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Baffinland Iron Mines Corporation

PHASE 1 WASTE ROCK MANAGEMENT PLAN

BAF-PH1-830-P16-0029

Rev 4.1

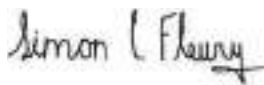
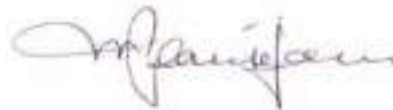
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1 PURPOSE

The Phase 1 Waste Rock Management Plan (WRMP) details the processes and designs to adequately manage non-acid generating (Non-AG) and potentially acid generating (PAG) waste being mined and deposited at the Waste Rock Facility (WRF). The current footprint of the WRF has capacity for an additional 25Mt of waste rock before further expansion toward the Life of Mine dump footprint is required.

2 SCOPE

This plan describes the criteria to effectively identify and segregate Non-AG and PAG waste in the pit, standards for placing and storing this waste at the WRF, processes and requirements on water management, and waste rock management quality assurance, quality control (QAQC) procedures. Closure considerations fall outside the scope of this document and the reader is referred to Baffinland's Interim Closure and Reclamation Plan (BAF-PH1-830-P16-0012).

3 DEFINITIONS

Acid Rock Drainage (ARD): Outflow of acidic water from acid generating minerals with reduced pH.

Metal Leaching (ML): Leaching of metals from rock (mainly cause by the acid generated during ARD) causing drainage that has high amounts of dissolved metals (such as iron, aluminum, copper, zinc, etc.)

Non-Acid Generating (Non-AG): Rock that does not have the potential to produce acid or acidic water.

Potentially Acid Generating (PAG): Rock containing minerals which potentially can produce acid or acidic water as classified using the criteria detailed in Section 6.


Waste Rock Facility (WRF): An engineered facility for the disposal of rock that is not currently economic to process.

Waste Rock Facility Pond (WRF pond): An engineered facility at the toe of the WRF, designed to capture surface runoff from the WRF. Note that the WRF is surrounded by a network of ditches that convey surface runoff to the pond.

Water Treatment Plant (WTP): A facility established in close proximity to the WRF pond that is used to treat surface runoff collected in the pond.

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4 RESPONSIBILITIES

4.1 OPERATIONS MANAGER

- Designate responsible persons within their department for implementing the Plan.
- Provide equipment requirements to execute the Plan.
- Ensure execution is in compliance to the Plan.
- Implement corrective actions in the event of identified non-conformances.

4.2 TECHNICAL SERVICES SUPERINTENDENT / MANAGER

- Designate responsible persons within their department for implementing the Plan.
- Provide training to ensure all Technical Services personnel understand the Plan.
- Ensure compliance with the WRMP and WRF QAQC Monitoring Plan.
- Manage timing and execution of future WRF expansions studies.
- Review and approve any changes, corrections, or updates to the Plan.
- Implement corrective actions in the event of identified non-conformances.
- Designate qualified personnel to produce NAPEG stamped drawings, on a quarterly basis, that show the extents of the Non-AG cover over the WRF.

4.3 TECHNICAL SERVICES STAFF


- Follow the responsibilities outlined in the Waste Rock Facility QAQC Monitoring Plan (BAF-PH1-340-P16-0004) and the Working Near Slopes: Pit Walls, Dumps, and Stockpiles Procedure (BAF-PH1-340-PRO-0033). Where Technical Services Staff includes the following personnel: Principal Geologist / Senior Geologist, Medium Term Planning Engineer / Short Term Planning Engineer, Mine Geologist, Mine Surveyor, Geotechnical Engineer.

4.4 MINE SUPERINTENDENT

- Ensure all activities are executed as per the plan set in place by Technical Services.
- Ensure all supervisors and operators receive proper training and understand the Plan.
- Coordinate resources to achieve the Plan.

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4.5 MINE SUPERVISOR

- Follow the responsibilities outlined in the Waste Rock Facility QAQC Monitoring Plan (BAF-PH1-340-P16-0004) and the Working Near Slopes: Pit Walls, Dumps, and Stockpiles Procedure (BAF-PH1-340-PRO-0033).
- Ensure the WRF emergency ditch is drained prior to freshet and throughout the operating season.
- Ensure that snow is cleared from the Water Treatment Plant (WTP), WRP and ditches, to the extent practical, prior to freshet.
- Ensure Deposit 1 pit sump pumping time and volumes are reported daily to Technical Services.

4.6 HEAVY EQUIPMENT OPERATORS

- Safe operation of their equipment as outlined in their respective equipment Standard Operating Procedures (BAF-PH1-340-PRO-0006, BAF-PH1-300-PRO-0010, BAF-PH1-300-PRO-0011).
- Follow the responsibilities outlined in the Waste Rock Facility QAQC Monitoring Plan (BAF-PH1-340-P16-0004) and the Working Near Slopes: Pit Walls, Dumps, and Stockpiles Procedure (BAF-PH1-340-PRO-0033).

4.7 ENVIRONMENTAL SUPERINTENDENT / MANAGER

- Designate responsible persons within their department for implementing the Plan.
- Provide training to ensure all Environmental personnel understand the Plan.

4.8 ENVIRONMENTAL COORDINATOR


- Follow the responsibilities outlined in the Waste Rock Facility QAQC Monitoring Plan (BAF-PH1-340-P16-0004).
- Follow the responsibilities outlined in the Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010).
- Responsible for effluent discharge sampling and all other Environmental Effects Monitoring (EEM) and Biological Monitoring, as required.

4.9 WRF WATER TREATMENT PLANT OPERATOR

- Operate the WRF Water Treatment Plant and ensure compliant effluent discharge, following the procedures outlined in the Waste Rock Facility Water Treatment Plant Operations Plan (BAF-PH1-340-PRO-0059).
- Responsible for commissioning the WTP prior to freshet.
- Tracking and reporting of volumes of effluent discharged from WTP.

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5 REGULATORY REQUIREMENTS

All mining operations are carried out under the *Mines Act* whose requirements are reflected in Baffinland procedures and must be followed.

This Plan has been developed under the requirements of Baffinland's Type A Water Licence.

In addition, the discharge from the WRF pond is established as a monitoring and discharge point under the *Metal and Diamond Mining Effluent Regulations* (MDMER) SOR/2002-222.

All monitoring and reporting of effluent water quality will be done by the Environmental Department, including reporting to the appropriate Regulatory agencies.

6 WASTE ROCK CLASSIFICATION AND GEOCHEMICAL SAMPLING PROGRAM

To mitigate ARD at the WRF, PAG waste rock must be appropriately identified for segregation during mining operations. Effective identification of PAG waste requires the waste rock geochemistry and mechanisms driving ARD production be understood. Baffinland has completed several geochemical studies investigating just this, dating back to 2008, and has developed a tested method for adequately identifying Non-AG and PAG waste during mining operations. A summary of this work is provided in Appendix A – Waste Rock Management Plan.

Cuttings from waste rock blastholes in the open pit are sampled prior to blasting and submitted to the on-site laboratory for total sulphur content and paste pH analysis. Based on the assay results, waste rock is classified using the Non-AG and PAG classification criteria shown in Table 1.

TABLE 1: WASTE CLASSIFICATION CRITERIA


Acid Generation Potential	Criteria*
PAG	Total sulphur ≥ 0.20 wt% as S
PAG	Total sulphur < 0.20 wt% as S and paste pH ≤ 6
Non-AG	Total sulphur < 0.20 wt% as S and paste pH > 6

*Total sulphur measured by XRF or LECO method, as supported by WSP 2024. Total sulphur criteria of ≥ 0.2 wt% is used as an analogue for Neutralization Potential Ratio (NPR) of ≤ 2.0 , as supported by WSP 2024 (Appendix A – Appendix A1).

