	-	-	0.014	0.05	0.24	0.065	3.3	0.037	0.00005	0.00029	0.00585	0.000050	0.000025	0.00560	0.0000025	4.13	0.000009	0.00015	-	0.000052	0.00025	0.23	0.000025	0.0006	1.20	0.029	0.0000022	0.00008	
9	AQF42	0.007	-	-	0.015	0.05	0.35	0.064	3.5	0.039	0.00005	0.00029	0.00637	0.000050	0.000025	0.00565	0.0000025	4.44	0.000009	0.00014	-	0.000052	0.00025	0.19	0.000025	0.0006	1.26	0.024	0.0000025	0.00010	
10	AQF42	0.019	-	-	0.015	0.05	0.30	0.063	4.0	0.041	0.00005	0.00029	0.00587	0.000050	0.000025	0.00576	0.0000025	4.68	0.000010	0.00014	-	0.000053	0.00025	0.25	0.000025	0.0012	1.36	0.030	0.0000025	0.00012	
11	AQF42	0.025	-	-	0.015	0.05	0.41	0.062	6.1	0.154	0.00013	0.00036	0.01487	0.000050	0.000025	0.00615	0.0000298	5.75	0.000026	0.00074	-	0.000122	0.00089	0.44	0.000139	0.0012	1.67	0.096	0.0000025	0.00015	
12	AQF42	0.046	-	-	0.020	0.05	0.60	0.068	7.8	0.101	0.00018	0.00040	0.01172	0.000031	0.000025	0.00647	0.0000161	6.52	0.000021	0.00049	-	0.000089	0.00057	0.39	0.000081	0.0013	1.86	0.073	0.0000025		

	Site	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal	Dissolved_Metal
Month	-	Nickel_T	Potassium_T	Rubidium_T	Selenium_T	Silicon_T	Silver_T	Sodium_T	Strontium_T	Sulfur_T	Tellurium_T	Thallium_T	Thorium_T	Tin_T	Titanium_T	Tungsten_T	Uranium_T	Vanadium_T	Zinc_T	Zirconium_T	Aluminum_D	Antimony_D	Arsenic_D	Barium_D	Beryllium_D	Bismuth_D	Boron_D	Cadmium_D	Calcium_D			
1	AQF40	0.00025	0.84	0.00127	0.00006	3.23	0.000005	2.05	0.025	2.77	0.0001	0.000005	0.00005	0.00036	0.0012	0.00005	0.00017	0.00025	0.0052	0.00010	0.020	0.00005	0.00031	0.013	0.000012	0.000025	0.0068	0.000025	6.52			
2	AQF40	0.00025	0.88	0.00128	0.00004	3.37	0.000005	2.09	0.025	3.31	0.0001	0.000005	0.00005	0.00033	0.0010	0.00005	0.00018	0.00025	0.0056	0.00015	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0069	0.000025	6.74			
3	AQF40	0.00025	0.90	0.00128	0.00003	3.52	0.000005	2.11	0.026	3.74	0.0001	0.000005	0.00005	0.00031	0.0008	0.00005	0.00018	0.00025	0.0059	0.00021	0.021	0.00005	0.00033	0.014	0.000012	0.000025	0.0069	0.000025	6.82			
4	AQF40	0.00025	0.78	0.00122	0.00013	3.15	0.000005	1.74	0.022	1.97	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00012	0.00025	0.0015	0.00010	0.020	0.00005	0.00027	0.020	0.000011	0.000025	0.0062	0.0000103	5.40			
5	AQF40	0.00025	0.66	0.00112	0.00003	2.41	0.000005	1.31	0.016	0.73	0.0001	0.000005	0.00005	0.00010	0.0016	0.00005	0.00006	0.00025	0.0015	0.00014	0.036	0.00005	0.00017	0.006	0.000050	0.000025	0.0053	0.0000025	3.82			
6	AQF40	0.00025	0.61	0.00103	0.00003	2.02	0.000005	1.18	0.014	0.94	0.0001	0.000005	0.00005	0.00024	0.0015	0.00005	0.00006	0.00025	0.0049	0.00010	0.036	0.00005	0.00021	0.006	0.000050	0.000025	0.0055	0.0000025	3.70			
7	AQF40	0.00025	0.67	0.00123	0.00003	2.17	0.000005	1.35	0.017	1.18	0.0001	0.000005	0.00005	0.00006	0.0014	0.00005	0.00009	0.00025	0.0015	0.00009	0.026	0.00005	0.00024	0.006	0.000050	0.000025	0.0057	0.0000052	4.14			
8	AQF40	0.00025	0.58	0.00113	0.00003	2.12	0.000005	1.46	0.016	1.18	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00007	0.00025	0.0044	0.00010	0.020	0.00005	0.00023	0.005	0.000050	0.000025	0.0057	0.0000025	3.87			
9	AQF40	0.00025	0.62	0.00114	0.00003	2.38	0.000005	1.39	0.017	1.25	0.0001	0.000005	0.00005	0.00014	0.0010	0.00005	0.00009	0.00025	0.0015	0.00010	0.031	0.00005	0.00025	0.006	0.000050	0.000025	0.0057	0.0000025	4.08			
10	AQF40	0.00053	0.65	0.00114	0.00003	2.44	0.000005	1.49	0.018	1.42	0.0001	0.000005	0.00005	0.00006	0.0017	0.00005	0.00010	0.00025	0.0015	0.00009	0.023	0.00005	0.00024	0.009	0.000050	0.000025	0.0058	0.0000025	4.52			
11	AQF40	0.00025	0.74	0.00128	0.00003	2.85	0.000005	1.60	0.020	2.02	0.0001	0.000005	0.00005	0.00006	0.0038	0.00005	0.00014	0.00025	0.0045	0.00010	0.022	0.00005	0.00027	0.005	0.000050	0.000025	0.0063	0.0000025	5.25			
12	AQF40	0.00025	0.80	0.00128	0.00004	3.04	0.000005	1.86	0.023	2.50	0.0001	0.000005	0.00005	0.00021	0.0025	0.00005	0.00016	0.00025	0.0049	0.00010	0.021	0.00005	0.00030	0.009	0.000031	0.000025	0.0066	0.0000025	6.03			
1	AQF41	0.00025	0.85	0.00118	0.00005	3.32	0.000005	2.07	0.024	2.77	0.0001	0.000005	0.00005	0.00155	0.0010	0.00005	0.00017	0.00025	0.0109	0.00010	0.020	0.00005	0.00039	0.014	0.000012	0.000025	0.0068	0.0000141	6.51			
2	AQF41	0.00025	0.89	0.00131	0.00004	3.43	0.000005	2.10	0.025	2.90	0.0001	0.000005	0.00005	0.00081	0.0024	0.00005	0.00018	0.00025	0.0075	0.00010	0.020	0.00005	0.00040	0.011	0.000012	0.000025	0.0069	0.0000083	6.78			
3	AQF41	0.00025	0.93	0.00142	0.00003	3.54	0.000005	2.09	0.026	2.93	0.0001	0.000005	0.00005	0.00007	0.0037	0.00005	0.00019	0.00025	0.0041	0.00010	0.021	0.00005	0.00041	0.008	0.000012	0.000025	0.0069	0.0000025	6.90			
4	AQF41	0.00025	0.77	0.00120	0.00005	3.18	0.000005	1.75	0.021	1.97	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00013	0.00025	0.0015	0.00010	0.020	0.00005	0.00025	0.020	0.000011	0.000025	0.0062	0.0000025	5.34			
5	AQF41	0.00025	0.61	0.00096	0.00003	2.39	0.000005	1.02	0.015	0.73	0.0001	0.000005	0.00005	0.00005	0.0016	0.00005	0.00005	0.00025	0.0015	0.00010	0.030	0.00005	0.00016	0.007	0.000050	0.000025	0.0053	0.0000025	3.56			
6	AQF41	0.00025	0.65	0.00113	0.00003	2.09	0.000005	1.18	0.016	0.94	0.0001	0.000005	0.00005	0.00016	0.0034	0.00005	0.00007	0.00025	0.0070	0.00010	0.033	0.00005	0.00019	0.010	0.000050	0.000025	0.0055	0.0000025	3.66			
7	AQF41	0.00025	0.58	0.00100	0.00003	2.14	0.000005	1.26	0.016	1.18	0.0001	0.000005	0.00005	0.00014	0.0009	0.00005	0.00008	0.00025	0.0015	0.00010	0.026	0.00005	0.00021	0.006	0.000050	0.000025	0.0057	0.0000025	3.85			
8	AQF41	0.00025	0.58	0.00115	0.00005	2.12	0.000005	1.49	0.016	1.18	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00007	0.00025	0.0052	0.00010	0.023	0.00005	0.00022	0.005	0.000050	0.000025	0.0057	0.0000025	3.79			
9	AQF41	0.00025	0.64	0.00122	0.00003	2.53	0.000005	1.45	0.016	1.25	0.0001	0.000005	0.00005	0.00006	0.0016	0.00005	0.00009	0.00025	0.0050	0.00010	0.023	0.00005	0.00022	0.006	0.000050	0.000025	0.0057	0.0000025	4.19			
10	AQF41	0.00025	0.60	0.00107	0.00003	2.49	0.000005	1.44	0.017	1.42	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00009	0.00025	0.0045	0.00010	0.019	0.00005	0.00022	0.005	0.000050	0.000025	0.0058	0.0000025	4.46			
11	AQF41	0.00025	0.70	0.00113	0.00003	2.68	0.000005	1.57	0.020	2.02	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00013	0.00025	0.0015	0.00010	0.019	0.00005	0.00026	0.005	0.000050	0.000025	0.0063	0.0000025	5.17			
12	AQF41	0.00025	0.78	0.00116	0.00004	3.00	0.000005	1.86	0.023	2.50	0.0001	0.000005	0.00005	0.00081	0.0009	0.00005	0.00016	0.00025	0.0062	0.00010	0.019	0.00005	0.00033	0.010	0.000031	0.000025	0.0066	0.0000083	5.98			
1	AQF42	0.00025	0.85	0.00133	0.00006	3.40	0.000005	2.11	0.025	3.04	0.0001	0.000005	0.00005	0.00054	0.0017	0.00005	0.00022	0.00025	0.0039	0.00010	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0068	0.0000025	6.50			
2	AQF42	0.00025	0.99	0.00134	0.00003	3.52	0.000005	2.16	0.026	10.86	0.0001	0.000005	0.00005	0.00202	0.0022	0.00005	0.00020	0.00025	0.0246	0.00010	0.023	0.00005	0.00035	0.021	0.000012	0.000025	0.0069	0.0000025	6.91			
3	AQF42	0.00078	0.92	0.00149	0.00003	3.71	0.000005	2.11	0.026	2.93	0.0001	0.000005	0.00005	0.00007	0.0057	0.00005	0.00020	0.00025	0.0052	0.00010	0.035	0.00005	0.00037	0.009	0.000012	0.000025	0.0069	0.0000025	6.91			
4	AQF42	0.00025	0.79	0.00120	0.00013	3.02	0.000005	1.76	0.022	1.97	0.0001	0.000005	0.00005	0.00006	0.0012	0.00005	0.00016	0.00025	0.0032	0.00010	0.023	0.00005	0.00028	0.019	0.000011	0.000025	0.0062	0.0000117	5.47			
5	AQF42	0.00025	0.58	0.00097	0.00003	2.29	0.000005	1.20	0.014	0.73	0.0001	0.000005	0.00005	0.00026	0.0015	0.00005	0.00005	0.00025	0.0015	0.00010	0.033	0.00005	0.00019	0.006	0.000050	0.000025	0.0053	0.0000025	3.52			
6	AQF42	0.00025	0.59	0.00102	0.00003	2.11	0.000005	1.18	0.014	0.94	0.0001	0.000005	0.00005	0.00028	0.0017	0.00005	0.00006	0.00025	0.0015	0.00010	0.034	0.00005	0.00020	0.006	0.000050	0.000025	0.0055	0.0000025	3.51			
7	AQF42	0.00025	0.59	0.00112	0.00003	2.15	0.000005	1.29	0.015	1.18	0.0001	0.000005	0.00005	0.00041	0.0012	0.00005	0.00008	0.00025	0.0059	0.00010	0.025	0.00005	0.00020	0.006	0.000050	0.000025	0.0057	0.0000025	3.85			
8	AQF42	0.00025	0.61	0.00115	0.00005	2.37	0.000005	1.34	0.017	1.18	0.0001	0.000005	0.00005	0.00006	0.0010	0.00005	0.00008	0.00025	0.0015	0.00010	0.021	0.00005	0.00022	0.005	0.000050	0.000025	0.0057	0.0000025	3.91			
9	AQF42	0.00025	0.62	0.00109	0.00003	2.33	0.000005	1.40	0.017	1.25	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00008	0.00025	0.0031	0.00010	0.024	0.00005	0.00023	0.006	0.000050	0.000025	0.0057	0.0000025	4.26			
10	AQF42	0.00025	0.64	0.00110	0.00003	2.66	0.000005	1.42	0.017	1.42	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00010	0.00025	0.0015	0.00010	0.019	0.00005	0.00023	0.005	0.000050	0.000025	0.0058	0.0000025	4.49			
11	AQF42	0.00025	0.77	0.00138	0.00003	2.82	0.000005	1.61	0.021	2.02	0.0001	0.000005	0.00005	0.00018	0.0077	0.00005	0.00019	0.00025	0.0043	0.00010	0.031	0.00005	0.00026	0.015	0.000050	0.000025	0.0063	0.0000025	5.41			
12</																																

[illegible]

Month	Site	Dissolved_Met	Dissolved_Met	Cyanides	Cyanides	Cyanides	Methylmercu	Methylmercu
		al	al				ry	ry
		-	-				ry_D	ry_T
		Zinc_D	Zirconium_D	cyanide_free	cyanide_SAD	cyanide_WA	Methylmercu	Methylmercu
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	AQF40	0.0044	0.00015	-	-	-	-	-
2	AQF40	0.0031	0.00015	-	-	-	-	-
3	AQF40	0.0018	0.00015	-	-	-	-	-
4	AQF40	0.0027	0.00015	-	-	-	-	-
5	AQF40	0.0030	0.00010	-	-	-	-	-
6	AQF40	0.0063	0.00010	-	-	-	-	-
7	AQF40	0.0037	0.00010	-	-	-	-	-
8	AQF40	0.0033	0.00010	-	-	-	-	-
9	AQF40	0.0047	0.00010	-	-	-	-	-
10	AQF40	0.0021	0.00011	-	-	-	-	-
11	AQF40	0.0100	0.00010	-	-	-	-	-
12	AQF40	0.0072	0.00012	-	-	-	-	-
1	AQF41	0.0050	0.00015	-	-	-	-	-
2	AQF41	0.0034	0.00015	-	-	-	-	-
3	AQF41	0.0018	0.00015	-	-	-	-	-
4	AQF41	0.0022	0.00015	-	-	-	-	-
5	AQF41	0.0254	0.00010	-	-	-	-	-
6	AQF41	0.0023	0.00010	-	-	-	-	-
7	AQF41	0.0032	0.00010	-	-	-	-	-
8	AQF41	0.0018	0.00026	-	-	-	-	-
9	AQF41	0.0005	0.00010	-	-	-	-	-
10	AQF41	0.0005	0.00010	-	-	-	-	-
11	AQF41	0.0042	0.00010	-	-	-	-	-
12	AQF41	0.0046	0.00012	-	-	-	-	-
1	AQF42	0.0045	0.00015	-	-	-	-	-
2	AQF42	0.0047	0.00015	-	-	-	-	-
3	AQF42	0.0012	0.00015	-	-	-	-	-
4	AQF42	0.0051	0.00015	-	-	-	-	-
5	AQF42	0.0012	0.00010	-	-	-	-	-
6	AQF42	0.0005	0.00010	-	-	-	-	-
7	AQF42	0.0089	0.00010	-	-	-	-	-
8	AQF42	0.0030	0.00010	-	-	-	-	-
9	AQF42	0.0005	0.00010	-	-	-	-	-
10	AQF42	0.0011	0.00010	-	-	-	-	-
11	AQF42	0.0032	0.00010	-	-	-	-	-
12	AQF42	0.0039	0.00012	-	-	-	-	-
1	AQF43	0.0011	0.00015	-	-	-	-	-
2	AQF43	0.0013	0.00015	-	-	-	-	-
3	AQF43	0.0015	0.00015	-	-	-	-	-
4	AQF43	0.0023	0.00015	-	-	-	-	-
5	AQF43	0.0015	0.00010	-	-	-	-	-
6	AQF43	0.0045	0.00010	-	-	-	-	-
7	AQF43	0.0013	0.00010	-	-	-	-	-
8	AQF43	0.0005	0.00010	-	-	-	-	-
9	AQF43	0.0005	0.00010	-	-	-	-	-
10	AQF43	0.0022	0.00010	-	-	-	-	-
11	AQF43	0.0047	0.00010	-	-	-	-	-
12	AQF43	0.0029	0.00012	-	-	-	-	-
1	AQF44	0.0038	0.00015	-	-	-	-	-
2	AQF44	0.0030	0.00015	-	-	-	-	-
3	AQF44	0.0023	0.00015	-	-	-	-	-
4	AQF44	0.0027	0.00015	-	-	-	-	-
5	AQF44	0.0005	0.00010	-	-	-	-	-
6	AQF44	0.0033	0.00010	-	-	-	-	-
7	AQF44	0.0005	0.00010	-	-	-	-	-
8	AQF44	0.0026	0.00010	-	-	-	-	-
9	AQF44	0.0005	0.00010	-	-	-	-	-
10	AQF44	0.0005	0.00010	-	-	-	-	-
11	AQF44	0.0049	0.00010	-	-	-	-	-
12	AQF44	0.0043	0.00012	-	-	-	-	-
1	AQF45	0.0022	0.00015	-	-	-	-	-
2	AQF45	0.0018	0.00015	-	-	-	-	-
3	AQF45	0.0014	0.00015	-	-	-	-	-
4	AQF45	0.0016	0.00015	-	-	-	-	-
5	AQF45	0.0013	0.00010	-	-	-	-	-
6	AQF45	0.0011	0.00010	-	-	-	-	-
7	AQF45	0.0021	0.00010	-	-	-	-	-
8	AQF45	0.0012	0.00010	-	-	-	-	-
9	AQF45	0.0005	0.00010	-	-	-	-	-
10	AQF45	0.0016	0.00010	-	-	-	-	-
11	AQF45	0.0059	0.00010	-	-	-	-	-
12	AQF45	0.0005	0.00010	-	-	-	-	-
May-Oct	All Stn Median	0.0015	0.00010	-	-	-	-	-
May-Oct	All Stn 90P	0.0046	0.00010	-	-	-	-	-
May-Oct	All Stn 10P	0.0005	0.00010	-	-	-	-	-

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient
Month	-	D_Oxygen_field	D_Oxygen_perce	ORP_field	pH_field	Specific_Con	TDS_field	Temp_field	Turbidity_fiel	Acidity(CaCO	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(CaCO3)	(CO3)_carbonat	(HCO3)_bicarbona	(OH)_hydroxide	Conductivity	DOC_D	Hardness(Ca	Hardness(Ca	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia(N)	Nitrate(N)	Nitrite(N)
	-	mg/L	nt_field	mV	pH	ductance_fiel	mg/L	C	d	3)	CO3)_bicarbo	CO3)_carbon	CO3)_hydrox	CO3)_phenol	T	e	te	mg/L	µS/cm	mg/L	CO3)_D	CO3)_T	pH	mg/L	mg/L	mg/L	mg/L	NTU	_T	mg/L	mg/L
1	AQF40	9.8	67.6	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-	10.0	-	-	0.096	0.071	0.005	
2	AQF40	10.7	73.4	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-	9.8	-	-	0.062	0.088	0.005	
3	AQF40	11.5	79.3	-	-	-	-	0.3	-	-	-	-	-	-	14.9	0.49	22.7	0.49	-	-	-	21.4	-	-	9.5	-	-	0.028	0.105	0.005	
4	AQF40	19.9	138.9	-	-	-	-	0.6	-	-	-	-	-	-	16.4	0.40	19.0	0.33	41.3	-	-	17.8	-	-	9.1	-	-	0.010	0.098	0.001	
5	AQF40	12.4	94.7	-	-	-	-	3.9	-	-	-	-	-	-	11.7	0.30	14.3	0.17	-	-	-	13.3	-	-	-	-	-	0.006	0.038	0.001	
6	AQF40	9.0	90.6	-	-	-	-	15.4	-	-	-	-	-	-	10.4	0.30	12.7	0.17	-	-	-	12.4	-	-	9.9	-	-	0.007	0.011	0.005	
7	AQF40	6.7	72.0	-	-	-	-	18.7	-	-	-	-	-	-	11.8	0.30	14.4	0.17	-	-	-	13.6	-	-	8.8	-	-	0.013	0.003	0.001	
8	AQF40	6.1	66.7	-	-	-	-	19.9	-	-	-	-	-	-	12.6	0.30	15.4	0.17	-	-	-	12.8	-	-	9.2	-	-	0.021	0.003	0.001	
9	AQF40	8.0	78.9	-	-	-	-	13.6	-	-	-	-	-	-	12.9	0.30	15.7	0.17	-	-	-	13.3	-	-	8.9	-	-	0.024	0.003	0.001	
10	AQF40	11.9	90.0	-	-	-	-	3.6	-	-	-	-	-	-	13.9	0.30	16.9	0.17	-	-	-	14.8	-	-	8.8	-	-	0.017	0.026	0.001	
11	AQF40	10.3	70.8	-	-	-	-	0.3	-	-	-	-	-	-	15.8	0.30	19.2	0.17	-	-	-	16.3	-	-	10.1	-	-	0.017	0.025	0.001	
12	AQF40	10.1	69.1	-	-	-	-	0.3	-	-	-	-	-	-	15.8	-	-	-	-	-	-	-	-	10.0	-	-	0.057	0.048	0.003		
1	AQF41	12.4	85.8	-	-	-	-	0.4	-	-	-	-	-	-	17.1	-	-	-	-	-	-	-	-	-	10.1	-	-	0.048	0.066	0.005	
2	AQF41	12.3	84.2	-	-	-	-	0.3	-	-	-	-	-	-	17.9	-	-	-	-	-	-	-	-	-	10.1	-	-	0.040	0.090	0.005	
3	AQF41	12.1	82.8	-	-	-	-	0.3	-	-	-	-	-	-	18.5	0.49	22.8	0.49	-	-	-	21.0	-	-	10.0	-	-	0.032	0.115	0.005	
4	AQF41	20.0	140.8	-	-	-	-	0.7	-	-	-	-	-	-	16.3	0.40	18.6	0.33	41.1	-	-	17.1	-	-	9.4	-	-	0.010	0.099	0.001	
5	AQF41	14.0	107.4	-	-	-	-	3.9	-	-	-	-	-	-	11.0	0.30	13.4	0.17	-	-	-	12.3	-	-	8.7	-	-	0.006	0.039	0.001	
6	AQF41	8.4	85.6	-	-	-	-	16.5	-	-	-	-	-	-	9.2	0.30	11.2	0.17	-	-	-	12.2	-	-	8.9	-	-	0.007	0.011	0.005	
7	AQF41	7.4	77.0	-	-	-	-	19.0	-	-	-	-	-	-	10.8	0.30	13.1	0.17	-	-	-	12.5	-	-	9.2	-	-	0.039	0.003	0.001	
8	AQF41	6.2	67.4	-	-	-	-	20.2	-	-	-	-	-	-	12.5	0.30	15.3	0.17	-	-	-	12.5	-	-	9.2	-	-	0.014	0.003	0.001	
9	AQF41	6.9	66.1	-	-	-	-	13.5	-	-	-	-	-	-	13.0	0.30	15.9	0.17	-	-	-	13.7	-	-	9.0	-	-	0.015	0.003	0.001	
10	AQF41	11.5	87.8	-	-	-	-	4.3	-	-	-	-	-	-	13.4	0.30	16.3	0.17	-	-	-	14.5	-	-	9.2	-	-	0.008	0.020	0.001	
11	AQF41	12.3	85.4	-	-	-	-	0.4	-	-	-	-	-	-	16.2	0.30	19.7	0.17	-	-	-	16.1	-	-	9.0	-	-	0.010	0.033	0.001	
12	AQF41	12.4	85.6	-	-	-	-	0.4	-	-	-	-	-	-	16.9	-	-	-	-	-	-	-	-	-	9.6	-	-	0.029	0.049	0.003	
1	AQF42	10.3	71.0	-	-	-	-	0.3	-	-	-	-	-	-	17.0	-	-	-	-	-	-	-	-	-	9.8	-	-	0.053	0.067	0.005	
2	AQF42	11.9	80.9	-	-	-	-	0.3	-	-	-	-	-	-	13.4	-	-	-	-	-	-	21.8	-	-	9.9	-	-	0.039	0.118	0.005	
3	AQF42	10.4	70.9	-	-	-	-	0.3	-	-	-	-	-	-	20.9	0.49	25.4	0.49	-	-	-	21.6	-	-	10.2	-	-	0.058	0.110	0.005	
4	AQF42	15.5	106.8	-	-	-	-	0.2	-	-	-	-	-	-	16.4	0.40	19.7	0.33	40.9	-	-	17.4	-	-	9.5	-	-	0.016	0.095	0.001	
5	AQF42	13.7	133.2	-	-	-	-	4.4	-	-	-	-	-	-	10.6	0.30	12.9	0.17	-	-	-	12.3	-	-	9.5	-	-	0.006	0.039	0.001	
6	AQF42	10.3	103.2	-	-	-	-	15.3	-	-	-	-	-	-	10.0	0.30	12.2	0.17	-	-	-	11.6	-	-	9.4	-	-	0.007	0.011	0.005	
7	AQF42	8.0	86.9	-	-	-	-	18.9	-	-	-	-	-	-	12.3	0.30	14.9	0.17	-	-	-	12.5	-	-	9.1	-	-	0.024	0.003	0.001	
8	AQF42	7.9	84.9	-	-	-	-	18.5	-	-	-	-	-	-	12.6	0.30	15.4	0.17	-	-	-	12.9	-	-	9.3	-	-	0.045	0.003	0.001	
9	AQF42	8.5	82.4	-	-	-	-	14.0	-	-	-	-	-	-	12.4	0.30	15.1	0.17	-	-	-	13.9	-	-	9.0	-	-	0.008	0.007	0.001	
10	AQF42	11.4	95.5	-	-	-	-	3.7	-	-	-	-	-	-	13.5	0.30	16.5	0.17	-	-	-	14.6	-	-	9.9	-	-	0.008	0.019	0.001	
11	AQF42	11.6	79.6	-	-	-	-	0.3	-	-	-	-	-	-	16.3	0.30	19.8	0.17	-	-	-	17.0	-	-	9.5	-	-	0.023	0.026	0.001	
12	AQF42	10.9	75.3	-	-	-	-	0.3	-	-	-	-	-	-	16.9	-	-	-	-	-	-	-	-	-	9.6	-	-	0.038	0.047	0.003	
1	AQF43	13.1	90.1	-	-	-	-	-	-	-	-	-	-	-	17.6	-	-	-	-	-	-	-	-	-	9.9	-	-	0.027	0.065	0.005	
2	AQF43	13.3	90.9	-	-	-	-	-	-	-	-	-	-	-	17.7	-	-	-	-	-	-	-	-	-	9.5	-	-	0.021	0.088	0.005	
3	AQF43	13.5	91.9	-	-	-	-	0.3	-	-	-	-	-	-	17.6	0.49	22.7	0.49	-	-	-	21.2	-	-	9.0	-	-	0.015	0.110	0.005	
4	AQF43	16.8	115.5	-	-	-	-	0.3	-	-	-	-	-	-	16.5	0.40	19.6	0.33	41.1	-	-	17.8	-	-	9.1	-	-	0.010	0.096	0.001	
5	AQF43	16.9	137.2	-	-	-	-	5.9	-	-	-	-	-	-	12.8	0.30	15.6	0.17	-	-	-	13.4	-	-	9.9	-	-	0.006	0.032	0.001	
6	AQF43	10.3	104.1	-	-	-	-	15.7	-	-	-	-	-	-	10.4	0.30	12.7	0.17	-	-	-	12.9	-	-	8.8	-	-	0.007	0.011	0.005	
7	AQF43	8.2	89.3	-	-	-	-	19.4	-	-	-	-	-	-	10.7	0.30	13.0	0.17	-	-	-	12.8	-	-	9.1	-	-	0.032	0.003	0.001	
8	AQF43	8.2	89.5	-	-	-	-	19.5	-	-	-	-	-	-	13.6	0.30	16.6	0.17	-	-	-	13.5	-	-	9.2	-	-	0.016	0.009	0.001	
9	AQF43	9.0	85.4	-	-	-	-	13.0	-	-	-	-	-	-	13.3	0.30	16.2	0.17	-	-	-	13.7	-	-	9.1	-	-	0.027	0.003	0.001	
10	AQF43	12.7	94.4	-	-	-	-	3.0	-	-	-	-	-	-	13.3	0.30	16.2	0.17	-	-	-	14.6	-	-	9.3	-	-	0.008	0.020	0.001	
11	AQF43	14.2	97.2	-	-	-	-	-	-	-	-	-	-	-	15.9	0.30	19.3	0.17	-	-	-	16.6	-	-	9.8	-	-	0.035	0.028	0.001	
12	AQF43	13.6	93.6	-	-	-	-	-	-	-	-	-	-	-	17.0	-	-	-	-	-	-	18.2	-	-	9.8	-	-	0.031	0.046	0.003	
1	AQF44	11.1	75.9	-	-	-	-	0.3	-	-	-	-	-	-	15.4	-	-	-	-	-	-	-	-	-	10.0	-	-	0.141	0.073	0.005	
2	AQF44	12.2	83.2	-	-	-	-	0.3	-	-	-	-	-	-	19.2	-	-	-	-	-	-	-	-	-	9.7	-	-	0.081	0.090	0.005	
3	AQF44	13.4	90.5	-	-	-	-	0.3	-	-	-	-	-	-	22.6	0.49	30.6	0.49	-	-	-	21.9	-	-	9.4	-	-	0.020	0.108	0.005	
4	AQF44	19.2	132.1	-	-	-	-	0.2	-	-	-	-	-	-	16.9	0.40	22.9	0.33	42.7	-	-	18.0	-	-	9.4	-	-	0.010	0.098	0.001	
5	AQF44	14.2	132.2	-	-	-	-	6.2	-	-	-	-	-	-	11.5	0.30	14.0	0.17	-	-	-	13.1	-	-	8.8	-	-	0.006	0.032	0.001	
6	AQF44	10.5	105.1	-	-	-	-	15.6	-	-	-	-	-	-	10.4	0.30	12.7	0.17	-	-	-	12.1	-	-	8.4	-	-	0.007	0.011	0.005	
7	AQF44	8.5	93.6	-	-	-	-	19.7	-	-	-	-	-	-	10.9	0.30	13.2	0.17	-	-	-	12.8	-	-	9.1	-	-	0.017	0.003	0.001	

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

	Site	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
Month	-	Nitrite_nitrat e(N) mg/L	Nitrogen(TK N) mg/L	Phosphorus_ D mg/L	Phosphorus_ T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium T mg/L	ChromiumVI _T mg/L	Cobalt_T mg/L	Copper_T mg/L	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesium_T mg/L	Manganese_T mg/L	Mercury_T mg/L	Molybdenum_ T mg/L	
1	AQF40	0.070	-	-	0.025	0.05	1.65	0.071	9.0	0.037	0.00011	0.00043	0.00773	0.000012	0.000025	0.00664	0.0000082	6.67	0.000015	0.00024	-	0.000056	0.00062	0.30	0.000073	0.0013	1.91	0.044	0.0000025	0.00013	
2	AQF40	-	-	-	0.021	0.05	1.16	0.073	10.8	0.035	0.00012	0.00043	0.00790	0.000012	0.000025	0.00673	0.0000053	7.00	0.000016	0.00024	-	0.000057	0.00044	0.31	0.000049	0.0014	1.98	0.046	0.0000021	0.00011	
3	AQF40	-	-	-	0.018	0.05	0.67	0.076	12.3	0.034	0.00013	0.00042	0.00803	0.000012	0.000025	0.00675	0.0000025	7.19	0.000016	0.00024	-	0.000057	0.00025	0.32	0.000025	0.0014	2.00	0.047	0.0000017	0.00008	
4	AQF40	-	-	-	0.025	0.01	0.39	0.078	5.9	0.033	0.00005	0.00038	0.00725	0.000011	0.000025	0.00612	0.0000085	5.53	0.000012	0.00024	-	0.000054	0.00025	0.29	0.000025	0.0012	1.59	0.035	0.0000019	0.00007	
5	AQF40	0.044	-	-	0.023	0.05	0.29	0.064	2.1	0.055	0.00005	0.00024	0.00617	0.000050	0.000025	0.00531	0.0000025	3.85	0.000007	0.00022	-	0.000051	0.00025	0.32	0.000025	0.0009	1.13	0.042	0.0000021	0.00007	
6	AQF40	0.035	-	-	0.015	0.05	0.30	0.057	2.5	0.062	0.00005	0.00023	0.00632	0.000050	0.000025	0.00545	0.0000052	3.97	0.000008	0.00020	-	0.000052	0.00025	0.35	0.000061	0.0015	1.07	0.032	0.0000022	0.00008	
7	AQF40	0.218	-	-	0.012	0.05	0.29	0.063	3.3	0.048	0.00005	0.00026	0.00660	0.000050	0.000025	0.00561	0.0000025	4.23	0.000009	0.00016	-	0.000052	0.00025	0.21	0.000147	0.0009	1.22	0.032	0.0000013	0.00011	
8	AQF40	0.003	-	-	0.015	0.05	0.24	0.066	3.3	0.034	0.00005	0.00027	0.00561	0.000050	0.000025	0.00560	0.0000025	3.92	0.000009	0.00014	-	0.000052	0.00025	0.22	0.000025	0.0006	1.11	0.026	0.0000019	0.00007	
9	AQF40	0.003	-	-	0.012	0.05	0.28	0.064	3.7	0.045	0.00005	0.00029	0.00654	0.000050	0.000025	0.00565	0.0000025	4.42	0.000009	0.00013	-	0.000052	0.00025	0.20	0.000025	0.0012	1.26	0.024	0.0000025	0.00012	
10	AQF40	0.038	-	-	0.020	0.05	0.32	0.065	4.2	0.054	0.00005	0.00028	0.00569	0.000050	0.000025	0.00576	0.0000025	4.66	0.000010	0.00025	-	0.000053	0.00025	0.28	0.000044	0.0012	1.35	0.033	0.0000012	0.00012	
11	AQF40	0.025	-	-	0.019	0.05	0.34	0.062	5.9	0.080	0.00005	0.00034	0.00896	0.000050	0.000025	0.00615	0.0000121	5.58	0.000012	0.00029	-	0.000054	0.00066	0.32	0.000096	0.0006	1.61	0.044	0.0000025	0.00011	
12	AQF40	0.048	-	-	0.022	0.05	1.01	0.067	7.7	0.058	0.00008	0.00039	0.00838	0.000031	0.000025	0.00647	0.0000101	6.27	0.000014	0.00027	-	0.000056	0.00064	0.31	0.000084	0.0010	1.80	0.045	0.0000025	0.00013	
1	AQF41	0.065	-	-	0.025	0.05	0.44	0.071	8.5	0.039	0.00005	0.00042	0.00818	0.000012	0.000025	0.00664	0.0000176	6.89	0.000015	0.00101	-	0.000056	0.00091	0.32	0.000060	0.0014	1.91	0.044	0.0000025	0.00010	
2	AQF41	-	-	-	0.025	0.05	0.46	0.074	8.9	0.064	0.00007	0.00045	0.00883	0.000012	0.000025	0.00673	0.0000121	7.03	0.000017	0.00062	-	0.000057	0.00058	0.45	0.000068	0.0014	1.98	0.071	0.0000022	0.00009	
3	AQF41	-	-	-	0.025	0.05	0.46	0.077	9.0	0.089	0.00008	0.00048	0.00942	0.000012	0.000025	0.00675	0.0000066	7.03	0.000019	0.00024	-	0.000057	0.00025	0.57	0.000075	0.0014	2.01	0.096	0.0000019	0.00008	
4	AQF41	-	-	-	0.012	0.01	0.37	0.077	5.9	0.032	0.00005	0.00037	0.00736	0.000011	0.000025	0.00612	0.0000025	5.60	0.000012	0.00024	-	0.000054	0.00025	0.30	0.000025	0.0012	1.61	0.036	0.0000022	0.00007	
5	AQF41	0.039	-	-	0.015	0.05	0.35	0.060	2.0	0.054	0.00005	0.00023	0.00607	0.000050	0.000025	0.00531	0.0000025	3.65	0.000007	0.00018	-	0.000051	0.00090	0.39	0.000057	0.0005	1.04	0.039	0.0000025	0.00009	
6	AQF41	0.035	-	-	0.021	0.05	0.77	0.057	2.6	0.094	0.00005	0.00022	0.01023	0.000050	0.000025	0.00545	0.0000088	4.22	0.000008	0.00030	-	0.000052	0.00066	0.49	0.000091	0.0015	1.08	0.072	0.0000036	0.00008	
7	AQF41	0.003	-	-	0.013	0.05	0.25	0.062	3.3	0.042	0.00005	0.00024	0.00590	0.000050	0.000025	0.00561	0.0000025	3.99	0.000009	0.00015	-	0.000052	0.00025	0.24	0.000025	0.0006	1.16	0.027	0.0000015	0.00007	
8	AQF41	0.003	-	-	0.015	0.05	0.28	0.065	3.3	0.035	0.00005	0.00028	0.00574	0.000050	0.000025	0.00560	0.0000025	3.85	0.000009	0.00027	-	0.000052	0.00025	0.22	0.000025	0.0006	1.10	0.026	0.0000020	0.00007	
9	AQF41	0.003	-	-	0.015	0.05	0.27	0.064	3.7	0.056	0.00005	0.00027	0.00677	0.000050	0.000025	0.00565	0.0000025	4.57	0.000009	0.00017	-	0.000052	0.00025	0.22	0.000025	0.0014	1.29	0.025	0.0000025	0.00012	
10	AQF41	0.019	-	-	0.015	0.05	0.29	0.063	4.0	0.038	0.00005	0.00029	0.00596	0.000050	0.000025	0.00576	0.0000025	4.71	0.000010	0.00017	-	0.000053	0.00025	0.25	0.000025	0.0013	1.31	0.030	0.0000011	0.00010	
11	AQF41	0.032	-	-	0.031	0.05	0.37	0.062	5.9	0.036	0.00005	0.00033	0.00591	0.000050	0.000025	0.00615	0.0000025	5.54	0.000012	0.00014	-	0.000054	0.00025	0.22	0.000025	0.0006	1.55	0.033	0.0000025	0.00010	
12	AQF41	0.049	-	-	0.028	0.05	0.41	0.067	7.5	0.037	0.00005	0.00038	0.00710	0.000031	0.000025	0.00647	0.0000101	6.37	0.000014	0.00058	-	0.000056	0.00058	0.27	0.000043	0.0010	1.77	0.040	0.0000025	0.00010	
1	AQF42	0.067	-	-	0.025	0.05	0.77	0.074	8.8	0.050	0.00022	0.00043	0.00860	0.000012	0.000025	0.00664	0.0000025	6.98	0.000015	0.00024	-	0.000056	0.00025	0.35	0.000025	0.0014	1.97	0.048	0.0000025	0.00011	
2	AQF42	-	-	-	0.025	0.05	0.74	0.073	17.3	0.065	0.00028	0.00046	0.00929	0.000012	0.000025	0.00673	0.0000103	7.29	0.000016	0.00024	-	0.000057	0.00096	0.38	0.000080	0.0014	2.01	0.056	0.0000011	0.00009	
3	AQF42	-	-	-	0.025	0.05	0.62	0.076	8.8	0.120	0.00005	0.00044	0.00992	0.000012	0.000025	0.00675	0.0000025	7.20	0.000028	0.00049	-	0.000124	0.00435	0.60	0.000084	0.0015	2.04	0.084	0.0000025	0.00009	
4	AQF42	-	-	-	0.030	0.01	0.39	0.074	5.9	0.037	0.00005	0.00039	0.00810	0.000011	0.000025	0.00612	0.0000101	5.67	0.000012	0.00024	-	0.000054	0.00091	0.31	0.000071	0.0012	1.63	0.038	0.0000025	0.00010	
5	AQF42	0.039	-	-	0.015	0.05	0.31	0.063	2.0	0.054	0.00005	0.00027	0.00605	0.000050	0.000025	0.00531	0.0000025	3.51	0.000007	0.00017	-	0.000051	0.00025	0.49	0.000025	0.0011	1.02	0.072	0.0000025	0.00009	
6	AQF42	0.035	-	-	0.016	0.05	0.30	0.057	2.5	0.058	0.00005	0.00022	0.00629	0.000050	0.000025	0.00545	0.0000025	3.82	0.000008	0.00024	-	0.000052	0.00025	0.37	0.000057	0.0015	1.03	0.025	0.0000020	0.00020	
7	AQF42	0.003	-	-	0.015	0.05	0.38	0.061	3.3	0.048	0.00005	0.00025	0.00612	0.000050	0.000025	0.00561	0.0000067	3.87	0.000009	0.00125	-	0.000052	0.00061	0.26	0.000025	0.0006	1.15	0.030	0.0000018	0.00009	
8	AQF42	0.003	-	-	0.014	0.05	0.24	0.065	3.3	0.037	0.00005	0.00029	0.00585	0.000050	0.000025	0.00560	0.0000025	4.13	0.000009	0.00015	-	0.000052	0.00025	0.23	0.000025	0.0006	1.20	0.029	0.0000022	0.00008	
9	AQF42	0.007	-	-	0.015	0.05	0.35	0.064	3.5	0.039	0.00005	0.00029	0.00637	0.000050	0.000025	0.00565	0.0000025	4.44	0.000009	0.00014	-	0.000052	0.00025	0.19	0.000025	0.0006	1.26	0.024	0.0000025	0.00010	
10	AQF42	0.019	-	-	0.015	0.05	0.30	0.063	4.0	0.041	0.00005	0.00029	0.00587	0.000050	0.000025	0.00576	0.0000025	4.68	0.000010	0.00014	-	0.000053	0.00025	0.25	0.000025	0.0012	1.36	0.030	0.0000011	0.00012	
11	AQF42	0.025	-	-	0.015	0.05	0.41	0.062	6.1	0.154	0.00013	0.00036	0.01487	0.000050	0.000025	0.00615	0.0000298	5.75	0.000026	0.00074	-	0.000122	0.00089	0.44	0.000139	0.0012	1.67	0.096	0.0000025	0.00015	
12	AQF42	0.046	-	-	0.020	0.05	0.60	0.068	7.8	0.101	0.00018	0.00040	0.01172	0.000031	0.000025	0.00647	0.0000161	6.52	0.000021	0.00049	-	0.000089	0.00057	0.39	0.000081	0.0013	1.86	0.073	0.0000025	0.00013	
1	AQF43	0.064	-	-	0.025	0.05	0.44	0.072	8.2	0.038																					