To allow for continued monitoring and validation of Baffinland's waste rock classification and identification criteria, select blasthole samples of both Non-AG and PAG material will be submitted off-site for Acid Base Accounting (ABA) and Shake Flask Extraction (SFE) testing on an ongoing basis. A

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frequency of 1 hole per 40,000 tonnes of blasted waste material will be selected at random for testing. The geochemical results from this testing program to date have not revealed any issues with the current waste rock categorization practices.

Overall, the geochemical results from sulphur, ABA, and SFE testing and on-site water quality analysis indicate that the overall waste rock classification practices are reasonable and appropriate to reduce the potential for acid generation and metal leaching. Therefore Non-AG may be placed at the WRF or used as ex-pit construction material. Additional analysis and supporting information can be found in Appendix A.

7 WRF DESIGN CRITERIA


The following design criteria have been developed with consideration to the criteria established under the Life of Mine Waste Rock Management Plan (BAF-PH1-830-P16-0031):

- Runoff and seepage from the WRF will be collected at the WRF pond. Collected flows will be treated to comply with requirements of the Type 'A' Water License 2AM-MRY1325 and MDMER;
- The WRF will be developed in a manner conducive to permafrost aggradation,
- The following conditions define the WRF geometry (Baffinland, 2014):
 - Overall external side slopes will be 2H:1V. Exterior slopes will be benched with inter bench slopes of 1.5H:1V;
 - Minimum crest width will be 25 m; and,
 - The perimeter of the WRF will be a minimum of 31 m from any water body.

Additional design criteria are necessary to achieve the WRF development strategy to minimize the release of acidity and limit ARD production. These are discussed below under Section 8.

8 WRF DEVELOPMENT STRATEGY

The primary objectives for the WRF development are the safety of personnel, protection of the environment and long-term physical and chemical stability. Thin lift deposition of waste rock creates a more homogenous stockpile and reduces particle size segregation that may create preferential air and water flow paths through the stockpile (i.e. reduce flow channelization and potential for oxygen supply to PAG materials). Waste rock placement locations and lift thickness also focus on the continuous development and raising of permafrost within the WRF. Permafrost aggradation provides an effective barrier to acid-forming reactions as absence of oxygen and water supply limits potential for sulphide oxidation and ARD transport, and the rate of sulphide oxidation is greatly reduced at low temperatures.

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8.1 DEPOSITION STRATEGY AND GUIDELINES

The WRF deposition strategy and guidelines below are developed from WSP's assessment of the geochemistry analysis and their various thermal, water quality and water balance models, presented in Appendix A.


The WRF design guidelines may change over time as the results of the ongoing studies and monitoring become available. A summary of the main aspects of the WRF deposition strategy is presented below and has been adjusted to reflect Baffinland's commitment to complete progressive reclamation of the WRF:

- **Footprint expansion:** The first lift of the WRF on native ground shall be Non-AG waste rock. Waste rock placement over native ground shall be carried out in the winter to the extent practical. At a minimum, the lift will be allowed to freeze prior to the deposition of subsequent lifts. Maintaining a frozen base and perimeter is expected to reduce potential for seepage.
- **Stockpile expansion construction:** Waste rock placed over an area of new WRF expansion shall be carried out in a manner conducive to aggrading permafrost, to limit potential for further development of ARD.
- **Material separation:** Non-AG and PAG waste rock placement locations at the WRF shall be documented. Non-AG material that may be intermixed with PAG shall be classified as, and follow the waste rock deposition strategies for PAG material.

Stockpile exterior face: PAG waste rock shall be placed 4 m (minimum) interior from ultimate and interim stockpile faces to conservatively maintain the PAG material interior from the permafrost active zone which has been measured up to 2.9 m in thickness.

Lift thickness: Waste rock placement to target a maximum thickness of 5 m during a single deposition event. This lift thickness has been established to reduce potential for waste rock segregation during placement while remaining operationally feasible with the available equipment. Reducing segregation of deposited waste rock is expected to reduce the potential for development of preferential air flow paths that can deliver oxygen to PAG waste rock.

- **Successive lift placement:** Placement of successive waste rock lifts shall give consideration to the waste rock and environmental conditions as described below. These placement strategies may be revised as the thermal performance of the WRF becomes better understood.
 - When the waste rock temperature at the time of placement is below 0°C, successive lifts may be continuously placed over a given footprint.

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- During summer deposition, when the waste rock temperature is greater than 0°C, a total maximum of 7 m of successive lifts should be placed at a given location. To the extent practical, thicker lifts should be placed in early summer, and thinner lifts should be placed during late summer to promote faster cooling, and to allow for material deposited in late summer to freeze faster in the subsequent winter.
- When the waste rock temperature is above 0°C and the air temperature below 0°C, the surface of the waste rock shall be kept clear of snow to the extent possible to promote permafrost aggradation prior to placement of the subsequent lift.
- To the extent possible, the deposition of successive lifts should occur in such a way that prevents the formation of depressions or low points with a difference in elevation between adjacent areas greater than 7 m. End-dumping waste rock to fill depressions will typically cause waste rock segregation that could potentially serve as a preferential flow path for air and water.
- **Capping PAG placement before summer:** To the extent practical, PAG waste rock shall be covered with a 4 m thick (minimum) layer of Non-AG waste rock prior to summer. The intention of this criteria is to maintain the permafrost active zone within the Non-AG waste rock during the summer months (i.e. maintain the PAG waste rock in a frozen state).
- **Capping PAG placement:** In all cases, PAG waste rock must be covered with a 4 m thick (minimum) layer of Non-AG waste within 24 months of initial placement.
- **Progressive Reclamation Objective:** To the maximum possible extent (without compromising the primary objective to permanently freeze PAG and minimize potential for ARD and ML), PAG material should be covered following the above guidelines such that the exposed PAG footprint is less than or equal to 15% of the dump footprint. PAG is to be covered with 4 m of Non-AG material following the deposition strategy outlined above.


Baffinland develops quarterly WRF placement plans to illustrate the upcoming waste deposition sequence including details on Non-AG cover, active PAG dumping areas and exposed PAG footprint. In the event that waste rock deposition following the above guidelines is not possible, Baffinland will document short-term deviations from the above waste rock deposition strategies and develop corrective action plans to return to the long-term objectives.

Additional details regarding the Adaptive Management and Trigger Action Response Plans (TARP) are outlined below in Appendix B Waste Rock Facility QAQC Monitoring Plan.

9 WRF WATER MANAGEMENT

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In compliance with Baffinland's Type 'A' Water Licence, contact water from the WRF are collected in a network of ditches, directed towards the WRF pond and treated through the water treatment plant (WTP) if water quality is not in compliance with discharge criteria. Dewatering from the Deposit 1 pit is also directed to the WRF pond.

Clean, non-contact water is diverted around the WRF by diversion berms as required. In addition, as part of the Snow Management Plan (BAF-PH1-830-P16-0023), clean snow is stockpiled in designated areas outside of the WRF pond catchment area to limit clean melt water from reporting into the WRF pond.

The emergency ditch will be drained and cleared prior to freshet to ensure that water is contained if a spill were to occur. The ditch is to be regularly pumped into the main pond to maintain its capacity.

Figure 1 shows the current WRF and the key water management structures. Phased drainage management berms, ditches and ponds are designed as mining progresses and when additional WRF expansions are required for capacity and/or adherence to the WRF development strategy.



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FIGURE 1: WRF WATER MANAGEMENT STRUCTURES

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9.1 WRF WATER TREATMENT PLANT

A water treatment plant facility established in close proximity to the WRF pond was constructed to treat surface runoff collected at the WRF pond. A transfer pump conveys water from the WRF pond to the WTP. The WTP consists of physical-chemical treatment for pH adjustment, chemical precipitation and removal of solids by physical barrier. The water treatment processes include coagulation, pH adjustment and precipitation, flocculation, and filtration. The WTP effluent is then discharged to the receiving environment of Mary River tributary.

A detailed design of the WTP was carried out by McCue Engineering Contractors (McCue, 2018). The WTP was constructed in 2018 and has a design treatment rate of 280 m³/hr capacity, consisting of two 140 m³/hr treatment trains. For each train, the water flow rate and pH in Reactor Tanks 1 and 2 is continuously monitored. Ferric sulfate and polymer are added based on flow rate, while the lime dosage is based on pH in Reactor Tank 1. The chemical dose rate is adjusted by the plant operator in the PLC to ensure discharge from the WRF does not exceed the effluent quality limits outlined in Section 9.2.

Other temporary treatment systems can be used to alter water chemistry with various mixing and dosing components if required. Treatment systems could be established alongside the WRF pond berm, or in an adjacent facility. Suction and recirculation hoses can be installed with floats, ensuring the lines do not damage the liner or disturb any settled solids. During discharge, it may be necessary to arrange equipment on the discharge end of the pump to provide pH adjustment or final solids removal before the water enters the receiving environment. Additional details regarding alternative water treatment solutions considered for the project that may be applicable depending on the encountered water quality parameters can be found in Baffinland's Fresh Water, Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010).


9.2 WATER QUALITY & EFFLUENT DISCHARGE MONITORING

Water quality sampling for the purposes of effluent discharge are outlined in the Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010). All sampling and reporting will be carried out by the Environmental Department.

Discharge from the WRF shall not exceed the effluent quality limits of Part F, Item 24 in the Type 'A' Water Licence site-specific limits (Table 1), as well as criteria listed under Schedule 4 of MDMER (Table 2). In addition, Environmental Effects Monitoring (EEM) and Biological Monitoring is carried out as required by MDMER. Baffinland has implemented an Aquatic Effects Monitoring Plan (AEMP) to monitor environmental effects of effluent discharge to the receiving environment at Mary River. Results of the discharge monitoring, EEM and the AEMP can trigger additional adaptive management actions such as further treatment of pond effluent, if required.

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When the maximum limit for a parameter differs between the MDMER and the Type 'A' Water Licence discharge criteria, the more conservative (lower) limit for the parameter will be adopted.

TABLE 1: EFFLUENT DISCHARGE QUALITY LIMITS FOR THE WRF POND

Parameter	Maximum Concentration of Any Grab Sample (mg/L)
Total Arsenic	0.50
Total Copper	0.30
Total Lead	0.20
Total Nickel	0.50
Total Zinc	0.50
Total Suspended Solids	15
Oil and Grease	No visible sheen
Toxicity	Not acutely toxic
pH	6.0 – 9.5


*Source: Type 'A' Water Licence (2AM-MRY1325 – Amendment No. 1) Table 10.

TABLE 2: EFFLUENT DISCHARGE QUALITY LIMITS FOR THE WRF POND

Parameter	Mean Monthly Limit (mg/L) ¹	Maximum Concentration of Any Grab Sample (mg/L)
Total Arsenic	0.30	0.60
Total Copper	0.30	0.60
Total Lead	0.10	0.20
Total Nickel	0.50	1.00
Total Zinc	0.50	1.00
Total Suspended Solids	15	30
Radium-226	0.37 Bq/L	1.11
pH	6 – 9.5	6 – 9.5
Toxicity	Not acutely toxic	Not acutely toxic
Un-ionized Ammonia	0.50	1.00

*Source: Metal and Diamond Mining Effluent Regulations, Schedule 4 Table 2

¹ Parameters listed above are sampled during discharge.

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Additional parameters including sub-lethal toxicity, aluminum, cadmium, iron, mercury, molybdenum, selenium, nitrate, ammonia, chloride, chromium, cobalt, sulphate, thallium, uranium, phosphorus, manganese, hardness, alkalinity and specific conductance are also required under MDMER, however these parameters do not have a maximum water quality discharge limit but instead are used to provide additional information to assist in interpreting toxicity results and identifying potential effects on the receiving environment.


Results of the water quality monitoring conducted to satisfy the conditions of the Type 'A' Water Licence will be reported monthly, and compiled annually into the QIA/NWB Annual Report for Operations. Results of the water quality monitoring conducted to satisfy the conditions of the MDMER will be reported quarterly in the ECCC's Mine Effluent Reporting System..

9.3 WATER VOLUME TRACKING

Baffinland monitors and records water volumes in the WRF pond daily during active discharges, in addition to inflows from the Deposit 1 Pit Sump(s) and effluent discharges to the receiving environment. The WRF WTP operator is responsible for tracking water volume discharged from the WTP, Technical Services is responsible for surveying and/or collecting via automated sensor the WRF pond level , and Mine Operations is responsible for tracking water volume discharged from the Deposit 1 Pit Sump. This monitoring data is used in the various water balance and quality models that inform the WRF design criteria and the WRF deposition strategy and guidelines. Results from the current iterations of the models are found in Appendix A.

10 WRF CLOSURE

At closure, the principal objectives are the safety of the public and maintaining the physical and chemical stability of the permanent structures to ensure that there is no long-term safety or environmental impact. The closure criteria for the WRF are outlined in Baffinland's Interim Closure and Reclamation Plan (BAF-PH1-830-P16-0012).

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11 WRF QAQC MONITORING PLAN AND ADAPTIVE MANAGEMENT

The criteria outlined in the WRMP are designed to mitigate the risk of ARD at the WRF due to the mining and deposition of Non-AG and PAG waste. A quality assurance and quality control (QAQC) monitoring plan is required to ensure conformance with the criteria outlined in the WRMP, and to ensure the WRF is performing as intended. The WRF QAQC Monitoring Plan provided in Appendix B describes processes for:


- In-Pit Material Identification & Delineation.
- WRF Material Placement Planning, Execution, Tracking & Reconciliation.
- WRF Non-AG Cover Placement Verification.
- WRF Instrumentation Monitoring and Reporting.
- WRF Water Quality Monitoring and Reporting.
- Quarterly Reporting as outlined in the plan.

Adaptive management plans that include Trigger Action Response Plans (TARP) based on specific performance indicators can be found in Appendix A of the above noted WRF QAQC Monitoring Plan. Additional adaptive management plans for waste placement and water management are discussed below.

11.1 NAG/PAG DEPOSITION

If it is found that the thickness of placed material is above the 5 m limit within a 0.5 m tolerance over an area greater than 100 m x 100 m, it will be surveyed and noted. These areas will be examined visually for excessive particle segregation. If necessary, test pitting may be completed to verify the suitability of the placed material. In the event it is found that these sections do not meet expected levels of compaction and particle distribution, a site specific plan to remediate the impacted area(s) will be formulated. This plan may include but is not limited to the following:

- Dozing and/or excavation of unsuitable material into a thinner lift;
- Target area with specific waste material determined by Technical Services;
- Adjustment of subsequent lift thickness and/or timing of the next lift to maximize permafrost aggradation.

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The impact of lift height variance, material segregation, encapsulated thawed material, or the thawing of previously frozen material, on the WRF performance is dependent on several factors:

- The reason for the presence of thawed material (i.e. exothermal geochemical reaction vs. encapsulation of thawed material);
- The location of the thawed material within the WRF and surrounding waste rock geochemistry;
- Forward planning for waste rock placement (both short term and long-term); and,
- Time of year.


The impact thawed waste rock may have on the WRF long-term performance, and the potential remediation strategies, must be assessed on a case-by-case basis. Upon identification of a thawed zone within the WRF (collected on a quarterly basis from installed thermistor data from representative location within the pile) the available construction records will be reviewed to identify the type of thawed waste rock (PAG vs. non-PAG), thickness of placement, and timing of placement. This information will be reviewed to assess the probable cause for the thawed material and inform the requirement for taking further action.

After reviewing the available construction documentation, the following general steps will be taken to assess the potential for the thawed material to impact the WRF long-term performance.