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

	Site	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met
Month	-	Nickel_T	Potassium_T	Rubidium_T	Selenium_T	Silicon_T	Silver_T	Sodium_T	Strontium_T	Sulfur_T	Tellurium_T	Thallium_T	Thorium_T	Tin_T	Titanium_T	Tungsten_T	Uranium_T	Vanadium_T	Zinc_T	Zirconium_T	Aluminum_D	Antimony_D	Arsenic_D	Barium_D	Beryllium_D	Bismuth_D	Boron_D	Cadmium_D	Calcium_D	Calcium_D		
	-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
1	AQF40	0.00025	0.84	0.00127	0.00006	3.23	0.000005	2.05	0.025	2.77	0.0001	0.000005	0.00005	0.00036	0.0012	0.00005	0.00017	0.00025	0.0052	0.00010	0.020	0.00005	0.00031	0.013	0.000012	0.000025	0.0068	0.0000025	6.52			
2	AQF40	0.00025	0.88	0.00128	0.00004	3.37	0.000005	2.09	0.025	3.31	0.0001	0.000005	0.00005	0.00033	0.0010	0.00005	0.00018	0.00025	0.0056	0.00015	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0069	0.0000025	6.74			
3	AQF40	0.00025	0.90	0.00128	0.00003	3.52	0.000005	2.11	0.026	3.74	0.0001	0.000005	0.00005	0.00031	0.0008	0.00005	0.00018	0.00025	0.0059	0.00021	0.021	0.00005	0.00033	0.014	0.000012	0.000025	0.0069	0.0000025	6.82			
4	AQF40	0.00025	0.78	0.00122	0.00013	3.15	0.000005	1.74	0.022	1.97	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00012	0.00025	0.0015	0.00010	0.020	0.00005	0.00027	0.020	0.000011	0.000025	0.0062	0.0000103	5.40			
5	AQF40	0.00025	0.66	0.00112	0.00003	2.41	0.000005	1.31	0.016	0.73	0.0001	0.000005	0.00005	0.00010	0.0016	0.00005	0.00006	0.00025	0.0015	0.00014	0.036	0.00005	0.00017	0.006	0.000050	0.000025	0.0053	0.0000025	3.82			
6	AQF40	0.00025	0.61	0.00103	0.00003	2.02	0.000005	1.18	0.014	0.94	0.0001	0.000005	0.00005	0.00024	0.0015	0.00005	0.00006	0.00025	0.0049	0.00010	0.036	0.00005	0.00021	0.006	0.000050	0.000025	0.0055	0.0000025	3.70			
7	AQF40	0.00025	0.67	0.00123	0.00003	2.17	0.000005	1.35	0.017	1.18	0.0001	0.000005	0.00005	0.00006	0.0014	0.00005	0.00009	0.00025	0.0015	0.00009	0.026	0.00005	0.00024	0.006	0.000050	0.000025	0.0057	0.0000052	4.14			
8	AQF40	0.00025	0.58	0.00113	0.00003	2.12	0.000005	1.46	0.016	1.18	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00007	0.00025	0.0044	0.00010	0.020	0.00005	0.00023	0.005	0.000050	0.000025	0.0057	0.0000025	3.87			
9	AQF40	0.00025	0.62	0.00114	0.00003	2.38	0.000005	1.39	0.017	1.25	0.0001	0.000005	0.00005	0.00014	0.0010	0.00005	0.00009	0.00025	0.0015	0.00010	0.031	0.00005	0.00025	0.006	0.000050	0.000025	0.0057	0.0000025	4.08			
10	AQF40	0.00053	0.65	0.00114	0.00003	2.44	0.000005	1.49	0.018	1.42	0.0001	0.000005	0.00005	0.00006	0.0017	0.00005	0.00010	0.00025	0.0015	0.00009	0.023	0.00005	0.00024	0.009	0.000050	0.000025	0.0058	0.0000025	4.52			
11	AQF40	0.00025	0.74	0.00128	0.00003	2.85	0.000005	1.60	0.020	2.02	0.0001	0.000005	0.00005	0.00006	0.0038	0.00005	0.00014	0.00025	0.0045	0.00010	0.022	0.00005	0.00027	0.005	0.000050	0.000025	0.0063	0.0000025	5.25			
12	AQF40	0.00025	0.80	0.00128	0.00004	3.04	0.000005	1.86	0.023	2.50	0.0001	0.000005	0.00005	0.00021	0.0025	0.00005	0.00016	0.00025	0.0049	0.00010	0.021	0.00005	0.00030	0.009	0.000031	0.000025	0.0066	0.0000025	6.03			
1	AQF41	0.00025	0.85	0.00118	0.00005	3.32	0.000005	2.07	0.024	2.77	0.0001	0.000005	0.00005	0.00155	0.0010	0.00005	0.00017	0.00025	0.0109	0.00010	0.020	0.00005	0.00039	0.014	0.000012	0.000025	0.0068	0.0000141	6.51			
2	AQF41	0.00025	0.89	0.00131	0.00004	3.43	0.000005	2.10	0.025	2.90	0.0001	0.000005	0.00005	0.00081	0.0024	0.00005	0.00018	0.00025	0.0075	0.00010	0.020	0.00005	0.00040	0.011	0.000012	0.000025	0.0069	0.0000083	6.78			
3	AQF41	0.00025	0.93	0.00142	0.00003	3.54	0.000005	2.09	0.026	2.93	0.0001	0.000005	0.00005	0.00007	0.0037	0.00005	0.00019	0.00025	0.0041	0.00010	0.021	0.00005	0.00041	0.008	0.000012	0.000025	0.0069	0.0000025	6.90			
4	AQF41	0.00025	0.77	0.00120	0.00015	3.18	0.000005	1.75	0.021	1.97	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00013	0.00025	0.0015	0.00010	0.020	0.00005	0.00025	0.020	0.000011	0.000025	0.0062	0.0000025	5.34			
5	AQF41	0.00025	0.61	0.00096	0.00003	2.39	0.000005	1.02	0.015	0.73	0.0001	0.000005	0.00005	0.00005	0.0016	0.00005	0.00005	0.00025	0.0015	0.00010	0.030	0.00005	0.00016	0.007	0.000050	0.000025	0.0053	0.0000025	3.56			
6	AQF41	0.00025	0.65	0.00113	0.00003	2.09	0.000005	1.18	0.016	0.94	0.0001	0.000005	0.00005	0.00016	0.0034	0.00005	0.00007	0.00025	0.0070	0.00010	0.033	0.00005	0.00019	0.010	0.000050	0.000025	0.0055	0.0000025	3.66			
7	AQF41	0.00025	0.58	0.00100	0.00003	2.14	0.000005	1.26	0.016	1.18	0.0001	0.000005	0.00005	0.00014	0.0009	0.00005	0.00008	0.00025	0.0015	0.00010	0.026	0.00005	0.00021	0.006	0.000050	0.000025	0.0057	0.0000025	3.85			
8	AQF41	0.00025	0.58	0.00115	0.00005	2.12	0.000005	1.49	0.016	1.18	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00007	0.00025	0.0052	0.00010	0.023	0.00005	0.00022	0.005	0.000050	0.000025	0.0057	0.0000025	3.79			
9	AQF41	0.00025	0.64	0.00122	0.00003	2.53	0.000005	1.45	0.016	1.25	0.0001	0.000005	0.00005	0.00006	0.0016	0.00005	0.00009	0.00025	0.0050	0.00010	0.023	0.00005	0.00022	0.006	0.000050	0.000025	0.0057	0.0000025	4.19			
10	AQF41	0.00025	0.60	0.00107	0.00003	2.49	0.000005	1.44	0.017	1.42	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00009	0.00025	0.0045	0.00010	0.019	0.00005	0.00022	0.005	0.000050	0.000025	0.0058	0.0000025	4.46			
11	AQF41	0.00025	0.70	0.00113	0.00003	2.68	0.000005	1.57	0.020	2.02	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00013	0.00025	0.0015	0.00010	0.019	0.00005	0.00026	0.005	0.000050	0.000025	0.0063	0.0000025	5.17			
12	AQF41	0.00025	0.78	0.00116	0.00004	3.00	0.000005	1.86	0.023	2.50	0.0001	0.000005	0.00005	0.00081	0.0009	0.00005	0.00016	0.00025	0.0062	0.00010	0.019	0.00005	0.00033	0.010	0.000031	0.000025	0.0066	0.0000083	5.98			
1	AQF42	0.00025	0.85	0.00133	0.00006	3.40	0.000005	2.11	0.025	3.04	0.0001	0.000005	0.00005	0.00054	0.0017	0.00005	0.00022	0.00025	0.0039	0.00010	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0068	0.0000025	6.50			
2	AQF42	0.00025	0.99	0.00134	0.00003	3.52	0.000005	2.16	0.026	10.86	0.0001	0.000005	0.00005	0.00202	0.0022	0.00005	0.00020	0.00025	0.0246	0.00010	0.023	0.00005	0.00035	0.021	0.000012	0.000025	0.0069	0.0000025	6.91			
3	AQF42	0.00078	0.92	0.00149	0.00003	3.71	0.000005	2.11	0.026	2.93	0.0001	0.000005	0.00005	0.00007	0.0057	0.00005	0.00020	0.00025	0.0052	0.00010	0.035	0.00005	0.00037	0.009	0.000012	0.000025	0.0069	0.0000025	6.91			
4	AQF42	0.00025	0.79	0.00120	0.00013	3.02	0.000005	1.76	0.022	1.97	0.0001	0.000005	0.00005	0.00006	0.0012	0.00005	0.00016	0.00025	0.0032	0.00010	0.023	0.00005	0.00028	0.019	0.000011	0.000025	0.0062	0.0000117	5.47			
5	AQF42	0.00025	0.58	0.00097	0.00003	2.29	0.000005	1.20	0.014	0.73	0.0001	0.000005	0.00005	0.00026	0.0015	0.00005	0.00005	0.00025	0.0015	0.00010	0.033	0.00005	0.00019	0.006	0.000050	0.000025	0.0053	0.0000025	3.52			
6	AQF42	0.00025	0.59	0.00102	0.00003	2.11	0.000005	1.18	0.014	0.94	0.0001	0.000005	0.00005	0.00028	0.0017	0.00005	0.00006	0.00025	0.0015	0.00010	0.034	0.00005	0.00020	0.006	0.000050	0.000025	0.0055	0.0000025	3.51			
7	AQF42	0.00025	0.59	0.00112	0.00003	2.15	0.000005	1.29	0.015	1.18	0.0001	0.000005	0.00005	0.00041	0.0012	0.00005	0.00008	0.00025	0.0059	0.00010	0.025	0.00005	0.00020	0.006	0.000050	0.000025	0.0057	0.0000025	3.85			
8	AQF42	0.00025	0.61	0.00115	0.00005	2.37	0.000005	1.34	0.017	1.18	0.0001	0.000005	0.00005	0.00006	0.0010	0.00005	0.00008	0.00025	0.0015	0.00010	0.021	0.00005	0.00022	0.005	0.000050	0.000025	0.0057	0.0000025	3.91			
9	AQF42	0.00025	0.62	0.00109	0.00003	2.40	0.000005	1.40	0.017	1.25	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00008	0.00025	0.0031	0.00010	0.024	0.00005	0.00023	0.006	0.000050	0.000025	0.0057	0.0000025	4.26			
10	AQF42	0.00025	0.64	0.00110	0.00003	2.66	0.000005	1.42	0.017	1.42	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00010	0.00025	0.0015	0.00010	0.019	0.00005	0.00023	0.005	0.000050	0.000025	0					

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

	Site	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
Month	-	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L
1	AQF40	0.000015	0.00024	0.000057	0.0027	0.16	0.00013	0.00137	1.9	0.040	-	0.00010	0.00025	0.86	0.00120	0.000025	3.2	0.000005	2.1	0.025	2.80	0.00010	0.000005	0.00005	0.000061	0.00015	0.000053	0.00018	0.00025
2	AQF40	0.000016	0.00024	0.000057	0.0019	0.17	0.00009	0.00124	2.0	0.042	-	0.00011	0.00025	0.86	0.00121	0.000033	3.2	0.000005	2.1	0.025	3.02	0.00010	0.000005	0.00005	0.000085	0.00015	0.000054	0.00019	0.00025
3	AQF40	0.000016	0.00024	0.000057	0.0012	0.19	0.00005	0.00109	2.0	0.043	0.0000010	0.00012	0.00025	0.85	0.00122	0.000041	3.2	0.000005	2.1	0.025	3.13	0.00010	0.000005	0.00005	0.000109	0.00015	0.000054	0.00020	0.00025
4	AQF40	0.000012	0.00024	0.000055	0.0020	0.18	0.00010	0.00122	1.6	0.033	0.0000014	0.00007	0.00025	0.86	0.00126	0.000025	3.1	0.000005	1.8	0.021	1.99	0.00010	0.000005	0.00005	0.000145	0.00015	0.000052	0.00013	0.00025
5	AQF40	0.000007	0.00010	0.000051	0.0006	0.21	0.00003	0.00113	1.1	0.032	0.0000019	0.00014	0.00025	0.64	0.00102	0.000025	2.4	0.000005	1.2	0.015	0.74	0.00010	0.000005	0.00005	0.000126	0.00071	0.000051	0.00005	0.00025
6	AQF40	0.000008	0.00013	0.000052	0.0003	0.18	0.00003	0.00055	1.1	0.013	0.0000018	0.00008	0.00025	0.61	0.00096	0.000025	2.0	0.000005	1.2	0.014	0.95	0.00010	0.000005	0.00005	0.000191	0.00051	0.000051	0.00007	0.00025
7	AQF40	0.000009	0.00011	0.000053	0.0003	0.11	0.00007	0.00092	1.2	0.018	0.0000012	0.00011	0.00025	0.65	0.00113	0.000025	1.9	0.000005	1.3	0.016	1.35	0.00010	0.000005	0.00005	0.000108	0.00041	0.000051	0.00009	0.00025
8	AQF40	0.000009	0.00012	0.000053	0.0003	0.15	0.00003	0.00057	1.2	0.018	-	0.00010	0.00025	0.60	0.00105	0.000052	2.1	0.000005	1.3	0.017	1.19	0.00010	0.000005	0.00005	0.000241	0.00037	0.000051	0.00008	0.00025
9	AQF40	0.000009	0.00022	0.000053	0.0026	0.13	0.00015	0.00058	1.2	0.019	-	0.00015	0.00025	0.60	0.00116	0.000052	2.3	0.000005	1.3	0.016	1.26	0.00010	0.000005	0.00005	0.000054	0.00054	0.000051	0.00009	0.00025
10	AQF40	0.000010	0.00008	0.000053	0.0016	0.14	0.00007	0.00089	1.3	0.019	0.0000011	0.00011	0.00025	0.63	0.00106	0.000042	2.3	0.000005	1.5	0.017	1.63	0.00010	0.000005	0.00005	0.000055	0.00027	0.000052	0.00010	0.00025
11	AQF40	0.000012	0.00015	0.000055	0.0049	0.14	0.00018	0.00064	1.5	0.028	-	0.00010	0.00025	0.71	0.00107	0.000025	2.5	0.000005	1.6	0.020	2.04	0.00010	0.000005	0.00005	0.000058	0.00033	0.000052	0.00013	0.00025
12	AQF40	0.000014	0.00019	0.000056	0.0038	0.15	0.00015	0.00101	1.8	0.036	-	0.00010	0.00025	0.80	0.00114	0.000025	2.8	0.000005	1.9	0.023	2.52	0.00010	0.000005	0.00005	0.000060	0.00024	0.000053	0.00017	0.00025
1	AQF41	0.000015	0.00024	0.000057	0.0037	0.17	0.00016	0.00127	1.9	0.040	-	0.00009	0.00052	0.86	0.00126	0.000025	3.2	0.000005	2.1	0.024	2.80	0.00010	0.000005	0.00005	0.000061	0.00015	0.000053	0.00018	0.00025
2	AQF41	0.000016	0.00024	0.000057	0.0021	0.19	0.00009	0.00116	2.0	0.043	-	0.00008	0.00038	0.87	0.00125	0.000025	3.2	0.000005	2.2	0.025	2.93	0.00010	0.000005	0.00005	0.000061	0.00020	0.000054	0.00019	0.00025
3	AQF41	0.000016	0.00024	0.000057	0.0004	0.20	0.00003	0.00105	2.0	0.045	0.0000012	0.00007	0.00025	0.87	0.00123	0.000025	3.2	0.000005	2.1	0.025	2.96	0.00010	0.000005	0.00005	0.000061	0.00025	0.000054	0.00020	0.00025
4	AQF41	0.000012	0.00024	0.000055	0.0017	0.19	0.00008	0.00122	1.6	0.034	0.0000018	0.00008	0.00025	0.76	0.00121	0.000025	3.1	0.000005	1.7	0.021	1.99	0.00010	0.000005	0.00005	0.000125	0.00035	0.000052	0.00013	0.00025
5	AQF41	0.000007	0.00012	0.000051	0.0017	0.22	0.00003	0.00054	1.0	0.025	0.0000025	0.00012	0.00025	0.62	0.00091	0.000025	2.4	0.000005	1.1	0.014	0.74	0.00010	0.000005	0.00005	0.000052	0.00044	0.000051	0.00005	0.00025
6	AQF41	0.000008	0.00013	0.000052	0.0006	0.18	0.00003	0.00055	1.0	0.013	0.0000022	0.00007	0.00025	0.58	0.00099	0.000025	1.9	0.000005	1.2	0.013	0.95	0.00010	0.000005	0.00005	0.000053	0.00052	0.000051	0.00007	0.00025
7	AQF41	0.000009	0.00012	0.000053	0.0002	0.15	0.00003	0.00057	1.1	0.017	0.0000010	0.00008	0.00025	0.57	0.00098	0.000025	2.1	0.000005	1.2	0.015	1.19	0.00010	0.000005	0.00005	0.000054	0.00036	0.000051	0.00008	0.00025
8	AQF41	0.000009	0.00012	0.000053	0.0003	0.15	0.00003	0.00057	1.1	0.018	-	0.00008	0.00025	0.57	0.00112	0.000025	2.1	0.000005	1.3	0.016	1.19	0.00010	0.000005	0.00005	0.000468	0.00039	0.000051	0.00008	0.00025
9	AQF41	0.000009	0.00005	0.000053	0.0004	0.12	0.00003	0.00117	1.2	0.018	-	0.00011	0.00025	0.59	0.00105	0.000025	2.2	0.000005	1.3	0.017	1.75	0.00010	0.000005	0.00005	0.000056	0.00034	0.000051	0.00008	0.00025
10	AQF41	0.000010	0.00012	0.000053	0.0003	0.12	0.00003	0.00059	1.3	0.018	0.0000010	0.00014	0.00025	0.59	0.00095	0.000025	2.4	0.000005	1.4	0.016	1.43	0.00010	0.000005	0.00005	0.000055	0.00015	0.000052	0.00010	0.00025
11	AQF41	0.000012	0.00005	0.000055	0.0040	0.12	0.00014	0.00064	1.5	0.026	-	0.00009	0.00025	0.67	0.00108	0.000025	2.5	0.000005	1.5	0.019	2.04	0.00010	0.000005	0.00005	0.000058	0.00015	0.000052	0.00013	0.00025
12	AQF41	0.000014	0.00015	0.000056	0.0039	0.15	0.00015	0.00097	1.8	0.035	-	0.00009	0.00038	0.78	0.00118	0.000025	2.8	0.000005	1.9	0.022	2.52	0.00010	0.000005	0.00005	0.000060	0.00015	0.000053	0.00016	0.00025
1	AQF42	0.000015	0.00024	0.000057	0.0031	0.18	0.00015	0.00137	2.0	0.041	-	0.00012	0.00025	0.85	0.00127	0.000025	3.2	0.000005	2.1	0.025	2.80	0.00010	0.000005	0.00005	0.000185	0.00015	0.000053	0.00022	0.00025
2	AQF42	0.000016	0.00024	0.000057	0.0019	0.20	0.00007	0.00071	2.1	0.049	0.0000003	0.00009	0.00025	1.03	0.00130	0.000025	3.3	0.000005	2.2	0.026	3.22	0.00010	0.000005	0.00005	0.000186	0.00040	0.000054	0.00020	0.00025
3	AQF42	0.000016	0.00024	0.000057	0.0004	0.22	0.00003	0.00148	2.0	0.047	-	0.00009	0.00025	0.84	0.00126	0.000062	3.3	0.000005	2.1	0.025	2.96	0.00010	0.000005	0.00005	0.000061	0.00040	0.000054	0.00020	0.00025
4	AQF42	0.000012	0.00024	0.000055	0.0025	0.19	0.00009	0.00132	1.6	0.035	-	0.00009	0.00025	0.80	0.00114	0.000025	3.0	0.000005	5.6	0.021	2.48	0.00010	0.000005	0.00005	0.000155	0.00034	0.000052	0.00016	0.00025
5	AQF42	0.000007	0.00014	0.000051	0.0007	0.30	0.00003	0.00054	1.1	0.051	0.0000016	0.00010	0.00025	0.60	0.00099	0.000025	2.5	0.000005	1.1	0.014	0.74	0.00010	0.000005	0.00005	0.000052	0.00051	0.000051	0.00005	0.00025
6	AQF42	0.000008	0.00013	0.000052	0.0003	0.18	0.00003	0.00055	1.0	0.011	0.0000016	0.00008	0.00025	0.63	0.00095	0.000025	2.0	0.000005	1.2	0.013	0.95	0.00010	0.000005	0.00005	0.000300	0.00046	0.000051	0.00006	0.00025
7	AQF42	0.000009	0.00005	0.000053	0.0002	0.15	0.00003	0.00057	1.1	0.017	0.0000015	0.00009	0.00025	0.59	0.00101	0.000025	2.0	0.000005	1.2	0.015	1.50	0.00010	0.000005	0.00005	0.000684	0.00044	0.000051	0.00009	0.00025
8	AQF42	0.000009	0.00011	0.000053	0.0004	0.15	0.00012	0.00057	1.1	0.018	-	0.00010	0.00025	0.59	0.00114	0.000025	2.1	0.000005	1.3	0.016	1.19	0.00010	0.000005	0.00005	0.000054	0.00046	0.000051	0.00008	0.00025
9	AQF42	0.000009	0.00012	0.000053	0.0002	0.12	0.00003	0.00058	1.2	0.017	-	0.00009	0.00025	0.61	0.00103	0.000060	2.2	0.000005	1.4	0.016	1.26	0.00010	0.000005	0.00005	0.000054	0.00032	0.000051	0.00009	0.00025
10	AQF42	0.000010	0.00005	0.000053	0.0005	0.12	0.00003	0.00059	1.3	0.019	0.0000008	0.00011	0.00025	0.58	0.00098	0.000025	2.4	0.000005	1.4	0.016	1.43	0.00010	0.000005	0.00005	0.000055	0.00015	0.000052	0.00010	0.00025
11	AQF42	0.000012	0.00076	0.000055	0.0015	0.19	0.00006	0.00064	1.6	0.043	-	0.00089	0.00025	0.70	0.00110	0.000025	2.4	0.000005	1.6										

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Month	Site	Dissolved_Met al	Dissolved_Met al	Cyanides	Cyanides	Cyanides	Methylmercu ry	Methylmercu ry
		Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WA D mg/L	Methylmercu ry_D mg/L	Methylmercu ry_T mg/L
		-	-	-	-	-	-	-
1	AQF40	0.0044	0.00015	-	-	-	-	-
2	AQF40	0.0031	0.00015	-	-	-	-	-
3	AQF40	0.0018	0.00015	-	-	-	-	-
4	AQF40	0.0027	0.00015	-	-	-	-	-
5	AQF40	0.0030	0.00010	-	-	-	-	-
6	AQF40	0.0063	0.00010	-	-	-	-	-
7	AQF40	0.0037	0.00010	-	-	-	-	-
8	AQF40	0.0033	0.00010	-	-	-	-	-
9	AQF40	0.0047	0.00010	-	-	-	-	-
10	AQF40	0.0021	0.00011	-	-	-	-	-
11	AQF40	0.0100	0.00010	-	-	-	-	-
12	AQF40	0.0072	0.00012	-	-	-	-	-
1	AQF41	0.0050	0.00015	-	-	-	-	-
2	AQF41	0.0034	0.00015	-	-	-	-	-
3	AQF41	0.0018	0.00015	-	-	-	-	-
4	AQF41	0.0022	0.00015	-	-	-	-	-
5	AQF41	0.0254	0.00010	-	-	-	-	-
6	AQF41	0.0023	0.00010	-	-	-	-	-
7	AQF41	0.0032	0.00010	-	-	-	-	-
8	AQF41	0.0018	0.00026	-	-	-	-	-
9	AQF41	0.0005	0.00010	-	-	-	-	-
10	AQF41	0.0005	0.00010	-	-	-	-	-
11	AQF41	0.0042	0.00010	-	-	-	-	-
12	AQF41	0.0046	0.00012	-	-	-	-	-
1	AQF42	0.0045	0.00015	-	-	-	-	-
2	AQF42	0.0047	0.00015	-	-	-	-	-
3	AQF42	0.0012	0.00015	-	-	-	-	-
4	AQF42	0.0051	0.00015	-	-	-	-	-
5	AQF42	0.0012	0.00010	-	-	-	-	-
6	AQF42	0.0005	0.00010	-	-	-	-	-
7	AQF42	0.0089	0.00010	-	-	-	-	-
8	AQF42	0.0030	0.00010	-	-	-	-	-
9	AQF42	0.0005	0.00010	-	-	-	-	-
10	AQF42	0.0011	0.00010	-	-	-	-	-
11	AQF42	0.0032	0.00010	-	-	-	-	-
12	AQF42	0.0039	0.00012	-	-	-	-	-
1	AQF43	0.0011	0.00015	-	-	-	-	-
2	AQF43	0.0013	0.00015	-	-	-	-	-
3	AQF43	0.0015	0.00015	-	-	-	-	-
4	AQF43	0.0023	0.00015	-	-	-	-	-
5	AQF43	0.0015	0.00010	-	-	-	-	-
6	AQF43	0.0045	0.00010	-	-	-	-	-
7	AQF43	0.0013	0.00010	-	-	-	-	-
8	AQF43	0.0005	0.00010	-	-	-	-	-
9	AQF43	0.0005	0.00010	-	-	-	-	-
10	AQF43	0.0022	0.00010	-	-	-	-	-
11	AQF43	0.0047	0.00010	-	-	-	-	-
12	AQF43	0.0029	0.00012	-	-	-	-	-
1	AQF44	0.0038	0.00015	-	-	-	-	-
2	AQF44	0.0030	0.00015	-	-	-	-	-
3	AQF44	0.0023	0.00015	-	-	-	-	-
4	AQF44	0.0027	0.00015	-	-	-	-	-
5	AQF44	0.0005	0.00010	-	-	-	-	-
6	AQF44	0.0033	0.00010	-	-	-	-	-
7	AQF44	0.0005	0.00010	-	-	-	-	-
8	AQF44	0.0026	0.00010	-	-	-	-	-
9	AQF44	0.0005	0.00010	-	-	-	-	-
10	AQF44	0.0005	0.00010	-	-	-	-	-
11	AQF44	0.0049	0.00010	-	-	-	-	-
12	AQF44	0.0043	0.00012	-	-	-	-	-
1	AQF45	0.0022	0.00015	-	-	-	-	-
2	AQF45	0.0018	0.00015	-	-	-	-	-
3	AQF45	0.0014	0.00015	-	-	-	-	-
4	AQF45	0.0016	0.00015	-	-	-	-	-
5	AQF45	0.0013	0.00010	-	-	-	-	-
6	AQF45	0.0011	0.00010	-	-	-	-	-
7	AQF45	0.0021	0.00010	-	-	-	-	-
8	AQF45	0.0012	0.00010	-	-	-	-	-
9	AQF45	0.0005	0.00010	-	-	-	-	-
10	AQF45	0.0016	0.00010	-	-	-	-	-
11	AQF45	0.0059	0.00010	-	-	-	-	-
12	AQF45	0.0005	0.00010	-	-	-	-	-
May-Oct	All Stn Median	0.0015	0.00010	-	-	-	-	-
May-Oct	All Stn 90P	0.0046	0.00010	-	-	-	-	-
May-Oct	All Stn 10P	0.0005	0.00010	-	-	-	-	-

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations

Month	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient
		D_Oxygen_field	D_Oxygen_perce	ORP_field	pH_field	Specific_Con	TDS_field	Temp_field	Turbidity_fiel	Acidity(CaCO	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(Ca	Alkalinity(CaCO3)	(CO3)_carbonat	(HCO3)_bicarbona	(OH)_hydroxide	Conductivity	DOC_D	Hardness(Ca	Hardness(Ca	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia(N)	Nitrate(N)	Nitrite(N)
		mg/L	nt	mV	pH	ductance_fiel	mg/L	C	d	3)	CO3)_bicarbo	CO3)_carbon	CO3)_hydrox	CO3)_phenol	_T	e	te	mg/L	µS/cm	mg/L	CO3)_D	CO3)_T	pH	mg/L	mg/L	mg/L	mg/L	NTU	_T	mg/L	mg/L
1	AQF40	9.8	67.6	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-	10.0	-	-	0.096	0.071	0.005	
2	AQF40	10.7	73.4	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-	9.8	-	-	0.062	0.088	0.005	
3	AQF40	11.5	79.3	-	-	-	-	0.3	-	-	-	-	-	-	14.9	0.49	22.7	0.49	-	-	-	21.4	-	-	9.5	-	-	0.028	0.105	0.005	
4	AQF40	19.9	138.9	-	-	-	-	0.6	-	-	-	-	-	-	16.4	0.40	19.0	0.33	41.3	-	-	17.8	-	-	9.1	-	-	0.010	0.098	0.001	
5	AQF40	12.4	94.7	-	-	-	-	3.9	-	-	-	-	-	-	11.7	0.30	14.3	0.17	-	-	-	13.3	-	-	8.7	-	-	0.006	0.038	0.001	
6	AQF40	9.0	90.6	-	-	-	-	15.4	-	-	-	-	-	-	10.4	0.30	12.7	0.17	-	-	-	12.4	-	-	9.9	-	-	0.007	0.011	0.005	
7	AQF40	6.7	72.0	-	-	-	-	18.7	-	-	-	-	-	-	11.8	0.30	14.4	0.17	-	-	-	13.6	-	-	8.8	-	-	0.013	0.003	0.001	
8	AQF40	6.1	66.7	-	-	-	-	19.9	-	-	-	-	-	-	12.6	0.30	15.4	0.17	-	-	-	12.8	-	-	9.2	-	-	0.021	0.003	0.001	
9	AQF40	8.0	78.9	-	-	-	-	13.6	-	-	-	-	-	-	12.9	0.30	15.7	0.17	-	-	-	13.3	-	-	8.9	-	-	0.024	0.003	0.001	
10	AQF40	11.9	90.0	-	-	-	-	3.6	-	-	-	-	-	-	13.9	0.30	16.9	0.17	-	-	-	14.8	-	-	8.8	-	-	0.017	0.026	0.001	
11	AQF40	10.3	70.8	-	-	-	-	0.3	-	-	-	-	-	-	15.8	0.30	19.2	0.17	-	-	-	16.3	-	-	10.1	-	-	0.017	0.025	0.001	
12	AQF40	10.1	69.1	-	-	-	-	0.3	-	-	-	-	-	-	15.8	-	-	-	-	-	-	-	-	-	10.0	-	-	0.057	0.048	0.003	
1	AQF41	12.4	85.8	-	-	-	-	0.4	-	-	-	-	-	-	17.1	-	-	-	-	-	-	-	-	-	10.1	-	-	0.048	0.066	0.005	
2	AQF41	12.3	84.2	-	-	-	-	0.3	-	-	-	-	-	-	17.9	-	-	-	-	-	-	-	-	-	10.1	-	-	0.040	0.090	0.005	
3	AQF41	12.1	82.8	-	-	-	-	0.3	-	-	-	-	-	-	18.5	0.49	22.8	0.49	-	-	-	21.0	-	-	10.0	-	-	0.032	0.115	0.005	
4	AQF41	20.0	140.8	-	-	-	-	0.7	-	-	-	-	-	-	16.3	0.40	18.6	0.33	41.1	-	-	17.1	-	-	9.4	-	-	0.010	0.099	0.001	
5	AQF41	14.0	107.4	-	-	-	-	3.9	-	-	-	-	-	-	11.0	0.30	13.4	0.17	-	-	-	12.3	-	-	8.7	-	-	0.006	0.039	0.001	
6	AQF41	8.4	85.6	-	-	-	-	16.5	-	-	-	-	-	-	9.2	0.30	11.2	0.17	-	-	-	12.2	-	-	8.9	-	-	0.007	0.011	0.005	
7	AQF41	7.4	77.0	-	-	-	-	19.0	-	-	-	-	-	-	10.8	0.30	13.1	0.17	-	-	-	12.5	-	-	9.2	-	-	0.039	0.003	0.001	
8	AQF41	6.2	67.4	-	-	-	-	20.2	-	-	-	-	-	-	12.5	0.30	15.3	0.17	-	-	-	12.5	-	-	9.2	-	-	0.014	0.003	0.001	
9	AQF41	6.9	66.1	-	-	-	-	13.5	-	-	-	-	-	-	13.0	0.30	15.9	0.17	-	-	-	13.7	-	-	9.0	-	-	0.015	0.003	0.001	
10	AQF41	11.5	87.8	-	-	-	-	4.3	-	-	-	-	-	-	13.4	0.30	16.3	0.17	-	-	-	14.5	-	-	9.2	-	-	0.008	0.020	0.001	
11	AQF41	12.3	85.4	-	-	-	-	0.4	-	-	-	-	-	-	16.2	0.30	19.7	0.17	-	-	-	16.1	-	-	9.0	-	-	0.010	0.033	0.001	
12	AQF41	12.4	85.6	-	-	-	-	0.4	-	-	-	-	-	-	16.9	-	-	-	-	-	-	-	-	-	9.6	-	-	0.029	0.049	0.003	
1	AQF42	10.3	71.0	-	-	-	-	0.3	-	-	-	-	-	-	17.0	-	-	-	-	-	-	-	-	-	9.8	-	-	0.053	0.067	0.005	
2	AQF42	11.9	80.9	-	-	-	-	0.3	-	-	-	-	-	-	13.4	-	-	-	-	-	-	21.8	-	-	9.9	-	-	0.039	0.118	0.005	
3	AQF42	10.4	70.9	-	-	-	-	0.3	-	-	-	-	-	-	20.9	0.49	25.4	0.49	-	-	-	21.6	-	-	10.2	-	-	0.058	0.110	0.005	
4	AQF42	15.5	106.8	-	-	-	-	0.2	-	-	-	-	-	-	16.4	0.40	19.7	0.33	40.9	-	-	17.4	-	-	9.5	-	-	0.016	0.095	0.001	
5	AQF42	13.7	133.2	-	-	-	-	4.4	-	-	-	-	-	-	10.6	0.30	12.9	0.17	-	-	-	12.3	-	-	9.5	-	-	0.006	0.039	0.001	
6	AQF42	10.3	103.2	-	-	-	-	15.3	-	-	-	-	-	-	10.0	0.30	12.2	0.17	-	-	-	11.6	-	-	9.4	-	-	0.007	0.011	0.005	
7	AQF42	8.0	86.9	-	-	-	-	18.9	-	-	-	-	-	-	12.3	0.30	14.9	0.17	-	-	-	12.5	-	-	9.1	-	-	0.024	0.003	0.001	
8	AQF42	7.9	84.9	-	-	-	-	18.5	-	-	-	-	-	-	12.6	0.30	15.4	0.17	-	-	-	12.9	-	-	9.3	-	-	0.045	0.003	0.001	
9	AQF42	8.5	82.4	-	-	-	-	14.0	-	-	-	-	-	-	12.4	0.30	15.1	0.17	-	-	-	13.9	-	-	9.0	-	-	0.008	0.007	0.001	
10	AQF42	11.4	95.5	-	-	-	-	3.7	-	-	-	-	-	-	13.5	0.30	16.5	0.17	-	-	-	14.6	-	-	9.9	-	-	0.008	0.019	0.001	
11	AQF42	11.6	79.6	-	-	-	-	0.3	-	-	-	-	-	-	16.3	0.30	19.8	0.17	-	-	-	17.0	-	-	9.5	-	-	0.023	0.026	0.001	
12	AQF42	10.9	75.3	-	-	-	-	0.3	-	-	-	-	-	-	16.9	-	-	-	-	-	-	-	-	-	9.6	-	-	0.038	0.047	0.003	
1	AQF43	13.1	90.1	-	-	-	-	-	-	-	-	-	-	-	17.6	-	-	-	-	-	-	-	-	-	9.9	-	-	0.027	0.065	0.005	
2	AQF43	13.3	90.9	-	-	-	-	-	-	-	-	-	-	-	17.7	-	-	-	-	-	-	-	-	-	9.5	-	-	0.021	0.088	0.005	
3	AQF43	13.5	91.9	-	-	-	-	0.3	-	-	-	-	-	-	17.6	0.49	22.7	0.49	-	-	-	21.2	-	-	9.0	-	-	0.015	0.110	0.005	
4	AQF43	16.8	115.5	-	-	-	-	0.3	-	-	-	-	-	-	16.5	0.40	19.6	0.33	41.1	-	-	17.8	-	-	9.1	-	-	0.010	0.096	0.001	
5	AQF43	16.9	137.2	-	-	-	-	5.9	-	-	-	-	-	-	12.8	0.30	15.6	0.17	-	-	-	13.4	-	-	9.9	-	-	0.006	0.032	0.001	
6	AQF43	10.3	104.1	-	-	-	-	15.7	-	-	-	-	-	-	10.4	0.30	12.7	0.17	-	-	-	12.9	-	-	8.8	-	-	0.007	0.011	0.005	
7	AQF43	8.2	89.3	-	-	-	-	19.4	-	-	-	-	-	-	10.7	0.30	13.0	0.17	-	-	-	12.8	-	-	9.1	-	-	0.032	0.003	0.001	
8	AQF43	8.2	89.5	-	-	-	-	19.5	-	-	-	-	-	-	13.6	0.30	16.6	0.17	-	-	-	13.5	-	-	9.2	-	-	0.016	0.009	0.001	
9	AQF43	9.0	85.4	-	-	-	-	13.0	-	-	-	-	-	-	13.3	0.30	16.2	0.17	-	-	-	13.7	-	-	9.1	-	-	0.027	0.003	0.001	
10	AQF43	12.7	94.4	-	-	-	-	3.0	-	-	-	-	-	-	13.3	0.30	16.2	0.17	-	-	-	14.6	-	-	9.3	-	-	0.008	0.020	0.001	
11	AQF43	14.2	97.2	-	-	-	-	-	-	-	-	-	-	-	15.9	0.30	19.3	0.17	-	-	-	16.6	-	-	9.8	-	-	0.035	0.028	0.001	
12	AQF43	13.6	93.6	-	-	-	-	-	-	-	-	-	-	-	17.0	-	-	-	-	-	-	18.2	-	-	9.8	-	-	0.031	0.046	0.003	
1	AQF44	11.1	75.9	-	-	-	-	0.3	-	-	-	-	-	-	15.4	-	-	-	-	-	-	-	-	-	10.0	-	-	0.141	0.073	0.005	
2	AQF44	12.2	83.2	-	-	-	-	0.3	-	-	-	-	-	-	19.2	-	-	-	-	-	-	-	-	-	9.7	-	-	0.081	0.090	0.005	
3	AQF44	13.4	90.5	-	-	-	-	0.3	-	-	-	-	-	-	22.6	0.49	30.6	0.49	-	-	-	21.9	-	-	9.4	-	-	0.020	0.108	0.005	
4	AQF44	19.2	132.1	-	-	-	-	0.2	-	-	-	-	-	-	16.9	0.40	22.9	0.33	42.7	-	-	18.0	-	-	9.4	-	-	0.010	0.098	0.001	
5	AQF44	14.2	132.2	-	-	-	-	6.2	-	-	-	-	-	-	11.5	0.30	14.0	0.17	-	-	-	13.1	-	-	8.8	-	-	0.006	0.032	0.001	
6	AQF44	10.5	105.1	-	-	-	-	15.6	-	-	-	-	-	-	10.4	0.30	12.7	0.17	-	-	-	12.1	-	-	8.4	-	-	0.007	0.011	0.005	
7	AQF44	8.5	93.6	-	-	-	-	19.7	-	-	-	-	-	-	10.9	0.30	13.2	0.17	-	-	-	12.8	-	-							

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Month	Site	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
		Nitrite_nitrat	Nitrogen(TK	Phosphorus_	Phosphorus_	Bromide	Chloride	Fluoride	Sulfate(SO4)	Aluminum_T	Antimony_T	Arsenic_T	Barium_T	Beryllium_T	Bismuth_T	Boron_T	Cadmium_T	Calcium_T	Cesium_T	Chromium_T	ChromiumVI	Cobalt_T	Copper_T	Iron_T	Lead_T	Lithium_T	Magnesium_T	Manganese_T	Mercury_T	Molybdenum_		
		e(N) mg/L	N) mg/L	D mg/L	T mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
1	AQF40	0.070	-	-	0.025	0.05	1.65	0.071	9.0	0.037	0.00011	0.00043	0.00773	0.000012	0.000025	0.00664	0.0000082	6.67	0.000015	0.00024	-	0.000056	0.00062	0.30	0.000073	0.0013	1.91	0.044	0.0000025	0.00013		
2	AQF40	-	-	-	0.021	0.05	1.16	0.073	10.8	0.035	0.00012	0.00043	0.00790	0.000012	0.000025	0.00673	0.0000053	7.00	0.000016	0.00024	-	0.000057	0.00044	0.31	0.000049	0.0014	1.98	0.046	0.0000021	0.00011		
3	AQF40	-	-	-	0.018	0.05	0.67	0.076	12.3	0.034	0.00013	0.00042	0.00803	0.000012	0.000025	0.00675	0.0000025	7.19	0.000016	0.00024	-	0.000057	0.00025	0.32	0.000025	0.0014	2.00	0.047	0.0000017	0.00008		
4	AQF40	-	-	-	0.025	0.01	0.39	0.078	5.9	0.033	0.00005	0.00038	0.00725	0.000011	0.000025	0.00612	0.0000085	5.53	0.000012	0.00024	-	0.000054	0.00025	0.29	0.000025	0.0012	1.59	0.035	0.0000019	0.00007		
5	AQF40	0.044	-	-	0.023	0.05	0.29	0.064	2.1	0.055	0.00005	0.00024	0.00617	0.000050	0.000025	0.00531	0.0000025	3.85	0.000007	0.00022	-	0.000051	0.00025	0.32	0.000025	0.0009	1.13	0.042	0.0000021	0.00007		
6	AQF40	0.035	-	-	0.015	0.05	0.30	0.057	2.5	0.062	0.00005	0.00023	0.00632	0.000050	0.000025	0.00545	0.0000052	3.97	0.000008	0.00020	-	0.000052	0.00025	0.35	0.000061	0.0015	1.07	0.032	0.0000022	0.00008		
7	AQF40	0.218	-	-	0.012	0.05	0.29	0.063	3.3	0.048	0.00005	0.00026	0.00660	0.000050	0.000025	0.00561	0.0000025	4.23	0.000009	0.00016	-	0.000052	0.00025	0.21	0.000147	0.0009	1.22	0.032	0.0000013	0.00011		
8	AQF40	0.003	-	-	0.015	0.05	0.24	0.066	3.3	0.034	0.00005	0.00027	0.00561	0.000050	0.000025	0.00560	0.0000025	3.92	0.000009	0.00014	-	0.000052	0.00025	0.22	0.000025	0.0006	1.11	0.026	0.0000019	0.00007		
9	AQF40	0.003	-	-	0.012	0.05	0.28	0.064	3.7	0.045	0.00005	0.00029	0.00654	0.000050	0.000025	0.00565	0.0000025	4.42	0.000009	0.00013	-	0.000052	0.00025	0.20	0.000025	0.0012	1.26	0.024	0.0000025	0.00012		
10	AQF40	0.038	-	-	0.020	0.05	0.32	0.065	4.2	0.054	0.00005	0.00028	0.00569	0.000050	0.000025	0.00576	0.0000025	4.66	0.000010	0.00025	-	0.000053	0.00025	0.28	0.000044	0.0012	1.35	0.033	0.0000012	0.00012		
11	AQF40	0.025	-	-	0.019	0.05	0.34	0.062	5.9	0.080	0.00005	0.00034	0.00896	0.000050	0.000025	0.00615	0.0000121	5.58	0.000012	0.00029	-	0.000054	0.00066	0.32	0.000096	0.0006	1.61	0.044	0.0000025	0.00011		
12	AQF40	0.048	-	-	0.022	0.05	1.01	0.067	7.7	0.058	0.00008	0.00039	0.00838	0.000031	0.000025	0.00647	0.0000101	6.27	0.000014	0.00027	-	0.000056	0.00064	0.31	0.000084	0.0010	1.80	0.045	0.0000025	0.00013		
1	AQF41	0.065	-	-	0.025	0.05	0.44	0.071	8.5	0.039	0.00005	0.00042	0.00818	0.000012	0.000025	0.00664	0.0000176	6.89	0.000015	0.00101	-	0.000056	0.00091	0.32	0.000060	0.0014	1.91	0.044	0.0000025	0.00010		
2	AQF41	-	-	-	0.025	0.05	0.46	0.074	8.9	0.064	0.00007	0.00045	0.00883	0.000012	0.000025	0.00673	0.0000121	7.03	0.000017	0.00062	-	0.000057	0.00058	0.45	0.000068	0.0014	1.98	0.071	0.0000022	0.00009		
3	AQF41	-	-	-	0.025	0.05	0.46	0.077	9.0	0.089	0.00008	0.00048	0.00942	0.000012	0.000025	0.00675	0.0000066	7.03	0.000019	0.00024	-	0.000057	0.00025	0.57	0.000075	0.0014	2.01	0.096	0.0000019	0.00008		
4	AQF41	-	-	-	0.012	0.01	0.37	0.077	5.9	0.032	0.00005	0.00037	0.00736	0.000011	0.000025	0.00612	0.0000025	5.60	0.000012	0.00024	-	0.000054	0.00025	0.30	0.000025	0.0012	1.61	0.036	0.0000022	0.00007		
5	AQF41	0.039	-	-	0.015	0.05	0.35	0.060	2.0	0.054	0.00005	0.00023	0.00607	0.000050	0.000025	0.00531	0.0000025	3.65	0.000007	0.00018	-	0.000051	0.00090	0.39	0.000057	0.0005	1.04	0.039	0.0000025	0.00009		
6	AQF41	0.035	-	-	0.021	0.05	0.77	0.057	2.6	0.094	0.00005	0.00022	0.01023	0.000050	0.000025	0.00545	0.0000088	4.22	0.000008	0.00030	-	0.000052	0.00066	0.49	0.000091	0.0015	1.08	0.072	0.0000036	0.00008		
7	AQF41	0.003	-	-	0.013	0.05	0.25	0.062	3.3	0.042	0.00005	0.00024	0.00590	0.000050	0.000025	0.00561	0.0000025	3.99	0.000009	0.00015	-	0.000052	0.00025	0.24	0.000025	0.0006	1.16	0.027	0.0000015	0.00007		
8	AQF41	0.003	-	-	0.015	0.05	0.28	0.065	3.3	0.035	0.00005	0.00028	0.00574	0.000050	0.000025	0.00560	0.0000025	3.85	0.000009	0.00027	-	0.000052	0.00025	0.22	0.000025	0.0006	1.10	0.026	0.0000020	0.00007		
9	AQF41	0.003	-	-	0.015	0.05	0.27	0.064	3.7	0.056	0.00005	0.00027	0.00677	0.000050	0.000025	0.00565	0.0000025	4.57	0.000009	0.00017	-	0.000052	0.00025	0.22	0.000025	0.0014	1.29	0.025	0.0000025	0.00012		
10	AQF41	0.019	-	-	0.015	0.05	0.29	0.063	4.0	0.038	0.00005	0.00029	0.00596	0.000050	0.000025	0.00576	0.0000025	4.71	0.000010	0.00017	-	0.000053	0.00025	0.25	0.000025	0.0013	1.31	0.030	0.0000011	0.00010		
11	AQF41	0.032	-	-	0.031	0.05	0.37	0.062	5.9	0.036	0.00005	0.00033	0.00591	0.000050	0.000025	0.00615	0.0000025	5.54	0.000012	0.00014	-	0.000054	0.00025	0.22	0.000025	0.0006	1.55	0.033	0.0000025	0.00010		
12	AQF41	0.049	-	-	0.028	0.05	0.41	0.067	7.5	0.037	0.00005	0.00038	0.00710	0.000031	0.000025	0.00647	0.0000101	6.37	0.000014	0.00058	-	0.000056	0.00058	0.27	0.000043	0.0010	1.77	0.040	0.0000025	0.00010		
1	AQF42	0.067	-	-	0.025	0.05	0.77	0.074	8.8	0.050	0.00022	0.00043	0.00860	0.000012	0.000025	0.00664	0.0000025	6.98	0.000015	0.00024	-	0.000056	0.00025	0.35	0.000025	0.0014	1.97	0.048	0.0000025	0.00011		
2	AQF42	-	-	-	0.025	0.05	0.74	0.073	17.3	0.065	0.00028	0.00046	0.00929	0.000012	0.000025	0.00673	0.0000103	7.29	0.000016	0.00024	-	0.000057	0.00096	0.38	0.000080	0.0014	2.01	0.056	0.0000011	0.00009		
3	AQF42	-	-	-	0.025	0.05	0.62	0.076	8.8	0.120	0.00005	0.00044	0.00992	0.000012	0.000025	0.00675	0.0000025	7.20	0.000028	0.00049	-	0.000124	0.00435	0.60	0.000084	0.0015	2.04	0.084	0.0000025	0.00009		
4	AQF42	-	-	-	0.030	0.01	0.39	0.074	5.9	0.037	0.00005	0.00039	0.00810	0.000011	0.000025	0.00612	0.0000101	5.67	0.000012	0.00024	-	0.000054	0.00091	0.31	0.000071	0.0012	1.63	0.038	0.0000025	0.00010		
5	AQF42	0.039	-	-	0.015	0.05	0.31	0.063	2.0	0.054	0.00005	0.00027	0.00605	0.000050	0.000025	0.00531	0.0000025	3.51	0.000007	0.00017	-	0.000051	0.00025	0.49	0.000025	0.0011	1.02	0.072	0.0000025	0.00009		
6	AQF42	0.035	-	-	0.016	0.05	0.30	0.057	2.5	0.058	0.00005	0.00022	0.00629	0.000050	0.000025	0.00545	0.0000025	3.82	0.000008	0.00024	-	0.000052	0.00025	0.37	0.000057	0.0015	1.03	0.025	0.0000020	0.00020		
7	AQF42	0.003	-	-	0.015	0.05	0.38	0.061	3.3	0.048	0.00005	0.00025	0.00612	0.000050	0.000025	0.00561	0.0000067	3.87	0.000009	0.00125	-	0.000052	0.00061	0.26	0.000025	0.0006	1.15	0.030	0.0000018	0.00009		
8	AQF42	0.003	-	-	0.014	0.05	0.24	0.065	3.3	0.037	0.00005	0.00029	0.00585	0.000050	0.000025	0.00560	0.0000025	4.13	0.000009	0.00015	-	0.000052	0.00025	0.23	0.000025	0.0006	1.20	0.029	0.0000022	0.00008		
9	AQF42	0.007	-	-	0.015	0.05	0.35	0.064	3.5	0.039	0.00005	0.00029	0.00637	0.000050	0.000025	0.00565	0.0000025	4.44	0.000009	0.00014	-	0.000052	0.00025	0.19	0.000025	0.0006	1.26	0.024	0.0000025	0.00010		
10	AQF42	0.019	-	-	0.015	0.05	0.30	0.063	4.0	0.041	0.00005	0.00029	0.00587	0.000050	0.000025	0.00576	0.0000025	4.68	0.000010	0.00014	-	0.000053	0.00025	0.25	0.000025	0.0012	1.36	0.030	0.0000011	0.00012		
11	AQF42	0.025	-	-	0.015	0.05	0.41	0.062	6.1	0.154	0.00013	0.00036	0.01487	0.000050	0.000025	0.00615	0.0000298	5.75	0.000026	0.00074	-	0.000122	0.00089	0.44	0.000139	0.0012	1.67	0.096	0.0000025	0.00015		
12	AQF42	0.046	-	-	0.020	0.05	0.60	0.068	7.8	0.101	0.00018	0.00040	0.01172	0.000031	0.000025																	

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Month	Site	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al
		Nickel_T mg/L	Potassium_T mg/L	Rubidium_T mg/L	Selenium_T mg/L	Silicon_T mg/L	Silver_T mg/L	Sodium_T mg/L	Strontium_T mg/L	Sulfur_T mg/L	Tellurium_T mg/L	Thallium_T mg/L	Thorium_T mg/L	Tin_T mg/L	Titanium_T mg/L	Tungsten_T mg/L	Uranium_T mg/L	Vanadium_T mg/L	Zinc_T mg/L	Zirconium_T mg/L	Aluminum_D mg/L	Antimony_D mg/L	Arsenic_D mg/L	Barium_D mg/L	Beryllium_D mg/L	Bismuth_D mg/L	Boron_D mg/L	Cadmium_D mg/L	Calcium_D mg/L
1	AQF40	0.00025	0.84	0.00127	0.00006	3.23	0.000005	2.05	0.025	2.77	0.0001	0.000005	0.00005	0.00036	0.0012	0.00005	0.00017	0.00025	0.0052	0.00010	0.020	0.00005	0.00031	0.013	0.000012	0.000025	0.0068	0.0000025	6.52
2	AQF40	0.00025	0.88	0.00128	0.00004	3.37	0.000005	2.09	0.025	3.31	0.0001	0.000005	0.00005	0.00033	0.0010	0.00005	0.00018	0.00025	0.0056	0.00015	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0069	0.0000025	6.74
3	AQF40	0.00025	0.90	0.00128	0.00003	3.52	0.000005	2.11	0.026	3.74	0.0001	0.000005	0.00005	0.00031	0.0008	0.00005	0.00018	0.00025	0.0059	0.00021	0.021	0.00005	0.00033	0.014	0.000012	0.000025	0.0069	0.0000025	6.82
4	AQF40	0.00025	0.78	0.00122	0.00013	3.15	0.000005	1.74	0.022	1.97	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00012	0.00025	0.0015	0.00010	0.020	0.00005	0.00027	0.020	0.000011	0.000025	0.0062	0.0000103	5.40
5	AQF40	0.00025	0.66	0.00112	0.00003	2.41	0.000005	1.31	0.016	0.73	0.0001	0.000005	0.00005	0.00010	0.0016	0.00005	0.00006	0.00025	0.0015	0.00014	0.036	0.00005	0.00017	0.006	0.000050	0.000025	0.0053	0.0000025	3.82
6	AQF40	0.00025	0.61	0.00103	0.00003	2.02	0.000005	1.18	0.014	0.94	0.0001	0.000005	0.00005	0.00024	0.0015	0.00005	0.00006	0.00025	0.0049	0.00010	0.036	0.00005	0.00021	0.006	0.000050	0.000025	0.0055	0.0000025	3.70
7	AQF40	0.00025	0.67	0.00123	0.00003	2.17	0.000005	1.35	0.017	1.18	0.0001	0.000005	0.00005	0.00006	0.0014	0.00005	0.00009	0.00025	0.0015	0.00009	0.026	0.00005	0.00024	0.006	0.000050	0.000025	0.0057	0.0000052	4.14
8	AQF40	0.00025	0.58	0.00113	0.00003	2.12	0.000005	1.46	0.016	1.18	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00007	0.00025	0.0044	0.00010	0.020	0.00005	0.00023	0.005	0.000050	0.000025	0.0057	0.0000025	3.87
9	AQF40	0.00025	0.62	0.00114	0.00003	2.38	0.000005	1.39	0.017	1.25	0.0001	0.000005	0.00005	0.00014	0.0010	0.00005	0.00009	0.00025	0.0015	0.00010	0.031	0.00005	0.00025	0.006	0.000050	0.000025	0.0057	0.0000025	4.08
10	AQF40	0.00053	0.65	0.00114	0.00003	2.44	0.000005	1.49	0.018	1.42	0.0001	0.000005	0.00005	0.00006	0.0017	0.00005	0.00010	0.00025	0.0015	0.00009	0.023	0.00005	0.00024	0.009	0.000050	0.000025	0.0058	0.0000025	4.52
11	AQF40	0.00025	0.74	0.00128	0.00003	2.85	0.000005	1.60	0.020	2.02	0.0001	0.000005	0.00005	0.00006	0.0038	0.00005	0.00014	0.00025	0.0045	0.00010	0.022	0.00005	0.00027	0.005	0.000050	0.000025	0.0063	0.0000025	5.25
12	AQF40	0.00025	0.80	0.00128	0.00004	3.04	0.000005	1.86	0.023	2.50	0.0001	0.000005	0.00005	0.00021	0.0025	0.00005	0.00016	0.00025	0.0049	0.00010	0.021	0.00005	0.00030	0.009	0.000031	0.000025	0.0066	0.0000025	6.03
1	AQF41	0.00025	0.85	0.00118	0.00005	3.32	0.000005	2.07	0.024	2.77	0.0001	0.000005	0.00005	0.00155	0.0010	0.00005	0.00017	0.00025	0.0109	0.00010	0.020	0.00005	0.00039	0.014	0.000012	0.000025	0.0068	0.0000141	6.51
2	AQF41	0.00025	0.89	0.00131	0.00004	3.43	0.000005	2.10	0.025	2.90	0.0001	0.000005	0.00005	0.00081	0.0024	0.00005	0.00018	0.00025	0.0075	0.00010	0.020	0.00005	0.00040	0.011	0.000012	0.000025	0.0069	0.0000083	6.78
3	AQF41	0.00025	0.93	0.00142	0.00003	3.54	0.000005	2.09	0.026	2.93	0.0001	0.000005	0.00005	0.00007	0.0037	0.00005	0.00019	0.00025	0.0041	0.00010	0.021	0.00005	0.00041	0.008	0.000012	0.000025	0.0069	0.0000025	6.90
4	AQF41	0.00025	0.77	0.00120	0.00015	3.18	0.000005	1.75	0.021	1.97	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00013	0.00025	0.0015	0.00010	0.020	0.00005	0.00025	0.020	0.000011	0.000025	0.0062	0.0000025	5.34
5	AQF41	0.00025	0.61	0.00096	0.00003	2.39	0.000005	1.02	0.015	0.73	0.0001	0.000005	0.00005	0.00005	0.0016	0.00005	0.00005	0.00025	0.0015	0.00010	0.030	0.00005	0.00016	0.007	0.000050	0.000025	0.0053	0.0000025	3.56
6	AQF41	0.00025	0.65	0.00113	0.00003	2.09	0.000005	1.18	0.016	0.94	0.0001	0.000005	0.00005	0.00016	0.0034	0.00005	0.00007	0.00025	0.0070	0.00010	0.033	0.00005	0.00019	0.010	0.000050	0.000025	0.0055	0.0000025	3.66
7	AQF41	0.00025	0.58	0.00100	0.00003	2.14	0.000005	1.26	0.016	1.18	0.0001	0.000005	0.00005	0.00014	0.0009	0.00005	0.00008	0.00025	0.0015	0.00010	0.026	0.00005	0.00021	0.006	0.000050	0.000025	0.0057	0.0000025	3.85
8	AQF41	0.00025	0.58	0.00115	0.00005	2.12	0.000005	1.49	0.016	1.18	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00007	0.00025	0.0052	0.00010	0.023	0.00005	0.00022	0.005	0.000050	0.000025	0.0057	0.0000025	3.79
9	AQF41	0.00025	0.64	0.00122	0.00003	2.53	0.000005	1.45	0.016	1.25	0.0001	0.000005	0.00005	0.00006	0.0016	0.00005	0.00009	0.00025	0.0050	0.00010	0.023	0.00005	0.00022	0.006	0.000050	0.000025	0.0057	0.0000025	4.19
10	AQF41	0.00025	0.60	0.00107	0.00003	2.49	0.000005	1.44	0.017	1.42	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00009	0.00025	0.0045	0.00010	0.019	0.00005	0.00022	0.005	0.000050	0.000025	0.0058	0.0000025	4.46
11	AQF41	0.00025	0.70	0.00113	0.00003	2.68	0.000005	1.57	0.020	2.02	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00013	0.00025	0.0015	0.00010	0.019	0.00005	0.00026	0.005	0.000050	0.000025	0.0063	0.0000025	5.17
12	AQF41	0.00025	0.78	0.00116	0.00004	3.00	0.000005	1.86	0.023	2.50	0.0001	0.000005	0.00005	0.00081	0.0009	0.00005	0.00016	0.00025	0.0062	0.00010	0.019	0.00005	0.00033	0.010	0.000031	0.000025	0.0066	0.0000083	5.98
1	AQF42	0.00025	0.85	0.00133	0.00006	3.40	0.000005	2.11	0.025	3.04	0.0001	0.000005	0.00005	0.00054	0.0017	0.00005	0.00022	0.00025	0.0039	0.00010	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0068	0.0000025	6.50
2	AQF42	0.00025	0.99	0.00134	0.00003	3.52	0.000005	2.16	0.026	10.86	0.0001	0.000005	0.00005	0.00202	0.0022	0.00005	0.00020	0.00025	0.0246	0.00010	0.023	0.00005	0.00035	0.021	0.000012	0.000025	0.0069	0.0000025	6.91
3	AQF42	0.00078	0.92	0.00149	0.00003	3.71	0.000005	2.11	0.026	2.93	0.0001	0.000005	0.00005	0.00007	0.0057	0.00005	0.00020	0.00025	0.0052	0.00010	0.035	0.00005	0.00037	0.009	0.000012	0.000025	0.0069	0.0000025	6.91
4	AQF42	0.00025	0.79	0.00120	0.00013	3.02	0.000005	1.76	0.022	1.97	0.0001	0.000005	0.00005	0.00006	0.0012	0.00005	0.00016	0.00025	0.0032	0.00010	0.023	0.00005	0.00028	0.019	0.000011	0.000025	0.0062	0.0000117	5.47
5	AQF42	0.00025	0.58	0.00097	0.00003	2.29	0.000005	1.20	0.014	0.73	0.0001	0.000005	0.00005	0.00026	0.0015	0.00005	0.00005	0.00025	0.0015	0.00010	0.033	0.00005	0.00019	0.006	0.000050	0.000025	0.0053	0.0000025	3.52
6	AQF42	0.00025	0.59	0.00102	0.00003	2.11	0.000005	1.18	0.014	0.94	0.0001	0.000005	0.00005	0.00028	0.0017	0.00005	0.00006	0.00025	0.0015	0.00010	0.034	0.00005	0.00020	0.006	0.000050	0.000025	0.0055	0.0000025	3.51
7	AQF42	0.00025	0.59	0.00112	0.00003	2.15	0.000005	1.29	0.015	1.18	0.0001	0.000005	0.00005	0.00041	0.0012	0.00005	0.00008	0.00025	0.0059	0.00010	0.025	0.00005	0.00020	0.006	0.000050	0.000025	0.0057	0.0000025	3.85
8	AQF42	0.00025	0.61	0.00115	0.00005	2.37	0.000005	1.34	0.017	1.18	0.0001	0.000005	0.00005	0.00006	0.0010	0.00005	0.00008	0.00025	0.0015	0.00010	0.021	0.00005	0.00022	0.005	0.000050	0.000025	0.0057	0.0000025	3.91
9	AQF42	0.00025	0.62	0.00109	0.00003	2.33	0.000005	1.40	0.017	1.25	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00008	0.00025	0.0031	0.00010	0.024	0.00005	0.00023	0.006	0.000050	0.000025	0.0057	0.0000025	4.26
10	AQF42	0.00025	0.64	0.00110	0.00003	2.66	0.000005	1.42	0.017	1.42	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00010	0.00025	0.0015	0.00010	0.019	0.00005	0.00023	0.005	0.000050	0.000025	0.0058	0.0000025	4.49
11	AQF42	0.00025	0.77	0.00138	0.00003	2.82	0.000005	1.61	0.021	2.02	0.0001	0.000005	0.00005	0.00018	0.0077	0.00005	0.												

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Month	Site	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	
		Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L
1	AQF40	0.000015	0.00024	0.000057	0.0027	0.16	0.00013	0.00137	1.9	0.040	-	0.00010	0.00025	0.86	0.00120	0.000025	3.2	0.000005	2.1	0.025	2.80	0.00010	0.000005	0.00005	0.000061	0.00015	0.000053	0.00018	0.00025
2	AQF40	0.000016	0.00024	0.000057	0.0019	0.17	0.00009	0.00124	2.0	0.042	-	0.00011	0.00025	0.86	0.00121	0.000033	3.2	0.000005	2.1	0.025	3.02	0.00010	0.000005	0.00005	0.000085	0.00015	0.000054	0.00019	0.00025
3	AQF40	0.000016	0.00024	0.000057	0.0012	0.19	0.00005	0.00109	2.0	0.043	0.0000010	0.00012	0.00025	0.85	0.00122	0.000041	3.2	0.000005	2.1	0.025	3.13	0.00010	0.000005	0.00005	0.000109	0.00015	0.000054	0.00020	0.00025
4	AQF40	0.000012	0.00024	0.000055	0.0020	0.18	0.00010	0.00122	1.6	0.033	0.0000014	0.00007	0.00025	0.86	0.00126	0.000025	3.1	0.000005	1.8	0.021	1.99	0.00010	0.000005	0.00005	0.000145	0.00015	0.000052	0.00013	0.00025
5	AQF40	0.000007	0.00010	0.000051	0.0006	0.21	0.00003	0.00113	1.1	0.032	0.0000019	0.00014	0.00025	0.64	0.00102	0.000025	2.4	0.000005	1.2	0.015	0.74	0.00010	0.000005	0.00005	0.000126	0.00015	0.000051	0.00005	0.00025
6	AQF40	0.000008	0.00013	0.000052	0.0003	0.18	0.00003	0.00055	1.1	0.013	0.0000018	0.00008	0.00025	0.61	0.00096	0.000025	2.0	0.000005	1.2	0.014	0.95	0.00010	0.000005	0.00005	0.000191	0.00015	0.000051	0.00007	0.00025
7	AQF40	0.000009	0.00011	0.000053	0.0003	0.11	0.00007	0.00092	1.2	0.018	0.0000012	0.00011	0.00025	0.65	0.00113	0.000025	1.9	0.000005	1.3	0.016	1.35	0.00010	0.000005	0.00005	0.000108	0.00015	0.000051	0.00009	0.00025
8	AQF40	0.000009	0.00012	0.000053	0.0003	0.15	0.00003	0.00057	1.2	0.018	-	0.00010	0.00025	0.60	0.00105	0.000052	2.1	0.000005	1.3	0.017	1.19	0.00010	0.000005	0.00005	0.000241	0.00037	0.000051	0.00008	0.00025
9	AQF40	0.000009	0.00022	0.000053	0.0026	0.13	0.00015	0.00058	1.2	0.019	-	0.00015	0.00025	0.60	0.00116	0.000052	2.3	0.000005	1.3	0.016	1.26	0.00010	0.000005	0.00005	0.000054	0.00054	0.000051	0.00009	0.00025
10	AQF40	0.000010	0.00008	0.000053	0.0016	0.14	0.00007	0.00089	1.3	0.019	0.0000011	0.00011	0.00025	0.63	0.00106	0.000042	2.3	0.000005	1.5	0.017	1.63	0.00010	0.000005	0.00005	0.000055	0.00027	0.000052	0.00010	0.00025
11	AQF40	0.000012	0.00015	0.000055	0.0049	0.14	0.00018	0.00064	1.5	0.028	-	0.00010	0.00025	0.71	0.00107	0.000025	2.5	0.000005	1.6	0.020	2.04	0.00010	0.000005	0.00005	0.000058	0.00033	0.000052	0.00013	0.00025
12	AQF40	0.000014	0.00019	0.000056	0.0038	0.15	0.00015	0.00101	1.8	0.036	-	0.00010	0.00025	0.80	0.00114	0.000025	2.8	0.000005	1.9	0.023	2.52	0.00010	0.000005	0.00005	0.000060	0.00024	0.000053	0.00017	0.00025
1	AQF41	0.000015	0.00024	0.000057	0.0037	0.17	0.00016	0.00127	1.9	0.040	-	0.00009	0.00052	0.86	0.00126	0.000025	3.2	0.000005	2.1	0.024	2.80	0.00010	0.000005	0.00005	0.000061	0.00015	0.000053	0.00018	0.00025
2	AQF41	0.000016	0.00024	0.000057	0.0021	0.19	0.00009	0.00116	2.0	0.043	-	0.00008	0.00038	0.87	0.00125	0.000025	3.2	0.000005	2.2	0.025	2.93	0.00010	0.000005	0.00005	0.000061	0.00020	0.000054	0.00019	0.00025
3	AQF41	0.000016	0.00024	0.000057	0.0004	0.20	0.00003	0.00105	2.0	0.045	0.0000012	0.00007	0.00025	0.87	0.00123	0.000025	3.2	0.000005	2.1	0.025	2.96	0.00010	0.000005	0.00005	0.000061	0.00025	0.000054	0.00020	0.00025
4	AQF41	0.000012	0.00024	0.000055	0.0017	0.19	0.00008	0.00122	1.6	0.034	0.0000018	0.00008	0.00025	0.76	0.00121	0.000025	3.1	0.000005	1.7	0.021	1.99	0.00010	0.000005	0.00005	0.000125	0.00035	0.000052	0.00013	0.00025
5	AQF41	0.000007	0.00012	0.000051	0.0017	0.22	0.00003	0.00054	1.0	0.025	0.0000025	0.00012	0.00025	0.62	0.00091	0.000025	2.4	0.000005	1.1	0.014	0.74	0.00010	0.000005	0.00005	0.000052	0.00044	0.000051	0.00005	0.00025
6	AQF41	0.000008	0.00013	0.000052	0.0006	0.18	0.00003	0.00055	1.0	0.013	0.0000022	0.00007	0.00025	0.58	0.00099	0.000025	1.9	0.000005	1.2	0.013	0.95	0.00010	0.000005	0.00005	0.000053	0.00052	0.000051	0.00007	0.00025
7	AQF41	0.000009	0.00012	0.000053	0.0002	0.15	0.00003	0.00057	1.1	0.017	0.0000010	0.00008	0.00025	0.57	0.00098	0.000025	2.1	0.000005	1.2	0.015	1.19	0.00010	0.000005	0.00005	0.000054	0.00036	0.000051	0.00008	0.00025
8	AQF41	0.000009	0.00012	0.000053	0.0003	0.15	0.00003	0.00057	1.1	0.018	-	0.00008	0.00025	0.57	0.00112	0.000025	2.1	0.000005	1.3	0.016	1.19	0.00010	0.000005	0.00005	0.000468	0.00039	0.000051	0.00008	0.00025
9	AQF41	0.000009	0.00005	0.000053	0.0004	0.12	0.00003	0.00117	1.2	0.018	-	0.00011	0.00025	0.59	0.00105	0.000025	2.2	0.000005	1.3	0.017	1.75	0.00010	0.000005	0.00005	0.000056	0.00034	0.000051	0.00008	0.00025
10	AQF41	0.000010	0.00012	0.000053	0.0003	0.12	0.00003	0.00059	1.3	0.018	0.0000010	0.00014	0.00025	0.59	0.00095	0.000025	2.4	0.000005	1.4	0.016	1.43	0.00010	0.000005	0.00005	0.000055	0.00015	0.000052	0.00010	0.00025
11	AQF41	0.000012	0.00005	0.000055	0.0040	0.12	0.00014	0.00064	1.5	0.026	-	0.00009	0.00025	0.67	0.00108	0.000025	2.5	0.000005	1.5	0.019	2.04	0.00010	0.000005	0.00005	0.000058	0.00015	0.000052	0.00013	0.00025
12	AQF41	0.000014	0.00015	0.000056	0.0039	0.15	0.00015	0.00097	1.8	0.035	-	0.00009	0.00038	0.78	0.00118	0.000025	2.8	0.000005	1.9	0.022	2.52	0.00010	0.000005	0.00005	0.000060	0.00015	0.000053	0.00016	0.00025
1	AQF42	0.000015	0.00024	0.000057	0.0031	0.18	0.00015	0.00137	2.0	0.041	-	0.00012	0.00025	0.85	0.00127	0.000025	3.2	0.000005	2.1	0.025	2.80	0.00010	0.000005	0.00005	0.000185	0.00015	0.000053	0.00022	0.00025
2	AQF42	0.000016	0.00024	0.000057	0.0019	0.20	0.00007	0.00071	2.1	0.049	0.0000003	0.00009	0.00025	1.03	0.00130	0.000025	3.3	0.000005	2.2	0.026	3.22	0.00010	0.000005	0.00005	0.000186	0.00040	0.000054	0.00020	0.00025
3	AQF42	0.000016	0.00024	0.000057	0.0004	0.22	0.00003	0.00148	2.0	0.047	-	0.00009	0.00025	0.84	0.00126	0.000062	3.3	0.000005	2.1	0.025	2.96	0.00010	0.000005	0.00005	0.000061	0.00040	0.000054	0.00020	0.00025
4	AQF42	0.000012	0.00024	0.000055	0.0025	0.19	0.00009	0.00132	1.6	0.035	-	0.00009	0.00025	0.80	0.00114	0.000025	3.0	0.000005	5.6	0.021	2.48	0.00010	0.000005	0.00005	0.000155	0.00034	0.000052	0.00016	0.00025
5	AQF42	0.000007	0.00014	0.000051	0.0007	0.30	0.00003	0.00054	1.1	0.051	0.0000016	0.00010	0.00025	0.60	0.00099	0.000025	2.5	0.000005	1.1	0.014	0.74	0.00010	0.000005	0.00005	0.000052	0.00051	0.000051	0.00005	0.00025
6	AQF42	0.000008	0.00013	0.000052	0.0003	0.18	0.00003	0.00055	1.0	0.011	0.0000016	0.00008	0.00025	0.63	0.00095	0.000025	2.0	0.000005	1.2	0.013	0.95	0.00010	0.000005	0.00005	0.000300	0.00046	0.000051	0.00006	0.00025
7	AQF42	0.000009	0.00005	0.000053	0.0002	0.15	0.00003	0.00057	1.1	0.017	0.0000015	0.00009	0.00025	0.59	0.00101	0.000025	2.0	0.000005	1.2	0.015	1.50	0.00010	0.000005	0.00005	0.000684	0.00044	0.000051	0.00009	0.00025
8	AQF42	0.000009	0.00011	0.000053	0.0004	0.15	0.00012	0.00057	1.1	0.018	-	0.00010	0.00025	0.59	0.00114	0.000025	2.1	0.000005	1.3	0.016	1.19	0.00010	0.000005	0.00005	0.000054	0.00046	0.000051	0.00008	0.00025
9	AQF42	0.000009	0.00012	0.000053	0.0002	0.12	0.00003	0.00058	1.2	0.017	-	0.00009	0.00025	0.61	0.00103	0.000060	2.2	0.000005	1.4	0.016	1.26	0.00010	0.000005	0.00005	0.000054	0.00032	0.000051	0.00009	0.00025
10	AQF42	0.000010	0.00005	0.000053	0.0005	0.12	0.00003	0.00059	1.3	0.019	0.0000008	0.00011	0.00025	0.58	0.00098	0.000025	2.4	0.000005	1.4	0.016	1.43	0.00010	0.000005	0.00005	0.000055	0.00015	0.000052	0.00010	0.00025
11	AQF42	0.000012	0.00076	0.000055	0.0015	0.19	0.00006	0.00064	1.6	0.043	-	0.00089	0.00025	0.70	0.00110	0.000025	2.4	0.000005	1.6	0.020	2.04	0.00010	0.000005	0.00005	0.000058	0.00100	0.000898		

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Month	Site	Dissolved_Met al	Dissolved_Met al	Cyanides	Cyanides	Cyanides	Methylmercu ry	Methylmercu ry
	-	Zinc_D mg/L	Zirconium_D mg/L	cyanide_free mg/L	cyanide_SAD mg/L	cyanide_WA D mg/L	Methylmercu ry_D mg/L	Methylmercu ry_T mg/L
1	AQF40	0.0044	0.00015	-	-	-	-	-
2	AQF40	0.0031	0.00015	-	-	-	-	-
3	AQF40	0.0018	0.00015	-	-	-	-	-
4	AQF40	0.0027	0.00015	-	-	-	-	-
5	AQF40	0.0030	0.00010	-	-	-	-	-
6	AQF40	0.0063	0.00010	-	-	-	-	-
7	AQF40	0.0037	0.00010	-	-	-	-	-
8	AQF40	0.0033	0.00010	-	-	-	-	-
9	AQF40	0.0047	0.00010	-	-	-	-	-
10	AQF40	0.0021	0.00011	-	-	-	-	-
11	AQF40	0.0100	0.00010	-	-	-	-	-
12	AQF40	0.0072	0.00012	-	-	-	-	-
1	AQF41	0.0050	0.00015	-	-	-	-	-
2	AQF41	0.0034	0.00015	-	-	-	-	-
3	AQF41	0.0018	0.00015	-	-	-	-	-
4	AQF41	0.0022	0.00015	-	-	-	-	-
5	AQF41	0.0254	0.00010	-	-	-	-	-
6	AQF41	0.0023	0.00010	-	-	-	-	-
7	AQF41	0.0032	0.00010	-	-	-	-	-
8	AQF41	0.0018	0.00026	-	-	-	-	-
9	AQF41	0.0005	0.00010	-	-	-	-	-
10	AQF41	0.0005	0.00010	-	-	-	-	-
11	AQF41	0.0042	0.00010	-	-	-	-	-
12	AQF41	0.0046	0.00012	-	-	-	-	-
1	AQF42	0.0045	0.00015	-	-	-	-	-
2	AQF42	0.0047	0.00015	-	-	-	-	-
3	AQF42	0.0012	0.00015	-	-	-	-	-
4	AQF42	0.0051	0.00015	-	-	-	-	-
5	AQF42	0.0012	0.00010	-	-	-	-	-
6	AQF42	0.0005	0.00010	-	-	-	-	-
7	AQF42	0.0089	0.00010	-	-	-	-	-
8	AQF42	0.0030	0.00010	-	-	-	-	-
9	AQF42	0.0005	0.00010	-	-	-	-	-
10	AQF42	0.0011	0.00010	-	-	-	-	-
11	AQF42	0.0032	0.00010	-	-	-	-	-
12	AQF42	0.0039	0.00012	-	-	-	-	-
1	AQF43	0.0011	0.00015	-	-	-	-	-
2	AQF43	0.0013	0.00015	-	-	-	-	-
3	AQF43	0.0015	0.00015	-	-	-	-	-
4	AQF43	0.0023	0.00015	-	-	-	-	-
5	AQF43	0.0015	0.00010	-	-	-	-	-
6	AQF43	0.0045	0.00010	-	-	-	-	-
7	AQF43	0.0013	0.00010	-	-	-	-	-
8	AQF43	0.0005	0.00010	-	-	-	-	-
9	AQF43	0.0005	0.00010	-	-	-	-	-
10	AQF43	0.0022	0.00010	-	-	-	-	-
11	AQF43	0.0047	0.00010	-	-	-	-	-
12	AQF43	0.0029	0.00012	-	-	-	-	-
1	AQF44	0.0038	0.00015	-	-	-	-	-
2	AQF44	0.0030	0.00015	-	-	-	-	-
3	AQF44	0.0023	0.00015	-	-	-	-	-
4	AQF44	0.0027	0.00015	-	-	-	-	-
5	AQF44	0.0005	0.00010	-	-	-	-	-
6	AQF44	0.0033	0.00010	-	-	-	-	-
7	AQF44	0.0005	0.00010	-	-	-	-	-
8	AQF44	0.0026	0.00010	-	-	-	-	-
9	AQF44	0.0005	0.00010	-	-	-	-	-
10	AQF44	0.0005	0.00010	-	-	-	-	-
11	AQF44	0.0049	0.00010	-	-	-	-	-
12	AQF44	0.0043	0.00012	-	-	-	-	-
1	AQF45	0.0022	0.00015	-	-	-	-	-
2	AQF45	0.0018	0.00015	-	-	-	-	-
3	AQF45	0.0014	0.00015	-	-	-	-	-
4	AQF45	0.0016	0.00015	-	-	-	-	-
5	AQF45	0.0013	0.00010	-	-	-	-	-
6	AQF45	0.0011	0.00010	-	-	-	-	-
7	AQF45	0.0021	0.00010	-	-	-	-	-
8	AQF45	0.0012	0.00010	-	-	-	-	-
9	AQF45	0.0005	0.00010	-	-	-	-	-
10	AQF45	0.0016	0.00010	-	-	-	-	-
11	AQF45	0.0059	0.00010	-	-	-	-	-
12	AQF45	0.0005	0.00010	-	-	-	-	-
May-Oct	All Stn Median	0.0015	0.00010	-	-	-	-	-
May-Oct	All Stn 90P	0.0046	0.00010	-	-	-	-	-
May-Oct	All Stn 10P	0.0005	0.00010	-	-	-	-	-

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	
Month	-	D_Oxygen_field mg/L	D_Oxygen_perce nt_field %	ORP_field mV	pH_field pH	Specific_Con ductance_fiel d uS/cm	TDS_field mg/L	Temp_field C	Turbidity_fiel d NTU	Acidity(CaCO 3) mg/L	Alkalinity(Ca CO3)_bicarbo nate mg/L	Alkalinity(Ca CO3)_carbon ate mg/L	Alkalinity(Ca CO3)_hydrox ide mg/L	Alkalinity(Ca CO3)_phenol mg/L	Alkalinity(CaCO3) _T mg/L	(CO3)_carbonat e mg/L	(HCO3)_bicarbona te mg/L	(OH)_hydroxide mg/L	Conductivity µS/cm	DOC_D mg/L	Hardness(Ca CO3)_D mg/L	Hardness(Ca CO3)_T mg/L	pH pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia(N) _T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L
1	AQF40	9.9	67.6	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.096	0.071	0.005
2	AQF40	10.7	73.4	-	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-	-	9.8	-	-	0.062	0.088	0.005
3	AQF40	11.5	79.3	-	-	-	-	0.3	-	-	-	-	-	-	14.9	0.49	22.7	0.49	-	-	-	-	-	-	9.5	-	-	0.028	0.105	0.005	
4	AQF40	19.9	138.9	-	-	-	-	0.6	-	-	-	-	-	-	16.4	0.40	19.0	0.33	41.3	-	-	-	-	-	9.1	-	-	0.010	0.098	0.001	
5	AQF40	12.4	94.7	-	-	-	-	3.9	-	-	-	-	-	-	11.7	0.30	14.3	0.17	-	-	-	-	-	-	8.7	-	-	0.006	0.038	0.001	
6	AQF40	9.0	90.6	-	-	-	-	15.4	-	-	-	-	-	-	10.4	0.30	12.7	0.17	-	-	-	-	-	-	9.9	-	-	0.007	0.011	0.005	
7	AQF40	6.7	72.0	-	-	-	-	18.7	-	-	-	-	-	-	11.8	0.30	14.4	0.17	-	-	-	-	-	-	8.8	-	-	0.013	0.003	0.001	
8	AQF40	6.1	66.7	-	-	-	-	19.9	-	-	-	-	-	-	12.6	0.30	15.4	0.17	-	-	-	-	-	-	9.2	-	-	0.021	0.003	0.001	
9	AQF40	8.0	78.9	-	-	-	-	13.6	-	-	-	-	-	-	12.9	0.30	15.7	0.17	-	-	-	-	-	-	8.9	-	-	0.024	0.003	0.001	
10	AQF40	11.9	90.0	-	-	-	-	3.6	-	-	-	-	-	-	13.9	0.30	16.9	0.17	-	-	-	-	-	-	8.8	-	-	0.017	0.026	0.001	
11	AQF40	10.3	70.8	-	-	-	-	0.3	-	-	-	-	-	-	15.8	0.30	19.2	0.17	-	-	-	-	-	-	10.1	-	-	0.017	0.025	0.001	
12	AQF40	10.1	69.1	-	-	-	-	0.3	-	-	-	-	-	-	15.8	-	-	-	-	-	-	-	-	-	10.0	-	-	0.057	0.048	0.003	
1	AQF41	12.4	85.8	-	-	-	-	0.4	-	-	-	-	-	-	17.1	-	-	-	-	-	-	-	-	-	-	10.1	-	-	0.048	0.066	0.005
2	AQF41	12.3	84.2	-	-	-	-	0.3	-	-	-	-	-	-	17.9	-	-	-	-	-	-	-	-	-	-	10.1	-	-	0.040	0.090	0.005
3	AQF41	12.1	82.8	-	-	-	-	0.3	-	-	-	-	-	-	18.5	0.49	22.8	0.49	-	-	-	-	-	-	10.0	-	-	0.032	0.115	0.005	
4	AQF41	20.0	140.8	-	-	-	-	0.7	-	-	-	-	-	-	16.3	0.40	18.6	0.33	41.1	-	-	-	-	-	9.4	-	-	0.010	0.099	0.001	
5	AQF41	14.0	107.4	-	-	-	-	3.9	-	-	-	-	-	-	11.0	0.30	13.4	0.17	-	-	-	-	-	-	8.7	-	-	0.006	0.039	0.001	
6	AQF41	8.4	85.6	-	-	-	-	16.5	-	-	-	-	-	-	9.2	0.30	11.2	0.17	-	-	-	-	-	-	8.9	-	-	0.007	0.011	0.005	
7	AQF41	7.4	77.0	-	-	-	-	19.0	-	-	-	-	-	-	10.8	0.30	13.1	0.17	-	-	-	-	-	-	9.2	-	-	0.039	0.003	0.001	
8	AQF41	6.2	67.4	-	-	-	-	20.2	-	-	-	-	-	-	12.5	0.30	15.3	0.17	-	-	-	-	-	-	9.2	-	-	0.014	0.003	0.001	
9	AQF41	6.9	66.1	-	-	-	-	13.5	-	-	-	-	-	-	13.0	0.30	15.9	0.17	-	-	-	-	-	-	9.0	-	-	0.015	0.003	0.001	
10	AQF41	11.5	87.8	-	-	-	-	4.3	-	-	-	-	-	-	13.4	0.30	16.3	0.17	-	-	-	-	-	-	9.2	-	-	0.008	0.020	0.001	
11	AQF41	12.3	85.4	-	-	-	-	0.4	-	-	-	-	-	-	16.2	0.30	19.7	0.17	-	-	-	-	-	-	9.0	-	-	0.010	0.033	0.001	
12	AQF41	12.4	85.6	-	-	-	-	0.4	-	-	-	-	-	-	16.9	-	-	-	-	-	-	-	-	-	9.6	-	-	0.029	0.049	0.003	
1	AQF42	10.3	71.0	-	-	-	-	0.3	-	-	-	-	-	-	17.0	-	-	-	-	-	-	-	-	-	-	9.8	-	-	0.053	0.067	0.005
2	AQF42	11.9	80.9	-	-	-	-	0.3	-	-	-	-	-	-	13.4	-	-	-	-	-	-	-	-	-	-	9.9	-	-	0.039	0.118	0.005
3	AQF42	10.4	70.9	-	-	-	-	0.3	-	-	-	-	-	-	20.9	0.49	25.4	0.49	-	-	-	-	-	-	10.2	-	-	0.058	0.110	0.005	
4	AQF42	15.5	106.8	-	-	-	-	0.2	-	-	-	-	-	-	16.4	0.40	19.7	0.33	40.9	-	-	-	-	-	9.5	-	-	0.016	0.095	0.001	
5	AQF42	13.7	133.2	-	-	-	-	4.4	-	-	-	-	-	-	10.6	0.30	12.9	0.17	-	-	-	-	-	-	9.5	-	-	0.006	0.039	0.001	
6	AQF42	10.3	103.2	-	-	-	-	15.3	-	-	-	-	-	-	10.0	0.30	12.2	0.17	-	-	-	-	-	-	9.4	-	-	0.007	0.011	0.005	
7	AQF42	8.0	86.9	-	-	-	-	18.9	-	-	-	-	-	-	12.3	0.30	14.9	0.17	-	-	-	-	-	-	9.1	-	-	0.024	0.003	0.001	
8	AQF42	7.9	84.9	-	-	-	-	18.5	-	-	-	-	-	-	12.6	0.30	15.4	0.17	-	-	-	-	-	-	9.3	-	-	0.045	0.003	0.001	
9	AQF42	8.5	82.4	-	-	-	-	14.0	-	-	-	-	-	-	12.4	0.30	15.1	0.17	-	-	-	-	-	-	9.0	-	-	0.008	0.007	0.001	
10	AQF42	11.4	95.5	-	-	-	-	3.7	-	-	-	-	-	-	13.5	0.30	16.5	0.17	-	-	-	-	-	-	9.9	-	-	0.008	0.019	0.001	
11	AQF42	11.6	79.6	-	-	-	-	0.3	-	-	-	-	-	-	16.3	0.30	19.8	0.17	-	-	-	-	-	-	9.5	-	-	0.023	0.026	0.001	
12	AQF42	10.9	75.3	-	-	-	-	0.3	-	-	-	-	-	-	16.9	-	-	-	-	-	-	-	-	-	9.6	-	-	0.038	0.047	0.003	
1	AQF43	13.1	90.1	-	-	-	-	-	-	-	-	-	-	-	17.6	-	-	-	-	-	-	-	-	-	-	9.9	-	-	0.027	0.065	0.005
2	AQF43	13.3	90.9	-	-	-	-	-	-	-	-	-	-	-	17.7	-	-	-	-	-	-	-	-	-	-	9.5	-	-	0.021	0.088	0.005
3	AQF43	13.5	91.9	-	-	-	-	0.3	-	-	-	-	-	-	17.6	0.49	22.7	0.49	-	-	-	-	-	-	9.0	-	-	0.015	0.110	0.005	
4	AQF43	16.8	115.5	-	-	-	-	0.3	-	-	-	-	-	-	16.5	0.40	19.6	0.33	41.1	-	-	-	-	-	9.1	-	-	0.010	0.096	0.001	
5	AQF43	16.9	137.2	-	-	-	-	5.9	-	-	-	-	-	-	12.8	0.30	15.6	0.17	-	-	-	-	-	-	9.9	-	-	0.006	0.032	0.001	
6	AQF43	10.3	104.1	-	-	-	-	15.7	-	-	-	-	-	-	10.4	0.30	12.7	0.17	-	-	-	-	-	-	8.8	-	-	0.007	0.011	0.005	
7	AQF43	8.2	89.3	-	-	-	-	19.4	-	-	-	-	-	-	10.7	0.30	13.0	0.17	-	-	-	-	-	-	9.1	-	-	0.032	0.003	0.001	
8	AQF43	8.2	89.5	-	-	-	-	19.5	-	-	-	-	-	-	13.6	0.30	16.6	0.17	-	-	-	-	-	-	9.2	-	-	0.016	0.009	0.001	
9	AQF43	9.0	85.4	-	-	-	-	13.0	-	-	-	-	-	-	13.3	0.30	16.2	0.17	-	-	-	-	-	-	9.1	-	-	0.027	0.003	0.001	
10	AQF43	12.7	94.4	-	-	-	-	3.0	-	-	-	-	-	-	13.3	0.30	16.2	0.17	-	-	-	-	-	-	9.3	-	-	0.008	0.020	0.001	
11	AQF43	14.2	97.2	-	-	-	-	-	-	-	-	-	-	-	15.9	0.30	19.3	0.17	-	-	-	-	-	-	9.8	-	-	0.035	0.028	0.001	
12	AQF43	13.6	93.6	-	-	-	-	-	-	-	-	-	-	-	17.0	-	-	-	-	-	-	-	-	-	9.8	-	-	0.031	0.046	0.003	
1	AQF44	11.1	75.9	-	-	-	-	0.3	-	-	-	-	-	-	15.4	-	-	-	-	-	-	-	-	-	-	10.0	-	-	0.141	0.073	0.005
2	AQF44	12.2	83.2	-	-	-	-	0.3	-	-	-	-	-	-	19.2	-	-	-	-	-	-	-	-	-	-	9.7	-	-	0.081	0.090	0.005
3	AQF44	13.4	90.5	-	-	-	-	0.3	-	-	-	-	-	-	22.6	0.49	30.6	0.49	-	-	-	-	-	-	9.4	-	-	0.020	0.108	0.005	
4	AQF44	19.2	132.1	-	-	-	-	0.2	-	-	-	-	-	-	16.9	0.40	22.9	0.33	42.7	-	-	-	-	-	9.4	-	-	0.010	0.098	0.001	
5	AQF44	14.2	132.2	-	-	-	-	6.2	-	-	-	-	-	-	11.5	0.30	14.0	0.17	-	-	-	-	-	-	8.8	-	-	0.006	0.032	0.001	
6	AQF44	10.5	105.1	-	-	-	-	15.6	-	-	-	-	-	-	10.4	0.30	12.7	0.17	-	-	-	-	-	-	8.4	-	-	0.007	0.011	0.005	
7	AQF44	8.5	93.6	-	-	-	-	19.7	-	-	-	-	-	-	10.9	0.30	13.2	0.17	-	-	-	-	-	-	9.1	-	-	0.017	0.003	0.001	
8	AQF44	8.1	88.6	-	-	-	-	19.2	-	-	-	-	-	-	13.5	0.30	16.5	0.17	-	-</											