- 1) Identify if thawing was the result of construction practices or exothermic reaction
 - a. If caused by construction practices assess time for freeze-back of thawed material.
 - i. If freeze-back time is unacceptable and may result in development of exothermic reactions based on the type of material and/or surrounding material (within the thawed or surrounding waste rock) further action is required (see Item 1b).
 - ii. If freeze-back time is acceptable then no further action is required. Document conditions and contributing factors and adjust waste rock placement guidelines to limit potential for a similar occurrence in the future.
 - b. If the thawed zone developed from an exothermic reaction or the reason cannot be determined, then additional investigation may be required. The extent of the investigation (desktop study vs. field investigation) will be assessed on a case-by-case basis, and may include:
 - i. Preliminary thermal modelling to screen potential extent and geometry of heat generation within the WRF.
 - ii. Review of water quality data from the WRF perimeter ditches, particularly in the area of the thawed zone.
 - iii. Field investigations to obtain samples for geochemical analysis.
 - iv. Installation of additional thermistor strings and oxygen sensors to better define the thawed zone and confirm the presence of oxygen consuming reactions.

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- v. Post-investigation thermal modelling to assess potential impact on long-term WRF performance.
- 2) Develop Remediation Plan (if required)
 - a. As noted under Item 1aii, remediation may not be required under certain circumstances.
 - b. Potential remediation strategies are itemized below and may vary significantly depending on the extent of thawed material and mechanism resulting in the thawed conditions. The appropriate actions to be undertaken can only be determined following a detailed review of the thawed zone in the context of the overall waste rock management plan. Such actions may include but are not limited to:
 - i. Adjustment of subsequent lift placement strategies to promote more rapid freeze-back (e.g. revised lift thickness, exposure time prior to covering over, etc.).
 - ii. Adjustment of waste rock placement locations and/or modification to the WRF development plan.
 - iii. Exposure of thawed materials to promote rapid freeze-back.
 - iv. Excavation of thawed material for re-deposition into thinner lifts and/or further encapsulation with NAG material.
- 3) Update waste rock placement guidelines and operational procedures to reduce potential for further development of thawed zones within the WRF. Update instrumentation plan and water quality sampling programs to address any observed shortcomings.

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12 REFERENCES

BAF-PH1-340-PRO-0006 - Haul Truck Operation Procedure

BAF-PH1-300-PRO-0011 - Loader Operation Procedure

BAF-PH1-300-PRO-0011 - Dozer Operation Procedure

BAF-PH1-340-PRO-0033 - Working Near Slopes: Pit Walls, Dumps, and Stockpiles

BAF-PH1-830-P16-0012 - Interim Closure and Reclamation Plan

BAF-PH1-830-P16-0023 - Snow Management Plan

BAF-PH1-830-P16-0010 - Fresh Water Supply, Sewage and Wastewater Management Plan

BAF-PH1-830-P16-0031 Life-of-Mine Waste Rock Management Plan


Metal and Diamond Mining Effluent Regulation, 2002. SOR/2002-222.

NWT Mine Health and Safety Act and Regulations

Nunavut Water Board, Type 'A' Water Licence, 2AM-MRY1325

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APPENDIX A: WASTE ROCK MANAGEMENT PLAN - JUNE 2023 THROUGH SEPTEMBER 2026

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REPORT

Waste Rock Management Plan-June 2023 through September 2026

Baffinland Iron Mines Mary River Project

Submitted to:

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2020 to 2022 Waste Rock Geochemistry Report

APPENDIX A2

Thermal Model and Assessment of Conceptual Summer Deposition Strategies for the Waste Rock Storage Facility at Mary River Mine Technical Memorandum

APPENDIX A3

2023 Water Balance Update Report

APPENDIX A4

2023 Water Quality Model Update, Waste Rock Facility Report

APPENDIX B

Baffinland Conceptual Waste Rock Deposition Plans

1.0 INTRODUCTION

Baffinland Iron Mines Corporation's (Baffinland) Mary River Project is an operational iron mine on Baffin Island in Nunavut, Canada. Baffinland has retained WSP Canada Inc. (WSP) to assist with developing an updated waste rock management plan (WRMP) for deposition of potential acid generating (PAG) and non-acid generating (Non-AG) waste rock at their existing Waste Rock Facility (WRF).

An estimated 640 Mt of waste rock and 32 Mt of overburden will require management from mining Deposit No. 1 (Baffinland 2014). An updated WRMP is required to accommodate current operational constraints, address the occurrence of acid rock drainage (ARD) from the WRF, and improve the chemical stability of future PAG waste rock deposition.

This WRMP provides a waste rock deposition plan for June 2023 through September 2026. Review of the updated waste rock geochemistry, and WRF thermal, water balance and water quality modelling are also discussed in this report.

2.0 DEPOSIT GEOLOGY

Deposit No.1 occurs at the nose of a syncline plunging steeply to the north-east (Aker Kvaerner 2008). The iron formation occupies the nose and two limbs of this feature with a ~1,300 m long northern portion and a ~700 m long southern portion. The footwall to the iron formation mainly consists of gneiss with minor schist, psammitic gneiss (psammite) and amphibolite. The hanging wall is primarily composed of schist and volcanic tuff with lesser amphibolite and metasediment.

The hanging wall primarily encompasses chlorite–actinolite schist and garnetiferous amphibolites. Metavolcanic tuff is also a significant lithology identified in the hanging wall. The footwall mainly consists of quartz-feldspar-mica gneiss with lesser meta-sediment (greywacke) and quartz-mica schist. Microcline and albite are the predominant feldspars within the gneiss and biotite is generally more abundant than muscovite.

The iron ore deposits at the Mary River project represent high-grade examples of Algoma-type iron formation and are composed of hematite, magnetite and mixed hematite-magnetite-specular hematite varieties of ore (Aker Kvaerner, 2008). The iron deposits consist of a number of lensoidal bodies that vary in their proportions of the main iron oxide minerals and impurity content of sulphur and silica in the ore. The massive hematite ore is the highest grade ore and also has the fewest impurities, which may indicate it was derived from relatively pure magnetite or that chert, quartzite and sulphides were leached and oxidized during alteration of the iron formation.

Intense deformation and lack of outcrop limit the ability to subdivide by lithology on the basis of future mined tonnages.

3.0 REGULATORY REQUIREMENTS

All mining operations at Baffinland are carried out under applicable regulations and the requirements will be reflected in Baffinland procedures.

The Mary River Operation is permitted under Nunavut Impact Review Board Project Certificate #005 and Nunavut Water Board Type A Water Licence, 2AM-MRY1325. The specific environmental requirements related to the WRF is for runoff to be collected in a downstream pond with capacity sized to reduce suspended solids in the discharge to meet discharge requirements of <30 mg/L (maximum concentration of any grab sample) and 15 mg/L maximum average concentration, as well as the effluent quality discharge limits set out in Part F, Item 24 in Type A Water License 2AM-MR1325.

In addition, discharge from the runoff collection pond is established as a monitoring and discharge point under the Metal and Diamond Mining Effluent Regulations (MDMER) SOR/2002-222.

4.0 GEOCHEMISTRY SUMMARY

For the BIM Mary River Deposit 1 the current field methodology for geochemical characterization involves testing of drillhole cuttings from each blasthole and measuring the paste pH and total sulphur content. A field classification system was developed in 2019 to consider the possible presence of soluble sulphate minerals (e.g., melanterite) that were observed in portions of the deposit (Golder 2019b) by adding paste pH as an additional criterion. Material where total S is greater than or equal to 0.2 wt. % Total S and if paste pH is less than 6 the material is treated as PAG. Table 1 provides a summary of the current field classification criteria.

Table 1: Acid Generation Potential Criteria Field Classification – Baffinland Mary River Site

Acid Generation Potential	Criteria
Treat as Potentially Acid Generating (PAG)	Total sulphur \geq 0.20 wt% as S
Treat as Potentially Acid Generating (PAG)	Total sulphur < 0.20 wt% as S and paste pH \leq 6
Treat as Non-Potentially Acid Generating (Non-PAG)	Total sulphur < 0.20 wt% as S and paste pH > 6

The 2023 geochemistry update report provides a review of results of geochemical sampling completed from 2020 through 2022 (Appendix A1). The current evaluation includes review of 8603 blasthole drill cutting samples with measurements of total sulphur and paste pH from on-site as well as review of results from a subset of 395 split samples that underwent both field testing (pH and total sulphur) and analytical laboratory testing which also included acid-base accounting (ABA) analysis. In particular the use of total sulphur, as well as the combination of total sulphur plus sample pH (or paste pH) was evaluated for use in on site classification as compared to the Neutralization Potential Ratio (NPR) developed through full ABA test work. Site water quality measurements were also reviewed for potential metal leaching and acidity trends.

Key conclusions from the completed review and analysis are as follows:

Field vs. Analytical results:

- A review of sample results from on-site analysis and analytical laboratory testing shows very good agreement for total sulphur analysis and paste pH analysis between field analysis and off-site analytical analysis, indicating that the results of field analysis of total sulphur and paste pH are reasonable for decision making purposes. It is also considered that x-ray fluorescence (XRF) for analysis of total sulphur is a valid method for use in classifying the waste materials in the field.

Total Sulphur and ABA results / review of sample representativeness / uncertainty:

- Considering the dataset of 8603 on-site analysis of paste pH, of the 8603 samples 0.4% of samples (33 samples) had some associated acidity (paste pH values of less than 6) and were distributed near the ore zones. Possible causes of low pH in the absence of elevated total sulphur include stored oxidation products, or soluble sulphate minerals.

- Baffinland currently segregates waste rock material as PAG and Non-AG using a total sulphur cut-off of 0.20 wt% as S and paste pH greater than 6. The uncertainty when using 0.2% S as an analogue for NPR of less than or equal to 2 is approximately 0.5%, with 0.51% of samples being incorrectly categorized as Non-PAG based on the recent ABA data collected. This recent ABA data continues to support the use of the 0.2 wt% Total Sulphur criteria (and the recently added paste pH criteria of 6) as being a suitable analogue for NPR of less than or equal to 2.
- When further considering potential soluble sulphate mineral misclassification, when considering that only about 0.38% of materials contain soluble sulphate based on overall paste pH measurements, and a misclassification rate of 0.51%, only 0.002% of rock placed in the WRF with soluble sulphate minerals has some potential of being incorrectly managed.
- A review of the available on site water quality data indicates that misclassification and misplacement of materials with stored acidity in areas where this material should not be placed is not appreciable, as is exemplified by the improvement in WRF water quality observed on site.

Leachate Chemistry from lab testing and on-site site runoff and seepage measurements:

- There has been an observed improvement in on site water quality with an observed increase in pH and decrease in metals concentrations from 2018 through 2022. All 2022 measurements of on-site runoff and seepage were of neutral pH with no exceedances of the MDMER guideline values with the exception of total suspended solids.
- It is considered that the proper use of the waste rock screening criteria coupled with updated rock management practices is resulting in the observed improvement in water quality on-site.
- The on site testing shows that a very small proportion (<0.4%) of waste materials have stored acidity or potential for acidification due to oxidation.
- Operational procedures currently appear to be effective in reducing and managing ARD/ML on site based on the 2022 observed on-site runoff and seepage chemistry.

The geochemical results from SFE testing and on site water quality analysis indicate that the overall waste rock pile design and placement, as presented in the previous WRMPs (including use of thin lifts to promote freezing and placement of Non-AG material around the edges of the pile), are reasonable and appropriate to reduce potential for acid generation and metal leaching. Regular operational monitoring and material segregation is still required to confirm the future geochemical performance of the WR, however based on low potential rock misclassification rates, coupled with on-site observations of seepage and runoff water quality from 2020 through 2022 that show improving water quality over time, the current waste rock segregation criteria is considered reasonable and appropriate.

5.0 THERMAL ASSESSMENT SUMMARY

Thermal assessments are periodically undertaken to characterize the freezing patterns of deposited waste rock and assess the WRF thermal performance. The assessment involves interpretation of instrumentation data and preparation of transient two-dimensional (2D) thermal modelling.

Results of the latest WRF instrumentation data and thermal modelling are summarized in the following sections. Refer to Appendix A2 for further details on the thermal model and instrumentation results to date, including a discussion on the model limitations.

5.1 Instrumentation Program

A field program was undertaken from December 2018 to February 2019 to characterize the waste rock deposited at the WRF and to assess the WRF's thermal performance. Instrumentation installed as part of this program are summarized below and their location presented in Figure 1:

- Vertical thermistor strings at BH1, BH2, and BH3, with sensors located within the WRF and underlying overburden.
- Vertical oxygen sensor strings installed at BH1 and BH2, with sensors located within the WRF fill.
- Vertical thermistor strings installed at T1 and T2 to monitor the WRF Pond liner south anchor trench (T2) and WRF Pond Berm foundation performance (T1).
- Horizontal thermistor strings at T3, T4, and T5, extending 40 m interior from the WRF edge and buried approximately 1.5 m below the stockpile crest at the time of installation, with additional waste rock being deposited on top after that.
- A barometer installed at BH1.
- Vibrating wire piezometers installed at the base of the WRF at BH1 and BH2.

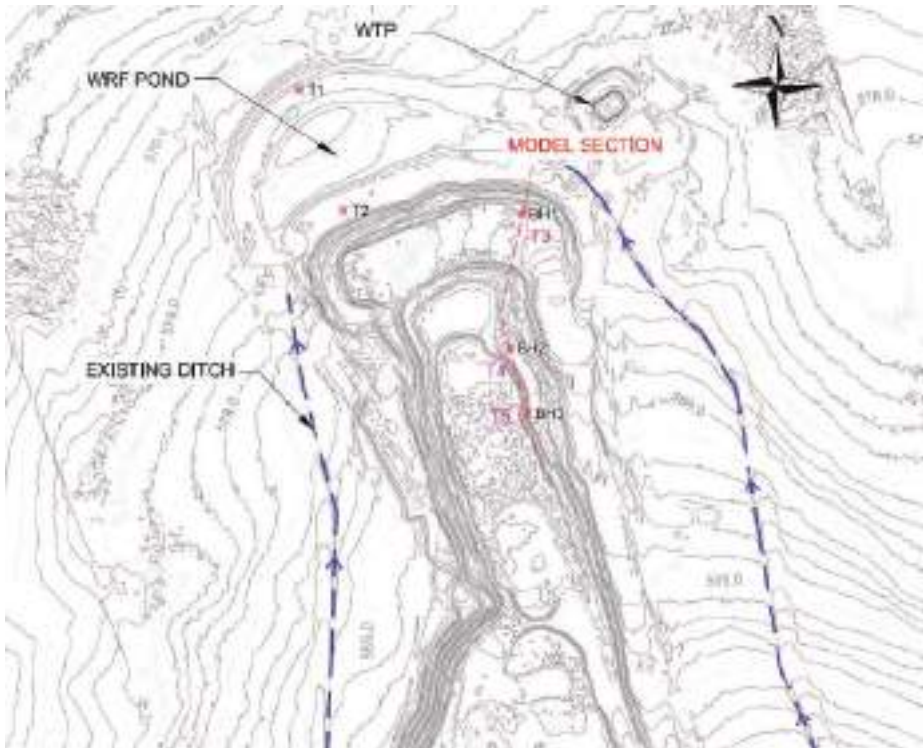


Figure 1: Instrumentation and thermal model alignment location

The combined data from the installed sensors supports review of the WRF thermal performance.

All instruments are currently functional except for the oxygen sensors at BH2 (damaged in August 2019) and 8 of the 26 thermistor nodes at BH2 (damaged September 2019). Baffinland will continue to maintain the installed instrumentation to the extent practical. Supplemental instrumentation is planned to be installed in 2024 to expand the monitored area and monitor temperature conditions in waste rock deposited after 2019. The instrumentation requirements will be reviewed regularly based on the results of site observations and measurements.