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

	Site	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal
Month	-	Nitrite_nitrat e(N) mg/L	Nitrogen(TK N) mg/L	Phosphorus_ D mg/L	Phosphorus_ T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(SO4) mg/L	Aluminum_T mg/L	Antimony_T mg/L	Arsenic_T mg/L	Barium_T mg/L	Beryllium_T mg/L	Bismuth_T mg/L	Boron_T mg/L	Cadmium_T mg/L	Calcium_T mg/L	Cesium_T mg/L	Chromium _T mg/L	ChromiumVI _T mg/L	Cobalt_T mg/L	Copper_T mg/L	Iron_T mg/L	Lead_T mg/L	Lithium_T mg/L	Magnesium_T mg/L	Manganese_T mg/L	Mercury_T mg/L	Molybdenum_ T mg/L	
1	AQF40	0.070	-	-	0.025	0.05	1.65	0.071	9.0	0.037	0.00011	0.00043	0.00773	0.000012	0.000025	0.00664	0.0000082	6.67	0.000015	0.00024	-	0.000056	0.00062	0.30	0.000073	0.0013	1.91	0.044	0.0000025	0.00013	
2	AQF40	-	-	-	0.021	0.05	1.16	0.073	10.8	0.035	0.00012	0.00043	0.00790	0.000012	0.000025	0.00673	0.0000053	7.00	0.000016	0.00024	-	0.000057	0.00044	0.31	0.000049	0.0014	1.98	0.046	0.0000021	0.00011	
3	AQF40	-	-	-	0.018	0.05	0.67	0.076	12.3	0.034	0.00013	0.00042	0.00803	0.000012	0.000025	0.00675	0.0000025	7.19	0.000016	0.00024	-	0.000057	0.00025	0.32	0.000025	0.0014	2.00	0.047	0.0000017	0.00008	
4	AQF40	-	-	-	0.025	0.01	0.39	0.078	5.9	0.033	0.00005	0.00038	0.00725	0.000011	0.000025	0.00612	0.0000085	5.53	0.000012	0.00024	-	0.000054	0.00025	0.29	0.000025	0.0012	1.59	0.035	0.0000019	0.00007	
5	AQF40	0.044	-	-	0.023	0.05	0.29	0.064	2.1	0.055	0.00005	0.00024	0.00617	0.000050	0.000025	0.00531	0.0000025	3.85	0.000007	0.00022	-	0.000051	0.00025	0.32	0.000025	0.0009	1.13	0.042	0.0000021	0.00007	
6	AQF40	0.035	-	-	0.015	0.05	0.30	0.057	2.5	0.062	0.00005	0.00023	0.00632	0.000050	0.000025	0.00545	0.0000052	3.97	0.000008	0.00020	-	0.000052	0.00025	0.35	0.000061	0.0015	1.07	0.032	0.0000022	0.00008	
7	AQF40	0.218	-	-	0.012	0.05	0.29	0.063	3.3	0.048	0.00005	0.00026	0.00660	0.000050	0.000025	0.00561	0.0000025	4.23	0.000009	0.00016	-	0.000052	0.00025	0.21	0.000147	0.0009	1.22	0.032	0.0000013	0.00011	
8	AQF40	0.003	-	-	0.015	0.05	0.24	0.066	3.3	0.034	0.00005	0.00027	0.00561	0.000050	0.000025	0.00560	0.0000025	3.92	0.000009	0.00014	-	0.000052	0.00025	0.22	0.000025	0.0006	1.11	0.026	0.0000019	0.00007	
9	AQF40	0.003	-	-	0.012	0.05	0.28	0.064	3.7	0.045	0.00005	0.00029	0.00654	0.000050	0.000025	0.00565	0.0000025	4.42	0.000009	0.00013	-	0.000052	0.00025	0.20	0.000025	0.0012	1.26	0.024	0.0000025	0.00012	
10	AQF40	0.038	-	-	0.020	0.05	0.32	0.065	4.2	0.054	0.00005	0.00028	0.00569	0.000050	0.000025	0.00576	0.0000025	4.66	0.000010	0.00025	-	0.000053	0.00025	0.28	0.000044	0.0012	1.35	0.033	0.0000012	0.00012	
11	AQF40	0.025	-	-	0.019	0.05	0.34	0.062	5.9	0.080	0.00005	0.00034	0.00896	0.000050	0.000025	0.00615	0.0000121	5.58	0.000012	0.00029	-	0.000054	0.00066	0.32	0.000096	0.0006	1.61	0.044	0.0000025	0.00011	
12	AQF40	0.048	-	-	0.022	0.05	1.01	0.067	7.7	0.058	0.00008	0.00039	0.00838	0.000031	0.000025	0.00647	0.0000101	6.27	0.000014	0.00027	-	0.000056	0.00064	0.31	0.000084	0.0010	1.80	0.045	0.0000025	0.00013	
1	AQF41	0.065	-	-	0.025	0.05	0.44	0.071	8.5	0.039	0.00005	0.00042	0.00818	0.000012	0.000025	0.00664	0.0000176	6.89	0.000015	0.00101	-	0.000056	0.00091	0.32	0.000060	0.0014	1.91	0.044	0.0000025	0.00010	
2	AQF41	-	-	-	0.025	0.05	0.46	0.074	8.9	0.064	0.00007	0.00045	0.00883	0.000012	0.000025	0.00673	0.0000121	7.03	0.000017	0.00062	-	0.000057	0.00058	0.45	0.000068	0.0014	1.98	0.071	0.0000022	0.00009	
3	AQF41	-	-	-	0.025	0.05	0.46	0.077	9.0	0.089	0.00008	0.00048	0.00942	0.000012	0.000025	0.00675	0.0000066	7.03	0.000019	0.00024	-	0.000057	0.00025	0.57	0.000075	0.0014	2.01	0.096	0.0000019	0.00008	
4	AQF41	-	-	-	0.012	0.01	0.37	0.077	5.9	0.032	0.00005	0.00037	0.00736	0.000011	0.000025	0.00612	0.0000025	5.60	0.000012	0.00024	-	0.000054	0.00025	0.30	0.000025	0.0012	1.61	0.036	0.0000022	0.00007	
5	AQF41	0.039	-	-	0.015	0.05	0.35	0.060	2.0	0.054	0.00005	0.00023	0.00531	0.000050	0.000025	0.00531	0.0000025	3.65	0.000007	0.00018	-	0.000051	0.00090	0.39	0.000057	0.0005	1.04	0.039	0.0000025	0.00009	
6	AQF41	0.035	-	-	0.021	0.05	0.77	0.057	2.6	0.094	0.00005	0.00022	0.01023	0.000050	0.000025	0.00545	0.0000088	4.22	0.000008	0.00030	-	0.000052	0.00066	0.49	0.000091	0.0015	1.08	0.072	0.0000036	0.00008	
7	AQF41	0.003	-	-	0.013	0.05	0.25	0.062	3.3	0.042	0.00005	0.00024	0.00590	0.000050	0.000025	0.00561	0.0000025	3.99	0.000009	0.00015	-	0.000052	0.00025	0.24	0.000025	0.0006	1.16	0.027	0.0000015	0.00007	
8	AQF41	0.003	-	-	0.015	0.05	0.28	0.065	3.3	0.035	0.00005	0.00028	0.00574	0.000050	0.000025	0.00560	0.0000025	3.85	0.000009	0.00027	-	0.000052	0.00025	0.22	0.000025	0.0006	1.10	0.026	0.0000020	0.00007	
9	AQF41	0.003	-	-	0.015	0.05	0.27	0.064	3.7	0.056	0.00005	0.00027	0.00677	0.000050	0.000025	0.00565	0.0000025	4.57	0.000009	0.00017	-	0.000052	0.00025	0.22	0.000025	0.0014	1.29	0.025	0.0000025	0.00012	
10	AQF41	0.019	-	-	0.015	0.05	0.29	0.063	4.0	0.038	0.00005	0.00029	0.00596	0.000050	0.000025	0.00576	0.0000025	4.71	0.000010	0.00017	-	0.000053	0.00025	0.25	0.000025	0.0013	1.31	0.030	0.0000011	0.00010	
11	AQF41	0.032	-	-	0.031	0.05	0.37	0.062	5.9	0.036	0.00005	0.00033	0.00591	0.000050	0.000025	0.00615	0.0000025	5.54	0.000012	0.00014	-	0.000054	0.00025	0.22	0.000025	0.0006	1.55	0.033	0.0000025	0.00010	
12	AQF41	0.049	-	-	0.028	0.05	0.41	0.067	7.5	0.037	0.00005	0.00038	0.00710	0.000031	0.000025	0.00647	0.0000101	6.37	0.000014	0.00058	-	0.000056	0.00058	0.27	0.000043	0.0010	1.77	0.040	0.0000025	0.00010	
1	AQF42	0.067	-	-	0.025	0.05	0.77	0.074	8.8	0.050	0.00022	0.00043	0.00860	0.000012	0.000025	0.00664	0.0000025	6.98	0.000015	0.00024	-	0.000056	0.00025	0.35	0.000025	0.0014	1.97	0.048	0.0000025	0.00011	
2	AQF42	-	-	-	0.025	0.05	0.74	0.073	17.3	0.065	0.00028	0.00046	0.00929	0.000012	0.000025	0.00673	0.0000103	7.29	0.000016	0.00024	-	0.000057	0.00096	0.38	0.000080	0.0014	2.01	0.056	0.0000011	0.00009	
3	AQF42	-	-	-	0.025	0.05	0.62	0.076	8.8	0.120	0.00005	0.00044	0.00992	0.000012	0.000025	0.00675	0.0000025	7.20	0.000028	0.00049	-	0.000124	0.00435	0.60	0.000084	0.0015	2.04	0.084	0.0000025	0.00009	
4	AQF42	-	-	-	0.030	0.01	0.39	0.074	5.9	0.037	0.00005	0.00039	0.00810	0.000011	0.000025	0.00612	0.0000101	5.67	0.000012	0.00024	-	0.000054	0.00091	0.31	0.000071	0.0012	1.63	0.038	0.0000025	0.00010	
5	AQF42	0.039	-	-	0.015	0.05	0.31	0.063	2.0	0.054	0.00005	0.00027	0.00605	0.000050	0.000025	0.00531	0.0000025	3.51	0.000007	0.00017	-	0.000051	0.00025	0.49	0.000025	0.0011	1.02	0.072	0.0000025	0.00009	
6	AQF42	0.035	-	-	0.016	0.05	0.30	0.057	2.5	0.058	0.00005	0.00022	0.00629	0.000050	0.000025	0.00545	0.0000025	3.82	0.000008	0.00024	-	0.000052	0.00025	0.37	0.000057	0.0015	1.03	0.025	0.0000020	0.00020	
7	AQF42	0.003	-	-	0.015	0.05	0.38	0.061	3.3	0.048	0.00005	0.00025	0.00612	0.000050	0.000025	0.00561	0.0000067	3.87	0.000009	0.00125	-	0.000052	0.00061	0.26	0.000025	0.0006	1.15	0.030	0.0000018	0.00009	
8	AQF42	0.003	-	-	0.014	0.05	0.24	0.065	3.3	0.037	0.00005	0.00029	0.00585	0.000050	0.000025	0.00560	0.0000025	4.13	0.000009	0.00015	-	0.000052	0.00025	0.23	0.000025	0.0006	1.20	0.029	0.0000022	0.00008	
9	AQF42	0.007	-	-	0.015	0.05	0.35	0.064	3.5	0.039	0.00005	0.00029	0.00637	0.000050	0.000025	0.00565	0.0000025	4.44	0.000009	0.00014	-	0.000052	0.00025	0.19	0.000025	0.0006	1.26	0.024	0.0000025	0.00010	
10	AQF42	0.019	-	-	0.015	0.05	0.30	0.063	4.0	0.041	0.00005	0.00029	0.00587	0.000050	0.000025	0.00576	0.0000025	4.68	0.000010	0.00014	-	0.000053	0.00025	0.25	0.000025	0.0012	1.36	0.030	0.0000011	0.00012	
11	AQF42	0.025	-	-	0.015	0.05	0.41	0.062	6.1	0.154	0.00013	0.00036	0.01487	0.000050	0.000025	0.00615	0.0000298	5.75	0.000026	0.00074	-	0.000122	0.00089	0.44	0.000139	0.0012	1.67	0.096	0.0000025	0.00015	
12	AQF42	0.046	-	-	0.020	0.05	0.60	0.068	7.8	0.101	0.00018	0.00040	0.01172	0.000031	0.000025	0.00647	0.0000161	6.52	0.000021	0.00049	-	0.000089	0.00057	0.39	0.000081	0.0013	1.86	0.073	0.0000025	0.00013	
1	AQF43	0.064	-	-	0.025	0.05	0.44	0.072	8.2	0.038																					

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

		Site	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Total_Metal	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met	Dissolved_Met
		-	Nickel_T	Potassium_T	Rubidium_T	Selenium_T	Silicon_T	Silver_T	Sodium_T	Strontium_T	Sulfur_T	Tellurium_T	Thallium_T	Thorium_T	Tin_T	Titanium_T	Tungsten_T	Uranium_T	Vanadium_T	Zinc_T	Zirconium_T	Aluminum_D	Antimony_D	Arsenic_D	Barium_D	Beryllium_D	Bismuth_D	Boron_D	Cadmium_D	Calcium_D	
Month		-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
1		AQF40	0.00025	0.84	0.00127	0.00006	3.23	0.000005	2.05	0.025	2.77	0.0001	0.000005	0.00005	0.00036	0.0012	0.00005	0.00017	0.00025	0.0052	0.00010	0.020	0.00005	0.00031	0.013	0.000012	0.000025	0.0068	0.0000025	6.52	
2		AQF40	0.00025	0.88	0.00128	0.00004	3.37	0.000005	2.09	0.025	3.31	0.0001	0.000005	0.00005	0.00033	0.0010	0.00005	0.00018	0.00025	0.0056	0.00015	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0069	0.0000025	6.74	
3		AQF40	0.00025	0.90	0.00128	0.00003	3.52	0.000005	2.11	0.026	3.74	0.0001	0.000005	0.00005	0.00031	0.0008	0.00005	0.00018	0.00025	0.0059	0.00021	0.021	0.00005	0.00033	0.014	0.000012	0.000025	0.0069	0.0000025	6.82	
4		AQF40	0.00025	0.78	0.00122	0.00013	3.15	0.000005	1.74	0.022	1.97	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00012	0.00025	0.0015	0.00010	0.020	0.00005	0.00027	0.020	0.000011	0.000025	0.0062	0.0000103	5.40	
5		AQF40	0.00025	0.66	0.00112	0.00003	2.41	0.000005	1.31	0.016	0.73	0.0001	0.000005	0.00005	0.00010	0.0016	0.00005	0.00006	0.00025	0.0015	0.00014	0.036	0.00005	0.00017	0.006	0.000050	0.000025	0.0053	0.0000025	3.82	
6		AQF40	0.00025	0.61	0.00103	0.00003	2.02	0.000005	1.18	0.014	0.94	0.0001	0.000005	0.00005	0.00024	0.0015	0.00005	0.00006	0.00025	0.0049	0.00010	0.036	0.00005	0.00021	0.006	0.000050	0.000025	0.0055	0.0000025	3.70	
7		AQF40	0.00025	0.67	0.00123	0.00003	2.17	0.000005	1.35	0.017	1.18	0.0001	0.000005	0.00005	0.00006	0.0014	0.00005	0.00009	0.00025	0.0015	0.00009	0.026	0.00005	0.00024	0.006	0.000050	0.000025	0.0057	0.0000052	4.14	
8		AQF40	0.00025	0.58	0.00113	0.00003	2.12	0.000005	1.46	0.016	1.18	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00007	0.00025	0.0044	0.00010	0.020	0.00005	0.00023	0.005	0.000050	0.000025	0.0057	0.0000025	3.87	
9		AQF40	0.00025	0.62	0.00114	0.00003	2.38	0.000005	1.39	0.017	1.25	0.0001	0.000005	0.00005	0.00014	0.0010	0.00005	0.00009	0.00025	0.0015	0.00010	0.031	0.00005	0.00025	0.006	0.000050	0.000025	0.0057	0.0000025	4.08	
10		AQF40	0.00053	0.65	0.00114	0.00003	2.44	0.000005	1.49	0.018	1.42	0.0001	0.000005	0.00005	0.00006	0.0017	0.00005	0.00010	0.00025	0.0015	0.00009	0.023	0.00005	0.00024	0.009	0.000050	0.000025	0.0058	0.0000025	4.52	
11		AQF40	0.00025	0.74	0.00128	0.00003	2.85	0.000005	1.60	0.020	2.02	0.0001	0.000005	0.00005	0.00006	0.0038	0.00005	0.00014	0.00025	0.0045	0.00010	0.022	0.00005	0.00027	0.005	0.000050	0.000025	0.0063	0.0000025	5.25	
12		AQF40	0.00025	0.80	0.00128	0.00004	3.04	0.000005	1.86	0.023	2.50	0.0001	0.000005	0.00005	0.00021	0.0025	0.00005	0.00016	0.00025	0.0049	0.00010	0.021	0.00005	0.00030	0.009	0.000031	0.000025	0.0066	0.0000025	6.03	
1		AQF41	0.00025	0.85	0.00118	0.00005	3.32	0.000005	2.07	0.024	2.77	0.0001	0.000005	0.00005	0.00155	0.0010	0.00005	0.00017	0.00025	0.0109	0.00010	0.020	0.00005	0.00039	0.014	0.000012	0.000025	0.0068	0.0000141	6.51	
2		AQF41	0.00025	0.89	0.00131	0.00004	3.43	0.000005	2.10	0.025	2.90	0.0001	0.000005	0.00005	0.00081	0.0024	0.00005	0.00018	0.00025	0.0075	0.00010	0.020	0.00005	0.00040	0.011	0.000012	0.000025	0.0069	0.0000083	6.78	
3		AQF41	0.00025	0.93	0.00142	0.00003	3.54	0.000005	2.09	0.026	2.93	0.0001	0.000005	0.00005	0.00007	0.0037	0.00005	0.00019	0.00025	0.0041	0.00010	0.021	0.00005	0.00041	0.008	0.000012	0.000025	0.0069	0.0000025	6.90	
4		AQF41	0.00025	0.77	0.00120	0.00015	3.18	0.000005	1.75	0.021	1.97	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00013	0.00025	0.0015	0.00010	0.020	0.00005	0.00025	0.020	0.000011	0.000025	0.0062	0.0000025	5.34	
5		AQF41	0.00025	0.61	0.00096	0.00003	2.39	0.000005	1.02	0.015	0.73	0.0001	0.000005	0.00005	0.00005	0.0016	0.00005	0.00005	0.00025	0.0015	0.00010	0.030	0.00005	0.00016	0.007	0.000050	0.000025	0.0053	0.0000025	3.56	
6		AQF41	0.00025	0.65	0.00113	0.00003	2.09	0.000005	1.18	0.016	0.94	0.0001	0.000005	0.00005	0.00016	0.0034	0.00005	0.00007	0.00025	0.0070	0.00010	0.033	0.00005	0.00019	0.010	0.000050	0.000025	0.0055	0.0000025	3.66	
7		AQF41	0.00025	0.58	0.00100	0.00003	2.14	0.000005	1.26	0.016	1.18	0.0001	0.000005	0.00005	0.00014	0.0009	0.00005	0.00008	0.00025	0.0015	0.00010	0.026	0.00005	0.00021	0.006	0.000050	0.000025	0.0057	0.0000025	3.85	
8		AQF41	0.00025	0.58	0.00115	0.00005	2.12	0.000005	1.49	0.016	1.18	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00007	0.00025	0.0052	0.00010	0.023	0.00005	0.00022	0.005	0.000050	0.000025	0.0057	0.0000025	3.79	
9		AQF41	0.00025	0.64	0.00122	0.00003	2.53	0.000005	1.45	0.016	1.25	0.0001	0.000005	0.00005	0.00006	0.0016	0.00005	0.00009	0.00025	0.0050	0.00010	0.023	0.00005	0.00022	0.006	0.000050	0.000025	0.0057	0.0000025	4.19	
10		AQF41	0.00025	0.60	0.00107	0.00003	2.49	0.000005	1.44	0.017	1.42	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00009	0.00025	0.0045	0.00010	0.019	0.00005	0.00022	0.005	0.000050	0.000025	0.0058	0.0000025	4.46	
11		AQF41	0.00025	0.70	0.00113	0.00003	2.68	0.000005	1.57	0.020	2.02	0.0001	0.000005	0.00005	0.00006	0.0009	0.00005	0.00013	0.00025	0.0015	0.00010	0.019	0.00005	0.00026	0.005	0.000050	0.000025	0.0063	0.0000025	5.17	
12		AQF41	0.00025	0.78	0.00116	0.00004	3.00	0.000005	1.86	0.023	2.50	0.0001	0.000005	0.00005	0.00081	0.0009	0.00005	0.00016	0.00025	0.0062	0.00010	0.019	0.00005	0.00033	0.010	0.000031	0.000025	0.0066	0.0000083	5.98	
1		AQF42	0.00025	0.85	0.00133	0.00006	3.40	0.000005	2.11	0.025	3.04	0.0001	0.000005	0.00005	0.00054	0.0017	0.00005	0.00022	0.00025	0.0039	0.00010	0.020	0.00005	0.00033	0.014	0.000012	0.000025	0.0068	0.0000025	6.50	
2		AQF42	0.00025	0.99	0.00134	0.00003	3.52	0.000005	2.16	0.026	10.86	0.0001	0.000005	0.00005	0.00202	0.0022	0.00005	0.00020	0.00025	0.0246	0.00010	0.023	0.00005	0.00035	0.021	0.000012	0.000025	0.0069	0.0000025	6.91	
3		AQF42	0.00078	0.92	0.00149	0.00003	3.71	0.000005	2.11	0.026	2.93	0.0001	0.000005	0.00005	0.00007	0.0057	0.00005	0.00020	0.00025	0.0052	0.00010	0.035	0.00005	0.00037	0.009	0.000012	0.000025	0.0069	0.0000025	6.91	
4		AQF42	0.00025	0.79	0.00120	0.00013	3.02	0.000005	1.76	0.022	1.97	0.0001	0.000005	0.00005	0.00006	0.0012	0.00005	0.00016	0.00025	0.0032	0.00010	0.023	0.00005	0.00028	0.019	0.000011	0.000025	0.0062	0.0000117	5.47	
5		AQF42	0.00025	0.58	0.00097	0.00003	2.29	0.000005	1.20	0.014	0.73	0.0001	0.000005	0.00005	0.00026	0.0015	0.00005	0.00005	0.00025	0.0015	0.00010	0.033	0.00005	0.00019	0.006	0.000050	0.000025	0.0053	0.0000025	3.52	
6		AQF42	0.00025	0.59	0.00102	0.00003	2.11	0.000005	1.18	0.014	0.94	0.0001	0.000005	0.00005	0.00028	0.0017	0.00005	0.00006	0.00025	0.0015	0.00010	0.034	0.00005	0.00020	0.006	0.000050	0.000025	0.0055	0.0000025	3.51	
7		AQF42	0.00025	0.59	0.00112	0.00003	2.15	0.000005	1.29	0.015	1.18	0.0001	0.000005	0.00005	0.00041	0.0012	0.00005	0.00008	0.00025	0.0059	0.00010	0.025	0.00005	0.00020	0.006	0.000050	0.000025	0.0057	0.0000025	3.85	
8		AQF42	0.00025	0.61	0.00115	0.00005	2.37	0.000005	1.34	0.017	1.18	0.0001	0.000005	0.00005	0.00006	0.0010	0.00005	0.00008	0.00025	0.0015	0.00010	0.021	0.00005	0.00022	0.005	0.000050	0.000025	0.0057	0.0000025	3.91	
9		AQF42	0.00025	0.62	0.00109	0.00003	2.33	0.000005	1.40	0.017	1.25	0.0001	0.000005	0.00005	0.00006	0.0008	0.00005	0.00008	0.00025	0.0031	0.00010	0.024	0.00005	0.00023	0.006	0.000050	0.000025	0.0057	0.0000025	4.26	
10		AQF42	0.00025	0.64	0.00110	0.00003	2.66	0.000005	1.42	0.017	1.42	0.0001	0.000005	0.00005	0.00006	0.0011	0.00005	0.00010	0.00025	0.0015	0.00010	0.019	0.00005	0.00023	0.005	0.000050					

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

		Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	Dissolved_Met al	
Month	-	Cesium_D mg/L	Chromium_D mg/L	Cobalt_D mg/L	Copper_D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_D mg/L	Magnesium_D mg/L	Manganese_D mg/L	Mercury_D mg/L	Molybdenum_D mg/L	Nickel_D mg/L	Potassium_D mg/L	Rubidium_D mg/L	Selenium_D mg/L	Silicon_D mg/L	Silver_D mg/L	Sodium_D mg/L	Strontium_D mg/L	Sulfur_D mg/L	Tellurium_D mg/L	Thallium_D mg/L	Thorium_D mg/L	Tin_D mg/L	Titanium_D mg/L	Tungsten_D mg/L	Uranium_D mg/L	Vanadium_D mg/L
1	AQF40	0.000015	0.00024	0.000057	0.0027	0.16	0.00013	0.00137	1.9	0.040	-	0.00010	0.00025	0.86	0.00120	0.000025	3.2	0.000005	2.1	0.025	2.80	0.00010	0.000005	0.00005	0.000061	0.00015	0.000053	0.00018	0.00025
2	AQF40	0.000016	0.00024	0.000057	0.0019	0.17	0.00009	0.00124	2.0	0.042	-	0.00011	0.00025	0.86	0.00121	0.000033	3.2	0.000005	2.1	0.025	3.02	0.00010	0.000005	0.00005	0.000085	0.00015	0.000054	0.00019	0.00025
3	AQF40	0.000016	0.00024	0.000057	0.0012	0.19	0.00005	0.00109	2.0	0.043	0.0000010	0.00012	0.00025	0.85	0.00122	0.000041	3.2	0.000005	2.1	0.025	3.13	0.00010	0.000005	0.00005	0.000109	0.00015	0.000054	0.00020	0.00025
4	AQF40	0.000012	0.00024	0.000055	0.0020	0.18	0.00010	0.00122	1.6	0.033	0.0000014	0.00007	0.00025	0.86	0.00126	0.000025	3.1	0.000005	1.8	0.021	1.99	0.00010	0.000005	0.00005	0.000145	0.00015	0.000052	0.00013	0.00025
5	AQF40	0.000007	0.00010	0.000051	0.0006	0.21	0.00003	0.00113	1.1	0.032	0.0000019	0.00014	0.00025	0.64	0.00102	0.000025	2.4	0.000005	1.2	0.015	0.74	0.00010	0.000005	0.00005	0.000126	0.00071	0.000051	0.00005	0.00025
6	AQF40	0.000008	0.00013	0.000052	0.0003	0.18	0.00003	0.00055	1.1	0.013	0.0000018	0.00008	0.00025	0.61	0.00096	0.000025	2.0	0.000005	1.2	0.014	0.95	0.00010	0.000005	0.00005	0.000191	0.00051	0.000051	0.00007	0.00025
7	AQF40	0.000009	0.00011	0.000053	0.0003	0.11	0.00007	0.00092	1.2	0.018	0.0000012	0.00011	0.00025	0.65	0.00113	0.000025	1.9	0.000005	1.3	0.016	1.35	0.00010	0.000005	0.00005	0.000108	0.00041	0.000051	0.00009	0.00025
8	AQF40	0.000009	0.00012	0.000053	0.0003	0.15	0.00003	0.00057	1.2	0.018	-	0.00010	0.00025	0.60	0.00105	0.000052	2.1	0.000005	1.3	0.017	1.19	0.00010	0.000005	0.00005	0.000241	0.00037	0.000051	0.00008	0.00025
9	AQF40	0.000009	0.00022	0.000053	0.0026	0.13	0.00015	0.00058	1.2	0.019	-	0.00015	0.00025	0.60	0.00116	0.000052	2.3	0.000005	1.3	0.016	1.26	0.00010	0.000005	0.00005	0.000054	0.00054	0.000051	0.00009	0.00025
10	AQF40	0.000010	0.00008	0.000053	0.0016	0.14	0.00007	0.00089	1.3	0.019	0.0000011	0.00011	0.00025	0.63	0.00106	0.000042	2.3	0.000005	1.5	0.017	1.63	0.00010	0.000005	0.00005	0.000055	0.00027	0.000052	0.00010	0.00025
11	AQF40	0.000012	0.00015	0.000055	0.0049	0.14	0.00018	0.00064	1.5	0.028	-	0.00010	0.00025	0.71	0.00107	0.000025	2.5	0.000005	1.6	0.020	2.04	0.00010	0.000005	0.00005	0.000058	0.00033	0.000052	0.00013	0.00025
12	AQF40	0.000014	0.00019	0.000056	0.0038	0.15	0.00015	0.00101	1.8	0.036	-	0.00010	0.00025	0.80	0.00114	0.000025	2.8	0.000005	1.9	0.023	2.52	0.00010	0.000005	0.00005	0.000060	0.00024	0.000053	0.00017	0.00025
1	AQF41	0.000015	0.00024	0.000057	0.0037	0.17	0.00016	0.00127	1.9	0.040	-	0.00009	0.00052	0.86	0.00126	0.000025	3.2	0.000005	2.1	0.024	2.80	0.00010	0.000005	0.00005	0.000061	0.00015	0.000053	0.00018	0.00025
2	AQF41	0.000016	0.00024	0.000057	0.0021	0.19	0.00009	0.00116	2.0	0.043	-	0.00008	0.00038	0.87	0.00125	0.000025	3.2	0.000005	2.2	0.025	2.93	0.00010	0.000005	0.00005	0.000061	0.00020	0.000054	0.00019	0.00025
3	AQF41	0.000016	0.00024	0.000057	0.0004	0.20	0.00003	0.00105	2.0	0.045	0.0000012	0.00007	0.00025	0.87	0.00123	0.000025	3.2	0.000005	2.1	0.025	2.96	0.00010	0.000005	0.00005	0.000061	0.00025	0.000054	0.00020	0.00025
4	AQF41	0.000012	0.00024	0.000055	0.0017	0.19	0.00008	0.00122	1.6	0.034	0.0000018	0.00008	0.00025	0.76	0.00121	0.000025	3.1	0.000005	1.7	0.021	1.99	0.00010	0.000005	0.00005	0.000125	0.00035	0.000052	0.00013	0.00025
5	AQF41	0.000007	0.00012	0.000051	0.0017	0.22	0.00003	0.00054	1.0	0.025	0.0000025	0.00012	0.00025	0.62	0.00091	0.000025	2.4	0.000005	1.1	0.014	0.74	0.00010	0.000005	0.00005	0.000052	0.00044	0.000051	0.00005	0.00025
6	AQF41	0.000008	0.00013	0.000052	0.0006	0.18	0.00003	0.00055	1.0	0.013	0.0000022	0.00007	0.00025	0.58	0.00099	0.000025	1.9	0.000005	1.2	0.013	0.95	0.00010	0.000005	0.00005	0.000053	0.00052	0.000051	0.00007	0.00025
7	AQF41	0.000009	0.00012	0.000053	0.0002	0.15	0.00003	0.00057	1.1	0.017	0.0000010	0.00008	0.00025	0.57	0.00098	0.000025	2.1	0.000005	1.2	0.015	1.19	0.00010	0.000005	0.00005	0.000054	0.00036	0.000051	0.00008	0.00025
8	AQF41	0.000009	0.00012	0.000053	0.0003	0.0003	0.00003	0.00057	1.1	0.018	-	0.00008	0.00025	0.57	0.00112	0.000025	2.1	0.000005	1.3	0.016	1.19	0.00010	0.000005	0.00005	0.000468	0.00039	0.000051	0.00008	0.00025
9	AQF41	0.000009	0.00005	0.000053	0.0004	0.12	0.00003	0.00117	1.2	0.018	-	0.00011	0.00025	0.59	0.00105	0.000025	2.2	0.000005	1.3	0.017	1.75	0.00010	0.000005	0.00005	0.000556	0.00034	0.000051	0.00008	0.00025
10	AQF41	0.000010	0.00012	0.000053	0.0003	0.12	0.00003	0.00059	1.3	0.018	0.0000010	0.00014	0.00025	0.59	0.00095	0.000025	2.4	0.000005	1.4	0.016	1.43	0.00010	0.000005	0.00005	0.000055	0.00015	0.000052	0.00010	0.00025
11	AQF41	0.000012	0.00005	0.000055	0.0040	0.12	0.00014	0.00064	1.5	0.026	-	0.00009	0.00025	0.67	0.00108	0.000025	2.5	0.000005	1.5	0.019	2.04	0.00010	0.000005	0.00005	0.000058	0.00015	0.000052	0.00013	0.00025
12	AQF41	0.000014	0.00015	0.000056	0.0039	0.15	0.00015	0.00097	1.8	0.035	-	0.00009	0.00038	0.78	0.00118	0.000025	2.8	0.000005	1.9	0.022	2.52	0.00010	0.000005	0.00005	0.000060	0.00015	0.000053	0.00016	0.00025
1	AQF42	0.000015	0.00024	0.000057	0.0031	0.18	0.00015	0.00137	2.0	0.041	-	0.00012	0.00025	0.85	0.00127	0.000025	3.2	0.000005	2.1	0.025	2.80	0.00010	0.000005	0.00005	0.000185	0.00015	0.000053	0.00022	0.00025
2	AQF42	0.000016	0.00024	0.000057	0.0019	0.20	0.00007	0.00071	2.1	0.049	0.0000003	0.00009	0.00025	1.03	0.00130	0.000025	3.3	0.000005	2.2	0.026	3.22	0.00010	0.000005	0.00005	0.000186	0.00040	0.000054	0.00020	0.00025
3	AQF42	0.000016	0.00024	0.000057	0.0004	0.22	0.00003	0.00148	2.0	0.047	-	0.00009	0.00025	0.84	0.00126	0.000062	3.3	0.000005	2.1	0.025	2.96	0.00010	0.000005	0.00005	0.000061	0.00040	0.000054	0.00020	0.00025
4	AQF42	0.000012	0.00024	0.000055	0.0025	0.19	0.00009	0.00132	1.6	0.035	-	0.00009	0.00025	0.80	0.00114	0.000025	3.0	0.000005	5.6	0.021	2.48	0.00010	0.000005	0.00005	0.000155	0.00034	0.000052	0.00016	0.00025
5	AQF42	0.000007	0.00014	0.000051	0.0007	0.30	0.00003	0.00054	1.1	0.051	0.0000016	0.00010	0.00025	0.60	0.00099	0.000025	2.5	0.000005	1.1	0.014	0.74	0.00010	0.000005	0.00005	0.000052	0.00051	0.000051	0.00005	0.00025
6	AQF42	0.000008	0.00013	0.000052	0.0003	0.18	0.00003	0.00055	1.0	0.011	0.0000016	0.00008	0.00025	0.63	0.00095	0.000025	2.0	0.000005	1.2	0.013	0.95	0.00010	0.000005	0.00005	0.000300	0.00046	0.000051	0.00006	0.00025
7	AQF42	0.000009	0.00005	0.000053	0.0002	0.15	0.00003	0.00057	1.1	0.017	0.0000015	0.00009	0.00025	0.59	0.00101	0.000025	2.0	0.000005	1.2	0.015	1.50	0.00010	0.000005	0.00005	0.000684	0.00044	0.000051	0.00009	0.00025
8	AQF42	0.000009	0.00011	0.000053	0.0004	0.15	0.00012	0.00057	1.1	0.018	-	0.00010	0.00025	0.59	0.00114	0.000025	2.1	0.000005	1.3	0.016	1.19	0.00010	0.000005	0.00005	0.000054	0.00046	0.000051	0.00008	0.00025
9	AQF42	0.000009	0.00012	0.000053	0.0002	0.12	0.00003	0.00058	1.2	0.017	-	0.00009	0.00025	0.61	0.00103	0.000060	2.2	0.000005	1.4	0.016	1.26	0.00010	0.000005	0.00005	0.000054	0.00032	0.000051	0.00009	0.00025
10	AQF42	0.000010	0.00005	0.000053	0.0005	0.12	0.00003	0.00059	1.3	0.019	0.0000008	0.00011	0.00025	0.58	0.00098	0.000025	2.4	0.000005	1.4	0.016	1.43	0.00010	0.000005	0.00005	0.000055	0.00015	0.000052	0.00010	0.00025
11	AQF42	0.000012	0.00076	0.000055	0.0015	0.19	0.00006	0.00064	1.6	0.043	-	0.00089	0.00025	0.70	0.00110	0.000025	2.4	0.000005	1.6	0.020	2.04	0.00010	0.000005	0.00005	0.000058	0.00100	0.000898	0.00017	0.00025

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

Month	Site	Dissolved_Met	Dissolved_Met	Cyanides	Cyanides	Cyanides	Methylmercu	Methylmercu
		al	al				ry	ry
		Zinc_D	Zirconium_D				Methylmercu	Methylmercu
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	AQF40	0.0044	0.00015	-	-	-	-	-
2	AQF40	0.0031	0.00015	-	-	-	-	-
3	AQF40	0.0018	0.00015	-	-	-	-	-
4	AQF40	0.0027	0.00015	-	-	-	-	-
5	AQF40	0.0030	0.00010	-	-	-	-	-
6	AQF40	0.0063	0.00010	-	-	-	-	-
7	AQF40	0.0037	0.00010	-	-	-	-	-
8	AQF40	0.0033	0.00010	-	-	-	-	-
9	AQF40	0.0047	0.00010	-	-	-	-	-
10	AQF40	0.0021	0.00011	-	-	-	-	-
11	AQF40	0.0100	0.00010	-	-	-	-	-
12	AQF40	0.0072	0.00012	-	-	-	-	-
1	AQF41	0.0050	0.00015	-	-	-	-	-
2	AQF41	0.0034	0.00015	-	-	-	-	-
3	AQF41	0.0018	0.00015	-	-	-	-	-
4	AQF41	0.0022	0.00015	-	-	-	-	-
5	AQF41	0.0254	0.00010	-	-	-	-	-
6	AQF41	0.0023	0.00010	-	-	-	-	-
7	AQF41	0.0032	0.00010	-	-	-	-	-
8	AQF41	0.0018	0.00026	-	-	-	-	-
9	AQF41	0.0005	0.00010	-	-	-	-	-
10	AQF41	0.0005	0.00010	-	-	-	-	-
11	AQF41	0.0042	0.00010	-	-	-	-	-
12	AQF41	0.0046	0.00012	-	-	-	-	-
1	AQF42	0.0045	0.00015	-	-	-	-	-
2	AQF42	0.0047	0.00015	-	-	-	-	-
3	AQF42	0.0012	0.00015	-	-	-	-	-
4	AQF42	0.0051	0.00015	-	-	-	-	-
5	AQF42	0.0012	0.00010	-	-	-	-	-
6	AQF42	0.0005	0.00010	-	-	-	-	-
7	AQF42	0.0089	0.00010	-	-	-	-	-
8	AQF42	0.0030	0.00010	-	-	-	-	-
9	AQF42	0.0005	0.00010	-	-	-	-	-
10	AQF42	0.0011	0.00010	-	-	-	-	-
11	AQF42	0.0032	0.00010	-	-	-	-	-
12	AQF42	0.0039	0.00012	-	-	-	-	-
1	AQF43	0.0011	0.00015	-	-	-	-	-
2	AQF43	0.0013	0.00015	-	-	-	-	-
3	AQF43	0.0015	0.00015	-	-	-	-	-
4	AQF43	0.0023	0.00015	-	-	-	-	-
5	AQF43	0.0015	0.00010	-	-	-	-	-
6	AQF43	0.0045	0.00010	-	-	-	-	-
7	AQF43	0.0013	0.00010	-	-	-	-	-
8	AQF43	0.0005	0.00010	-	-	-	-	-
9	AQF43	0.0005	0.00010	-	-	-	-	-
10	AQF43	0.0022	0.00010	-	-	-	-	-
11	AQF43	0.0047	0.00010	-	-	-	-	-
12	AQF43	0.0029	0.00012	-	-	-	-	-
1	AQF44	0.0038	0.00015	-	-	-	-	-
2	AQF44	0.0030	0.00015	-	-	-	-	-
3	AQF44	0.0023	0.00015	-	-	-	-	-
4	AQF44	0.0027	0.00015	-	-	-	-	-
5	AQF44	0.0005	0.00010	-	-	-	-	-
6	AQF44	0.0033	0.00010	-	-	-	-	-
7	AQF44	0.0005	0.00010	-	-	-	-	-
8	AQF44	0.0026	0.00010	-	-	-	-	-
9	AQF44	0.0005	0.00010	-	-	-	-	-
10	AQF44	0.0005	0.00010	-	-	-	-	-
11	AQF44	0.0049	0.00010	-	-	-	-	-
12	AQF44	0.0043	0.00012	-	-	-	-	-
1	AQF45	0.0022	0.00015	-	-	-	-	-
2	AQF45	0.0018	0.00015	-	-	-	-	-
3	AQF45	0.0014	0.00015	-	-	-	-	-
4	AQF45	0.0016	0.00015	-	-	-	-	-
5	AQF45	0.0013	0.00010	-	-	-	-	-
6	AQF45	0.0011	0.00010	-	-	-	-	-
7	AQF45	0.0021	0.00010	-	-	-	-	-
8	AQF45	0.0012	0.00010	-	-	-	-	-
9	AQF45	0.0005	0.00010	-	-	-	-	-
10	AQF45	0.0016	0.00010	-	-	-	-	-
11	AQF45	0.0059	0.00010	-	-	-	-	-
12	AQF45	0.0005	0.00010	-	-	-	-	-
May-Oct	All Stn Median	0.0015	0.00010	-	-	-	-	-
May-Oct	All Stn 90P	0.0046	0.00010	-	-	-	-	-
May-Oct	All Stn 10P	0.0005	0.00010	-	-	-	-	-

F.3 Full Modelling Results – 25% Mixing Zone Scenarios



Pink fill: parameter of potential concern (PoPC)	Station AQF 41 is upstream of the discharge point; no mixing scenarios conducted on AQF41
Light grey fill: river station concentrations less than method detection limit (<MDL)	Parameters with "_" indicates total concentration
":" symbol: no geochemistry measurement for river and/or pit; pH cannot be mixed	Parameters with "0" indicates dissolved concentration
Light grey with ":" symbol: river measurement <MDL and no geochemistry measurement for pit	

Median Hughes monthly flow rate, median mixed pit concentrations

		Site	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Me tal																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Month			D_Oxygen			Specific_Conducta	Temp_fie	Turbidity	Acidity(C	(CaCO3)_	Alkalinity bicarbon	Alkalinity carbonat	Alkalinity hydroxid	Alkalinity phenol	Alkalinity T	(CO3)_ca	(HCO3)_b		(OH)_hyd	Conducti	DOC_D	Hardness		pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia (N)_T	Nitrate(N)	Nitrite(N)	Nitrate(N)	Nitrogen(TKN)	Phosphor us_D	Phosphor us_T	Bromide	Chloride	Fluoride	Sulfate(S O4)	Aluminu m_T																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
			n_field	percent_f	ORP_fiel												d	pH_field				nce_field	TDS_field																			ld	_field	aCO3)	ate	e	e	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

[illegible]

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

[illegible]