The portions of the pile monitored by the temperature probes in BH1, BH2, and BH3 remained entirely frozen throughout the monitoring period, except for the active zone within 2 to 3 m in depth, which is subject to seasonal freeze and thaw cycles (as observed at BH1, where limited additional rock was placed on top of the string).

The thermal regime of the pile is likely effected by a combination of seasonal variations in air temperature, preferential air flow through the pile, and localized heat generation associated with sulphide oxidation and/or mineral dissolution, but the fact that the pile remained mostly frozen during all times with a progressive cooling trend continues to indicate that the site cold climatic condition is the prevailing mechanism governing the thermal regime in the pile, as intended in the design.

5.2 Thermal Model Calibration

An update of the thermal model calibration was conducted for the same waste rock pile cross-section defined in 2019 along the alignment of boreholes BH1, BH2, and BH3, with the model geometry being adjusted to incorporate rockfill placed on the pile after June 2020, based on ground survey data provided by Baffinland for different dates from 2020 through 2022.

BH1 had little change in waste rock elevation over time and was used as the primary reference for calibration of the thermal model. Overall, the temperatures at surface and depth within BH1 were calibrated well. Deviations of measured results from predicted temperatures at certain depths along BH1 were due to the propagation of heat from a localized event observed in July 2020 that could not be captured in the model.

Difficulty calibrating surface nodes at BH2 and BH3 was due to the sensitivity of the thermal models to the exact date of material placement (i.e., progressive placement in the field vs. instantaneous placement in the models). In general, the models predicted warmer ground temperature compared to measured values along BH2 and BH3, but the model was able to replicate the cooling trend measured by the deepest nodes of thermistors installed along BH2 and BH3, as well as a slightly warming trend measured by the deepest node at the base of BH1.

5.3 Thermal Model Results

The thermal model update was run to assess the time for waste rock placed during summer and the subsequent winter to freeze back. Several model scenarios were tested to assess the impacts on the thermal regime when lift thicknesses and deposition timing were varied. The detailed model results are discussed under Appendix A2, and the main trends summarized below:

- All conceptual deposition schedules modelled eventually achieved and sustained sub-zero temperatures at the base of the waste rock lift. Ground temperatures at depth within both BH2 and BH3 continued to cool over time irrespective of the deposition schedule.
- The models suggest that between 5 m and 7 m of waste rock could be placed in summer and the entire thickness of material would freeze during the following winter.

- Waste rock placed in 5 m lifts during late summer (August and September), would still freeze in winter and allow for the deposition of more waste rock to the pile during winter of the following year (January to March), but early winter deposition on top of thicker lifts deposited in late summer should be avoided.
- Placing thicker lifts in early summer, and thinner lifts in late summer promotes faster cooling and allows for material deposited in late summer to freeze in the subsequent winter.

Updates to the thermal model will be carried out, as appropriate, to incorporate improved understanding of the WRF gained by the ongoing review of the WRF instrumentation data and as required to inform the waste rock deposition.

6.0 WATER BALANCE SUMMARY

The existing water balance for the WRF was updated in 2023 to consider new deposition to 2023 and in support of the water quality model (Section 7.0). The water balance was developed using the computer software package GoldSim (version 14.0). GoldSim is a graphical, object-oriented mathematical code where all input components and functions are defined by the user and are built as individual objects or elements linked together by mathematical expressions.

The water balance has been set to run various climatic conditions and considers WRF catchment areas changes over time to estimate the flows reporting the WRF Pond on a daily basis. WRF runoff was estimated for the following surfaces:

- unclassified waste rock (existing placed waste rock where survey is not available to differentiate PAG and non-AG materials)
- non-AG waste rock
- PAG waste rock
- direct precipitation to the WRF Pond
- runoff generated by precipitation on the WRF Pond walls; and
- prepared ground from the Water Treatment Plant (WTP) pad.

Inflow from the Deposit 1 sump was included in the water balance based on monitoring data collected and provided by Baffinland. The surface water flows reporting to the WRF Pond are the primary output from the water balance and provide input into the WRF water quality model.

The baseline dataset developed for the site was based on a combination of on-site monitoring data, Environment Canada and Climate Change (ECCC) meteorological stations and reanalysis data from the European Centre for Medium Range Weather Forecasts (ECMWF) Re Analysis (ERA5) dataset. ERA5 provides hourly estimates of atmospheric, land and oceanic climate variables by combining observations and atmospheric modelling to represent the current climate on a gridded basis.

These data sources were assessed based on data availability and geographical siting (i.e., elevation, distance from site, proximity to water bodies and land features) and compared to each other to develop the long-term dataset.

The Pond Inlet stations were considered the base station to represent the Mary River mine site. Other regional climate stations and ERA5 data were used to infill and extend the daily gapless dataset for period between 1940 to 2022. This long-term climate data set was used as input into the water balance.

Snow Runoff Model (SRM) was used to compute runoff and evaluate snow accumulation at the site. The SRM is a semi-distributed-conceptual model designed to simulate daily streamflow that support snow cover and associated snowmelt processes on a seasonal basis. The primary input variables for the model are temperature, precipitation, and snow cover area. The model uses this information, along with several other input parameters (i.e., temperature lapse rate, runoff coefficient [for rain and snow], degree-day factor, recession coefficient, critical temperature, rainfall-contributing area, and lag time) to calculate runoff (Abudu et al. 2012).

Runoff is estimated through the SRM hydrology module for the following land types:

- Natural Ground: The natural land type category includes natural and undisturbed areas.
- Prepared Ground: The prepared ground land cover includes hard-packed areas such as roads and plant site area.
- Waste rock: Includes the unclassified, non-AG and PAG waste rock types. Additional considerations are included in the water balance to calculate toe seepage within the waste rock that contributes to the flow reporting to the WRF Pond.

Lake evaporation is used in the water balance model to represent losses from pond surfaces. Lake evaporation was estimated using the Hargreaves-Samani (1982) method using daily minimum and maximum air temperature and site latitude (with the day of the year) to approximate radiation,

6.1 Water Balance Results and Recommendations

The water balance model was calibrated using the data collected from Baffinland between June 2020 until September 2022. The WRF Pond observed water levels recorded by Baffinland were used to adjust runoff coefficients for prepared ground and waste rock land types to match observed water levels. The simulated and observed WRF Pond water levels are shown in Figure 2.

For 2021, the predicted water levels are below the observed water levels. This is attributed to the Deposit 1 sump inflow reported by Baffinland by month instead of daily values. In the water balance a constant pumping rate was assumed for each month in 2021, therefore missing some of the peak inflows from the Deposit 1. For 2022, the water balance predicts water levels below the observed water levels during the summer with a similar trend.

The primary output from the water balance is the volume of runoff generated over each of the aforementioned surface types with time. The surface flows were calculated based on the conceptual waste rock deposition plans presented in Appendix A3. The results from the water balance under the three climate scenarios considered (100-yr wet, average and 100-yr dry) are presented as monthly flows in Figure 3, Figure 4 and Figure 5 respectively.