Median Hughes monthly flow rate, median mixed pit concentrations cont'd											
Month	Site	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Cyanides	Cyanides	Cyanides	Methylm ercury	Methylm ercury	
		Uranium _D mg/L	Vanadiu m_D mg/L	Zinc_D mg/L	Zirconiu m_D mg/L	cyanide_f ree mg/L	cyanide_ SAD mg/L	cyanide_ WAD mg/L	Methylm ercury_D mg/L	Methylm ercury_T mg/L	
1	AQF40	0.000363	0.00025	0.004345	0.000146	-	-	-	-	-	
2	AQF40	0.000374	0.00025	0.003058	0.000146	-	-	-	-	-	
3	AQF40	0.000378	0.00025	0.001778	0.000146	-	-	-	-	-	
4	AQF40	0.000359	0.00025	0.002697	0.000146	-	-	-	-	-	
5	AQF40	0.000188	0.00025	0.002941	9.9E-05	-	-	-	-	-	
6	AQF40	0.000245	0.00025	0.006134	0.0001	-	-	-	-	-	
7	AQF40	0.000301	0.00025	0.003604	9.67E-05	-	-	-	-	-	
8	AQF40	0.000292	0.00025	0.003185	0.0001	-	-	-	-	-	
9	AQF40	0.000297	0.00025	0.004583	0.0001	-	-	-	-	-	
10	AQF40	0.00029	0.00025	0.002065	0.000106	-	-	-	-	-	
11	AQF40	0.000313	0.00025	0.00967	0.0001	-	-	-	-	-	
12	AQF40	0.000342	0.00025	0.006986	0.000123	-	-	-	-	-	
1	AQF42	0.000402	0.00025	0.004436	0.000146	-	-	-	-	-	
2	AQF42	0.000383	0.00025	0.004611	0.000146	-	-	-	-	-	
3	AQF42	0.000383	0.00025	0.00123	0.000146	-	-	-	-	-	
4	AQF42	0.000387	0.00025	0.0049	0.000146	-	-	-	-	-	
5	AQF42	0.000188	0.00025	0.001214	0.0001	-	-	-	-	-	
6	AQF42	0.000244	0.00025	0.000558	0.0001	-	-	-	-	-	
7	AQF42	0.000297	0.00025	0.008504	0.0001	-	-	-	-	-	
8	AQF42	0.000291	0.00025	0.002905	0.0001	-	-	-	-	-	
9	AQF42	0.000295	0.00025	0.00057	0.0001	-	-	-	-	-	
10	AQF42	0.000286	0.00025	0.001129	0.0001	-	-	-	-	-	
11	AQF42	0.000351	0.00025	0.003174	0.0001	-	-	-	-	-	
12	AQF42	0.00038	0.00025	0.003807	0.000123	-	-	-	-	-	
1	AQF43	0.000366	0.00025	0.001138	0.000146	-	-	-	-	-	
2	AQF43	0.000376	0.00025	0.001322	0.000146	-	-	-	-	-	
3	AQF43	0.000379	0.00025	0.001504	0.000146	-	-	-	-	-	
4	AQF43	0.000357	0.00025	0.002238	0.000146	-	-	-	-	-	
5	AQF43	0.000189	0.00025	0.001502	0.0001	-	-	-	-	-	
6	AQF43	0.000244	0.00025	0.004338	0.0001	-	-	-	-	-	
7	AQF43	0.000294	0.00025	0.001317	0.0001	-	-	-	-	-	
8	AQF43	0.000291	0.00025	0.000569	0.0001	-	-	-	-	-	
9	AQF43	0.000294	0.00025	0.00057	0.0001	-	-	-	-	-	
10	AQF43	0.000287	0.00025	0.002158	0.0001	-	-	-	-	-	
11	AQF43	0.000312	0.00025	0.004566	0.0001	-	-	-	-	-	
12	AQF43	0.000343	0.00025	0.00284	0.000123	-	-	-	-	-	
1	AQF44	0.000365	0.00025	0.003703	0.000146	-	-	-	-	-	
2	AQF44	0.000375	0.00025	0.002994	0.000146	-	-	-	-	-	
3	AQF44	0.000379	0.00025	0.00228	0.000146	-	-	-	-	-	
4	AQF44	0.000359	0.00025	0.002697	0.000146	-	-	-	-	-	
5	AQF44	0.000189	0.00025	0.000542	0.0001	-	-	-	-	-	
6	AQF44	0.000244	0.00025	0.003204	0.0001	-	-	-	-	-	
7	AQF44	0.000296	0.00025	0.00057	0.0001	-	-	-	-	-	
8	AQF44	0.000291	0.00025	0.002531	0.0001	-	-	-	-	-	
9	AQF44	0.000298	0.00025	0.00057	0.0001	-	-	-	-	-	
10	AQF44	0.000284	0.00025	0.000567	0.0001	-	-	-	-	-	
11	AQF44	0.000313	0.00025	0.004752	0.0001	-	-	-	-	-	
12	AQF44	0.000343	0.00025	0.004222	0.000123	-	-	-	-	-	

Median Hughes monthly flow rate, median mixed pit concentrations cont'd

		Site	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Me tal		
			D_Oxyge n_field mg/L	D_percent_f ield %	ORP_fiel d mV	pH_fie ld pH	Specific_ nce_fie ld uS/cm	TDS_fie ld mg/L	Temp_fie ld C	Turbidity _fie ld NTU	Acidity(C aCO3) mg/L	bicarbon ate mg/L	carbonat e mg/L	hydroxid e mg/L	phenol mg/L	Alkalinity (CaCO3)_ T mg/L	(CO3)_ca rbonate mg/L	(HCO3)_b icarbonate mg/L	(OH)_hyd roxide mg/L	Conducti vity μS/cm	DOC_D mg/L	Hardness (CaCO3)_ D mg/L	Hardness (CaCO3)_ T mg/L	pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia (N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite(N) trate(N) mg/L	Nitrogen(TKN) mg/L	Phosphor us_D mg/L	Phosphor us_T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(S O4) mg/L	Aluminu m_T mg/L
1		AQF45	12.4	84.7	-	-	-	-	-	-	-	-	-	-	-	25.9	-	-	-	-	-	-	-	-	-	-	-	-	-	0.040189	0.071535	0.005	0.069819	-	-	0.010963	0.05	0.639261	0.0736	16.52835	0.042219
2		AQF45	12.6	86.7	-	-	-	-	-	-	-	-	-	-	-	25.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.043167	0.086844	0.005	-	-	-	0.010991	0.05	1.473194	0.075077	18.34898	0.043953
3		AQF45	13.0	88.8	-	-	-	-	0.49	-	-	-	-	-	-	24.9	0.48	32.8	0.47	-	-	-	32.27713	-	-	-	-	-	0.045778	0.102516	0.005	-	-	-	0.011001	0.05	2.30725	0.076482	19.87359	0.045743	
4		AQF45	18.0	128.5	-	-	-	-	0.74	-	-	-	-	-	-	27.0	0.39	30.7	0.32	67.6	-	-	29.94591	-	-	-	-	-	0.020674	0.094503	0.00087	-	-	-	0.014066	0.008702	0.82531	0.079044	16.55953	0.039612	
5		AQF45	14.0	113.6	-	-	-	-	7.62	-	-	-	-	-	-	17.0	0.30	20.7	0.17	-	-	-	20.18796	-	-	-	-	-	0.012703	0.026713	0.000682	0.025884	-	-	0.020157	0.05	0.466807	0.065981	8.277456	0.067565	
6		AQF45	9.4	94.4	-	-	-	-	14.52	-	-	-	-	-	-	18.0	0.30	21.9	0.17	-	-	-	21.38825	-	-	-	-	-	0.015433	0.012492	0.005	0.035	-	-	0.015167	0.05	0.504652	0.059122	10.91556	0.073945	
7		AQF45	6.7	72.1	-	-	-	-	18.04	-	-	-	-	-	-	20.4	0.30	24.9	0.17	-	-	-	23.79107	-	-	-	-	-	0.029808	0.006026	0.000799	0.004709	-	-	0.017766	0.05	0.690028	0.065393	13.19051	0.068729	
8		AQF45	7.5	79.7	-	-	-	-	18.05	-	-	-	-	-	-	22.5	0.30	27.4	0.17	-	-	-	24.47586	-	-	-	-	-	0.05116	0.005985	0.000796	0.004684	-	-	0.017763	0.05	0.499736	0.069091	12.99914	0.105121	
9		AQF45	8.4	80.7	-	-	-	-	13.18	-	-	-	-	-	-	22.8	0.30	27.7	0.17	-	-	-	25.7107	-	-	-	-	-	0.027055	0.008653	0.000801	0.007284	-	-	0.013194	0.05	0.541888	0.068206	13.21184	0.070859	
10		AQF45	12.4	88.6	-	-	-	-	1.41	-	-	-	-	-	-	22.1	0.30	27.0	0.17	-	-	-	24.94567	-	-	-	-	-	0.017179	0.020678	0.000788	0.019368	-	-	0.013356	0.05	0.565992	0.062452	12.66139	0.060943	
11		AQF45	12.6	85.8	-	-	-	-	0.42	-	-	-	-	-	-	25.0	0.30	30.5	0.17	-	-	-	27.03528	-	-	-	-	-	0.018708	0.031464	0.000824	0.029989	-	-	0.013983	0.05	0.584599	0.066598	14.25646	0.044429	
12		AQF45	13.4	91.7	-	-	-	-	-	-	-	-	-	-	-	25.3	0.30	30.8	0.17	-	-	-	29.3243	-	-	-	-	-	0.02921	0.042049	0.000854	0.040436	-	-	0.013669	0.05	0.643723	0.073385	15.58476	0.054477	
May-Oct	All Stn Median		8.8	86.6	-	-	-	-	14.04	-	-	-	-	-	-	21.1	0.30	25.7	0.17	-	-	-	23.34767	-	-	-	-	-	8.973583	-	-	-	-	-	0.015433	0.05	0.504606	0.065393	12.81631	0.053337	
May-Oct	All Stn 90P		13.6	109.3	-	-	-	-	18.65	-	-	-	-	-	-	22.3	0.30	27.1	0.17	-	-	-	24.52355	-	-	-	-	-	9.540127	-	-	-	-	-	0.020126	0.05	0.577271	0.068181	13.17784	0.072402	
May-Oct	All Stn 10P		6.8	71.1	-	-	-	-	3.71	-	-	-	-	-	-	17.1	0.30	20.8	0.17	-	-	-	19.94806	-	-	-	-	-	8.616419	-	-	-	-	-	0.013601	0.05	0.471068	0.059594	8.272659	0.037167	

Median Hughes monthly flow rate, median mixed pit concentrations cont'd																																					
Month	Site	Total_Me	Total_Me	Total_Met	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me	Total_Me		
		Total_Metal	tal	tal	Total_Metal	al	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal	Total_Metal	tal
		Antimony_T	Arsenic_T	Barium_T	Beryllium_T	Bismuth_T	Boron_T	Cadmium_T	Calcium_T	Cesium_T	Chromiu	Chromiu	Cobalt_T	Copper_T	Iron_T	Lead_T	Lithium_T	Magnesi	Mangane	Mercury_T	Molybdenum	Nickel_T	Potassiu	Rubidium	Selenium_T	Silicon_T	Silver_T	Sodium_T	Strontiu	Sulfur_T	Tellurium	Thalliu	Thorium_	Tin_T	Titanium	Tungsten	
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	m_T	mV/L	mg/L	mg/L	mg/L	mg/L	mg/L	m_T	se_T	mg/L	_T	mg/L	mg/L	m_T	_T	mg/L	mg/L	mg/L	m_T	m_T	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
1	AQF45	0.00005	0.000634	0.008854	1.33485E-05	0.000025	0.008474	0.0000025	10.90783	2.70581E-05	0.000236	-	6.38125E-05	0.00025	0.336524	0.000025	0.001485	3.087368	0.080902	0.0000025	0.000126568	0.00025	1.130372	0.001437	7.24095E-05	3.403702	0.000005	2.853421	0.03694	5.532225	0.0001	0.000005	0.00005	0.000109	0.001173	5.71E-05	
2	AQF45	0.00005	0.000647	0.009034	1.34474E-05	0.000025	0.008577	0.0000025	11.33241	2.77097E-05	0.000235	-	6.42205E-05	0.00025	0.351105	0.000025	0.001542	3.155511	0.083347	2.15275E-06	0.000121702	0.00025	1.166146	0.001466	4.9974E-05	3.491077	0.000005	3.180822	0.037677	5.818946	0.0001	0.000005	0.00005	0.000124	0.001253	5.73E-05	
3	AQF45	0.00005	0.000652	0.009174	1.34824E-05	0.000025	0.008613	0.0000025	11.62717	2.79403E-05	0.000235	-	6.43649E-05	0.00025	0.364507	0.000025	0.001592	3.194635	0.084539	1.81529E-06	0.000115945	0.00025	1.191166	0.001479	2.76118E-05	3.584108	0.000005	3.47004	0.038088	6.00366	0.0001	0.000005	0.00005	0.000139	0.001335	5.74E-05	
4	AQF45	0.00005	0.000653	0.009021	1.32911E-05	0.000025	0.008414	5.62026E-06	10.81095	2.668E-05	0.000236	-	6.35757E-05	0.000828	0.332733	0.000025	0.001478	3.043952	0.085477	2.15127E-06	0.000106566	0.000993	1.187743	0.001413	9.99684E-05	3.281421	0.000005	2.873708	0.036474	5.44168	0.0001	0.000005	0.00005	0.000108	0.001229	5.7E-05	
5	AQF45	0.00005	0.000399	0.006856	0.00005	0.000025	0.006678	0.0000025	6.579918	1.56545E-05	0.000186	-	5.66717E-05	0.00025	0.388716	0.000025	0.001382	1.887799	0.05698	0.0000025	0.000101682	0.00025	0.798891	0.001176	2.6213E-05	2.287166	0.000005	1.783883	0.02373	2.801407	0.0001	0.000005	0.00005	7.85E-05	0.002282	5.34E-05	
6	AQF45	0.00005	0.000458	0.007526	0.00005	0.000025	0.007273	0.0000025	7.830884	1.94303E-05	0.000231	-	5.9036E-05	0.00025	0.361911	5.14666E-05	0.00173	2.146178	0.062511	1.80053E-06	0.000106176	0.00025	0.881423	0.001229	2.66429E-05	2.209352	0.000005	1.983469	0.025701	3.705599	0.0001	0.000005	0.00005	8.86E-05	0.002397	5.47E-05	
7	AQF45	0.00005	0.000541	0.007777	0.00005	0.000025	0.007761	0.0000025	8.661606	2.25293E-05	0.000183	-	6.09766E-05	0.00025	0.314763	0.000025	0.000846	2.472856	0.081477	1.62253E-06	0.000108493	0.00025	0.938572	0.001317	2.69958E-05	2.313213	0.000005	2.202354	0.029469	4.44773	0.0001	0.000005	0.00005	9.69E-05	0.002606	5.57E-05	
8	AQF45	0.00005	0.000583	0.008169	0.00005	0.000025	0.007729	0.0000025	8.921758	3.07363E-05	0.000697	-	6.08506E-05	0.00025	0.350638	6.33038E-05	0.001496	2.556299	0.085611	2.06091E-06	0.000124914	0.000829	0.981968	0.001566	2.69728E-05	2.675118	0.000005	2.32765	0.031043	4.39954	0.0001	0.000005	0.00005	9.64E-05	0.004121	5.56E-05	
9	AQF45	0.00005	0.000561	0.008148	0.00005	0.000025	0.007772	0.0000025	9.22566	2.2598E-05	0.000192	-	6.10196E-05	0.00025	0.275759	0.000025	0.001407	2.608844	0.074039	0.0000025	0.000129159	0.00025	0.986067	0.001384	2.70036E-05	2.556683	0.000005	2.355478	0.030751	4.464163	0.0001	0.000005	0.00005	9.71E-05	0.002288	5.57E-05	
10	AQF45	0.00005	0.000545	0.007056	0.00005	0.000025	0.007653	0.0000025	8.949287	2.18454E-05	0.00022	-	6.05483E-05	0.00025	0.282906	0.000025	0.001394	2.540466	0.065575	1.21758E-06	0.000142718	0.00025	0.940609	0.001213	2.69179E-05	2.6606	0.000005	2.341366	0.02972	4.283935	0.0001	0.000005	0.00005	9.51E-05	0.002219	5.54E-05	
11	AQF45	0.00005	0.000579	0.007358	0.00005	0.000025	0.007986	0.0000025	9.795852	2.39606E-05	0.000164	-	6.18729E-05	0.00025	0.26399	0.000025	0.000874	2.779049	0.071294	0.0000025	0.000138223	0.00025	1.041334	0.001267	2.71587E-05	2.841045	0.000005	2.458101	0.03341	4.790476	0.0001	0.000005	0.00005	0.000101	0.00122	5.61E-05	
12	AQF45	0.00005	0.00068	0.010003	0.00005	0.000025	0.008267	0.0000025	11.29564	2.57448E-05	0.000209	-	6.29901E-05	0.00025	0.320022	5.72445E-05	0.001739	3.21719	0.077447	0.0000025	0.000124033	0.00025	1.202895	0.001628	6.14489E-05	3.577615	0.000005	3.013248	0.03822	5.217727	0.0001	0.000005	0.00005	0.000106	0.001582	5.67E-05	
May-Oct	All Stn Median	0.00005	0.000536	0.007413	0.00005	0.000025	0.007691	0.0000025	8.572182	2.23281E-05	0.000184	-	6.06995E-05	0.00025	0.303067	0.000025	0.001394	2.431501	0.069122	1.95814E-06	0.000120437	0.00025	0.940524	0.001326	2.69728E-05	2.447408	0.000005	2.247759	0.029364	4.341738	0.0001	0.000005	0.00005	9.66E-05	0.00159	5.55E-05	
May-Oct	All Stn 90P	0.00005	0.000567	0.008079	0.00005	0.000025	0.007772	0.0000025	8.972689	2.2598E-05	0.000273	-	6.10196E-05	0.00025	0.395587	6.11661E-05	0.00173	2.540466	0.079796	0.0000025	0.00014621	0.000383	0.982151	0.001439	5.68695E-05	2.67656	0.000005	2.360144	0.03071	4.464163	0.0001	0.000005	0.00005	0.000274	0.002501	5.57E-05	
May-Oct	All Stn 10P	0.00005	0.000442	0.006929	0.00005	0.000025	0.006678	0.0000025	6.64229	1.56545E-05	0.000141	-	5.66717E-05	0.00025	0.256057	0.000025	0.000842	1.882042	0.062337	1.19418E-06	9.66222E-05	0.00025	0.822881	0.001185	2.6213E-05	2.264949	0.000005	1.807873	0.023826	2.801407	0.0001	0.000005	0.00005	8.36E-05	0.000907	5.34E-05	

Median Hughes monthly flow rate, median mixed pit concentrations cont'd																																																																																																																																																																																																																																																																																																																																																																																																																																						
Site		Total_Me tal	Total_Me tal	Total_Me tal	Total_Me tal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _

Median Hughes monthly flow rate, median mixed pit concentrations cont'd										
Month	Site	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Cyanides	Cyanides	Cyanides	Methylm ercury	Methylm ercury
		Uranium _D mg/L	Vanadiu m_D mg/L	Zinc_D mg/L	Zirconiu m_D mg/L	cyanide_f ree mg/L	cyanide_ SAD mg/L	cyanide_ WAD mg/L	Methylm ercury_D mg/L	Methylm ercury_T mg/L
1	AQF45	0.000367	0.00025	0.002237	0.000146	-	-	-	-	-
2	AQF45	0.000377	0.00025	0.001852	0.000146	-	-	-	-	-
3	AQF45	0.000381	0.00025	0.001459	0.000146	-	-	-	-	-
4	AQF45	0.000361	0.00025	0.001596	0.000146	-	-	-	-	-
5	AQF45	0.000192	0.00025	0.00131	0.0001	-	-	-	-	-
6	AQF45	0.000245	0.00025	0.001125	0.0001	-	-	-	-	-
7	AQF45	0.000297	0.00025	0.002063	0.0001	-	-	-	-	-
8	AQF45	0.000297	0.00025	0.001223	0.0001	-	-	-	-	-
9	AQF45	0.000298	0.00025	0.00057	0.0001	-	-	-	-	-
10	AQF45	0.000285	0.00025	0.001597	0.0001	-	-	-	-	-
11	AQF45	0.000314	0.00025	0.00568	0.0001	-	-	-	-	-
12	AQF45	0.000346	0.00025	0.000583	0.0001	-	-	-	-	-
May-Oct	All Stn Median	0.00029	0.00025	0.001549	0.0001	-	-	-	-	-
May-Oct	All Stn 90P	0.000297	0.00025	0.004461	0.0001	-	-	-	-	-
May-Oct	All Stn 10P	0.000189	0.00025	0.000568	0.0001	-	-	-	-	-

10th percentile Hughes monthly flow rate, median mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major	Major	Major	Major	Total_Me
Month		D_Oxygen	D_Oxygen	ORP_fiel		Specific_				Alkalinity	Alkalinity	Alkalinity	Alkalinity	Alkalinity	Alkalinity	(HCO3)_b						Hardness	Hardness						Ammonia	Nitrate(N	Nitrite(N	Nitrate(N	Nitrogen(	Phosphor	Phosphor					
		n_field	_percent_f	d	pH_field	Conducta	TDS_field	Temp_fie	Turbidity	Acidity(C	bicarbon	carbonat	hydroxid	(CaCO3)_	(CaCO3)_	(CO3)_ca	icarbonat	(OH)_hyd	Conducti	DOC_D	D	T	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	(N)_T	)	Nitrite(N	trate(N	TKN)	us_D	us_T	Bromide	Chloride	Fluoride	Sulfate(S	Aluminu
		mg/L	%	mV	pH	uS/cm	mg/L	C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	AQF40	10.0	68.4	-	-	-	-	-	-	-	-	-	-	-	12.3	-	-	-	-	-	-	-	-	-	-	-	-	-	0.095441	0.071607	0.005	0.071119	-	-	0.024917	0.05	1.590719	0.070048	5.861468	0.037662
2	AQF40	10.8	74.4	-	-	-	-	-	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.060609	0.088491	0.005	-	-	0.021305	0.05	1.088498	0.072494	7.350493	0.035998	
3	AQF40	11.7	80.4	-	-	-	-	0.21	-	-	-	-	-	-	11.7	0.50	18.8	0.49	-	-	-	-	-	-	-	-	-	-	0.025717	0.105752	0.005	-	-	0.017597	0.05	0.58711	0.074945	8.868377	0.034234	
4	AQF40	20.0	139.4	-	-	-	-	0.60	-	-	-	-	-	-	15.8	0.40	18.3	0.33	39.9	-	-	-	-	-	-	-	-	-	0.009572	0.098151	0.000608	-	-	0.024916	0.00608	0.371362	0.077864	5.204222	0.033557	
5	AQF40	12.3	94.0	-	-	-	-	3.91	-	-	-	-	-	-	13.8	0.30	16.8	0.17	-	-	-	-	-	-	-	-	-	-	0.008793	0.038446	0.00059	0.043919	-	-	0.022676	0.05	0.347481	0.064976	4.424827	0.054248
6	AQF40	9.0	90.0	-	-	-	-	15.26	-	-	-	-	-	-	12.3	0.30	15.0	0.17	-	-	-	-	-	-	-	-	-	-	0.009185	0.011	0.005	0.035	-	-	0.015143	0.05	0.352166	0.057252	4.575503	0.061387
7	AQF40	6.7	71.8	-	-	-	-	18.57	-	-	-	-	-	-	13.3	0.30	16.2	0.17	-	-	-	-	-	-	-	-	-	-	0.015302	0.003736	0.000605	0.216663	-	-	0.011831	0.05	0.324241	0.063678	4.933257	0.048128
8	AQF40	6.0	66.5	-	-	-	-	19.73	-	-	-	-	-	-	14.1	0.30	17.2	0.17	-	-	-	-	-	-	-	-	-	-	0.02317	0.003752	0.000606	0.003317	-	-	0.015154	0.05	0.281744	0.066134	4.928048	0.033372
9	AQF40	8.0	78.6	-	-	-	-	13.58	-	-	-	-	-	-	14.2	0.30	17.3	0.17	-	-	-	-	-	-	-	-	-	-	0.026063	0.003741	0.000605	0.00331	-	-	0.011832	0.05	0.310068	0.064171	5.14294	0.044705
10	AQF40	11.9	90.0	-	-	-	-	3.62	-	-	-	-	-	-	14.4	0.30	17.5	0.17	-	-	-	-	-	-	-	-	-	-	0.017887	0.026436	0.000596	0.037838	-	-	0.020032	0.05	0.330023	0.065049	4.666402	0.053393
11	AQF40	10.4	71.2	-	-	-	-	0.29	-	-	-	-	-	-	14.6	0.30	17.7	0.17	-	-	-	-	-	-	-	-	-	-	0.016811	0.024951	0.000594	0.024523	-	-	0.019248	0.05	0.307934	0.062086	4.457027	0.080834
12	AQF40	10.2	69.8	-	-	-	-	0.20	-	-	-	-	-	-	13.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.056228	0.048365	0.002801	0.047901	-	-	0.022086	0.05	0.95152	0.066087	5.21799	0.059199
1	AQF42	10.5	71.9	-	-	-	-	0.21	-	-	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.051512	0.067702	0.005	0.067214	-	-	0.024917	0.05	0.702387	0.072976	5.695516	0.050938
2	AQF42	12.1	82.0	-	-	-	-	0.21	-	-	-	-	-	-	10.2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.036891	0.119432	0.005	-	-	0.024916	0.05	0.663914	0.072006	13.91936	0.066061	
3	AQF42	10.5	71.9	-	-	-	-	0.21	-	-	-	-	-	-	17.8	0.50	21.7	0.49	-	-	-	-	-	-	-	-	-	-	0.056453	0.110631	0.005	-	-	0.024915	0.05	0.538322	0.074945	5.29707	0.12215	
4	AQF42	15.5	107.2	-	-	-	-	0.21	-	-	-	-	-	-	15.8	0.40	19.0	0.33	39.5	-	-	-	-	-	-	-	-	-	0.016404	0.095223	0.000608	-	-	0.030089	0.00608	0.371362	0.07396	5.184702	0.037363	
5	AQF42	13.6	132.0	-	-	-	-	4.40	-	-	-	-	-	-	12.7	0.30	15.5	0.17	-	-	-	-	-	-	-	-	-	-	0.008793	0.039034	0.00059	0.038626	-	-	0.015129	0.05	0.362183	0.063995	4.321917	0.053072
6	AQF42	10.3	102.5	-	-	-	-	15.16	-	-	-	-	-	-	11.9	0.30	14.5	0.17	-	-	-	-	-	-	-	-	-	-	0.009185	0.011	0.005	0.035	-	-	0.0352166	0.057252	4.585284	0.057671		
7	AQF42	7.9	86.5	-	-	-	-	18.76	-	-	-	-	-	-	13.7	0.30	16.7	0.17	-	-	-	-	-	-	-	-	-	-	0.026046	0.003736	0.000605	0.003307	-	-	0.015152	0.05	0.417026	0.061236	4.90884	0.047346
8	AQF42	7.9	84.5	-	-	-	-	18.37	-	-	-	-	-	-	14.1	0.30	17.2	0.17	-	-	-	-	-	-	-	-	-	-	0.046603	0.003752	0.000606	0.003317	-	-	0.01408	0.05	0.281744	0.065158	4.947576	0.036594
9	AQF42	8.5	82.1	-	-	-	-	13.97	-	-	-	-	-	-	13.7	0.30	16.7	0.17	-	-	-	-	-	-	-	-	-	-	0.009461	0.007648	0.000605	0.007167	-	-	0.015152	0.05	0.388195	0.064171	4.947623	0.039237
10	AQF42	11.3	95.4	-	-	-	-	3.72	-	-	-	-	-	-	14.0	0.30	17.1	0.17	-	-	-	-	-	-	-	-	-	-	0.00908	0.01939	0.000596	0.018951	-	-	0.015139	0.05	0.310452	0.063092	4.529401	0.041259
11	AQF42	11.6	80.1	-	-	-	-	0.29	-	-	-	-	-	-	15.0	0.30	18.3	0.17	-	-	-	-	-	-	-	-	-	-	0.022686	0.025441	0.000594	0.025013	-	-	0.015136	0.05	0.376472	0.062086	4.662642	0.154855
12	AQF42	11.0	76.0	-	-	-	-	0.25	-	-	-	-	-	-	14.7	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03717	0.046606	0.002801	0.046142	-	-	0.020034	0.05	0.541035	0.067553	5.237537	0.102789
1	AQF43	13.3	91.3	-	-	-	-	-	-	-	-	-	-	-	14.8	-	-	-	-	-	-	-	-	-	-	-	-	-	0.025155	0.064774	0.005	0.064286	-	-	0.024917	0.05	0.360721	0.071024	5.100041	0.038638
2	AQF43	13.5	92.3	-	-	-	-	-	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	0.018834	0.088198	0.005	-	-	0.021305	0.05	0.359384	0.072786	5.513554	0.036975	
3	AQF43	13.7	93.3	-	-	-	-	0.21	-	-	-	-	-	-	14.4	0.50	18.8	0.49	-	-	-	-	-	-	-	-	-	-	0.102155	0.111607	0.005	-	-	0.017597	0.05	0.357805	0.074457	5.960592	0.035307	
4	AQF43	16.9	116.0	-	-	-	-	0.30	-	-	-	-	-	-	15.9	0.40	18.9	0.33	39.7	-	-	-	-	-	-	-	-	-	0.009572	0.096492	0.000608	-	-	0.012521	0.00608	0.351842	0.076888	5.194462	0.036094	
5	AQF43	16.7	135.9	-	-	-	-	5.87	-	-	-	-	-	-	14.9	0.30	18.1	0.17	-	-	-	-	-	-	-	-	-	-	0.008793	0.032174	0.00059	0.031766	-	-	0.030811	0.05	0.411187	0.063995	4.370922	0.059541
6	AQF43	10.3	103.4	-	-	-	-	15.55	-	-	-	-	-	-	12.3	0.30	15.0	0.17	-	-	-	-	-	-	-	-	-	-	0.009185	0.011	0.005	0.035	-	-	0.015143	0.05	0.352166	0.05823	4.673306	0.066766
7	AQF43	8.1	88.9	-	-	-	-	19.25	-	-	-	-	-	-	12.1	0.30	14.8	0.17	-	-	-	-	-	-	-	-	-	-	0.033859	0.003736	0.000605	0.003307	-	-	0.015249	0.05	0.28029	0.062212	4.860005	0.056722
8	AQF43	8.1	89.1	-	-	-	-	19.34	-	-	-	-	-	-	15.1	0.30	18.4	0.17	-	-	-	-	-	-	-	-	-	-	0.018288	0.009708	0.000606	0.009224	-	-	0.016228	0.05	0.291508	0.06711	4.967103	0.04626
9	AQF43	9.0	85.1	-	-	-	-	12.90	-	-	-	-	-	-	14.6	0.30	17.8	0.17	-	-	-	-	-	-	-	-	-	-	0.028993	0.003741	0.000605	0.00331	-	-	0.015152	0.05	0.300302	0.064171	4.898794	0.047928
10	AQF43	12.7	94.4	-	-	-	-	3.03	-	-	-	-	-	-	13.8	0.30	16.8	0.17	-	-	-	-	-	-	-	-	-	-	0.00908	0.020369	0.000596	0.01993	-	-	0.01465	0.05	0.300666	0.064071	4.519615	0.065821
11	AQF43	14.3	97.8	-	-	-	-	-	-	-	-	-	-	-	14.7	0.30	17.8	0.17	-	-	-	-	-	-	-	-	-	-	0.034435	0.027399	0.000594	0.026971	-	-	0.015234	0.05	0.307934	0.063065	4.466818	0.039515
12	AQF43	13.8	94.6	-	-	-	-	-	-	-	-	-	-	-	14.8	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02984	0.046117	0.002801	0.045653	-	-	0.020132	0.05	0.335792	0.067065	4.841712	0.039066
1	AQF44	11.2	76.8	-	-																																			

10th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

[illegible]

10th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

Month	Site	Total_Me	Total_Me	Total_Me	Total_Me	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved						
		tal	tal	tal	tal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal	_Metal						
		Uranium	Vanadiu	Zinc_T	Zirconiu	Aluminu	Antimon	Arsenic_	Barium_	Beryllium	Bismuth_	Boron_D	Cadmium	Calcium_	Cesium_	Chromiu	Cobalt_D	Copper_	Iron_D	Lead_D	Lithium	Magnesi	Mangane	Mercury_	Molybde	Potassiu	Rubidium	Selenium	Silicon_D	Silver_D	Sodium_	Strontiu	Tellurium	Thallium	Thorium_	Tin_D	Titanium	Tungsten		
		_T	m_T	mg/L	m_T	m_D	y_D	D	D	_D	D	D	_D	D	D	m_D	D	D	D	D	D	um_D	se_D	D	num_D	Nickel_D	m_D	_D	_D	Silicon_D	Silver_D	D	m_D	Sulfur_D	_D	_D	D	Tin_D	_D	_D
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
1	AQF40	0.000113	0.00025	0.005307	0.0001	0.020058	0.00005	0.000255	0.013049	1.1E-05	0.000025	0.006071	2.5E-06	5.162982	1.12E-05	0.000245	5.4E-05	0.002754	0.161572	0.000128	0.001305	1.527466	0.026462	-	9.1E-05	0.00025	0.746629	0.001132	0.000025	3.144765	0.000005	1.767886	0.020729	1.776285	0.0001	0.000005	0.00005	6.43E-05	0.00015	5.21E-05
2	AQF40	0.000112	0.00025	0.005678	0.000154	0.020544	0.00005	0.00026	0.013539	1.1E-05	0.000025	0.006077	2.5E-06	5.213257	1.12E-05	0.000245	5.41E-05	0.001982	0.176221	8.82E-05	0.001159	1.533756	0.027714	-	0.000104	0.00025	0.738725	0.001133	3.31E-05	3.15483	0.000005	1.770484	0.020568	1.872605	0.0001	0.000005	0.00005	8.88E-05	0.00015	5.22E-05
3	AQF40	0.000111	0.00025	0.006037	0.000207	0.021124	0.00005	0.000266	0.014033	1.1E-05	0.000025	0.00609	2.5E-06	5.2769	1.13E-05	0.000245	5.41E-05	0.001212	0.190872	4.79E-05	0.001014	1.545028	0.02795	9.78E-07	0.000118	0.00025	0.730901	0.001144	4.11E-05	3.165251	0.000005	1.785937	0.02035	1.978975	0.0001	0.000005	0.00005	0.000113	0.00015	5.22E-05
4	AQF40	0.000111	0.00025	0.0015	0.0001	0.020152	0.00005	0.000265	0.019787	1.1E-05	0.000025	0.00608	1.03E-05	5.130268	1.12E-05	0.000245	5.41E-05	0.002041	0.18208	0.000104	0.001208	1.524472	0.029901	1.45E-06	6.86E-05	0.00025	0.834754	0.00125	0.000025	3.076881	0.000005	1.752086	0.020192	1.788421	0.0001	0.000005	0.00005	0.000152	0.00015	5.22E-05
5	AQF40	0.000101	0.00025	0.0015	0.000141	0.036008	0.00005	0.000225	0.006791	0.00005	0.000025	0.005896	2.5E-06	4.860942	1.02E-05	0.000104	5.34E-05	0.000582	0.210319	0.000025	0.00119	1.426307	0.042132	1.91E-06	0.000141	0.00025	0.72358	0.001076	0.000025	2.479132	0.000005	1.436405	0.018157	1.52622	0.0001	0.000005	0.00005	0.000135	0.000704	5.18E-05
6	AQF40	0.000103	0.00025	0.004825	0.0001	0.035154	0.00005	0.000257	0.005904	0.00005	0.000025	0.005989	2.5E-06	4.644795	1.07E-05	0.000128	5.37E-05	0.00035	0.181011	0.000025	0.000612	1.340823	0.022101	1.79E-06	8.72E-05	0.00025	0.679602	0.001007	0.000025	2.045141	0.000005	1.389422	0.016441	1.658348	0.0001	0.000005	0.00005	0.0002	0.000502	5.2E-05
7	AQF40	0.000116	0.00025	0.0015	9.32E-05	0.026221	0.00005	0.000277	0.00591	0.00005	0.000025	0.006049	5.14E-06	4.86709	1.1E-05	0.000109	5.4E-05	0.000342	0.112705	6.9E-05	0.000961	1.406498	0.024824	1.22E-06	0.000113	0.00025	0.706225	0.001169	0.000025	1.97161	0.000005	1.484711	0.018551	1.896017	0.0001	0.000005	0.00005	0.000118	0.000404	5.21E-05
8	AQF40	0.000107	0.00025	0.004331	0.0001	0.019964	0.00005	0.000264	0.005332	0.00005	0.000025	0.006063	2.5E-06	4.639433	1.11E-05	0.000118	5.4E-05	0.000332	0.149843	0.000025	0.00062	1.382129	0.025094	-	0.000104	0.00025	0.662395	0.001092	5.14E-05	2.128906	0.000005	1.510366	0.019314	1.764339	0.0001	0.000005	0.00005	0.00025	0.000365	5.21E-05
9	AQF40	0.000112	0.00025	0.0015	0.0001	0.031101	0.00005	0.000283	0.00644	0.00005	0.000025	0.006054	2.5E-06	4.729261	1.11E-05	0.000216	5.4E-05	0.002617	0.132248	0.000145	0.000619	1.364169	0.025818	-	0.000149	0.00025	0.652217	0.001189	5.14E-05	2.294238	0.000005	1.47697	0.018284	1.751143	0.0001	0.000005	0.00005	6.41E-05	0.000541	5.21E-05
10	AQF40	0.00011	0.00025	0.0015	9.22E-05	0.022549	0.00005	0.000255	0.0086	0.00005	0.000025	0.005964	2.5E-06	4.773764	1.05E-05	0.000109	5.36E-05	0.001582	0.137928	7.1E-05	0.000903	1.416716	0.021652	1.06E-06	0.00011	0.00025	0.64573	0.001073	4.21E-05	2.356397	0.000005	1.544724	0.017862	1.823519	0.0001	0.000005	0.00005	6.29E-05	0.000272	5.19E-05
11	AQF40	0.000117	0.00025	0.004535	0.0001	0.021875	0.00005	0.000243	0.005268	0.00005	0.000025	0.00594	2.5E-06	4.649722	1.04E-05	0.000148	5.35E-05	0.00497	0.139838	0.000177	0.000606	1.348207	0.022166	-	9.94E-05	0.00025	0.665427	0.001041	0.000025	2.472227	0.000005	1.416584	0.018212	1.588498	0.0001	0.000005	0.00005	6.25E-05	0.000336	5.19E-05
12	AQF40	0.000116	0.00025	0.004921	0.0001	0.020959	0.00005	0.00025	0.009176	3.05E-05	0.000025	0.006019	2.5E-06	4.937589	1.09E-05	0.000197	5.39E-05	0.003859	0.150744	0.000153	0.000958	1.446235	0.024575	-	9.53E-05	0.00025	0.70862	0.001088	0.000025	2.809805	0.000005	1.59854	0.019551	1.702091	0.0001	0.000005	0.00005	6.36E-05	0.000243	5.2E-05
1	AQF42	0.000162	0.00025	0.00394	0.0001	0.020254	0.00005	0.000274	0.013635	1.1E-05	0.000025	0.006071	2.5E-06	5.143458	1.12E-05	0.000245	5.4E-05	0.003193	0.178167	0.000151	0.001305	1.554799	0.027741	-	0.000115	0.00025	0.738819	0.0012	0.000025	3.11548	0.000005	1.78741	0.020827	1.776285	0.0001	0.000005	0.00005	0.000191	0.00015	5.21E-05
2	AQF42	0.000131	0.00025	0.025023	0.0001	0.02357	0.00005	0.000285	0.020665	1.1E-05	0.000025	0.006077	2.5E-06	5.388948	1.12E-05	0.000245	5.41E-05	0.001963	0.200623	7.58E-05	0.000622	1.616721	0.034333	3.04E-07	8.52E-05	0.00025	0.907583	0.001221	0.000025	3.310999	0.000005	1.86809	0.021251	2.077577	0.0001	0.000005	0.00005	0.000191	0.000404	5.22E-05
3	AQF42	0.000132	0.00025	0.005305	0.0001	0.035175	0.00005	0.000305	0.008646	1.1E-05	0.000025	0.00609	2.5E-06	5.374476	1.13E-05	0.000245	5.41E-05	0.000411	0.21917	0.000025	0.001404	1.546004	0.031258	-	7.75E-05	0.00025	0.720167	0.001183	6.31E-05	3.223797	0.000005	1.776179	0.020252	1.803337	0.0001	0.000005	0.00005	6.45E-05	0.000404	5.22E-05
4	AQF42	0.000143	0.00025	0.003159	0.0001	0.023471	0.00005	0.000275	0.019396	1.1E-05	0.000025	0.00608	1.18E-05	5.198588	1.12E-05	0.000245	5.41E-05	0.002509	0.190864	8.75E-05	0.001306	1.534232	0.032527	-	8.81E-05	0.00025	0.775218	0.001123	0.000025	3.008561	0.000005	5.529205	0.019997	2.276421	0.0001	0.000005	0.00005	0.000162	0.000345	5.22E-05
5	AQF42	9.87E-05	0.00025	0.0015	0.0001	0.032676	0.00005	0.000239	0.006105	0.00005	0.000025	0.005896	2.5E-06	4.566915	1.02E-05	0.000138	5.34E-05	0.00071	0.300487	0.000025	0.000602	1.366521	0.060459	1.57E-06	0.000101	0.00025	0.682416	0.001047	0.000025	2.488933	0.000005	1.301152	0.017373	1.52622	0.0001	0.000005	0.00005	6.19E-05	0.000503	5.18E-05
6	AQF42	0.000104	0.00025	0.0015	0.0001	0.033394	0.00005	0.000247	0.00609	0.00005	0.000025	0.005989	2.5E-06	4.449189	1.07E-05	0.000128	5.37E-05	0.00036	0.183945	0.000025	0.000619	1.279208	0.020771	1.66E-06	8.82E-05	0.00025	0.661006	0.001062	6.02E-05	2.216111	0.000005	1.516034	0.018187	1.751143	0.0001	0.000005	0.00005	0.000308	0.000453	5.2E-05
7	AQF42	0.000107	0.00025	0.005895	0.0001	0.024951	0.00005	0.000233	0.006017	0.00005	0.000025	0.006049	2.5E-06	4.583852	1.1E-05	0.00005	5.4E-05	0.000244	0.154702	0.000025	0.000619	1.327386	0.024345	1.48E-06	9.47E-05	0.00025	0.644694	0.001052	0.000025	2.030211	0.000005	1.355789	0.017281	2.047403	0.0001	0.000005	0.00005	0.000689	0.000433	5.21E-05
8	AQF42	0.000112	0.00025	0.0015	0.0001	0.021136	0.00005	0.000254	0.005664	0.00005	0.000025	0.006063	2.5E-06	4.678488	1.11E-05	0.000109	5.4E-05	0.00045	0.146914	0.000119	0.00062	1.375294	0.025484	-	0.000107	0.00025	0.64775	0.00118	0.000025	2.099615	0.000005	1.435185	0.018045	1.764339	0.0001	0.000005	0.00005	6.42E-05	0.000453	5.21E-05
9	AQF42	0.00011	0.00025	0.003063	0.0001	0.024167	0.00005	0.000263	0.006157	0.00005	0.000025	0.006054	2.5E-06	4.905045	1.11E-05	0.000118	5.4E-05	0.000244	0.121506	0.000025	0.000619	1.412022	0.023855	-	9.37E-05	0.00025	0.661006	0.001062	6.02E-05	2.216111	0.000005	1.516034	0.018187	1.751143	0.0001	0.000005	0.00005	6.41E-05	0.000316	5.21E-05
10	AQF42	0.000115	0.00025	0.0015	0.0001	0.018831	0.00005	0.000245	0.005293	0.00005	0.000025	0.005964	2.5E-06	4.744406	1.05E-05	0.00005	5.36E-05	0.000476	0.124227	0.000025	0.000																			