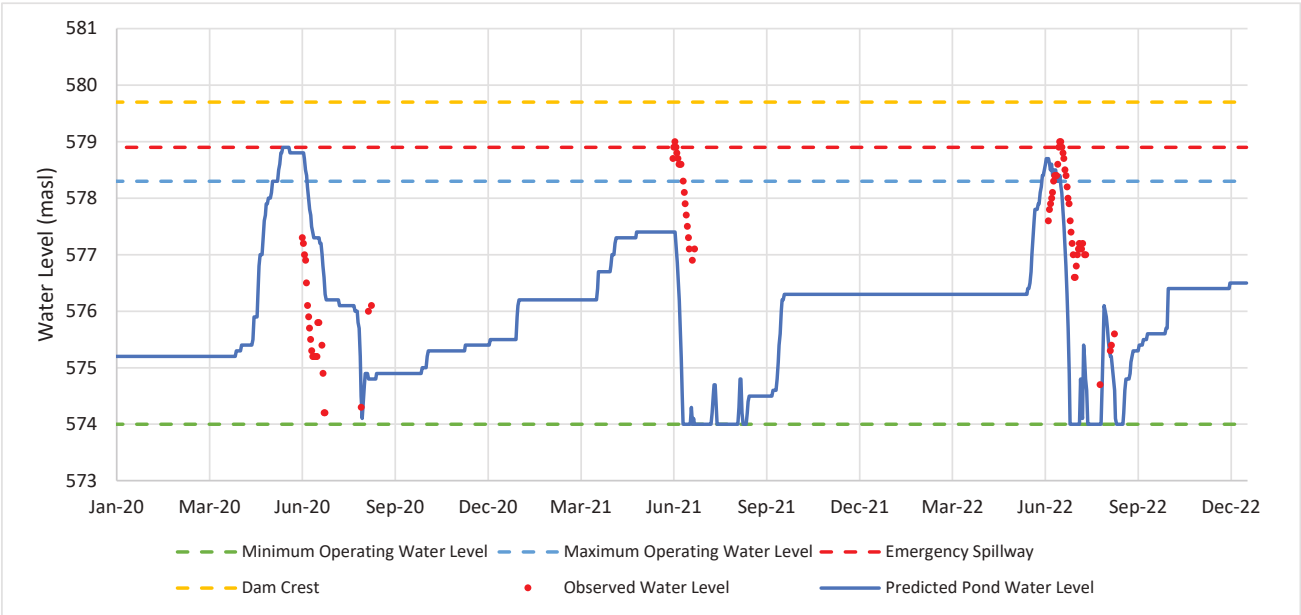


Figure 2: Predicted water balance water levels in WRF Pond (2020-2022)

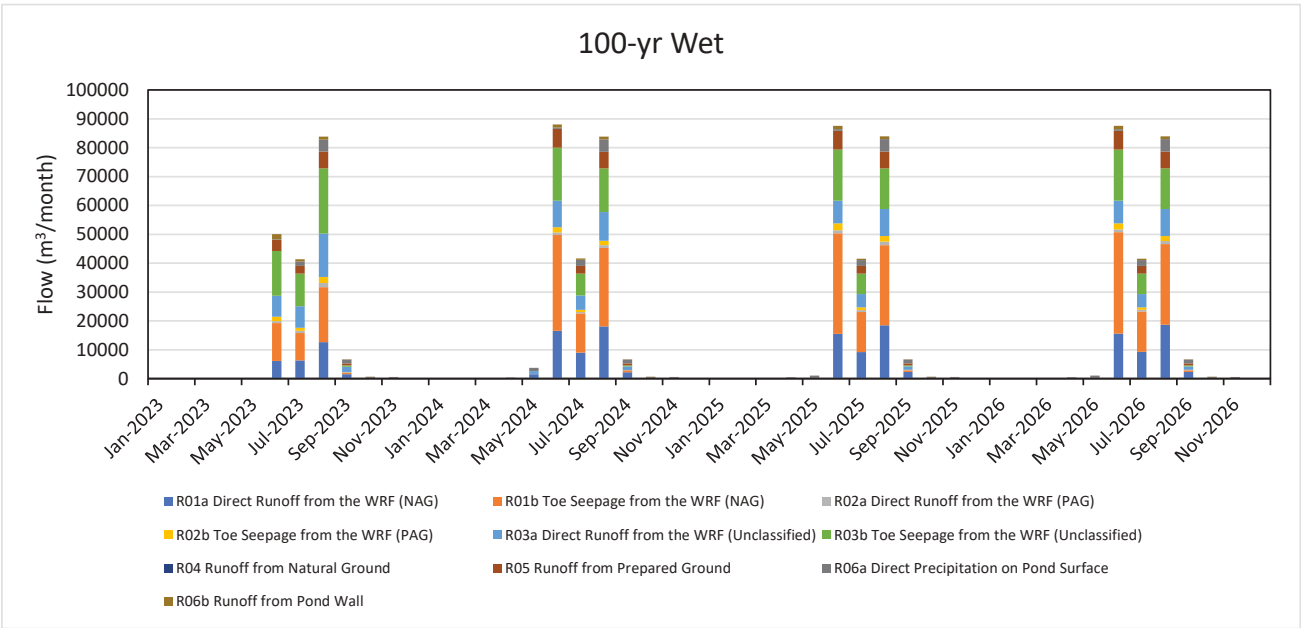


Figure 3: Monthly inflow to the WRF Pond by catchment type for the 100-yr wet scenario (2023 – 2026)

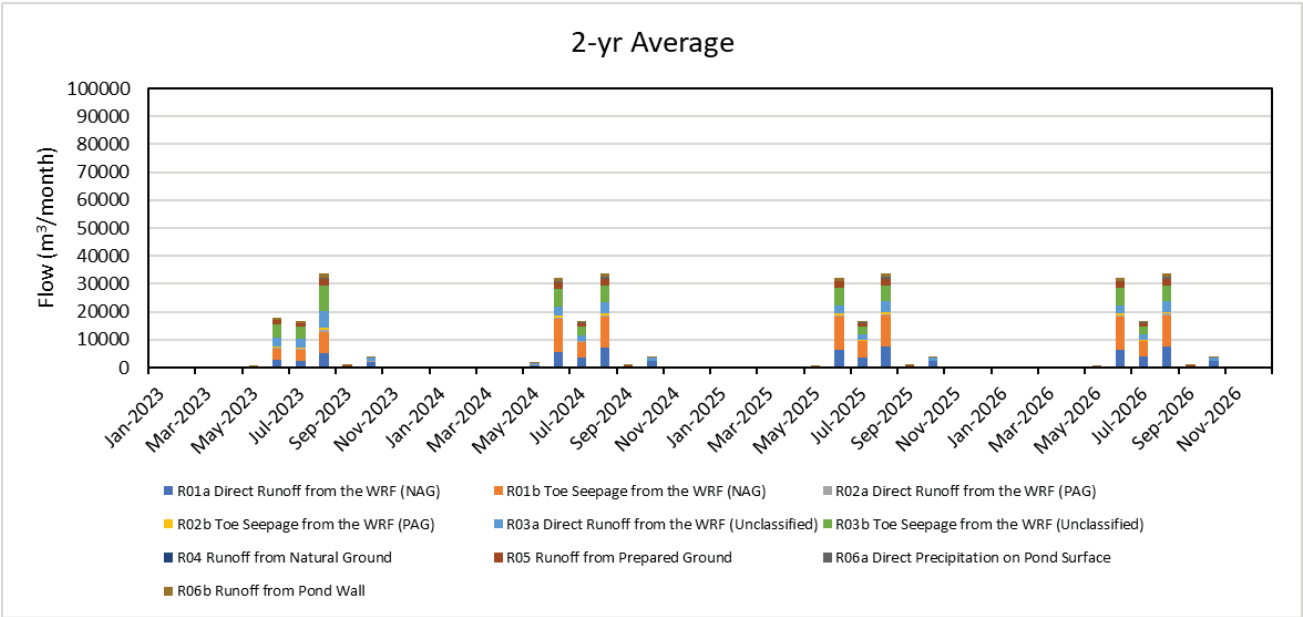


Figure 4: Monthly inflow to the WRF Pond by catchment type for the 2-yr average scenario (2023 – 2026)