10th percentile Hughes monthly flow rate, median mixed pit concentration											
Month	Site	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Cyanides	Cyanides	Cyanides	Methylm ercury	Methylm ercury	
		Uranium _D mg/L	Vanadiu m_D mg/L	Zinc_D mg/L	Zirconiu m_D mg/L	cyanide_f ree mg/L	cyanide_ SAD mg/L	cyanide_ WAD mg/L	Methylm ercury_D mg/L	Methylm ercury_T mg/L	
1	AQF40	0.000118	0.00025	0.004527	0.000149	-	-	-	-	-	
2	AQF40	0.000119	0.00025	0.00316	0.000149	-	-	-	-	-	
3	AQF40	0.000121	0.00025	0.001794	0.000149	-	-	-	-	-	
4	AQF40	0.00012	0.00025	0.00277	0.000149	-	-	-	-	-	
5	AQF40	0.000104	0.00025	0.002971	9.9E-05	-	-	-	-	-	
6	AQF40	0.000111	0.00025	0.006293	0.0001	-	-	-	-	-	
7	AQF40	0.000124	0.00025	0.003699	9.66E-05	-	-	-	-	-	
8	AQF40	0.00012	0.00025	0.003259	0.0001	-	-	-	-	-	
9	AQF40	0.000119	0.00025	0.004724	0.0001	-	-	-	-	-	
10	AQF40	0.000116	0.00025	0.002088	0.000106	-	-	-	-	-	
11	AQF40	0.000104	0.00025	0.010117	0.0001	-	-	-	-	-	
12	AQF40	0.000112	0.00025	0.007316	0.000124	-	-	-	-	-	
1	AQF42	0.000159	0.00025	0.004625	0.000149	-	-	-	-	-	
2	AQF42	0.000129	0.00025	0.00482	0.000149	-	-	-	-	-	
3	AQF42	0.000126	0.00025	0.001208	0.000149	-	-	-	-	-	
4	AQF42	0.00015	0.00025	0.005112	0.000149	-	-	-	-	-	
5	AQF42	0.000104	0.00025	0.001207	0.0001	-	-	-	-	-	
6	AQF42	0.000109	0.00025	0.000523	0.0001	-	-	-	-	-	
7	AQF42	0.00012	0.00025	0.008826	0.0001	-	-	-	-	-	
8	AQF42	0.000118	0.00025	0.002966	0.0001	-	-	-	-	-	
9	AQF42	0.000117	0.00025	0.000525	0.0001	-	-	-	-	-	
10	AQF42	0.000112	0.00025	0.00111	0.0001	-	-	-	-	-	
11	AQF42	0.000144	0.00025	0.003263	0.0001	-	-	-	-	-	
12	AQF42	0.000152	0.00025	0.003944	0.000124	-	-	-	-	-	
1	AQF43	0.000121	0.00025	0.001111	0.000149	-	-	-	-	-	
2	AQF43	0.000121	0.00025	0.001306	0.000149	-	-	-	-	-	
3	AQF43	0.000122	0.00025	0.001501	0.000149	-	-	-	-	-	
4	AQF43	0.000118	0.00025	0.002282	0.000149	-	-	-	-	-	
5	AQF43	0.000105	0.00025	0.001501	0.0001	-	-	-	-	-	
6	AQF43	0.000109	0.00025	0.004435	0.0001	-	-	-	-	-	
7	AQF43	0.000117	0.00025	0.001306	0.0001	-	-	-	-	-	
8	AQF43	0.000119	0.00025	0.000525	0.0001	-	-	-	-	-	
9	AQF43	0.000116	0.00025	0.000525	0.0001	-	-	-	-	-	
10	AQF43	0.000113	0.00025	0.002186	0.0001	-	-	-	-	-	
11	AQF43	0.000103	0.00025	0.004732	0.0001	-	-	-	-	-	
12	AQF43	0.000113	0.00025	0.002918	0.000124	-	-	-	-	-	
1	AQF44	0.00012	0.00025	0.003844	0.000149	-	-	-	-	-	
2	AQF44	0.00012	0.00025	0.003092	0.000149	-	-	-	-	-	
3	AQF44	0.000121	0.00025	0.002331	0.000149	-	-	-	-	-	
4	AQF44	0.00012	0.00025	0.00277	0.000149	-	-	-	-	-	
5	AQF44	0.000105	0.00025	0.000521	0.0001	-	-	-	-	-	
6	AQF44	0.000109	0.00025	0.003262	0.0001	-	-	-	-	-	
7	AQF44	0.00012	0.00025	0.000524	0.0001	-	-	-	-	-	
8	AQF44	0.000119	0.00025	0.002575	0.0001	-	-	-	-	-	
9	AQF44	0.00012	0.00025	0.000525	0.0001	-	-	-	-	-	
10	AQF44	0.00011	0.00025	0.000522	0.0001	-	-	-	-	-	
11	AQF44	0.000104	0.00025	0.004928	0.0001	-	-	-	-	-	
12	AQF44	0.000113	0.00025	0.004384	0.000124	-	-	-	-	-	
1	AQF45	0.000122	0.00025	0.002282	0.000149	-	-	-	-	-	
2	AQF45	0.000122	0.00025	0.001872	0.000149	-	-	-	-	-	
3	AQF45	0.000124	0.00025	0.001452	0.000149	-	-	-	-	-	
4	AQF45	0.000122	0.00025	0.001599	0.000149	-	-	-	-	-	
5	AQF45	0.000108	0.00025	0.001305	0.0001	-	-	-	-	-	
6	AQF45	0.000111	0.00025	0.00111	0.0001	-	-	-	-	-	
7	AQF45	0.00012	0.00025	0.002087	0.0001	-	-	-	-	-	
8	AQF45	0.000125	0.00025	0.001208	0.0001	-	-	-	-	-	
9	AQF45	0.000121	0.00025	0.000525	0.0001	-	-	-	-	-	
10	AQF45	0.000111	0.00025	0.001599	0.0001	-	-	-	-	-	
11	AQF45	0.000105	0.00025	0.005907	0.0001	-	-	-	-	-	
12	AQF45	0.000116	0.00025	0.000524	0.0001	-	-	-	-	-	
May -Oct	All Stn Median	0.000115	0.00025	0.00155	0.0001	-	-	-	-	-	
May-Oct	All Stn 90P	0.000121	0.00025	0.00458	0.0001	-	-	-	-	-	
May-Oct	All Stn 10P	0.000105	0.00025	0.000524	0.0001	-	-	-	-	-	

90th percentile Hughes monthly flow rate, median mixed pit concentrations

		Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major Anion	Major Anion	Major Anion	Major Anion	Total_Me tal							
			D_Oxygen	D_percent_f	ORP_fiel		Specific_Conducta	Temp_fie	Turbidity	Acidity(C	(CaCO3)_	bicarbon	carbonat	e hydroxid	(CaCO3)_	Alkalinity phenol	Alkalinity T	(CO3)_ca	(HCO3)_b	(OH)_hyd	Conducti		Hardness D	Hardness T	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	Ammonia (N)_T	Nitrate(N)	Nitrite(N)	Nitrate(N) trate(N)	Nitrogen (TKN)	Phosphor us_D	Phosphor us_T	Bromide	Chloride	Fluoride	Sulfate(S O4)	Aluminu m_T			
Month			n_field mg/L	%	d mV	pH_field pH	nce_field uS/cm	TDS_field mg/L	ld C	_field NTU	aCO3) mg/L	mcarbon mg/L	onate mg/L	e mg/L	(CaCO3)_ mg/L	phenol mg/L	T mg/L	rbonate mg/L	icarbonate mg/L	(OH)_roxide mg/L	vity μS/cm		DOC_D mg/L	(CaCO3)_ D mg/L	(CaCO3)_ T mg/L	pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	NTU	(N)_T mg/L	) mg/L	Nitrite(N) mg/L	Nitrate(N) trate(N) mg/L	TKN mg/L	us_D mg/L	us_T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(S O4) mg/L	Aluminu m_T mg/L		
1		AQF40	10.0	68.5	-	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-	-	-	-	-	10.10404	-	-	0.095122	0.071658	0.005	0.071234	-	-	0.024928	0.05	1.580183	0.069911	5.275193	0.037758
2		AQF40	10.9	74.5	-	-	-	-	-	-	-	-	-	-	-	-	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	9.854342	-	-	0.860315	0.088563	0.005	-	-	0.021304	0.05	1.080187	0.072405	6.952197	0.036061	
3		AQF40	11.7	80.5	-	-	-	0.20	-	-	-	-	-	-	-	-	11.3	0.50	18.4	0.49	-	-	-	-	-	-	-	-	-	-	9.599002	-	-	0.025338	0.105864	0.005	-	-	0.017588	0.05	0.577505	0.07486	8.465007	0.034293	
4		AQF40	20.2	140.5	-	-	-	0.56	-	-	-	-	-	-	-	-	14.1	0.40	16.2	0.33	35.9	-	-	-	-	-	-	-	-	-	9.119337	-	-	0.007677	0.098586	0.000563	-	-	-	0.024951	0.077506	3.320872	0.033823		
5		AQF40	12.5	95.0	-	-	-	3.90	-	-	-	-	-	-	-	-	11.1	0.30	13.5	0.17	-	-	-	-	-	-	-	-	-	-	8.727633	-	-	0.005742	0.038168	0.000518	0.044065	-	-	0.022695	0.05	0.273093	0.064191	1.392548	0.055014
6		AQF40	9.0	91.0	-	-	-	15.44	-	-	-	-	-	-	-	-	9.5	0.30	11.6	0.17	-	-	-	-	-	-	-	-	-	-	9.875678	-	-	0.006069	0.010255	0.005	0.035	-	-	0.015036	0.05	0.27609	0.05632	1.473729	0.06229
7		AQF40	6.8	72.4	-	-	-	18.79	-	-	-	-	-	-	-	-	10.6	0.30	12.9	0.17	-	-	-	-	-	-	-	-	-	-	8.785464	-	-	0.012395	0.002901	0.000534	0.219594	-	-	0.011675	0.05	0.250423	0.062882	1.947704	0.048785
8		AQF40	6.1	67.0	-	-	-	19.98	-	-	-	-	-	-	-	-	11.4	0.30	13.9	0.17	-	-	-	-	-	-	-	-	-	-	9.242194	-	-	0.020325	0.002898	0.000534	0.002794	-	-	0.015049	0.05	0.205498	0.06536	1.872559	0.0338
9		AQF40	8.0	79.3	-	-	-	13.72	-	-	-	-	-	-	-	-	11.6	0.30	14.1	0.17	-	-	-	-	-	-	-	-	-	-	8.952248	-	-	0.02341	0.002931	0.000537	0.002814	-	-	0.01168	0.05	0.238194	0.063406	2.248263	0.04529
10		AQF40	12.0	90.7	-	-	-	3.61	-	-	-	-	-	-	-	-	12.3	0.30	15.0	0.17	-	-	-	-	-	-	-	-	-	-	8.818759	-	-	0.015726	0.026082	0.000543	0.037872	-	-	0.020014	0.05	0.274412	0.064466	2.411119	0.053953
11		AQF40	10.4	71.4	-	-	-	0.26	-	-	-	-	-	-	-	-	13.5	0.30	16.4	0.17	-	-	-	-	-	-	-	-	-	-	10.13317	-	-	0.015631	0.02475	0.000565	0.024454	-	-	0.019233	0.05	0.277625	0.06175	3.232406	0.081319
12		AQF40	10.2	69.9	-	-	-	0.18	-	-	-	-	-	-	-	-	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	10.11455	-	-	0.055627	0.048335	0.002791	0.047957	-	-	0.022089	0.05	0.93448	0.065885	4.420528	0.059423
1		AQF42	10.5	72.0	-	-	-	0.19	-	-	-	-	-	-	-	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	9.849425	-	-	0.051054	0.067741	0.005	0.067317	-	-	0.024928	0.05	0.689023	0.072849	5.108713	0.051077
2		AQF42	12.1	82.1	-	-	-	0.20	-	-	-	-	-	-	-	-	9.8	0.50	21.2	0.49	-	-	-	-	-	-	-	-	-	-	10.00107	-	-	0.036545	0.119571	0.005	-	-	0.024924	0.05	0.654676	0.071916	13.53538	0.066189	
3		AQF42	10.6	71.9	-	-	-	0.20	-	-	-	-	-	-	-	-	17.4	0.40	16.9	0.33	35.5	-	-	-	-	-	-	-	-	-	10.29334	-	-	0.056144	0.110754	0.005	-	-	0.024923	0.05	0.528608	0.07486	4.885746	0.122406	
4		AQF42	15.6	107.9	-	-	-	0.16	-	-	-	-	-	-	-	-	14.1	0.30	12.1	0.17	-	-	-	-	-	-	-	-	-	-	9.602451	-	-	0.014579	0.095628	0.000563	-	-	0.030176	0.005632	0.325208	0.073562	3.301153	0.037669	
5		AQF42	13.8	133.6	-	-	-	4.40	-	-	-	-	-	-	-	-	10.0	0.30	11.1	0.17	-	-	-	-	-	-	-	-	-	-	9.564361	-	-	0.005742	0.038765	0.000518	0.038686	-	-	0.015025	0.05	0.288035	0.063195	1.287957	0.053818
6		AQF42	10.4	103.6	-	-	-	15.34	-	-	-	-	-	-	-	-	9.1	0.30	11.1	0.17	-	-	-	-	-	-	-	-	-	-	10.51097	-	-	0.006069	0.010255	0.005	0.035	-	-	0.015633	0.05	0.27609	0.05632	1.483673	0.058512
7		AQF42	8.0	87.4	-	-	-	18.99	-	-	-	-	-	-	-	-	11.0	0.30	13.4	0.17	-	-	-	-	-	-	-	-	-	-	9.132818	-	-	0.023312	0.002901	0.000534	0.002795	-	-	0.015049	0.05	0.344705	0.060401	1.922893	0.047991
8		AQF42	8.0	85.3	-	-	-	18.59	-	-	-	-	-	-	-	-	11.4	0.30	13.9	0.17	-	-	-	-	-	-	-	-	-	-	9.311669	-	-	0.044145	0.002898	0.000534	0.002794	-	-	0.013957	0.05	0.205498	0.064368	1.892409	0.037076
9		AQF42	8.5	82.9	-	-	-	14.12	-	-	-	-	-	-	-	-	11.1	0.30	13.5	0.17	-	-	-	-	-	-	-	-	-	-	9.071273	-	-	0.006548	0.006898	0.000537	0.006732	-	-	0.015053	0.05	0.317544	0.063406	2.049888	0.039735
10		AQF42	11.4	96.2	-	-	-	3.71	-	-	-	-	-	-	-	-	11.9	0.30	14.6	0.17	-	-	-	-	-	-	-	-	-	-	9.947918	-	-	0.006812	0.018951	0.000543	0.018756	-	-	0.015062	0.05	0.254602	0.062485	2.27245	0.041671
11		AQF42	11.7	80.4	-	-	-	0.26	-	-	-	-	-	-	-	-	14.0	0.30	17.0	0.17	-	-	-	-	-	-	-	-	-	-	9.531963	-	-	0.021545	0.025243	0.000565	0.024947	-	-	0.015094	0.05	0.346616	0.06175	3.439378	0.155828
12		AQF42	11.1	76.2	-	-	-	0.23	-	-	-	-	-	-	-	-	13.9	-	-	-	-	-	-	-	-	-	-	-	-	-	9.692478	-	-	0.036487	0.046568	0.002791	0.04619	-	-	0.020028	0.05	0.522223	0.067357	4.44016	0.103201
1		AQF43	13.3	91.5	-	-	-	-	-	-	-	-	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	10.00611	-	-	0.024613	0.064803	0.005	0.064379	-	-	0.024928	0.05	0.346269	0.07089	4.511342	0.038738
2		AQF43	13.5	92.4	-	-	-	-	-	-	-	-	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	9.551105	-	-	0.018448	0.088269	0.005	-	-	0.021304	0.05	0.349482	0.072699	5.111252	0.037039	
3		AQF43	13.7	93.5	-	-	-	0.20	-	-	-	-	-	-	-	-	14.1	0.50	18.4	0.49	-	-	-	-	-	-	-	-	-	-	9.110032	-	-	0.012136	0.111732	0.005	-	-	0.017588	0.05	0.34769	0.074371	5.550746	0.035369	
4		AQF43	17.0	116.8	-	-	-	0.26	-	-	-	-	-	-	-	-	14.2	0.40	16.8	0.33	35.7	-	-	-	-	-	-	-	-	-	9.109478	-	-	0.007677	0.09691	0.000563	-	-	0.012429	0.005632	0.305489	0.07652	3.311013	0.036387	
5		AQF43	17.0	137.6	-	-	-	5.89	-	-	-	-	-	-	-	-	12.2	0.30	14.8	0.17	-	-	-	-	-	-	-	-	-	-	9.932919	-	-	0.005742	0.031793	0.000518	0.031713	-	-	0.030963	0.05	0.33784	0.063195	1.337763	0.060393
6		AQF43	10.4	104.6	-	-	-	15.74	-	-	-	-	-	-	-	-	9.5	0.30	11.6	0.17	-	-	-	-	-	-	-	-	-	-	11.74402	-	-	0.006069	0.010255	0.005	0.035	-	-	0.015036	0.05	0.27609	0.057314	1.573168	0.067759
7		AQF43	8.2	89.8	-	-	-	19.49	-	-	-	-	-	-	-	-	11.30805	0.30	11.5	0.17	-	-	-	-	-	-	-	-	-	-	9.172516	-	-	0.031251	0.002901	0.000534	0.002795	-	-	0.015148	0.05	0.205764	0.061393	1.873271	0.057518
8		AQF43	8.2	90.0	-	-	-	19.59	-	-	-	-	-	-	-	-	9.4	0.30	15.1	0.17	-	-	-	-	-	-	-	-	-	-	9.242194	-	-	0.015362	0.008952	0.000534	0.008798	-	-	0.016141	0.05	0.215423	0.066353	1.912259	0.046901
9		AQF43	9.1	85.9	-	-	-	13.03	-	-	-	-	-	-	-	-	12.0	0.30	14.6	0.17	-	-	-	-	-	-	-	-	-	-	9.081192	-	-	0.026386	0.002931	0.000537	0.002814	-	-	0.015053	0.05	0.228276	0.063406	2.000295	0.048563
10		AQF43	12.8	95.1	-	-	-	3.01	-	-	-	-	-	-	-	-	11.7	0																											

90th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

[illegible]

90th percentile Hughes monthly flow rate, median mixed pit concentrations cont'd

[illegible]

90th percentile Hughes monthly flow rate, median mixed pit concentration											
Month	Site	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Cyanides	Cyanides	Cyanides	Methylm ercury	Methylm ercury	
		Uranium _D mg/L	Vanadiu m_D mg/L	Zinc_D mg/L	Zirconiu m_D mg/L	cyanide_f ree mg/L	cyanide_ SAD mg/L	cyanide_ WAD mg/L	Methylm ercury_D mg/L	Methylm ercury_T mg/L	
1	AQF40	0.000105	0.00025	0.004537	0.000149	-	-	-	-	-	
2	AQF40	0.00011	0.00025	0.003164	0.000149	-	-	-	-	-	
3	AQF40	0.000112	0.00025	0.001794	0.000149	-	-	-	-	-	
4	AQF40	7.96E-05	0.00025	0.002782	0.000149	-	-	-	-	-	
5	AQF40	3.8E-05	0.00025	0.002994	9.9E-05	-	-	-	-	-	
6	AQF40	4.4E-05	0.00025	0.006373	0.0001	-	-	-	-	-	
7	AQF40	5.94E-05	0.00025	0.003733	9.65E-05	-	-	-	-	-	
8	AQF40	5.37E-05	0.00025	0.003287	0.0001	-	-	-	-	-	
9	AQF40	5.63E-05	0.00025	0.004774	0.0001	-	-	-	-	-	
10	AQF40	6.69E-05	0.00025	0.002095	0.000106	-	-	-	-	-	
11	AQF40	7.71E-05	0.00025	0.010174	0.0001	-	-	-	-	-	
12	AQF40	9.46E-05	0.00025	0.007341	0.000125	-	-	-	-	-	
1	AQF42	0.000146	0.00025	0.004635	0.000149	-	-	-	-	-	
2	AQF42	0.00012	0.00025	0.004827	0.000149	-	-	-	-	-	
3	AQF42	0.000117	0.00025	0.001208	0.000149	-	-	-	-	-	
4	AQF42	0.000109	0.00025	0.005149	0.000149	-	-	-	-	-	
5	AQF42	3.8E-05	0.00025	0.001201	0.0001	-	-	-	-	-	
6	AQF42	4.2E-05	0.00025	0.000506	0.0001	-	-	-	-	-	
7	AQF42	5.6E-05	0.00025	0.008944	0.0001	-	-	-	-	-	
8	AQF42	5.18E-05	0.00025	0.002989	0.0001	-	-	-	-	-	
9	AQF42	5.43E-05	0.00025	0.000509	0.0001	-	-	-	-	-	
10	AQF42	6.3E-05	0.00025	0.001104	0.0001	-	-	-	-	-	
11	AQF42	0.000118	0.00025	0.003275	0.0001	-	-	-	-	-	
12	AQF42	0.000135	0.00025	0.003955	0.000125	-	-	-	-	-	
1	AQF43	0.000108	0.00025	0.001109	0.000149	-	-	-	-	-	
2	AQF43	0.000112	0.00025	0.001305	0.000149	-	-	-	-	-	
3	AQF43	0.000113	0.00025	0.001501	0.000149	-	-	-	-	-	
4	AQF43	7.76E-05	0.00025	0.002289	0.000149	-	-	-	-	-	
5	AQF43	3.9E-05	0.00025	0.0015	0.0001	-	-	-	-	-	
6	AQF43	4.2E-05	0.00025	0.004483	0.0001	-	-	-	-	-	
7	AQF43	5.2E-05	0.00025	0.001302	0.0001	-	-	-	-	-	
8	AQF43	5.28E-05	0.00025	0.000508	0.0001	-	-	-	-	-	
9	AQF43	5.33E-05	0.00025	0.000509	0.0001	-	-	-	-	-	
10	AQF43	6.39E-05	0.00025	0.002194	0.0001	-	-	-	-	-	
11	AQF43	7.62E-05	0.00025	0.004753	0.0001	-	-	-	-	-	
12	AQF43	9.56E-05	0.00025	0.002924	0.000125	-	-	-	-	-	
1	AQF44	0.000107	0.00025	0.003851	0.000149	-	-	-	-	-	
2	AQF44	0.000111	0.00025	0.003096	0.000149	-	-	-	-	-	
3	AQF44	0.000112	0.00025	0.002332	0.000149	-	-	-	-	-	
4	AQF44	7.96E-05	0.00025	0.002782	0.000149	-	-	-	-	-	
5	AQF44	3.9E-05	0.00025	0.000504	0.0001	-	-	-	-	-	
6	AQF44	4.2E-05	0.00025	0.00329	0.0001	-	-	-	-	-	
7	AQF44	5.5E-05	0.00025	0.000508	0.0001	-	-	-	-	-	
8	AQF44	5.28E-05	0.00025	0.002592	0.0001	-	-	-	-	-	
9	AQF44	5.73E-05	0.00025	0.000509	0.0001	-	-	-	-	-	
10	AQF44	6.1E-05	0.00025	0.00051	0.0001	-	-	-	-	-	
11	AQF44	7.71E-05	0.00025	0.00495	0.0001	-	-	-	-	-	
12	AQF44	9.56E-05	0.00025	0.004397	0.000125	-	-	-	-	-	
1	AQF45	0.000109	0.00025	0.002284	0.000149	-	-	-	-	-	
2	AQF45	0.000114	0.00025	0.001873	0.000149	-	-	-	-	-	
3	AQF45	0.000115	0.00025	0.001452	0.000149	-	-	-	-	-	
4	AQF45	8.16E-05	0.00025	0.001599	0.000149	-	-	-	-	-	
5	AQF45	4.19E-05	0.00025	0.001301	0.0001	-	-	-	-	-	
6	AQF45	4.4E-05	0.00025	0.001103	0.0001	-	-	-	-	-	
7	AQF45	5.6E-05	0.00025	0.002096	0.0001	-	-	-	-	-	
8	AQF45	5.87E-05	0.00025	0.001203	0.0001	-	-	-	-	-	
9	AQF45	5.83E-05	0.00025	0.000509	0.0001	-	-	-	-	-	
10	AQF45	6.2E-05	0.00025	0.0016	0.0001	-	-	-	-	-	
11	AQF45	7.81E-05	0.00025	0.005936	0.0001	-	-	-	-	-	
12	AQF45	9.85E-05	0.00025	0.000519	0.0001	-	-	-	-	-	
May -Oct	All Stn Median	5.3E-05	0.00025	0.00155	0.0001	-	-	-	-	-	
May-Oct	All Stn 90P	6.15E-05	0.00025	0.004629	0.0001	-	-	-	-	-	
May-Oct	All Stn 10P	3.9E-05	0.00025	0.000508	0.0001	-	-	-	-	-	

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major	Major	Major	Major	Total_Me			
Month		D_Oxygen n_field mg/L	D_Oxygen percent_f ield %	ORP_fiel d mV	pH_field pH	Specific_ Conducta nce_field uS/cm	TDS_field mg/L	Temp_fie ld C	Turbidity _field NTU	Acidity(C aCO3) mg/L	Alkalinity bicarbon ate mg/L	Alkalinity carbonat e mg/L	Alkalinity hydroxid e mg/L	Alkalinity (CaCO3)_ phenol mg/L	Alkalinity (CaCO3)_ T mg/L	General (CO3)_ca rbonate mg/L	General (HCO3)_b icarbonat e mg/L	General (OH)_hyd roxide mg/L	General Conducti vity µS/cm	General DOC_D mg/L	General Hardness (CaCO3)_ D mg/L	General Hardness (CaCO3)_ T mg/L	pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia (N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrate(N) trate(N) mg/L	Nitrogen(TKN) mg/L	Phosphor us_D mg/L	Phosphor us_T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(S O4) mg/L	Aluminu m_T mg/L			
1	AQF40	9.6	65.8	-	-	-	-	-	-	-	-	-	-	-	22.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.099446	0.070577	0.005	0.068903	-	-	0.024389	0.05	1.792109	0.072641	17.07688	0.035763		
2	AQF40	10.4	71.4	-	-	-	-	-	-	-	-	-	-	-	22.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.067013	0.086344	0.005	-	-	-	0.02099	0.05	1.329829	0.075034	18.91161	0.034132	
3	AQF40	11.2	77.0	-	-	-	-	0.48	-	-	-	-	-	-	22.5	0.48	31.7	0.47	-	-	-	-	-	-	-	-	-	-	-	-	0.034428	0.102473	0.005	-	-	-	0.017517	0.05	0.863063	0.077352	20.44385	0.032462	
4	AQF40	19.0	132.7	-	-	-	-	0.83	-	-	-	-	-	-	25.5	0.39	30.2	0.32	63.0	-	-	-	-	-	-	-	-	-	-	-	0.018576	0.095563	0.00087	-	-	-	0.024399	0.008702	0.64012	0.079921	16.15605	0.031954	
5	AQF40	12.1	92.5	-	-	-	-	3.92	-	-	-	-	-	-	17.3	0.30	21.0	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.011672	0.038783	0.000682	0.043732	-	-	0.022498	0.05	0.442009	0.065961	8.270607	0.053247	
6	AQF40	8.8	87.9	-	-	-	-	14.90	-	-	-	-	-	-	17.9	0.30	21.8	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.014036	0.012464	0.005	0.035	-	-	0.015148	0.05	0.503557	0.059094	10.73791	0.05955	
7	AQF40	6.6	69.8	-	-	-	-	17.94	-	-	-	-	-	-	20.6	0.30	25.1	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.021577	0.005993	0.000799	0.208626	-	-	0.012006	0.05	0.525339	0.065826	13.05397	0.046293	
8	AQF40	5.9	64.8	-	-	-	-	19.07	-	-	-	-	-	-	21.3	0.30	25.9	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.02893	0.005952	0.000796	0.004684	-	-	0.015178	0.05	0.479736	0.068124	12.8493	0.032218	
9	AQF40	7.8	76.3	-	-	-	-	13.18	-	-	-	-	-	-	21.5	0.30	26.2	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.031884	0.006006	0.000801	0.004717	-	-	0.012007	0.05	0.512556	0.066306	13.28503	0.043015	
10	AQF40	11.6	87.2	-	-	-	-	3.66	-	-	-	-	-	-	21.5	0.30	26.2	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.023973	0.027667	0.000788	0.037715	-	-	0.019853	0.05	0.527271	0.067101	12.65363	0.051363	
11	AQF40	10.0	68.9	-	-	-	-	0.51	-	-	-	-	-	-	23.2	0.30	28.2	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.024297	0.026509	0.000824	0.02507	-	-	0.019092	0.05	0.546038	0.064706	14.06386	0.076967	
12	AQF40	9.8	67.3	-	-	-	-	0.44	-	-	-	-	-	-	23.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.062211	0.048735	0.002927	0.047161	-	-	0.021754	0.05	1.176486	0.06874	15.74095	0.056188	
1	AQF42	10.0	69.1	-	-	-	-	0.47	-	-	-	-	-	-	24.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.058213	0.066912	0.005	0.065238	-	-	0.024389	0.05	0.958287	0.07539	16.92111	0.048225	
2	AQF42	11.6	78.5	-	-	-	-	0.48	-	-	-	-	-	-	21.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.044807	0.115312	0.005	-	-	-	0.024371	0.05	0.932319	0.074577	25.06158	0.062277	
3	AQF42	10.1	69.0	-	-	-	-	0.48	-	-	-	-	-	-	28.2	0.48	34.3	0.47	-	-	-	-	-	-	-	-	-	-	-	-	0.063186	0.107038	0.005	-	-	-	0.024364	0.05	0.817416	0.077352	17.10249	0.114718	
4	AQF42	14.8	102.4	-	-	-	-	0.46	-	-	-	-	-	-	25.5	0.39	30.9	0.32	62.7	-	-	-	-	-	-	-	-	-	-	-	0.025	0.09281	0.00087	-	-	-	0.029263	0.008702	0.64012	0.07625	16.1377	0.035533	
5	AQF42	13.4	129.7	-	-	-	-	4.40	-	-	-	-	-	-	16.2	0.30	19.7	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.011672	0.039359	0.000682	0.03855	-	-	0.015109	0.05	0.456402	0.065002	8.169852	0.052096	
6	AQF42	10.0	99.9	-	-	-	-	14.80	-	-	-	-	-	-	17.5	0.30	21.4	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.014036	0.012464	0.005	0.035	-	-	0.015715	0.05	0.503557	0.059094	10.74737	0.055958	
7	AQF42	7.7	83.9	-	-	-	-	18.13	-	-	-	-	-	-	21.0	0.30	25.6	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.031846	0.005993	0.000799	0.004709	-	-	0.01518	0.05	0.614019	0.063493	13.03064	0.045546	
8	AQF42	7.7	82.0	-	-	-	-	17.76	-	-	-	-	-	-	21.3	0.30	25.9	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.051352	0.005952	0.000796	0.004684	-	-	0.01415	0.05	0.479736	0.067189	12.86798	0.035301	
9	AQF42	8.2	79.7	-	-	-	-	13.55	-	-	-	-	-	-	21.1	0.30	25.6	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.01602	0.009739	0.000801	0.008403	-	-	0.01518	0.05	0.587213	0.066306	13.09839	0.037789	
10	AQF42	11.0	92.4	-	-	-	-	3.75	-	-	-	-	-	-	21.1	0.30	25.8	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.015548	0.020927	0.000788	0.019648	-	-	0.015173	0.05	0.50855	0.065228	12.52258	0.039756	
11	AQF42	11.2	77.3	-	-	-	-	0.51	-	-	-	-	-	-	23.6	0.30	28.8	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.029865	0.026973	0.000824	0.025534	-	-	0.015194	0.05	0.611001	0.064706	14.25875	0.147127	
12	AQF42	10.6	73.2	-	-	-	-	0.49	-	-	-	-	-	-	24.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.044246	0.047077	0.002927	0.045503	-	-	0.019819	0.05	0.789552	0.070121	15.75938	0.097277	
1	AQF43	12.7	87.3	-	-	-	-	-	-	-	-	-	-	-	24.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.033473	0.064163	0.005	0.062489	-	-	0.024389	0.05	0.637586	0.073558	16.36217	0.036679	
2	AQF43	12.8	88.1	-	-	-	-	-	-	-	-	-	-	-	25.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027902	0.08607	0.005	-	-	-	0.02099	0.05	0.647209	0.075308	17.19181	0.035046	
3	AQF43	13.0	89.0	-	-	-	-	0.48	-	-	-	-	-	-	25.1	0.48	31.7	0.47	-	-	-	-	-	-	-	-	-	-	-	-	0.022104	0.107951	0.005	-	-	-	0.017517	0.05	0.648522	0.076895	17.72329	0.033467	
4	AQF43	16.1	110.7	-	-	-	-	0.55	-	-	-	-	-	-	25.6	0.39	30.8	0.32	62.8	-	-	-	-	-	-	-	-	-	-	-	-	0.018576	0.094003	0.00087	-	-	-	0.012744	0.008702	0.621765	0.079003	16.14688	0.03434
5	AQF43	16.5	133.6	-	-	-	-	5.84	-	-	-	-	-	-	18.3	0.30	22.3	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.011672	0.032642	0.000682	0.031833	-	-	0.030462	0.05	0.504381	0.065002	8.217831	0.058429
6	AQF43	10.0	100.8	-	-	-	-	15.18	-	-	-	-	-	-	17.9	0.30	21.8	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.014036	0.012464	0.005	0.035	-	-	0.015148	0.05	0.503557	0.060039	10.83244	0.064748
7	AQF43	7.9	86.1	-	-	-	-	18.59	-	-	-	-	-	-	19.5	0.30	23.8	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.039314	0.005993	0.000799	0.004709	-	-	0.015273	0.05	0.483333	0.064426	12.98396	0.054507
8	AQF43	7.9	86.3	-	-	-	-	18.70	-	-	-	-	-	-	22.2	0.30	27.0	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.024259	0.011651	0.000796	0.010336	-	-	0.016205	0.05	0.489078	0.069058	12.88667	0.04455
9	AQF43	8.8	82.5	-	-	-	-	12.52	-	-	-	-	-	-	21.9	0.30	26.7	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.034684	0.006006	0.000801	0.004717	-	-	0.01518	0.05	0.503224	0.066306	13.05173	0.046095
10	AQF43	12.3	91.4	-	-	-	-	3.09	-	-	-	-	-	-	21.0	0.30	25.5	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.015548	0.021863	0.000788	0.020585	-	-	0.014705	0.05	0.499189	0.066164	12.51322	0.063251
11	AQF43	13.7	94.1	-	-	-	-	-	-	-	-	-	-	-	23.3	0.30	28.3	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.041002	0.028829	0.000824	0.02739	-	-	0.015287	0.05	0.546038	0.065634	14.07314	0.037804
12	AQF43	13.2	90.7	-	-	-	-	-</																																			

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

[illegible]

Median Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

[illegible]

Median Hughes monthly flow rate, 10th percentile mixed pit concentration											
Month	Site	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Cyanides	Cyanides	Cyanides	Methylm ercury	Methylm ercury	
		Uranium _D mg/L	Vanadiu m_D mg/L	Zinc_D mg/L	Zirconiu m_D mg/L	cyanide_f ree mg/L	cyanide_ SAD mg/L	cyanide_ WAD mg/L	Methylm ercury_D mg/L	Methylm ercury_T mg/L	
1	AQF40	0.000358	0.00025	0.004282	0.000146	-	-	-	-	-	
2	AQF40	0.000369	0.00025	0.002993	0.000146	-	-	-	-	-	
3	AQF40	0.000373	0.00025	0.001713	0.000146	-	-	-	-	-	
4	AQF40	0.000354	0.00025	0.002635	0.000146	-	-	-	-	-	
5	AQF40	0.000185	0.00025	0.002911	9.9E-05	-	-	-	-	-	
6	AQF40	0.000242	0.00025	0.006093	0.0001	-	-	-	-	-	
7	AQF40	0.000297	0.00025	0.003554	9.67E-05	-	-	-	-	-	
8	AQF40	0.000288	0.00025	0.003136	0.0001	-	-	-	-	-	
9	AQF40	0.000293	0.00025	0.004533	0.0001	-	-	-	-	-	
10	AQF40	0.000286	0.00025	0.002017	0.000106	-	-	-	-	-	
11	AQF40	0.000309	0.00025	0.009616	0.0001	-	-	-	-	-	
12	AQF40	0.000337	0.00025	0.006926	0.000123	-	-	-	-	-	
1	AQF42	0.000397	0.00025	0.004374	0.000146	-	-	-	-	-	
2	AQF42	0.000378	0.00025	0.004547	0.000146	-	-	-	-	-	
3	AQF42	0.000378	0.00025	0.001165	0.000146	-	-	-	-	-	
4	AQF42	0.000382	0.00025	0.004838	0.000146	-	-	-	-	-	
5	AQF42	0.000185	0.00025	0.001184	0.0001	-	-	-	-	-	
6	AQF42	0.00024	0.00025	0.000516	0.0001	-	-	-	-	-	
7	AQF42	0.000293	0.00025	0.008454	0.0001	-	-	-	-	-	
8	AQF42	0.000287	0.00025	0.002855	0.0001	-	-	-	-	-	
9	AQF42	0.000291	0.00025	0.00052	0.0001	-	-	-	-	-	
10	AQF42	0.000282	0.00025	0.001081	0.0001	-	-	-	-	-	
11	AQF42	0.000347	0.00025	0.00312	0.0001	-	-	-	-	-	
12	AQF42	0.000375	0.00025	0.003748	0.000123	-	-	-	-	-	
1	AQF43	0.000361	0.00025	0.001075	0.000146	-	-	-	-	-	
2	AQF43	0.000371	0.00025	0.001257	0.000146	-	-	-	-	-	
3	AQF43	0.000374	0.00025	0.001439	0.000146	-	-	-	-	-	
4	AQF43	0.000352	0.00025	0.002177	0.000146	-	-	-	-	-	
5	AQF43	0.000186	0.00025	0.001472	0.0001	-	-	-	-	-	
6	AQF43	0.00024	0.00025	0.004297	0.0001	-	-	-	-	-	
7	AQF43	0.00029	0.00025	0.001267	0.0001	-	-	-	-	-	
8	AQF43	0.000288	0.00025	0.00052	0.0001	-	-	-	-	-	
9	AQF43	0.00029	0.00025	0.00052	0.0001	-	-	-	-	-	
10	AQF43	0.000283	0.00025	0.00211	0.0001	-	-	-	-	-	
11	AQF43	0.000308	0.00025	0.004512	0.0001	-	-	-	-	-	
12	AQF43	0.000338	0.00025	0.002781	0.000123	-	-	-	-	-	
1	AQF44	0.00036	0.00025	0.00364	0.000146	-	-	-	-	-	
2	AQF44	0.00037	0.00025	0.002929	0.000146	-	-	-	-	-	
3	AQF44	0.000374	0.00025	0.002215	0.000146	-	-	-	-	-	
4	AQF44	0.000354	0.00025	0.002635	0.000146	-	-	-	-	-	
5	AQF44	0.000186	0.00025	0.000512	0.0001	-	-	-	-	-	
6	AQF44	0.00024	0.00025	0.003163	0.0001	-	-	-	-	-	
7	AQF44	0.000292	0.00025	0.00052	0.0001	-	-	-	-	-	
8	AQF44	0.000288	0.00025	0.002482	0.0001	-	-	-	-	-	
9	AQF44	0.000294	0.00025	0.00052	0.0001	-	-	-	-	-	
10	AQF44	0.00028	0.00025	0.000519	0.0001	-	-	-	-	-	
11	AQF44	0.000309	0.00025	0.004698	0.0001	-	-	-	-	-	
12	AQF44	0.000338	0.00025	0.004163	0.000123	-	-	-	-	-	
1	AQF45	0.000362	0.00025	0.002174	0.000146	-	-	-	-	-	
2	AQF45	0.000372	0.00025	0.001787	0.000146	-	-	-	-	-	
3	AQF45	0.000376	0.00025	0.001393	0.000146	-	-	-	-	-	
4	AQF45	0.000356	0.00025	0.001534	0.000146	-	-	-	-	-	
5	AQF45	0.000189	0.00025	0.00128	0.0001	-	-	-	-	-	
6	AQF45	0.000242	0.00025	0.001084	0.0001	-	-	-	-	-	
7	AQF45	0.000293	0.00025	0.002014	0.0001	-	-	-	-	-	
8	AQF45	0.000293	0.00025	0.001174	0.0001	-	-	-	-	-	
9	AQF45	0.000294	0.00025	0.00052	0.0001	-	-	-	-	-	
10	AQF45	0.000281	0.00025	0.001549	0.0001	-	-	-	-	-	
11	AQF45	0.00031	0.00025	0.005626	0.0001	-	-	-	-	-	
12	AQF45	0.000341	0.00025	0.000524	0.0001	-	-	-	-	-	
May-Oct	All Stn Median	0.000286	0.00025	0.00151	0.0001	-	-	-	-	-	
May-Oct	All Stn 90P	0.000293	0.00025	0.004415	0.0001	-	-	-	-	-	
May-Oct	All Stn 10P	0.000186	0.00025	0.000519	0.0001	-	-	-	-	-	

10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major	Major	Major	Major	Total_Me			
Month		D_Oxygen n_field mg/L	D_Oxygen percent_f ield %	ORP_fiel d mV	pH_field pH	Specific_ Conducta nce_field uS/cm	TDS_field mg/L	Temp_fie ld C	Turbidity _field NTU	Acidity(C aCO3) mg/L	Alkalinity (CaCO3)_ bicarbon ate mg/L	Alkalinity (CaCO3)_ carbonat e mg/L	Alkalinity (CaCO3)_ hydroxid e mg/L	Alkalinity (CaCO3)_ phenol mg/L	Alkalinity (CaCO3)_ T mg/L	(HCO3)_b rbonate mg/L	e mg/L	roxide mg/L	(OH)_hyd roxide mg/L	Conducti vity µS/cm	DOC_D mg/L	Hardness (CaCO3)_ D mg/L	Hardness (CaCO3)_ T mg/L	pH pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia (N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite_ni trate(N) mg/L	Nitrogen(TKN) mg/L	Phosphor us_D mg/L	Phosphor us_T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(S O4) mg/L	Aluminu m_T mg/L		
1	AQF40	9.9	68.2	-	-	-	-	-	-	-	-	-	-	-	12.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.094833	0.071595	0.005	0.071119	-	-	-	0.024826	0.05	1.590243	0.070036	5.837657	0.03765	
2	AQF40	10.8	74.3	-	-	-	-	-	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.059998	0.088479	0.005	-	-	-	0.021214	0.05	1.088019	0.072482	7.32655	0.035986	
3	AQF40	11.7	80.3	-	-	-	-	0.21	-	-	-	-	-	-	11.6	0.50	18.8	0.49	-	-	-	-	-	-	-	-	-	-	-	-	0.025099	0.10574	0.005	-	-	-	0.017505	0.05	0.586625	0.074933	8.844144	0.034221	
4	AQF40	20.0	139.3	-	-	-	-	0.60	-	-	-	-	-	-	15.7	0.40	18.2	0.33	39.8	-	-	-	-	-	-	-	-	-	-	-	0.00896	0.098139	0.000608	-	-	-	0.024825	0.00608	0.370882	0.077852	5.180221	0.033545	
5	AQF40	12.3	93.9	-	-	-	-	3.91	-	-	-	-	-	-	13.8	0.30	16.8	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.008285	0.038436	0.00059	0.043919	-	-	0.0226	0.05	0.347083	0.064966	4.404917	0.054238	
6	AQF40	9.0	89.9	-	-	-	-	15.26	-	-	-	-	-	-	12.3	0.30	15.0	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.008625	0.010989	0.005	0.035	-	-	0.015059	0.05	0.351726	0.057241	4.553532	0.061376	
7	AQF40	6.7	71.7	-	-	-	-	18.56	-	-	-	-	-	-	13.2	0.30	16.1	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.014707	0.003724	0.000605	0.216663	-	-	0.011742	0.05	0.323775	0.063666	4.90994	0.048116	
8	AQF40	6.0	66.4	-	-	-	-	19.73	-	-	-	-	-	-	14.1	0.30	17.2	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.022567	0.00374	0.000606	0.003317	-	-	0.015064	0.05	0.281272	0.066122	4.904424	0.03336	
9	AQF40	7.9	78.5	-	-	-	-	13.58	-	-	-	-	-	-	14.2	0.30	17.2	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.025466	0.003729	0.000605	0.00331	-	-	0.011743	0.05	0.3096	0.064159	5.119521	0.044694	
10	AQF40	11.9	89.9	-	-	-	-	3.62	-	-	-	-	-	-	14.3	0.30	17.4	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.017341	0.026425	0.000596	0.037838	-	-	0.019951	0.05	0.329595	0.065039	4.644984	0.053383	
11	AQF40	10.4	71.1	-	-	-	-	0.29	-	-	-	-	-	-	14.5	0.30	17.7	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.016278	0.024941	0.000594	0.024523	-	-	0.019169	0.05	0.307516	0.062075	4.436145	0.080823	
12	AQF40	10.2	69.7	-	-	-	-	0.20	-	-	-	-	-	-	13.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05565	0.048354	0.002801	0.047901	-	-	0.022	0.05	0.951067	0.066076	5.195337	0.059188	
1	AQF42	10.4	71.8	-	-	-	-	0.20	-	-	-	-	-	-	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.050905	0.06769	0.005	0.067214	-	-	0.024826	0.05	0.701911	0.072964	5.671705	0.050926	
2	AQF42	12.1	81.9	-	-	-	-	0.20	-	-	-	-	-	-	10.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03628	0.11942	0.005	-	-	-	0.024825	0.05	0.663435	0.071994	13.89541	0.066049	
3	AQF42	10.5	71.7	-	-	-	-	0.21	-	-	-	-	-	-	17.7	0.50	21.6	0.49	-	-	-	-	-	-	-	-	-	-	-	-	0.055835	0.110619	0.005	-	-	-	0.024823	0.05	0.537837	0.074933	5.272837	0.122138	
4	AQF42	15.5	107.1	-	-	-	-	0.20	-	-	-	-	-	-	15.7	0.40	18.9	0.33	39.5	-	-	-	-	-	-	-	-	-	-	-	0.015792	0.095211	0.000608	-	-	-	0.029998	0.00608	0.370882	0.073948	5.160701	0.037351	
5	AQF42	13.6	131.9	-	-	-	-	4.40	-	-	-	-	-	-	12.7	0.30	15.4	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.008285	0.039025	0.00059	0.038626	-	-	0.015054	0.05	0.361784	0.063986	4.302007	0.053062	
6	AQF42	10.3	102.3	-	-	-	-	15.16	-	-	-	-	-	-	11.9	0.30	14.5	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.008625	0.010989	0.005	0.035	-	-	0.015646	0.05	0.351726	0.057241	4.563312	0.05766	
7	AQF42	7.9	86.4	-	-	-	-	18.76	-	-	-	-	-	-	13.7	0.30	16.6	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.025451	0.003724	0.000605	0.003307	-	-	0.015063	0.05	0.41656	0.061224	4.885522	0.047335	
8	AQF42	7.9	84.4	-	-	-	-	18.36	-	-	-	-	-	-	14.1	0.30	17.2	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.046	0.00374	0.000606	0.003317	-	-	0.01399	0.05	0.281272	0.065146	4.923951	0.036582	
9	AQF42	8.5	82.0	-	-	-	-	13.97	-	-	-	-	-	-	13.7	0.30	16.7	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.008864	0.007636	0.000605	0.007167	-	-	0.015063	0.05	0.387726	0.064159	4.924205	0.039225	
10	AQF42	11.3	95.3	-	-	-	-	3.72	-	-	-	-	-	-	13.9	0.30	17.0	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.008534	0.01938	0.000596	0.018951	-	-	0.015058	0.05	0.310023	0.063082	4.507982	0.041248	
11	AQF42	11.6	80.0	-	-	-	-	0.29	-	-	-	-	-	-	15.0	0.30	18.3	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.022153	0.025431	0.000594	0.025013	-	-	0.015056	0.05	0.376054	0.062075	4.64176	0.154845	
12	AQF42	11.0	75.9	-	-	-	-	0.25	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.036592	0.046595	0.002801	0.046142	-	-	0.019948	0.05	0.540582	0.067542	5.214884	0.102778	
1	AQF43	13.3	91.2	-	-	-	-	-	-	-	-	-	-	-	14.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.024548	0.064762	0.005	0.064286	-	-	0.024826	0.05	0.360245	0.071012	5.07623	0.038626	
2	AQF43	13.5	92.1	-	-	-	-	-	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.018223	0.088186	0.005	-	-	-	0.021214	0.05	0.358905	0.072774	5.489611	0.036963	
3	AQF43	13.7	93.2	-	-	-	-	0.21	-	-	-	-	-	-	14.4	0.50	18.8	0.49	-	-	-	-	-	-	-	-	-	-	-	-	-	0.011926	0.111594	0.005	-	-	-	0.017505	0.05	0.35732	0.074445	5.936359	0.035295
4	AQF43	16.9	115.9	-	-	-	-	0.30	-	-	-	-	-	-	15.8	0.40	18.8	0.33	39.7	-	-	-	-	-	-	-	-	-	-	-	-	0.00896	0.09648	0.000608	-	-	-	0.01243	0.00608	0.351362	0.076876	5.170461	0.036082
5	AQF43	16.7	135.8	-	-	-	-	5.87	-	-	-	-	-	-	14.9	0.30	18.1	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.008285	0.032164	0.00059	0.031766	-	-	0.030735	0.05	0.410789	0.063986	4.351012	0.059531	
6	AQF43	10.3	103.3	-	-	-	-	15.55	-	-	-	-	-	-	12.3	0.30	15.0	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.008625	0.010989	0.005	0.035	-	-	0.015059	0.05	0.351726	0.058219	4.651335	0.066755
7	AQF43	8.1	88.8	-	-	-	-	19.25	-	-	-	-	-	-	12.1	0.30	14.8	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.033264	0.003724	0.000605	0.003307	-	-	0.015161	0.05	0.279824	0.062201	4.836688	0.056711
8	AQF43	8.1	88.9	-	-	-	-	19.34	-	-	-	-	-	-	15.1	0.30	18.4	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.017685	0.009696	0.000606	0.009224	-	-	0.016138	0.05	0.291036	0.067099	4.943479	0.046248
9	AQF43	9.0	85.0	-	-	-	-	12.90	-	-	-	-	-	-	14.6	0.30	17.7	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.028396	0.003729	0.000605	0.00331	-	-	0.015063	0.05	0.299834	0.064159	4.875375	0.047916
10	AQF43	12.7	94.3	-	-	-	-	3.03	-	-	-	-	-	-	13.7	0.30	16.7	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.008534	0.020358	0.000596	0.011993	-	-	0.014569	0.05	0.300237	0.06406	4.498197	0.065811
11	AQF43	14.3	97.7	-	-	-	-	-	-	-	-	-	-	-	14.6	0.30	17.8	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.033903	0.027389	0.000594	0.026971	-	-	0.015154	0.05	0.307516	0.063055	4.445937	0.039505
12	AQF43	13.8	94.5	-	-	-	-																																				

10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

[illegible]

10th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

[illegible]

10th percentile Hughes monthly flow rate, 10th percentile mixed pit conce											
Month	Site	Dissolved	Dissolved	Dissolved	Dissolved	Cyanides	Cyanides	Cyanides	Methylm	Methylm	
		_Metal	_Metal	_Metal	_Metal				ercury	ercury	
		Uranium	Vanadiu	Zinc_D	Zirconiu	cyanide_f	cyanide_	cyanide_	Methylm	Methylm	
		_D	m_D	mg/L	m_D	ree	SAD	WAD	ercury_D	ercury_T	
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
1	AQF40	0.000116	0.00025	0.00451	0.000149	-	-	-	-	-	
2	AQF40	0.000118	0.00025	0.003143	0.000149	-	-	-	-	-	
3	AQF40	0.000119	0.00025	0.001776	0.000149	-	-	-	-	-	
4	AQF40	0.000119	0.00025	0.002752	0.000149	-	-	-	-	-	
5	AQF40	0.000102	0.00025	0.002956	9.9E-05	-	-	-	-	-	
6	AQF40	0.00011	0.00025	0.006277	0.0001	-	-	-	-	-	
7	AQF40	0.000123	0.00025	0.003681	9.66E-05	-	-	-	-	-	
8	AQF40	0.000118	0.00025	0.003241	0.0001	-	-	-	-	-	
9	AQF40	0.000118	0.00025	0.004706	0.0001	-	-	-	-	-	
10	AQF40	0.000114	0.00025	0.002072	0.000106	-	-	-	-	-	
11	AQF40	0.000102	0.00025	0.010102	0.0001	-	-	-	-	-	
12	AQF40	0.000111	0.00025	0.007299	0.000124	-	-	-	-	-	
1	AQF42	0.000157	0.00025	0.004607	0.000149	-	-	-	-	-	
2	AQF42	0.000127	0.00025	0.004802	0.000149	-	-	-	-	-	
3	AQF42	0.000125	0.00025	0.00119	0.000149	-	-	-	-	-	
4	AQF42	0.000148	0.00025	0.005094	0.000149	-	-	-	-	-	
5	AQF42	0.000102	0.00025	0.001192	0.0001	-	-	-	-	-	
6	AQF42	0.000108	0.00025	0.000507	0.0001	-	-	-	-	-	
7	AQF42	0.000119	0.00025	0.008809	0.0001	-	-	-	-	-	
8	AQF42	0.000116	0.00025	0.002948	0.0001	-	-	-	-	-	
9	AQF42	0.000116	0.00025	0.000507	0.0001	-	-	-	-	-	
10	AQF42	0.00011	0.00025	0.001094	0.0001	-	-	-	-	-	
11	AQF42	0.000143	0.00025	0.003248	0.0001	-	-	-	-	-	
12	AQF42	0.000151	0.00025	0.003928	0.000124	-	-	-	-	-	
1	AQF43	0.000119	0.00025	0.001093	0.000149	-	-	-	-	-	
2	AQF43	0.000119	0.00025	0.001288	0.000149	-	-	-	-	-	
3	AQF43	0.00012	0.00025	0.001483	0.000149	-	-	-	-	-	
4	AQF43	0.000117	0.00025	0.002264	0.000149	-	-	-	-	-	
5	AQF43	0.000103	0.00025	0.001486	0.0001	-	-	-	-	-	
6	AQF43	0.000108	0.00025	0.004419	0.0001	-	-	-	-	-	
7	AQF43	0.000115	0.00025	0.001288	0.0001	-	-	-	-	-	
8	AQF43	0.000117	0.00025	0.000507	0.0001	-	-	-	-	-	
9	AQF43	0.000115	0.00025	0.000507	0.0001	-	-	-	-	-	
10	AQF43	0.000111	0.00025	0.00217	0.0001	-	-	-	-	-	
11	AQF43	0.000101	0.00025	0.004716	0.0001	-	-	-	-	-	
12	AQF43	0.000112	0.00025	0.002901	0.000124	-	-	-	-	-	
1	AQF44	0.000118	0.00025	0.003826	0.000149	-	-	-	-	-	
2	AQF44	0.000119	0.00025	0.003074	0.000149	-	-	-	-	-	
3	AQF44	0.00012	0.00025	0.002312	0.000149	-	-	-	-	-	
4	AQF44	0.000119	0.00025	0.002752	0.000149	-	-	-	-	-	
5	AQF44	0.000103	0.00025	0.000506	0.0001	-	-	-	-	-	
6	AQF44	0.000108	0.00025	0.003245	0.0001	-	-	-	-	-	
7	AQF44	0.000118	0.00025	0.000507	0.0001	-	-	-	-	-	
8	AQF44	0.000117	0.00025	0.002557	0.0001	-	-	-	-	-	
9	AQF44	0.000119	0.00025	0.000507	0.0001	-	-	-	-	-	
10	AQF44	0.000108	0.00025	0.000506	0.0001	-	-	-	-	-	
11	AQF44	0.000102	0.00025	0.004912	0.0001	-	-	-	-	-	
12	AQF44	0.000112	0.00025	0.004367	0.000124	-	-	-	-	-	
1	AQF45	0.00012	0.00025	0.002264	0.000149	-	-	-	-	-	
2	AQF45	0.000121	0.00025	0.001854	0.000149	-	-	-	-	-	
3	AQF45	0.000122	0.00025	0.001434	0.000149	-	-	-	-	-	
4	AQF45	0.000121	0.00025	0.001581	0.000149	-	-	-	-	-	
5	AQF45	0.000106	0.00025	0.00129	0.0001	-	-	-	-	-	
6	AQF45	0.00011	0.00025	0.001093	0.0001	-	-	-	-	-	
7	AQF45	0.000119	0.00025	0.00207	0.0001	-	-	-	-	-	
8	AQF45	0.000123	0.00025	0.001191	0.0001	-	-	-	-	-	
9	AQF45	0.000119	0.00025	0.000507	0.0001	-	-	-	-	-	
10	AQF45	0.000109	0.00025	0.001583	0.0001	-	-	-	-	-	
11	AQF45	0.000103	0.00025	0.005891	0.0001	-	-	-	-	-	
12	AQF45	0.000114	0.00025	0.000507	0.0001	-	-	-	-	-	
May-Oct	All Stn Median	0.000114	0.00025	0.001534	0.0001	-	-	-	-	-	
May-Oct	All Stn 90P	0.000119	0.00025	0.004563	0.0001	-	-	-	-	-	
May-Oct	All Stn 10P	0.000103	0.00025	0.000507	0.0001	-	-	-	-	-	

90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major	Major	Major	Major	Total_Me				
Month		D_Oxygen n_field mg/L	D_Oxygen percent_f ield %	ORP_fiel d mV	pH_field pH	Specific_ Conducta nce_field uS/cm	TDS_field mg/L	Temp_fie ld C	Turbidity _field NTU	Acidity(C aCO3) mg/L	Alkalinity (CaCO3)_ bicarbon ate mg/L	Alkalinity (CaCO3)_ carbonat e mg/L	Alkalinity (CaCO3)_ hydroxid e mg/L	Alkalinity (CaCO3)_ phenol mg/L	Alkalinity (CaCO3)_ T mg/L	(HCO3)_b rbonate mg/L	e mg/L	roxide mg/L	(OH)_hyd roxide mg/L	Conducti vity µS/cm	DOC_D mg/L	Hardness (CaCO3)_ D mg/L	Hardness (CaCO3)_ T mg/L	pH pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia (N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrite(N) trate(N) mg/L	Nitrogen(TKN) mg/L	Phosphor us_D mg/L	Phosphor us_T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(S O4) mg/L	Aluminu m_T mg/L			
1	AQF40	10.0	68.4	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.094594	0.071648	0.005	0.071234	-	-	-	0.024849	0.05	1.579769	0.069901	5.25449	0.037748		
2	AQF40	10.8	74.4	-	-	-	-	-	-	-	-	-	-	-	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.059759	0.088552	0.005	-	-	-	0.021221	0.05	1.07975	0.072394	6.930382	0.03605		
3	AQF40	11.7	80.4	-	-	-	0.20	-	-	-	-	-	-	-	11.3	0.50	18.3	0.49	-	-	-	-	-	-	-	-	-	-	-	-	0.024776	0.105853	0.005	-	-	-	0.017504	0.05	0.577064	0.074849	8.442947	0.034282		
4	AQF40	20.2	140.4	-	-	-	0.56	-	-	-	-	-	-	-	14.1	0.40	16.2	0.33	35.9	-	-	-	-	-	-	-	-	-	-	-	0.007319	0.098579	0.000563	-	-	-	0.024897	0.005632	0.324927	0.077499	3.306819	0.033816		
5	AQF40	12.5	94.9	-	-	-	3.90	-	-	-	-	-	-	-	11.1	0.30	13.5	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.005643	0.038166	0.000518	0.044065	-	-	-	0.022681	0.05	0.273016	0.064189	1.388653	0.055012	
6	AQF40	9.0	90.9	-	-	-	15.44	-	-	-	-	-	-	-	9.5	0.30	11.6	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.005926	0.010252	0.005	0.035	-	-	-	0.015015	0.05	0.275977	0.056317	1.468118	0.062287	
7	AQF40	6.8	72.4	-	-	-	18.79	-	-	-	-	-	-	-	10.5	0.30	12.9	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.012202	0.002897	0.000534	0.219594	-	-	-	0.011646	0.05	0.250272	0.062878	1.940143	0.048781	
8	AQF40	6.1	67.0	-	-	-	19.98	-	-	-	-	-	-	-	11.4	0.30	13.9	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.020133	0.002894	0.000534	0.002794	-	-	-	0.01502	0.05	0.205348	0.065356	1.865055	0.033797	
9	AQF40	8.0	79.3	-	-	-	13.72	-	-	-	-	-	-	-	11.6	0.30	14.1	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.023203	0.002927	0.000537	0.002814	-	-	-	0.01165	0.05	0.238032	0.063402	2.240137	0.045286	
10	AQF40	12.0	90.6	-	-	-	3.61	-	-	-	-	-	-	-	12.3	0.30	15.0	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.015484	0.026078	0.000543	0.037872	-	-	-	0.019978	0.05	0.274222	0.064461	2.401609	0.053948	
11	AQF40	10.4	71.4	-	-	-	0.26	-	-	-	-	-	-	-	13.4	0.30	16.4	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.015264	0.024743	0.000565	0.024454	-	-	-	0.019178	0.05	0.277337	0.061743	3.217987	0.081311	
12	AQF40	10.2	69.8	-	-	-	0.18	-	-	-	-	-	-	-	12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.055157	0.048325	0.002791	0.047957	-	-	-	0.022019	0.05	0.934111	0.065876	4.402093	0.059414	
1	AQF42	10.5	71.9	-	-	-	0.19	-	-	-	-	-	-	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.050526	0.067731	0.005	0.067317	-	-	-	0.024849	0.05	0.688609	0.072838	5.08801	0.051066	
2	AQF42	12.1	82.0	-	-	-	0.20	-	-	-	-	-	-	-	9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.035989	0.111956	0.005	-	-	-	0.024841	0.05	0.65424	0.071905	13.51357	0.066178		
3	AQF42	10.5	71.8	-	-	-	0.20	-	-	-	-	-	-	-	17.4	0.50	21.2	0.49	-	-	-	-	-	-	-	-	-	-	-	-	0.055581	0.110743	0.005	-	-	-	0.024839	0.05	0.528167	0.074849	4.863686	0.122395		
4	AQF42	15.6	107.9	-	-	-	0.16	-	-	-	-	-	-	-	14.1	0.40	16.9	0.33	35.5	-	-	-	-	-	-	-	-	-	-	-	0.01422	0.095621	0.000563	-	-	-	0.030123	0.005632	0.324927	0.073555	3.2871	0.037662		
5	AQF42	13.8	133.6	-	-	-	4.40	-	-	-	-	-	-	-	10.0	0.30	12.1	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.005643	0.038763	0.000518	0.038686	-	-	-	0.015011	0.05	0.287957	0.063193	1.284062	0.053817	
6	AQF42	10.4	103.6	-	-	-	15.34	-	-	-	-	-	-	-	9.1	0.30	11.1	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.005926	0.010252	0.005	0.035	-	-	-	0.015612	0.05	0.275977	0.056317	1.478062	0.058509	
7	AQF42	8.0	87.4	-	-	-	18.99	-	-	-	-	-	-	-	11.0	0.30	13.4	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.023119	0.002897	0.000534	0.002795	-	-	-	0.01502	0.05	0.344554	0.060397	1.915332	0.047987	
8	AQF42	7.9	85.3	-	-	-	18.59	-	-	-	-	-	-	-	11.4	0.30	13.9	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.043953	0.002894	0.000534	0.002794	-	-	-	0.013929	0.05	0.205348	0.064364	1.884904	0.037072	
9	AQF42	8.5	82.9	-	-	-	14.12	-	-	-	-	-	-	-	11.1	0.30	13.5	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.006341	0.006894	0.000537	0.006732	-	-	-	0.015022	0.05	0.317382	0.063402	2.041762	0.039731	
10	AQF42	11.4	96.2	-	-	-	3.71	-	-	-	-	-	-	-	11.9	0.30	14.6	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.006569	0.018946	0.000543	0.018756	-	-	-	0.015026	0.05	0.254412	0.06248	2.26294	0.041666	
11	AQF42	11.7	80.3	-	-	-	0.26	-	-	-	-	-	-	-	13.9	0.30	17.0	0.17	-	-	-	-	-	-	-	-	-	-	-	-	0.021177	0.025235	0.000565	0.024947	-	-	-	0.015039	0.05	0.346328	0.061743	3.424959	0.155821	
12	AQF42	11.1	76.1	-	-	-	0.23	-	-	-	-	-	-	-	13.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.036016	0.046559	0.002791	0.04619	-	-	-	0.019958	0.05	0.521854	0.067348	4.421724	0.103191	
1	AQF43	13.3	91.4	-	-	-	-	-	-	-	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.024085	0.064793	0.005	0.064379	-	-	-	0.024849	0.05	0.345855	0.07088	4.490639	0.038727	
2	AQF43	13.5	92.3	-	-	-	-	-	-	-	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.017892	0.088258	0.005	-	-	-	0.021221	0.05	0.349046	0.072688	5.089437	0.037028		
3	AQF43	13.7	93.3	-	-	-	0.20	-	-	-	-	-	-	-	14.0	0.50	18.3	0.49	-	-	-	-	-	-	-	-	-	-	-	-	-	0.011574	0.111721	0.005	-	-	-	0.017504	0.05	0.347248	0.07436	5.528686	0.035358	
4	AQF43	17.0	116.7	-	-	-	0.26	-	-	-	-	-	-	-	14.2	0.40	16.8	0.33	35.7	-	-	-	-	-	-	-	-	-	-	-	-	0.007319	0.096903	0.000563	-	-	-	0.012376	0.005632	0.305208	0.076513	3.296959	0.03638	
5	AQF43	16.9	137.6	-	-	-	5.89	-	-	-	-	-	-	-	12.2	0.30	14.8	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005643	0.031791	0.000518	0.031713	-	-	-	0.030948	0.05	0.337762	0.063193	1.333867	0.060391
6	AQF43	10.4	104.6	-	-	-	15.74	-	-	-	-	-	-	-	9.5	0.30	11.6	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005926	0.010252	0.005	0.035	-	-	-	0.015015	0.05	0.275977	0.057311	1.567557	0.067757
7	AQF43	8.2	89.7	-	-	-	19.49	-	-	-	-	-	-	-	9.4	0.30	11.5	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.031059	0.002897	0.000534	0.002795	-	-	-	0.01512	0.05	0.205612	0.061389	1.86571	0.057514
8	AQF43	8.2	89.9	-	-	-	19.59	-	-	-	-	-	-	-	12.4	0.30	15.0	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.015171	0.008948	0.000534	0.008798	-	-	-	0.016112	0.05	0.215273	0.066349	1.904754	0.046898
9	AQF43	9.1	85.8	-	-	-	13.03	-	-	-	-	-	-	-	12.0	0.30	14.6	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.026178	0.002927	0.000537	0.002814	-	-	-	0.015022	0.05	0.228113	0.063402	1.992168	0.048559
10	AQF43	12.8	95.1	-	-	-	3.01	-	-	-	-	-	-	-	11.7	0.30	14.3	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.006569	0.019937	0.000543	0.019746	-	-	-	0.01453	0.05	0.244507	0.063471	2.253035	0.066527
11	AQF43	14.3	98.2	-	-	-	-	-	-	-	-	-	-	-	13.5	0.30	16.5	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	0.033004	0.027207	0.000565	0.026918									

90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

[illegible]

90th percentile Hughes monthly flow rate, 10th percentile mixed pit concentrations cont'd

	Site	Total_Me tal	Total_Me tal	Total_Me tal	Total_Me tal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal							
Month		Uranium_ _T mg/L	Vanadiu m_T mg/L	Zinc_T mg/L	Zirconiu m_T mg/L	Aluminu m_D mg/L	Antimon y_D mg/L	Arsenic_ D mg/L	Barium_ D mg/L	Beryllium _D mg/L	Bismuth_ D mg/L	Boron_D mg/L	Cadmium _D mg/L	Calcium_ D mg/L	Cesium_ D mg/L	Chromiu m_D mg/L	Cobalt_D mg/L	Copper_ D mg/L	Iron_D mg/L	Lead_D mg/L	Lithium_ D mg/L	Magnesi um_D mg/L	Mangane se_D mg/L	Mercury_ D mg/L	Molybde num_D mg/L	Nickel_D mg/L	Potassiu m_D mg/L	Rubidium _D mg/L	Selenium _D mg/L	Silicon_D mg/L	Silver_D mg/L	Sodium_ D mg/L	Strontiu m_D mg/L	Sulfur_D mg/L	Tellurium _D mg/L	Thallium _D mg/L	Thorium_ D mg/L	Tin_D mg/L	Titanium _D mg/L	Tungsten _D mg/L
1	AQF40	0.000101	0.00025	0.005319	0.0001	0.020107	0.00005	0.000238	0.012973	1.08E-05	0.000025	0.005932	2.5E-06	4.865796	1.02E-05	0.000246	5.35E-05	0.002734	0.159979	0.000129	0.001287	1.437047	0.023578	-	8.89E-05	0.00025	0.724267	0.001117	0.000025	3.136064	0.000005	1.700602	0.019825	1.550144	0.0001	0.000005	0.00005	5.55E-05	0.00015	5.18E-05
2	AQF40	0.000103	0.00025	0.005687	0.000154	0.020575	0.00005	0.000247	0.013482	1.09E-05	0.000025	0.005982	2.5E-06	4.997606	1.05E-05	0.000246	5.37E-05	0.001958	0.174651	8.84E-05	0.001145	1.467642	0.025071	-	0.000103	0.00025	0.722781	0.001122	3.31E-05	3.14832	0.000005	1.722116	0.01991	1.708004	0.0001	0.000005	0.00005	8.02E-05	0.00015	5.19E-05
3	AQF40	0.000103	0.00025	0.006047	0.000208	0.021157	0.00005	0.000253	0.013975	1.09E-05	0.000025	0.005993	2.5E-06	5.057161	1.06E-05	0.000246	5.38E-05	0.001185	0.189316	4.8E-05	0.000999	1.477655	0.025842	9.74E-07	0.000116	0.00025	0.714618	0.001133	4.11E-05	3.158642	0.000005	1.736641	0.019679	1.8114	0.0001	0.000005	0.00005	0.000105	0.00015	5.19E-05
4	AQF40	7.38E-05	0.00025	0.0015	0.0001	0.020332	0.00005	0.000223	0.019656	1.06E-05	0.000025	0.005632	1.04E-05	4.262195	8.55E-06	0.000247	5.24E-05	0.002029	0.180691	0.000105	0.00116	1.263733	0.021357	1.44E-06	6.33E-05	0.00025	0.768249	0.001208	0.000025	3.052253	0.000005	1.552215	0.017556	1.132554	0.0001	0.000005	0.00005	0.000142	0.00015	5.12E-05
5	AQF40	4.21E-05	0.00025	0.0015	0.000142	0.036563	0.00005	0.00016	0.006385	0.00005	0.000025	0.005175	2.5E-06	3.494592	5.98E-06	0.000105	5.07E-05	0.00056	0.209801	0.000025	0.001117	1.016914	0.028866	1.9E-06	0.000134	0.00025	0.616627	0.001007	0.000025	2.431277	0.000005	1.116386	0.013989	0.494622	0.0001	0.000005	0.00005	0.000126	0.000713	5.03E-05
6	AQF40	4.33E-05	0.00025	0.004881	0.0001	0.035707	0.00005	0.000191	0.005472	0.00005	0.000025	0.005252	2.5E-06	3.239782	6.42E-06	0.00013	5.1E-05	0.000321	0.179882	0.000025	0.000527	0.919385	0.008165	1.77E-06	7.94E-05	0.00025	0.569244	0.000934	0.000025	1.988768	0.000005	1.06053	0.012138	0.602351	0.0001	0.000005	0.00005	0.000191	0.000508	5.05E-05
7	AQF40	5.87E-05	0.00025	0.0015	9.31E-05	0.026609	0.00005	0.000213	0.005491	0.00005	0.000025	0.00534	5.18E-06	3.512254	6.91E-06	0.00011	5.13E-05	0.000312	0.11037	6.97E-05	0.000884	0.999943	0.011401	1.2E-06	0.000106	0.00025	0.600054	0.001102	0.000025	1.915897	0.000005	1.168423	0.014424	0.878661	0.0001	0.000005	0.00005	0.000107	0.000408	5.06E-05
8	AQF40	4.81E-05	0.00025	0.004378	0.0001	0.020258	0.00005	0.000198	0.004894	0.00005	0.000025	0.005338	2.5E-06	3.249514	6.89E-06	0.000119	5.13E-05	0.000302	0.148083	0.000025	0.000537	0.965788	0.011365	-	9.61E-05	0.00025	0.553035	0.001022	5.18E-05	2.074504	0.000005	1.187172	0.015105	0.72131	0.0001	0.000005	0.00005	0.000241	0.000368	5.06E-05
9	AQF40	5.63E-05	0.00025	0.0015	0.0001	0.031554	0.00005	0.00022	0.006041	0.00005	0.000025	0.005366	2.5E-06	3.410756	7.05E-06	0.000219	5.14E-05	0.002632	0.130236	0.000147	0.00054	0.968447	0.012795	-	0.000143	0.00025	0.548252	0.001124	5.18E-05	2.245151	0.000005	1.169604	0.014271	0.760344	0.0001	0.000005	0.00005	5.22E-05	0.000547	5.07E-05
10	AQF40	6.63E-05	0.00025	0.0015	9.21E-05	0.022796	0.00005	0.000206	0.008314	0.00005	0.000025	0.005428	2.5E-06	3.744569	7.4E-06	7.97E-05	5.16E-05	0.00157	0.136219	7.16E-05	0.000844	1.108077	0.011441	1.04E-06	0.000105	0.00025	0.563432	0.001021	4.23E-05	2.318768	0.000005	1.305732	0.014722	1.050285	0.0001	0.000005	0.00005	5.25E-05	0.000274	5.08E-05
11	AQF40	9.28E-05	0.00025	0.004555	0.0001	0.022	0.00005	0.000214	0.005083	0.00005	0.000025	0.005649	2.5E-06	4.075863	8.64E-06	0.000149	5.25E-05	0.004975	0.138303	0.000178	0.000571	1.175259	0.016516	-	9.6E-05	0.00025	0.620814	0.001012	0.000025	2.451887	0.000005	1.283334	0.016465	1.155515	0.0001	0.000005	0.00005	5.38E-05	0.000337	5.12E-05
12	AQF40	9.99E-05	0.00025	0.004935	0.0001	0.021033	0.00005	0.000229	0.009064	3.04E-05	0.000025	0.00583	2.5E-06	4.549189	9.65E-06	0.000197	5.31E-05	0.003848	0.149184	0.000154	0.000934	1.328618	0.020778	-	9.28E-05	0.00025	0.678915	0.001068	0.000025	2.797287	0.000005	1.509494	0.01837	1.407756	0.0001	0.000005	0.00005	5.49E-05	0.000243	5.16E-05
1	AQF42	0.00015	0.00025	0.003948	0.0001	0.020303	0.00005	0.000257	0.01356	1.08E-05	0.000025	0.005932	2.5E-06	4.84621	1.02E-05	0.000246	5.35E-05	0.003174	0.176627	0.000151	0.001287	1.464468	0.024861	-	0.000113	0.00025	0.716432	0.001186	0.000025	3.106685	0.000005	1.720188	0.019923	1.550144	0.0001	0.000005	0.00005	0.000183	0.00015	5.18E-05
2	AQF42	0.000122	0.00025	0.025074	0.0001	0.023607	0.00005	0.000271	0.020623	1.09E-05	0.000025	0.005982	2.5E-06	5.17368	1.05E-05	0.000246	5.37E-05	0.001939	0.199106	7.59E-05	0.000607	1.550788	0.03228	2.99E-07	8.35E-05	0.00025	0.892007	0.00121	0.000025	3.304829	0.000005	1.819934	0.020595	1.913423	0.0001	0.000005	0.00005	0.000183	0.000404	5.19E-05
3	AQF42	0.000123	0.00025	0.005314	0.0001	0.035239	0.00005	0.000292	0.008577	1.09E-05	0.000025	0.005993	2.5E-06	5.154955	1.06E-05	0.000246	5.38E-05	0.000384	0.217676	0.000025	0.00139	1.478633	0.029157	-	7.58E-05	0.00025	0.703861	0.001172	6.31E-05	3.217319	0.000005	1.726862	0.019581	1.635371	0.0001	0.000005	0.00005	5.58E-05	0.000404	5.19E-05
4	AQF42	0.000106	0.00025	0.003176	0.0001	0.023684	0.00005	0.000232	0.019262	1.06E-05	0.000025	0.005632	1.19E-05	4.331211	8.55E-06	0.000247	5.24E-05	0.002502	0.189564	8.81E-05	0.001259	1.273593	0.02401	-	8.31E-05	0.00025	0.708106	0.001079	0.000025	2.983236	0.000005	5.367828	0.017358	1.625527	0.0001	0.000005	0.00005	0.000152	0.000347	5.12E-05
5	AQF42	4.01E-05	0.00025	0.0015	0.0001	0.033176	0.00005	0.000175	0.005687	0.00005	0.000025	0.005175	2.5E-06	3.195761	5.98E-06	0.00014	5.07E-05	0.000689	0.301443	0.000025	0.000519	0.956152	0.047493	1.55E-06	9.36E-05	0.00025	0.574791	0.000977	0.000025	2.441238	0.000005	0.978924	0.013193	0.494622	0.0001	0.000005	0.00005	5.1E-05	0.000509	5.03E-05
6	AQF42	4.43E-05	0.00025	0.0015	0.0001	0.033917	0.00005	0.000181	0.005661	0.00005	0.000025	0.005252	2.5E-06	3.040904	6.42E-06	0.00013	5.1E-05	0.000331	0.182865	0.000025	0.000527	0.856738	0.010801	1.64E-06	8.04E-05	0.00025	0.598131	0.000924	0.000025	1.998712	0.000005	1.040643	0.011939	0.602351	0.0001	0.000005	0.00005	0.0003	0.000458	5.05E-05
7	AQF42	4.93E-05	0.00025	0.005966	0.0001	0.025319	0.00005	0.000169	0.0056	0.00005	0.000025	0.00534	2.5E-06	3.224447	6.91E-06	0.00005	5.13E-05	0.000212	0.153045	0.000025	0.000537	0.919555	0.010915	1.47E-06	8.72E-05	0.00025	0.53753	0.000982	0.000025	1.975443	0.000005	1.037421	0.013134	1.032489	0.0001	0.000005	0.00005	0.000687	0.000438	5.06E-05
8	AQF42	5.31E-05	0.00025	0.0015	0.0001	0.021449	0.00005	0.000188	0.005232	0.00005	0.000025	0.005338	2.5E-06	3.289213	6.89E-06	0.00011	5.13E-05	0.000421	0.145105	0.00012	0.000537	0.958841	0.011762	-	9.91E-05	0.00025	0.538148	0.001111	0.000025	2.044729	0.000005	1.11075	0.013815	0.72131	0.0001	0.000005	0.00005	5.2E-05	0.000458	5.06E-05
9	AQF42	5.33E-05	0.00025	0.003087	0.0001	0.024511	0.00005	0.0002	0.005754	0.00005	0.000025	0.005366	2.5E-06	3.589293	7.05E-06	0.000119	5.14E-05	0.000213	0.119325	0.000025	0.00054	1.017048	0.010801	-	8.65E-05	0.00025	0.557179	0.000995	6.07E-05	2.165802	0.000005	1.209279	0.014171	0.760344	0.0001	0.000005	0.00005	5.22E-05	0.000319	5.07E-05
10	AQF42	7.12E-05	0.00025	0.0015	0.0001	0.019032	0.00005	0.000196	0.004966	0.00005	0.000025	0.005428	2.5E-06	3.714855	7.4E-06	0.00005	5.16E-05	0.000451	0.122352	0.000025	0.000547	0.917812	0.011629	8.26E-07	0.000105	0.00025	0.520841	0.000941	0.000025	2.338578	0.000005	1.216588	0.013534	0.847235	0.0001	0.000005	0.00005	5.25E-05	0.00015	5.08E-05
11	AQF42	0.00014	0.00025	0.003458	0.0001	0.031462	0.00005	0.000204	0.015																															

90th percentile Hughes monthly flow rate, 10th percentile mixed pit conce

Month	Site	Dissolved	Dissolved	Dissolved	Dissolved	Cyanides	Cyanides	Cyanides	Methylm	Methylm
		_Metal	_Metal	_Metal	_Metal				ercury	ercury
		Uranium_D mg/L	Vanadiu m_D mg/L	Zinc_D mg/L	Zirconiu m_D mg/L				Methylm ercury_D mg/L	Methylm ercury_T mg/L
1	AQF40	0.000104	0.00025	0.004521	0.000149	-	-	-	-	-
2	AQF40	0.000109	0.00025	0.003148	0.000149	-	-	-	-	-
3	AQF40	0.000111	0.00025	0.001778	0.000149	-	-	-	-	-
4	AQF40	7.87E-05	0.00025	0.002772	0.000149	-	-	-	-	-
5	AQF40	3.77E-05	0.00025	0.002991	9.9E-05	-	-	-	-	-
6	AQF40	4.37E-05	0.00025	0.006369	0.0001	-	-	-	-	-
7	AQF40	5.9E-05	0.00025	0.003728	9.65E-05	-	-	-	-	-
8	AQF40	5.33E-05	0.00025	0.003281	0.0001	-	-	-	-	-
9	AQF40	5.58E-05	0.00025	0.004767	0.0001	-	-	-	-	-
10	AQF40	6.63E-05	0.00025	0.002088	0.000106	-	-	-	-	-
11	AQF40	7.63E-05	0.00025	0.010163	0.0001	-	-	-	-	-
12	AQF40	9.35E-05	0.00025	0.007327	0.000125	-	-	-	-	-
1	AQF42	0.000145	0.00025	0.004619	0.000149	-	-	-	-	-
2	AQF42	0.000119	0.00025	0.004811	0.000149	-	-	-	-	-
3	AQF42	0.000116	0.00025	0.001191	0.000149	-	-	-	-	-
4	AQF42	0.000108	0.00025	0.005138	0.000149	-	-	-	-	-
5	AQF42	3.77E-05	0.00025	0.001198	0.0001	-	-	-	-	-
6	AQF42	4.17E-05	0.00025	0.000502	0.0001	-	-	-	-	-
7	AQF42	5.55E-05	0.00025	0.008938	0.0001	-	-	-	-	-
8	AQF42	5.13E-05	0.00025	0.002983	0.0001	-	-	-	-	-
9	AQF42	5.38E-05	0.00025	0.000502	0.0001	-	-	-	-	-
10	AQF42	6.24E-05	0.00025	0.001097	0.0001	-	-	-	-	-
11	AQF42	0.000117	0.00025	0.003264	0.0001	-	-	-	-	-
12	AQF42	0.000134	0.00025	0.003941	0.000125	-	-	-	-	-
1	AQF43	0.000107	0.00025	0.001094	0.000149	-	-	-	-	-
2	AQF43	0.000111	0.00025	0.001289	0.000149	-	-	-	-	-
3	AQF43	0.000112	0.00025	0.001485	0.000149	-	-	-	-	-
4	AQF43	7.68E-05	0.00025	0.002279	0.000149	-	-	-	-	-
5	AQF43	3.87E-05	0.00025	0.001497	0.0001	-	-	-	-	-
6	AQF43	4.17E-05	0.00025	0.004479	0.0001	-	-	-	-	-
7	AQF43	5.15E-05	0.00025	0.001296	0.0001	-	-	-	-	-
8	AQF43	5.23E-05	0.00025	0.000502	0.0001	-	-	-	-	-
9	AQF43	5.28E-05	0.00025	0.000502	0.0001	-	-	-	-	-
10	AQF43	6.34E-05	0.00025	0.002187	0.0001	-	-	-	-	-
11	AQF43	7.53E-05	0.00025	0.004742	0.0001	-	-	-	-	-
12	AQF43	9.45E-05	0.00025	0.00291	0.000125	-	-	-	-	-
1	AQF44	0.000106	0.00025	0.003836	0.000149	-	-	-	-	-
2	AQF44	0.00011	0.00025	0.003079	0.000149	-	-	-	-	-
3	AQF44	0.000111	0.00025	0.002316	0.000149	-	-	-	-	-
4	AQF44	7.87E-05	0.00025	0.002772	0.000149	-	-	-	-	-
5	AQF44	3.87E-05	0.00025	0.000501	0.0001	-	-	-	-	-
6	AQF44	4.17E-05	0.00025	0.003286	0.0001	-	-	-	-	-
7	AQF44	5.45E-05	0.00025	0.000502	0.0001	-	-	-	-	-
8	AQF44	5.23E-05	0.00025	0.002586	0.0001	-	-	-	-	-
9	AQF44	5.68E-05	0.00025	0.000502	0.0001	-	-	-	-	-
10	AQF44	6.04E-05	0.00025	0.000503	0.0001	-	-	-	-	-
11	AQF44	7.63E-05	0.00025	0.004939	0.0001	-	-	-	-	-
12	AQF44	9.45E-05	0.00025	0.004383	0.000125	-	-	-	-	-
1	AQF45	0.000108	0.00025	0.002269	0.000149	-	-	-	-	-
2	AQF45	0.000112	0.00025	0.001856	0.000149	-	-	-	-	-
3	AQF45	0.000114	0.00025	0.001436	0.000149	-	-	-	-	-
4	AQF45	8.07E-05	0.00025	0.001589	0.000149	-	-	-	-	-
5	AQF45	4.17E-05	0.00025	0.001298	0.0001	-	-	-	-	-
6	AQF45	4.37E-05	0.00025	0.001098	0.0001	-	-	-	-	-
7	AQF45	5.55E-05	0.00025	0.00209	0.0001	-	-	-	-	-
8	AQF45	5.83E-05	0.00025	0.001197	0.0001	-	-	-	-	-
9	AQF45	5.78E-05	0.00025	0.000502	0.0001	-	-	-	-	-
10	AQF45	6.14E-05	0.00025	0.001592	0.0001	-	-	-	-	-
11	AQF45	7.73E-05	0.00025	0.005925	0.0001	-	-	-	-	-
12	AQF45	9.74E-05	0.00025	0.000506	0.0001	-	-	-	-	-
May-Oct	All Stn Median	5.26E-05	0.00025	0.001545	0.0001	-	-	-	-	-
May-Oct	All Stn 90P	6.09E-05	0.00025	0.004623	0.0001	-	-	-	-	-
May-Oct	All Stn 10P	3.87E-05	0.00025	0.000502	0.0001	-	-	-	-	-

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major	Major	Major	Major	Total_Me			
Month		D_Oxygen	D_Oxygen	ORP_fiel		Specific_				Alkalinity	Alkalinity	Alkalinity	Alkalinity	Alkalinity		(HCO3)_b						Hardness	Hardness						Ammonia	Nitrate(N	Nitrite(N	Nitrate(N	Nitrogen(	Phosphor	Phosphor							
		n_field	_percent_f	d	pH_field	Conducta	TDS_field	Temp_fie	Turbidity	Acidity(C	bicarbon	carbonat	hydroxid	(CaCO3)_	(CaCO3)_	(CO3)_ca	icarbonat	(OH)_hyd	Conducti	DOC_D	D	(CaCO3)_	(CaCO3)_	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	(N)_T	)	Nitrite(N	trate(N	TKN)	us_D	us_T	Bromide	Chloride	Fluoride	Sulfate(S	Aluminu	
		mg/L	%	mV	pH	uS/cm	mg/L	C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	AQF40	10.0	68.5	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-	-	-	-	-	0.095971	0.071689	0.005	0.071234	-	-	0.025155	0.05	1.581218	0.069932	5.285545	0.037777		
2	AQF40	10.9	74.5	-	-	-	-	-	-	-	-	-	-	-	11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	0.061209	0.088595	0.005	-	-	-	0.021544	0.05	1.081277	0.072427	6.963104	0.03608		
3	AQF40	11.7	80.6	-	-	-	-	0.20	-	-	-	-	-	-	11.3	0.50	18.4	0.49	-	-	-	-	-	-	-	-	-	-	0.026243	0.105897	0.005	-	-	-	0.017831	0.05	0.578608	0.074882	8.476037	0.034313		
4	AQF40	20.2	140.5	-	-	-	-	0.56	-	-	-	-	-	-	14.1	0.40	16.2	0.33	35.9	-	-	-	-	-	-	-	-	-	0.008253	0.098607	0.000563	-	-	-	0.025105	0.005632	0.32591	0.07752	3.327899	0.033836		
5	AQF40	12.5	95.0	-	-	-	-	3.90	-	-	-	-	-	-	11.1	0.30	13.5	0.17	-	-	-	-	-	-	-	-	-	-	0.005902	0.038174	0.000518	0.044065	-	-	0.022738	0.05	0.273288	0.064195	1.394496	0.055017		
6	AQF40	9.0	91.0	-	-	-	-	15.44	-	-	-	-	-	-	9.5	0.30	11.6	0.17	-	-	-	-	-	-	-	-	-	-	0.006299	0.010264	0.005	0.035	-	-	0.015098	0.05	0.27637	0.056325	1.476534	0.062295		
7	AQF40	6.8	72.4	-	-	-	-	18.79	-	-	-	-	-	-	10.6	0.30	12.9	0.17	-	-	-	-	-	-	-	-	-	-	0.012705	0.002912	0.000534	0.219594	-	-	0.011758	0.05	0.250802	0.062889	1.951484	0.048792		
8	AQF40	6.1	67.1	-	-	-	-	19.98	-	-	-	-	-	-	11.4	0.30	13.9	0.17	-	-	-	-	-	-	-	-	-	-	0.020632	0.002909	0.000534	0.002794	-	-	0.015131	0.05	0.205874	0.065368	1.876312	0.033807		
9	AQF40	8.0	79.3	-	-	-	-	13.73	-	-	-	-	-	-	11.6	0.30	14.1	0.17	-	-	-	-	-	-	-	-	-	-	0.023743	0.002943	0.000537	0.002814	-	-	0.01177	0.05	0.238601	0.063414	2.252326	0.045297		
10	AQF40	12.0	90.7	-	-	-	-	3.61	-	-	-	-	-	-	12.3	0.30	15.0	0.17	-	-	-	-	-	-	-	-	-	-	0.016116	0.026097	0.000543	0.037872	-	-	0.020119	0.05	0.274888	0.064476	2.415874	0.053962		
11	AQF40	10.4	71.5	-	-	-	-	0.26	-	-	-	-	-	-	13.5	0.30	16.4	0.17	-	-	-	-	-	-	-	-	-	-	0.016223	0.024772	0.000565	0.024454	-	-	0.019392	0.05	0.278346	0.061764	3.239616	0.081332		
12	AQF40	10.2	69.9	-	-	-	-	0.18	-	-	-	-	-	-	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	0.056383	0.048362	0.002791	0.047957	-	-	0.022292	0.05	0.935402	0.065903	4.429746	0.05944		
1	AQF42	10.5	72.0	-	-	-	-	0.19	-	-	-	-	-	-	13.7	-	-	-	-	-	-	-	-	-	-	-	-	-	0.051903	0.067772	0.005	0.067317	-	-	0.025155	0.05	0.690058	0.07287	5.119064	0.051095		
2	AQF42	12.1	82.1	-	-	-	-	0.20	-	-	-	-	-	-	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	0.037439	0.119604	0.005	-	-	-	0.025164	0.05	0.655767	0.071938	13.54629	0.066209		
3	AQF42	10.6	71.9	-	-	-	-	0.20	-	-	-	-	-	-	17.4	0.50	21.3	0.49	-	-	-	-	-	-	-	-	-	-	0.057048	0.110787	0.005	-	-	-	0.025165	0.05	0.529711	0.074882	4.896776	0.122426		
4	AQF42	15.6	107.9	-	-	-	-	0.16	-	-	-	-	-	-	14.1	0.40	16.9	0.33	35.5	-	-	-	-	-	-	-	-	-	0.015155	0.095649	0.000563	-	-	-	0.030331	0.005632	0.32591	0.073576	3.30818	0.037681		
5	AQF42	13.8	133.6	-	-	-	-	4.40	-	-	-	-	-	-	10.0	0.30	12.1	0.17	-	-	-	-	-	-	-	-	-	-	0.005902	0.038771	0.000518	0.038686	-	-	0.015068	0.05	0.28823	0.063199	1.289905	0.053822		
6	AQF42	10.4	103.6	-	-	-	-	15.34	-	-	-	-	-	-	9.1	0.30	11.1	0.17	-	-	-	-	-	-	-	-	-	-	0.006299	0.010264	0.005	0.035	-	-	0.015695	0.05	0.27637	0.056325	1.486478	0.058517		
7	AQF42	8.0	87.4	-	-	-	-	18.99	-	-	-	-	-	-	11.0	0.30	13.4	0.17	-	-	-	-	-	-	-	-	-	-	0.023622	0.002912	0.000534	0.002795	-	-	0.015132	0.05	0.345083	0.060408	1.926673	0.047998		
8	AQF42	8.0	85.3	-	-	-	-	18.59	-	-	-	-	-	-	11.4	0.30	13.9	0.17	-	-	-	-	-	-	-	-	-	-	0.044452	0.002909	0.000534	0.002794	-	-	0.01404	0.05	0.205874	0.064375	1.896162	0.037082		
9	AQF42	8.5	82.9	-	-	-	-	14.12	-	-	-	-	-	-	11.1	0.30	13.5	0.17	-	-	-	-	-	-	-	-	-	-	0.006881	0.00691	0.000537	0.006732	-	-	0.015142	0.05	0.317951	0.063414	2.053952	0.039742		
10	AQF42	11.4	96.2	-	-	-	-	3.71	-	-	-	-	-	-	11.9	0.30	14.6	0.17	-	-	-	-	-	-	-	-	-	-	0.007202	0.018965	0.000543	0.018756	-	-	0.015166	0.05	0.255078	0.062495	2.277205	0.04168		
11	AQF42	11.7	80.4	-	-	-	-	0.26	-	-	-	-	-	-	14.0	0.30	17.0	0.17	-	-	-	-	-	-	-	-	-	-	0.022136	0.025264	0.000565	0.024947	-	-	0.015252	0.05	0.347337	0.061764	3.446588	0.155841		
12	AQF42	11.1	76.2	-	-	-	-	0.23	-	-	-	-	-	-	14.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.037242	0.046595	0.002791	0.04619	-	-	0.02023	0.05	0.523145	0.067376	4.449377	0.103217		
1	AQF43	13.3	91.5	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-	-	-	-	-	0.025461	0.064834	0.005	0.064379	-	-	0.025155	0.05	0.347304	0.070911	4.521693	0.038756		
2	AQF43	13.5	92.4	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-	-	-	-	-	0.019343	0.088302	0.005	-	-	-	0.021544	0.05	0.350573	0.072721	5.12216	0.037059		
3	AQF43	13.7	93.5	-	-	-	-	0.20	-	-	-	-	-	-	14.1	0.50	18.4	0.49	-	-	-	-	-	-	-	-	-	-	0.013041	0.111765	0.005	-	-	-	0.017831	0.05	0.348793	0.074393	5.561776	0.035389		
4	AQF43	17.0	116.8	-	-	-	-	0.26	-	-	-	-	-	-	14.2	0.40	16.8	0.33	35.7	-	-	-	-	-	-	-	-	-	0.008253	0.096931	0.000563	-	-	-	0.012584	0.005632	0.306192	0.076534	3.318039	0.036399		
5	AQF43	17.0	137.6	-	-	-	-	5.89	-	-	-	-	-	-	12.2	0.30	14.8	0.17	-	-	-	-	-	-	-	-	-	-	0.005902	0.031799	0.000518	0.031713	-	-	0.031006	0.05	0.338035	0.063199	1.33971	0.060396		
6	AQF43	10.4	104.6	-	-	-	-	15.74	-	-	-	-	-	-	9.5	0.30	11.6	0.17	-	-	-	-	-	-	-	-	-	-	0.006299	0.010264	0.005	0.035	-	-	0.015098	0.05	0.27637	0.05732	1.575973	0.067764		
7	AQF43	8.2	89.8	-	-	-	-	19.49	-	-	-	-	-	-	9.4	0.30	11.5	0.17	-	-	-	-	-	-	-	-	-	-	0.031561	0.002912	0.000534	0.002795	-	-	0.015232	0.05	0.206142	0.061401	1.877051	0.057525		
8	AQF43	8.2	90.0	-	-	-	-	19.59	-	-	-	-	-	-	12.4	0.30	15.1	0.17	-	-	-	-	-	-	-	-	-	-	0.01567	0.008963	0.000534	0.008798	-	-	0.016223	0.05	0.215799	0.06636	1.916012	0.046908		
9	AQF43	9.1	85.9	-	-	-	-	13.03	-	-	-	-	-	-	12.0	0.30	14.6	0.17	-	-	-	-	-	-	-	-	-	-	0.026719	0.002943	0.000537	0.002814	-	-	0.015142	0.05	0.228682	0.063414	2.004358	0.04857		
10	AQF43	12.8	95.1	-	-	-	-	3.02	-	-	-	-	-	-	11.7	0.30	14.3	0.17	-	-	-	-	-	-	-	-	-	-	0.007202	0.019956	0.000543	0.019746	-	-	0.014671	0.05	0.245173	0.063485	2.267301	0.066541		
11	AQF43	14.4	98.3	-	-	-	-	-	-	-	-	-	-	-	13.6	0.30	16.5	0.17	-	-	-	-	-	-	-	-	-	-	0.033963	0.027235	0.000565	0.026918	-	-	0.015351	0.05	0.278346	0.06275	3.249471	0.03974		
12	AQF43	13.8	94.9	-	-	-	-	-	-	-	-	-	-	-	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.029881	0.046105	0.002791	0.045699	-	-	0.020329	0.05	0.3					

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

[illegible]

Median Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

[illegible]

Median Hughes monthly flow rate, 90th percentile mixed pit concentration											
Month	Site	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Cyanides	Cyanides	Cyanides	Methylm ercury	Methylm ercury	
		Uranium _D mg/L	Vanadiu m_D mg/L	Zinc_D mg/L	Zirconiu m_D mg/L	cyanide_f ree mg/L	cyanide_ SAD mg/L	cyanide_ WAD mg/L	Methylm ercury_D mg/L	Methylm ercury_T mg/L	
1	AQF40	0.000106	0.00025	0.004549	0.000149	-	-	-	-	-	
2	AQF40	0.000112	0.00025	0.003177	0.000149	-	-	-	-	-	
3	AQF40	0.000114	0.00025	0.001808	0.000149	-	-	-	-	-	
4	AQF40	8.06E-05	0.00025	0.002791	0.000149	-	-	-	-	-	
5	AQF40	3.83E-05	0.00025	0.002997	9.9E-05	-	-	-	-	-	
6	AQF40	4.44E-05	0.00025	0.006376	0.0001	-	-	-	-	-	
7	AQF40	6E-05	0.00025	0.003738	9.65E-05	-	-	-	-	-	
8	AQF40	5.43E-05	0.00025	0.003291	0.0001	-	-	-	-	-	
9	AQF40	5.69E-05	0.00025	0.004778	0.0001	-	-	-	-	-	
10	AQF40	6.76E-05	0.00025	0.00021	0.000106	-	-	-	-	-	
11	AQF40	7.82E-05	0.00025	0.010182	0.0001	-	-	-	-	-	
12	AQF40	9.6E-05	0.00025	0.007352	0.000125	-	-	-	-	-	
1	AQF42	0.000148	0.00025	0.004647	0.000149	-	-	-	-	-	
2	AQF42	0.000122	0.00025	0.00484	0.000149	-	-	-	-	-	
3	AQF42	0.000119	0.00025	0.001221	0.000149	-	-	-	-	-	
4	AQF42	0.00011	0.00025	0.005157	0.000149	-	-	-	-	-	
5	AQF42	3.83E-05	0.00025	0.001204	0.0001	-	-	-	-	-	
6	AQF42	4.24E-05	0.00025	0.000509	0.0001	-	-	-	-	-	
7	AQF42	5.65E-05	0.00025	0.008948	0.0001	-	-	-	-	-	
8	AQF42	5.23E-05	0.00025	0.002994	0.0001	-	-	-	-	-	
9	AQF42	5.49E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF42	6.37E-05	0.00025	0.00111	0.0001	-	-	-	-	-	
11	AQF42	0.000119	0.00025	0.003283	0.0001	-	-	-	-	-	
12	AQF42	0.000137	0.00025	0.003966	0.000125	-	-	-	-	-	
1	AQF43	0.000109	0.00025	0.001122	0.000149	-	-	-	-	-	
2	AQF43	0.000114	0.00025	0.001319	0.000149	-	-	-	-	-	
3	AQF43	0.000115	0.00025	0.001514	0.000149	-	-	-	-	-	
4	AQF43	7.87E-05	0.00025	0.002298	0.000149	-	-	-	-	-	
5	AQF43	3.93E-05	0.00025	0.001503	0.0001	-	-	-	-	-	
6	AQF43	4.24E-05	0.00025	0.004487	0.0001	-	-	-	-	-	
7	AQF43	5.26E-05	0.00025	0.001306	0.0001	-	-	-	-	-	
8	AQF43	5.33E-05	0.00025	0.000512	0.0001	-	-	-	-	-	
9	AQF43	5.39E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF43	6.47E-05	0.00025	0.0022	0.0001	-	-	-	-	-	
11	AQF43	7.72E-05	0.00025	0.004762	0.0001	-	-	-	-	-	
12	AQF43	9.7E-05	0.00025	0.002935	0.000125	-	-	-	-	-	
1	AQF44	0.000108	0.00025	0.003864	0.000149	-	-	-	-	-	
2	AQF44	0.000113	0.00025	0.003109	0.000149	-	-	-	-	-	
3	AQF44	0.000114	0.00025	0.002346	0.000149	-	-	-	-	-	
4	AQF44	8.06E-05	0.00025	0.002791	0.000149	-	-	-	-	-	
5	AQF44	3.93E-05	0.00025	0.000506	0.0001	-	-	-	-	-	
6	AQF44	4.24E-05	0.00025	0.003294	0.0001	-	-	-	-	-	
7	AQF44	5.55E-05	0.00025	0.000512	0.0001	-	-	-	-	-	
8	AQF44	5.33E-05	0.00025	0.002597	0.0001	-	-	-	-	-	
9	AQF44	5.79E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF44	6.17E-05	0.00025	0.000516	0.0001	-	-	-	-	-	
11	AQF44	7.82E-05	0.00025	0.004959	0.0001	-	-	-	-	-	
12	AQF44	9.7E-05	0.00025	0.004408	0.000125	-	-	-	-	-	
1	AQF45	0.00011	0.00025	0.002297	0.000149	-	-	-	-	-	
2	AQF45	0.000115	0.00025	0.001886	0.000149	-	-	-	-	-	
3	AQF45	0.000117	0.00025	0.001465	0.000149	-	-	-	-	-	
4	AQF45	8.26E-05	0.00025	0.001608	0.000149	-	-	-	-	-	
5	AQF45	4.22E-05	0.00025	0.001303	0.0001	-	-	-	-	-	
6	AQF45	4.44E-05	0.00025	0.001106	0.0001	-	-	-	-	-	
7	AQF45	5.65E-05	0.00025	0.0021	0.0001	-	-	-	-	-	
8	AQF45	5.93E-05	0.00025	0.001207	0.0001	-	-	-	-	-	
9	AQF45	5.89E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF45	6.27E-05	0.00025	0.001605	0.0001	-	-	-	-	-	
11	AQF45	7.92E-05	0.00025	0.005944	0.0001	-	-	-	-	-	
12	AQF45	9.99E-05	0.00025	0.00053	0.0001	-	-	-	-	-	
May-Oct	All Stn Median	5.36E-05	0.00025	0.001554	0.0001	-	-	-	-	-	
May-Oct	All Stn 90P	6.22E-05	0.00025	0.004633	0.0001	-	-	-	-	-	
May-Oct	All Stn 10P	3.93E-05	0.00025	0.000513	0.0001	-	-	-	-	-	

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major	Major	Major	Major	Total_Me	
Month		D_Oxyge	D_Oxygen	ORP_fiel		Specific_				Acidity(C	Alkalinity	Alkalinity	Alkalinity	Alkalinity	Alkalinity	(HCO3)_b	(OH)_hyd	Conducti		Hardness	Hardness							Ammonia	Nitrate(N	Nitrite(N	Nitrite(N	Nitrogen(	Phosphor	Phosphor		Anion	Anion	Anion	Anion	tal	
		n_field	_percent_f	d	pH_field	nce_field	TDS_field	Id	_field	aCO3)	bicarbon	carbonat	hydroxid	phenol	(CaCO3)_	(CaCO3)_	(CO3)_ca	icarbonat	roxide	vity	DOC_D	D	T	pH	TDS_T	TKN_T	TOC_T	TSS_T	Turbidity	(N)_T	)	Nitrite(N	trate(N	TKN)	us_D	us_T	Bromide	Chloride	Fluoride	Sulfate(S	Aluminu
		mg/L	%	mV		uS/cm	mg/L	C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	AQF40	10.0	68.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.095971	0.071689	0.005	0.071234	-	-	-	0.025155	0.05	1.581218	0.069932	5.285545	0.037777
2	AQF40	10.9	74.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.061209	0.088595	0.005	-	-	-	0.021544	0.05	1.081277	0.072427	6.963104	0.03608	
3	AQF40	11.7	80.6	-	-	-	-	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.026243	0.105897	0.005	-	-	-	0.017831	0.05	0.578608	0.074882	8.476037	0.034313	
4	AQF40	20.2	140.5	-	-	-	-	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.008253	0.098607	0.000563	-	-	-	0.025105	0.005632	0.32591	0.07752	3.327899	0.038386	
5	AQF40	12.5	95.0	-	-	-	-	3.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005902	0.038174	0.000518	0.044065	-	-	-	0.022738	0.05	0.273288	0.064195	1.394496	0.055017
6	AQF40	9.0	91.0	-	-	-	-	15.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.006299	0.010264	0.005	0.035	-	-	-	0.015098	0.05	0.27637	0.056325	1.476534	0.062295
7	AQF40	6.8	72.4	-	-	-	-	18.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.012705	0.002912	0.000534	0.219594	-	-	-	0.011758	0.05	0.250802	0.062889	1.951484	0.048792
8	AQF40	6.1	67.1	-	-	-	-	19.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020632	0.002909	0.000534	0.002794	-	-	-	0.015131	0.05	0.205874	0.065368	1.876312	0.03807
9	AQF40	8.0	79.3	-	-	-	-	13.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.023743	0.002943	0.000537	0.002814	-	-	-	0.01177	0.05	0.238601	0.063414	2.252326	0.045297
10	AQF40	12.0	90.7	-	-	-	-	3.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.016116	0.026097	0.000543	0.037872	-	-	-	0.020119	0.05	0.274888	0.064476	2.415874	0.053962
11	AQF40	10.4	71.5	-	-	-	-	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.016223	0.024772	0.000565	0.024454	-	-	-	0.019392	0.05	0.278346	0.061764	3.239616	0.081332
12	AQF40	10.2	69.9	-	-	-	-	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.056383	0.048362	0.002791	0.047957	-	-	-	0.022292	0.05	0.935402	0.065903	4.429746	0.05944
1	AQF42	10.5	72.0	-	-	-	-	0.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.051903	0.067772	0.005	0.067317	-	-	-	0.025155	0.05	0.690058	0.07287	5.119064	0.051095
2	AQF42	12.1	82.1	-	-	-	-	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.037439	0.119604	0.005	-	-	-	0.025164	0.05	0.655767	0.071938	13.54629	0.066209	
3	AQF42	10.6	71.9	-	-	-	-	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.057048	0.110787	0.005	-	-	-	0.025165	0.05	0.529711	0.074882	4.896776	0.122426	
4	AQF42	15.6	107.9	-	-	-	-	0.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.015155	0.095649	0.000563	-	-	-	0.030331	0.005632	0.32591	0.073576	3.30818	0.037681	
5	AQF42	13.8	133.6	-	-	-	-	4.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005902	0.038771	0.000518	0.038686	-	-	-	0.015068	0.05	0.28823	0.063199	1.289905	0.053822
6	AQF42	10.4	103.6	-	-	-	-	15.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.006299	0.010264	0.005	0.035	-	-	-	0.015695	0.05	0.27637	0.056325	1.486478	0.058517
7	AQF42	8.0	87.4	-	-	-	-	18.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.023622	0.002912	0.000534	0.002795	-	-	-	0.015132	0.05	0.345083	0.060408	1.926673	0.047998
8	AQF42	8.0	85.3	-	-	-	-	18.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.044452	0.002909	0.000534	0.002794	-	-	-	0.01404	0.05	0.205874	0.064375	1.896162	0.037082
9	AQF42	8.5	82.9	-	-	-	-	14.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.006881	0.00691	0.000537	0.006732	-	-	-	0.015142	0.05	0.317951	0.063414	2.053952	0.039742
10	AQF42	11.4	96.2	-	-	-	-	3.71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.007202	0.018965	0.000543	0.018756	-	-	-	0.015166	0.05	0.255078	0.062495	2.277205	0.04168
11	AQF42	11.7	80.4	-	-	-	-	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.022136	0.025264	0.000565	0.024947	-	-	-	0.015252	0.05	0.347337	0.061764	3.446588	0.155841
12	AQF42	11.1	76.2	-	-	-	-	0.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.037242	0.046595	0.002791	0.04619	-	-	-	0.02023	0.05	0.523145	0.067376	4.449377	0.103217
1	AQF43	13.3	91.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.025461	0.064834	0.005	0.064379	-	-	-	0.025155	0.05	0.347304	0.070911	4.521693	0.038756
2	AQF43	13.5	92.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.019343	0.088302	0.005	-	-	-	0.021544	0.05	0.350573	0.072721	5.12216	0.037059	
3	AQF43	13.7	93.5	-	-	-	-	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.013041	0.111765	0.005	-	-	-	0.017831	0.05	0.348793	0.074393	5.561776	0.035389	
4	AQF43	17.0	116.8	-	-	-	-	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.008253	0.096931	0.000563	-	-	-	0.012584	0.005632	0.306192	0.076534	3.318039	0.036399	
5	AQF43	17.0	137.6	-	-	-	-	5.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005902	0.031799	0.000518	0.031713	-	-	-	0.031006	0.05	0.338035	0.063199	1.33971	0.060396
6	AQF43	10.4	104.6	-	-	-	-	15.74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.006299	0.010264	0.005	0.035	-	-	-	0.015098	0.05	0.27637	0.05732	1.575973	0.067764
7	AQF43	8.2	89.8	-	-	-	-	19.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.031561	0.002912	0.000534	0.002795	-	-	-	0.015232	0.05	0.206142	0.061401	1.877051	0.057525
8	AQF43	8.2	90.0	-	-	-	-	19.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01567	0.008963	0.000534	0.008798	-	-	-	0.016223	0.05	0.215799	0.06636	1.916012	0.046908
9	AQF43	9.1	85.9	-	-	-	-	13.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.026719	0.002943	0.000537	0.002814	-	-	-	0.015142	0.05	0.228682	0.063414	2.004358	0.04857
10	AQF43	12.8	95.1	-	-	-	-	3.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.007202	0.019956	0.000543	0.019746	-	-	-	0.014671	0.05	0.245173	0.063485	2.267301	0.066541
11	AQF43	14.4	98.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.033963	0.027235	0.000565	0.026918	-	-	-	0.015351	0.05	0.278346	0.06275	3.249471	0.03974
12	AQF43	13.8	94.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.029881	0.046105	0.002791	0.045699	-	-	-	0.020329	0.05	0.317016	0.066885	4.051844	0.039219
1	AQF44	11.3	77.0	-	-	-	-	0.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.141998	0.073648	0.005	0.073193	-	-	-	0.025155	0.05	1.777077	0.068952	5.54	

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

[illegible]

10th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

[illegible]

10th percentile Hughes monthly flow rate, 90th percentile mixed pit conce											
Month	Site	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Dissolved _Metal	Cyanides	Cyanides	Cyanides	Methylm ercury	Methylm ercury	
		Uranium _D mg/L	Vanadiu m_D mg/L	Zinc_D mg/L	Zirconiu m_D mg/L	cyanide_f ree mg/L	cyanide_ SAD mg/L	cyanide_ WAD mg/L	Methylm ercury_D mg/L	Methylm ercury_T mg/L	
1	AQF40	0.000106	0.00025	0.004549	0.000149	-	-	-	-	-	
2	AQF40	0.000112	0.00025	0.003177	0.000149	-	-	-	-	-	
3	AQF40	0.000114	0.00025	0.001808	0.000149	-	-	-	-	-	
4	AQF40	8.06E-05	0.00025	0.002791	0.000149	-	-	-	-	-	
5	AQF40	3.83E-05	0.00025	0.002997	9.9E-05	-	-	-	-	-	
6	AQF40	4.44E-05	0.00025	0.006376	0.0001	-	-	-	-	-	
7	AQF40	6E-05	0.00025	0.003738	9.65E-05	-	-	-	-	-	
8	AQF40	5.43E-05	0.00025	0.003291	0.0001	-	-	-	-	-	
9	AQF40	5.69E-05	0.00025	0.004778	0.0001	-	-	-	-	-	
10	AQF40	6.76E-05	0.00025	0.00021	0.000106	-	-	-	-	-	
11	AQF40	7.82E-05	0.00025	0.010182	0.0001	-	-	-	-	-	
12	AQF40	9.6E-05	0.00025	0.00025	0.000125	-	-	-	-	-	
1	AQF42	0.000148	0.00025	0.004647	0.000149	-	-	-	-	-	
2	AQF42	0.000122	0.00025	0.00484	0.000149	-	-	-	-	-	
3	AQF42	0.000119	0.00025	0.001221	0.000149	-	-	-	-	-	
4	AQF42	0.00011	0.00025	0.005157	0.000149	-	-	-	-	-	
5	AQF42	3.83E-05	0.00025	0.001204	0.0001	-	-	-	-	-	
6	AQF42	4.24E-05	0.00025	0.000509	0.0001	-	-	-	-	-	
7	AQF42	5.65E-05	0.00025	0.008948	0.0001	-	-	-	-	-	
8	AQF42	5.23E-05	0.00025	0.002994	0.0001	-	-	-	-	-	
9	AQF42	5.49E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF42	6.37E-05	0.00025	0.00111	0.0001	-	-	-	-	-	
11	AQF42	0.000119	0.00025	0.003283	0.0001	-	-	-	-	-	
12	AQF42	0.000137	0.00025	0.003966	0.000125	-	-	-	-	-	
1	AQF43	0.000109	0.00025	0.001122	0.000149	-	-	-	-	-	
2	AQF43	0.000114	0.00025	0.001319	0.000149	-	-	-	-	-	
3	AQF43	0.000115	0.00025	0.001514	0.000149	-	-	-	-	-	
4	AQF43	7.87E-05	0.00025	0.002298	0.000149	-	-	-	-	-	
5	AQF43	3.93E-05	0.00025	0.001503	0.0001	-	-	-	-	-	
6	AQF43	4.24E-05	0.00025	0.004487	0.0001	-	-	-	-	-	
7	AQF43	5.26E-05	0.00025	0.001306	0.0001	-	-	-	-	-	
8	AQF43	5.33E-05	0.00025	0.000512	0.0001	-	-	-	-	-	
9	AQF43	5.39E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF43	6.47E-05	0.00025	0.0022	0.0001	-	-	-	-	-	
11	AQF43	7.72E-05	0.00025	0.004762	0.0001	-	-	-	-	-	
12	AQF43	9.7E-05	0.00025	0.002935	0.000125	-	-	-	-	-	
1	AQF44	0.000108	0.00025	0.003864	0.000149	-	-	-	-	-	
2	AQF44	0.000113	0.00025	0.003109	0.000149	-	-	-	-	-	
3	AQF44	0.000114	0.00025	0.002346	0.000149	-	-	-	-	-	
4	AQF44	8.06E-05	0.00025	0.002791	0.000149	-	-	-	-	-	
5	AQF44	3.93E-05	0.00025	0.000506	0.0001	-	-	-	-	-	
6	AQF44	4.24E-05	0.00025	0.003294	0.0001	-	-	-	-	-	
7	AQF44	5.55E-05	0.00025	0.000512	0.0001	-	-	-	-	-	
8	AQF44	5.33E-05	0.00025	0.002597	0.0001	-	-	-	-	-	
9	AQF44	5.79E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF44	6.17E-05	0.00025	0.000516	0.0001	-	-	-	-	-	
11	AQF44	7.82E-05	0.00025	0.004959	0.0001	-	-	-	-	-	
12	AQF44	9.7E-05	0.00025	0.004408	0.000125	-	-	-	-	-	
1	AQF45	0.00011	0.00025	0.002297	0.000149	-	-	-	-	-	
2	AQF45	0.000115	0.00025	0.001886	0.000149	-	-	-	-	-	
3	AQF45	0.000117	0.00025	0.001465	0.000149	-	-	-	-	-	
4	AQF45	8.26E-05	0.00025	0.001608	0.000149	-	-	-	-	-	
5	AQF45	4.22E-05	0.00025	0.001303	0.0001	-	-	-	-	-	
6	AQF45	4.44E-05	0.00025	0.001106	0.0001	-	-	-	-	-	
7	AQF45	5.65E-05	0.00025	0.0021	0.0001	-	-	-	-	-	
8	AQF45	5.93E-05	0.00025	0.001207	0.0001	-	-	-	-	-	
9	AQF45	5.89E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF45	6.27E-05	0.00025	0.001605	0.0001	-	-	-	-	-	
11	AQF45	7.92E-05	0.00025	0.005944	0.0001	-	-	-	-	-	
12	AQF45	9.99E-05	0.00025	0.00053	0.0001	-	-	-	-	-	
May-Oct	All Stn Median	5.36E-05	0.00025	0.001554	0.0001	-	-	-	-	-	
May-Oct	All Stn 90P	6.22E-05	0.00025	0.004633	0.0001	-	-	-	-	-	
May-Oct	All Stn 10P	3.93E-05	0.00025	0.000513	0.0001	-	-	-	-	-	

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations

	Site	Field	Field	Field	Field	Field	Field	Field	Field	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	General	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Nutrient	Major	Major	Major	Major	Total_Me		
Month		D_Oxygen n_field mg/L	D_Oxygen percent_f ield %	ORP_fiel d mV	pH_field pH	Specific_ Conducta nce_field uS/cm	TDS_field mg/L	Temp_fie ld C	Turbidity _field NTU	Acidity(C aCO3) mg/L	Alkalinity (CaCO3)_ bicarbon ate mg/L	Alkalinity (CaCO3)_ carbonat e mg/L	Alkalinity (CaCO3)_ hydroxid e mg/L	Alkalinity (CaCO3)_ phenol mg/L	Alkalinity (CaCO3)_ T mg/L	(HCO3)_b rbonate mg/L	e mg/L	roxide mg/L	(OH)_hyd roxide mg/L	Conducti vity µS/cm	DOC_D mg/L	Hardness (CaCO3)_ D mg/L	Hardness (CaCO3)_ T mg/L	pH	TDS_T mg/L	TKN_T mg/L	TOC_T mg/L	TSS_T mg/L	Turbidity NTU	Ammonia (N)_T mg/L	Nitrate(N) mg/L	Nitrite(N) mg/L	Nitrate(N) mg/L	Nitrogen(TKN) mg/L	Phosphor us_D mg/L	Phosphor us_T mg/L	Bromide mg/L	Chloride mg/L	Fluoride mg/L	Sulfate(S O4) mg/L	Aluminu m_T mg/L
1	AQF40	10.0	68.5	-	-	-	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-	-	-	0.095971	0.071689	0.005	0.071234	-	-	-	0.025155	0.05	1.581218	0.069932	5.285545	0.037777		
2	AQF40	10.9	74.5	-	-	-	-	-	-	-	-	-	-	-	11.7	-	-	-	-	-	-	-	-	-	-	-	0.061209	0.088595	0.005	-	-	-	0.021544	0.05	1.081277	0.072427	6.963104	0.03608			
3	AQF40	11.7	80.6	-	-	-	0.20	-	-	-	-	-	-	-	11.3	0.50	18.4	0.49	-	-	-	-	-	-	-	0.026243	0.105897	0.005	-	-	-	0.017831	0.05	0.578608	0.074882	8.476037	0.034313				
4	AQF40	20.2	140.5	-	-	-	0.56	-	-	-	-	-	-	-	14.1	0.40	16.2	0.33	35.9	-	-	-	-	-	-	0.008253	0.098607	0.000563	-	-	-	0.025105	0.005632	0.32591	0.07752	3.327899	0.033836				
5	AQF40	12.5	95.0	-	-	-	3.90	-	-	-	-	-	-	-	11.1	0.30	13.5	0.17	-	-	-	-	-	-	-	0.005902	0.038174	0.000518	0.044065	-	-	-	0.022738	0.05	0.273288	0.064195	1.394496	0.055017			
6	AQF40	9.0	91.0	-	-	-	15.44	-	-	-	-	-	-	-	9.5	0.30	11.6	0.17	-	-	-	-	-	-	-	0.006299	0.010264	0.005	0.035	-	-	-	0.015098	0.05	0.27637	0.056325	1.476534	0.062295			
7	AQF40	6.8	72.4	-	-	-	18.79	-	-	-	-	-	-	-	10.6	0.30	12.9	0.17	-	-	-	-	-	-	-	0.012705	0.002912	0.000534	0.219594	-	-	-	0.011758	0.05	0.250802	0.062889	1.951484	0.048792			
8	AQF40	6.1	67.1	-	-	-	19.98	-	-	-	-	-	-	-	11.4	0.30	13.9	0.17	-	-	-	-	-	-	-	0.020632	0.002909	0.000534	0.002794	-	-	-	0.015131	0.05	0.205874	0.065368	1.876312	0.033807			
9	AQF40	8.0	79.3	-	-	-	13.73	-	-	-	-	-	-	-	11.6	0.30	14.1	0.17	-	-	-	-	-	-	-	0.023743	0.002943	0.000537	0.002814	-	-	-	0.01177	0.05	0.238601	0.063414	2.252326	0.045297			
10	AQF40	12.0	90.7	-	-	-	3.61	-	-	-	-	-	-	-	12.3	0.30	15.0	0.17	-	-	-	-	-	-	-	0.016116	0.026097	0.000543	0.037872	-	-	-	0.020119	0.05	0.274888	0.064476	2.415874	0.053962			
11	AQF40	10.4	71.5	-	-	-	0.26	-	-	-	-	-	-	-	13.5	0.30	16.4	0.17	-	-	-	-	-	-	-	0.016223	0.024772	0.000565	0.024454	-	-	-	0.019392	0.05	0.278346	0.061764	3.239616	0.081332			
12	AQF40	10.2	69.9	-	-	-	0.18	-	-	-	-	-	-	-	12.8	-	-	-	-	-	-	-	-	-	-	0.056383	0.048362	0.002791	0.047957	-	-	-	0.022292	0.05	0.935402	0.065903	4.429746	0.05944			
1	AQF42	10.5	72.0	-	-	-	0.19	-	-	-	-	-	-	-	13.7	-	-	-	-	-	-	-	-	-	-	0.051903	0.067772	0.005	0.067317	-	-	-	0.025155	0.05	0.690058	0.07287	5.119064	0.051095			
2	AQF42	12.1	82.1	-	-	-	0.20	-	-	-	-	-	-	-	9.9	-	-	-	-	-	-	-	-	-	-	0.037439	0.119604	0.005	-	-	-	0.025164	0.05	0.655767	0.071938	13.54629	0.066209				
3	AQF42	10.6	71.9	-	-	-	0.20	-	-	-	-	-	-	-	17.4	0.50	21.3	0.49	-	-	-	-	-	-	-	0.057048	0.110787	0.005	-	-	-	0.025165	0.05	0.529711	0.074882	4.896776	0.122426				
4	AQF42	15.6	107.9	-	-	-	0.16	-	-	-	-	-	-	-	14.1	0.40	16.9	0.33	35.5	-	-	-	-	-	-	0.015155	0.095649	0.000563	-	-	-	0.030331	0.005632	0.32591	0.073576	3.30818	0.037681				
5	AQF42	13.8	133.6	-	-	-	4.40	-	-	-	-	-	-	-	10.0	0.30	12.1	0.17	-	-	-	-	-	-	-	0.005902	0.038771	0.000518	0.038686	-	-	-	0.015068	0.05	0.28823	0.063199	1.289905	0.053822			
6	AQF42	10.4	103.6	-	-	-	15.34	-	-	-	-	-	-	-	9.1	0.30	11.1	0.17	-	-	-	-	-	-	-	0.006299	0.010264	0.005	0.035	-	-	-	0.015695	0.05	0.27637	0.056325	1.486478	0.058517			
7	AQF42	8.0	87.4	-	-	-	18.99	-	-	-	-	-	-	-	11.0	0.30	13.4	0.17	-	-	-	-	-	-	-	0.023622	0.002912	0.000534	0.002795	-	-	-	0.015132	0.05	0.345083	0.060408	1.926673	0.047998			
8	AQF42	8.0	85.3	-	-	-	18.59	-	-	-	-	-	-	-	11.4	0.30	13.9	0.17	-	-	-	-	-	-	-	0.044452	0.002909	0.000534	0.002794	-	-	-	0.01404	0.05	0.205874	0.064375	1.896162	0.037082			
9	AQF42	8.5	82.9	-	-	-	14.12	-	-	-	-	-	-	-	11.1	0.30	13.5	0.17	-	-	-	-	-	-	-	0.006881	0.00691	0.000537	0.006732	-	-	-	0.015142	0.05	0.317951	0.063414	2.053952	0.039742			
10	AQF42	11.4	96.2	-	-	-	3.71	-	-	-	-	-	-	-	11.9	0.30	14.6	0.17	-	-	-	-	-	-	-	0.007202	0.018965	0.000543	0.018756	-	-	-	0.015166	0.05	0.255078	0.062495	2.277205	0.04168			
11	AQF42	11.7	80.4	-	-	-	0.26	-	-	-	-	-	-	-	14.0	0.30	17.0	0.17	-	-	-	-	-	-	-	0.022136	0.025264	0.000565	0.024947	-	-	-	0.015252	0.05	0.347337	0.061764	3.446588	0.155841			
12	AQF42	11.1	76.2	-	-	-	0.23	-	-	-	-	-	-	-	14.0	-	-	-	-	-	-	-	-	-	-	0.037242	0.046595	0.002791	0.04619	-	-	-	0.02023	0.05	0.523145	0.067376	4.449377	0.103217			
1	AQF43	13.3	91.5	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-	-	0.025461	0.064834	0.005	0.064379	-	-	-	0.025155	0.05	0.347304	0.070911	4.521693	0.038756			
2	AQF43	13.5	92.4	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-	-	0.019343	0.088302	0.005	-	-	-	0.021544	0.05	0.350573	0.072721	5.12216	0.037059				
3	AQF43	13.7	93.5	-	-	-	0.20	-	-	-	-	-	-	-	14.1	0.50	18.4	0.49	-	-	-	-	-	-	-	0.013041	0.111765	0.005	-	-	-	0.017831	0.05	0.348793	0.074393	5.561776	0.035389				
4	AQF43	17.0	116.8	-	-	-	0.26	-	-	-	-	-	-	-	14.2	0.40	16.8	0.33	35.7	-	-	-	-	-	-	0.008253	0.096931	0.000563	-	-	-	0.012584	0.005632	0.306192	0.076534	3.318039	0.036399				
5	AQF43	17.0	137.6	-	-	-	5.89	-	-	-	-	-	-	-	12.2	0.30	14.8	0.17	-	-	-	-	-	-	-	0.005902	0.031799	0.000518	0.031713	-	-	-	0.0338035	0.063199	1.33971	0.060396					
6	AQF43	10.4	104.6	-	-	-	15.74	-	-	-	-	-	-	-	9.5	0.30	11.6	0.17	-	-	-	-	-	-	-	0.006299	0.010264	0.005	0.035	-	-	-	0.015098	0.05	0.27637	0.05732	1.575973	0.067764			
7	AQF43	8.2	89.8	-	-	-	19.49	-	-	-	-	-	-	-	9.4	0.30	11.5	0.17	-	-	-	-	-	-	-	0.031561	0.002912	0.000534	0.002795	-	-	-	0.015232	0.05	0.206142	0.061401	1.877051	0.057525			
8	AQF43	8.2	90.0	-	-	-	19.59	-	-	-	-	-	-	-	12.4	0.30	15.1	0.17	-	-	-	-	-	-	-	0.01567	0.008963	0.000534	0.008798	-	-	-	0.016223	0.05	0.215799	0.06636	1.916012	0.046908			
9	AQF43	9.1	85.9	-	-	-	13.03	-	-	-	-	-	-	-	12.0	0.30	14.6	0.17	-	-	-	-	-	-	-	0.026719	0.002943	0.000537	0.002814	-	-	-	0.015142	0.05	0.228682	0.063414	2.004358	0.04857			
10	AQF43	12.8	95.1	-	-	-	3.02	-	-	-	-	-	-	-	11.7	0.30	14.3	0.17	-	-	-	-	-	-	-	0.007202	0.019956	0.000543	0.019746	-	-	-	0.014671	0.05	0.245173	0.063485	2.267301	0.066541			
11	AQF43	14.4	98.3	-	-	-	-	-	-	-	-	-	-	-	13.6	0.30	16.5	0.17	-	-	-	-	-	-	-	0.033963	0.027235	0.000565	0.026918	-	-	-	0.015351	0.05	0.278346	0.06275	3.249471	0.03974			
12	AQF43	13.8	94.9	-	-	-	-	-	-	-	-	-	-	-	14.1	-	-	-	-	-	-	-	-	-	-	0.029881	0.046105	0.002791	0.045699	-	-	-	0.020329	0.05	0.317016	0.066885	4.051844	0.039219			
1	AQF44	11.3	77.0	-	-	-	0.19	-	-	-	-	-	-	-	12.0	-	-	-	-	-	-	-	-	-	-	0.141998	0.073648	0.005	0.073193	-	-	-	0.025155	0.05	1.777077	0.068952	5.549955	0.039638			
2	AQF44	12.4	84.5	-	-	-	0.20	-	-	-	-	-	-	-	15.7	-	-	-	-	-	-	-	-	-	-	0.080284	0.091236	0.005	-	-	-	0.017827	0.05	1.790462	0.071253	7.139178	0.				

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

[illegible]

90th percentile Hughes monthly flow rate, 90th percentile mixed pit concentrations cont'd

[illegible]

90th percentile Hughes monthly flow rate, 90th percentile mixed pit conce											
Month	Site	Dissolved	Dissolved	Dissolved	Dissolved	Cyanides	Cyanides	Cyanides	Methylm	Methylm	
		_Metal	_Metal	_Metal	_Metal				ercury	ercury	
Month		Uranium	Vanadiu	Zinc_D	Zirconiu	cyanide_f	cyanide_	cyanide_	Methylm	Methylm	
		_D	m_D	m_D	m_D	ree	SAD	WAD	ercury_D	ercury_T	
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
1	AQF40	0.000106	0.00025	0.004549	0.000149	-	-	-	-	-	
2	AQF40	0.000112	0.00025	0.003177	0.000149	-	-	-	-	-	
3	AQF40	0.000114	0.00025	0.001808	0.000149	-	-	-	-	-	
4	AQF40	8.06E-05	0.00025	0.002791	0.000149	-	-	-	-	-	
5	AQF40	3.83E-05	0.00025	0.002997	9.9E-05	-	-	-	-	-	
6	AQF40	4.44E-05	0.00025	0.006376	0.0001	-	-	-	-	-	
7	AQF40	6E-05	0.00025	0.003738	9.65E-05	-	-	-	-	-	
8	AQF40	5.43E-05	0.00025	0.003291	0.0001	-	-	-	-	-	
9	AQF40	5.69E-05	0.00025	0.004778	0.0001	-	-	-	-	-	
10	AQF40	6.76E-05	0.00025	0.0021	0.000106	-	-	-	-	-	
11	AQF40	7.82E-05	0.00025	0.010182	0.0001	-	-	-	-	-	
12	AQF40	9.6E-05	0.00025	0.007352	0.000125	-	-	-	-	-	
1	AQF42	0.000148	0.00025	0.004647	0.000149	-	-	-	-	-	
2	AQF42	0.000122	0.00025	0.00484	0.000149	-	-	-	-	-	
3	AQF42	0.000119	0.00025	0.001221	0.000149	-	-	-	-	-	
4	AQF42	0.00011	0.00025	0.005157	0.000149	-	-	-	-	-	
5	AQF42	3.83E-05	0.00025	0.001204	0.0001	-	-	-	-	-	
6	AQF42	4.24E-05	0.00025	0.000509	0.0001	-	-	-	-	-	
7	AQF42	5.65E-05	0.00025	0.008948	0.0001	-	-	-	-	-	
8	AQF42	5.23E-05	0.00025	0.002994	0.0001	-	-	-	-	-	
9	AQF42	5.49E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF42	6.37E-05	0.00025	0.00111	0.0001	-	-	-	-	-	
11	AQF42	0.000119	0.00025	0.003283	0.0001	-	-	-	-	-	
12	AQF42	0.000137	0.00025	0.003966	0.000125	-	-	-	-	-	
1	AQF43	0.000109	0.00025	0.001122	0.000149	-	-	-	-	-	
2	AQF43	0.000114	0.00025	0.001319	0.000149	-	-	-	-	-	
3	AQF43	0.000115	0.00025	0.001514	0.000149	-	-	-	-	-	
4	AQF43	7.87E-05	0.00025	0.002298	0.000149	-	-	-	-	-	
5	AQF43	3.93E-05	0.00025	0.001503	0.0001	-	-	-	-	-	
6	AQF43	4.24E-05	0.00025	0.004487	0.0001	-	-	-	-	-	
7	AQF43	5.26E-05	0.00025	0.001306	0.0001	-	-	-	-	-	
8	AQF43	5.33E-05	0.00025	0.000512	0.0001	-	-	-	-	-	
9	AQF43	5.39E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF43	6.47E-05	0.00025	0.0022	0.0001	-	-	-	-	-	
11	AQF43	7.72E-05	0.00025	0.004762	0.0001	-	-	-	-	-	
12	AQF43	9.7E-05	0.00025	0.002935	0.000125	-	-	-	-	-	
1	AQF44	0.000108	0.00025	0.003864	0.000149	-	-	-	-	-	
2	AQF44	0.000113	0.00025	0.003109	0.000149	-	-	-	-	-	
3	AQF44	0.000114	0.00025	0.002346	0.000149	-	-	-	-	-	
4	AQF44	8.06E-05	0.00025	0.002791	0.000149	-	-	-	-	-	
5	AQF44	3.93E-05	0.00025	0.000506	0.0001	-	-	-	-	-	
6	AQF44	4.24E-05	0.00025	0.003294	0.0001	-	-	-	-	-	
7	AQF44	5.55E-05	0.00025	0.000512	0.0001	-	-	-	-	-	
8	AQF44	5.33E-05	0.00025	0.002597	0.0001	-	-	-	-	-	
9	AQF44	5.79E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF44	6.17E-05	0.00025	0.000516	0.0001	-	-	-	-	-	
11	AQF44	7.82E-05	0.00025	0.004959	0.0001	-	-	-	-	-	
12	AQF44	9.7E-05	0.00025	0.004408	0.000125	-	-	-	-	-	
1	AQF45	0.00011	0.00025	0.002297	0.000149	-	-	-	-	-	
2	AQF45	0.000115	0.00025	0.001886	0.000149	-	-	-	-	-	
3	AQF45	0.000117	0.00025	0.001465	0.000149	-	-	-	-	-	
4	AQF45	8.26E-05	0.00025	0.001608	0.000149	-	-	-	-	-	
5	AQF45	4.22E-05	0.00025	0.001303	0.0001	-	-	-	-	-	
6	AQF45	4.44E-05	0.00025	0.001106	0.0001	-	-	-	-	-	
7	AQF45	5.65E-05	0.00025	0.0021	0.0001	-	-	-	-	-	
8	AQF45	5.93E-05	0.00025	0.001207	0.0001	-	-	-	-	-	
9	AQF45	5.89E-05	0.00025	0.000513	0.0001	-	-	-	-	-	
10	AQF45	6.27E-05	0.00025	0.001605	0.0001	-	-	-	-	-	
11	AQF45	7.92E-05	0.00025	0.005944	0.0001	-	-	-	-	-	
12	AQF45	9.99E-05	0.00025	0.00053	0.0001	-	-	-	-	-	
May-Oct	All Stn Median	5.36E-05	0.00025	0.001554	0.0001	-	-	-	-	-	
May-Oct	All Stn 90P	6.22E-05	0.00025	0.004633	0.0001	-	-	-	-	-	
May-Oct	All Stn 10P	3.93E-05	0.00025	0.000513	0.0001	-	-	-	-	-	