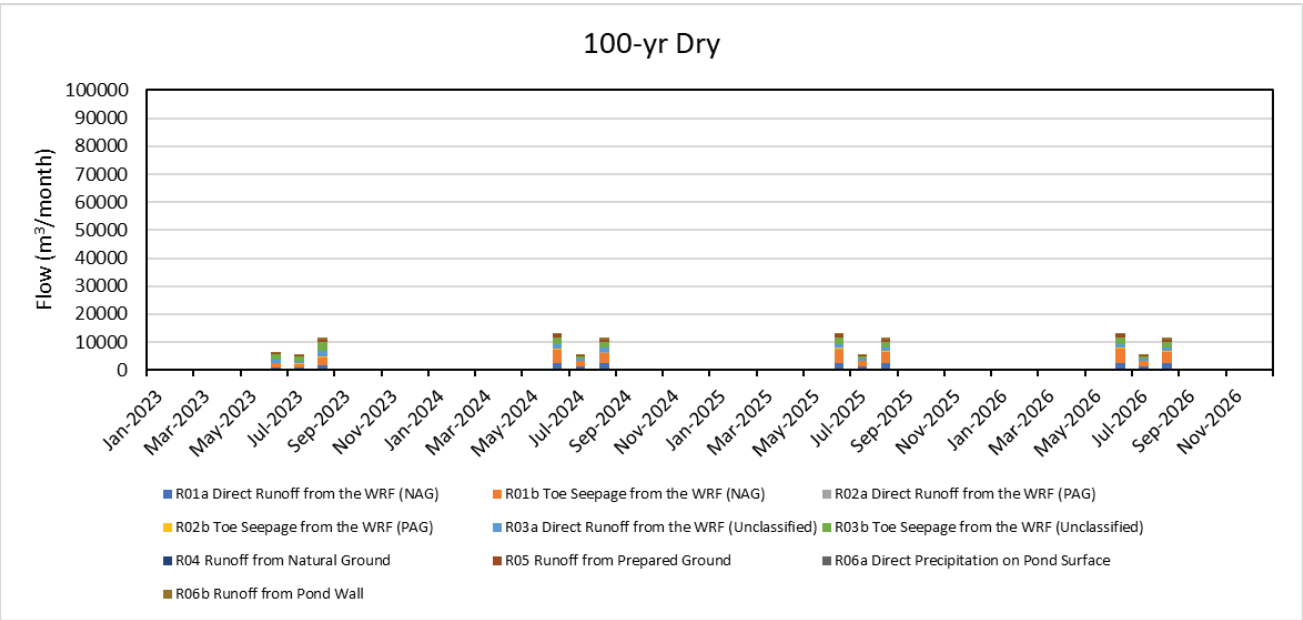


Figure 5: Monthly inflow to the WRF Pond by catchment type for the 100-yr dry scenario (2023 – 2026)

Overall, the updated water balance model was able to capture general trends and patterns with the WRF pond given the predicted waste rock deposition plan for the short future. The results predicted flow patterns and magnitudes from 2023 to 2026 under different climate scenarios.

Recommendations for the future include the following:

- Continue collection of monitoring data from the WRF water management system.
- Continue collection of climate data at the Mary River station.
- Collection of hydrometric data (ex. Staff gauge) for the east and west ditches for development of ditch rating curves.
- Investigate methods for collecting snowfall and snowpack within the WRF pond catchment and then implement.

7.0 WATER QUALITY MODEL SUMMARY

This 2023 water quality model update report (Appendix A4) includes discussion on the assumptions, inputs, and results related to integration of the 2023 water balance update (WSP 2023a) and 2023 geochemistry waste rock investigation results (WSP 2023b). The mitigation strategy defined for prevention of acid generation and metal leaching from the pile centers around freezing of the PAG waste rock during winter, with deposition of additional rock in summer to keep the frozen rock isolated from the active zone, which is subject to seasonal freeze and thaw. The water quality model assumes that flow from the WRF only occurs via direct runoff or as shallow interflow within the waste rock active layer. Updated catchment areas and land type proportions as provided by Baffinland and estimated from survey were included as was an update of the waste rock material balance to reflect the 2023 through 2026 Depositional Plan for the Project.

The purpose of the model is to forecast future WRF pond chemistry from 2023 through 2026 based on recent water balance model updates, geochemical source term updates and mine planning information. The model does not consider closure conditions, downstream water discharge toxicity, or environmental assimilative capacity, with addition assumptions and limitations as provided in Appendix A4.

Key results from the model are:

- The range of pH of the materials is assigned based on observed site conditions, considering the available neutralization potential and acidification potential of the relevant rock component blends (WSP, 2023b). The pH in the Expected Case ranges from 6.6 to 7.4 whereas in the conservative case a lower pH range of 4.5 to 6.5 is more likely. The actual pH values will vary substantially based on mitigation practices and site conditions, in particular mitigation measures in place to segregate and freeze the PAG rock and soluble sulphate minerals.
- Nickel is the most relevant parameter with respect to potential for exceedance of MDMER, however remains below the MDMER (2021) value of 0.25 mg/L for expected condition, with an expected median value of 0.1 mg/L.
- In general, WRF chemistry improves as a function of the proportion of available Non-AG rock, thus as the proportion of non-AG rock increases over time the water quality improves.

- Assuming up to 5% of material is misclassified as Non-AG rock when it is actually PAG rock (all other conditions remaining as expected) results in a median predicted Nickel value of 0.14 mg/L which is still below the MDMER guideline values.
- Nickel is the limiting parameter with respect to MDMER exceedances, with the next-most important/driving parameter being Copper. The conservative loading case is the only sensitivity analysis that exceeds the more recent 2021 MDMER guideline value of 0.25 mg/L Nickel, with a median Nickel concentration of 0.4 mg/L. The current operational limit of 0.5 mg/L is only exceeded for brief periods of time under this conservative scenario.
- Results indicate that the model is sensitive to the acidity and elevated metals that resulting from PAG materials, should strongly acidic conditions develop in all of the exposed PAG materials (not currently observed ore expected under current mitigation practices). Under those acidic conditions for all PAG materials, then the 2021 MDMER guideline for nickel will be exceeded, with a predicted median nickel concentration of 0.4 mg/L.
- The model results suggest additional consideration should be given to parameters Sulphate, Be, Cd, Co, Cu in order to demonstrate no acute toxicity, as is necessary under MDMER prior to environmental release to a water body.

The conclusions based on the 2023 water quality model update are:

- Key drivers of WRF Pond chemistry are the quantity and quality of the runoff and seepage of the WRF, particularly the acidity and metal loading. Nickel concentration is a key driver with respect to MDMER potential for exceedance and requirement for treatment prior to discharge.
- The WRF pond chemistry was evaluated as a function of expected non-AG vs PAG material placement over time and indicates that the requirement to treat to meet MDMER guideline values diminishes with the reduction in the amount of PAG materials available to react or provide source term loading in the pile. The required reductions in availability of PAG materials are expected to be achievable through ongoing mitigation efforts that primarily involve material segregation and freezing in the pile as demonstrated by improving observed conditions in ongoing water quality monitoring as presented in WSP 2023b.
- The potential uncertainty within the model was investigated through use of conservative assumptions and by performing sensitivity analyses. The results of these analysis show that it is necessary to limit the potential for development of strongly acidic conditions in the pile through material segregation and freezing. Provided strongly acidic conditions are not allowed to develop, some misclassification of PAG materials as non-AG (up to 5%) and placement of PAG materials in non-AG areas is not expected to result in MDMER exceedances for specified parameters.
- Based on the conservative case assessment it is necessary to limit the potential for generation of acidity within the pile through continued mitigation measures. Further, the possibility of generation of acidity, particularly within the thermally active zone at the final edges and surface of the pile must be minimized through strict adherence to operational guidelines that consider the geochemistry of the placed materials.
- Treatment is not predicted to be required when strictly considering the MDMER defined parameters arsenic, copper, nickel, lead and zinc. Although the model results are compared to MDMER, the results are not representative of discharge to the receiving environment or the final discharge point regulated under MDMER. Additional review of the assimilative capacity of the environment and desktop evaluation and/or to confirm no

acute toxicity would be required under MDMER prior to environmental release to a water body or receiving environment.

8.0 WRF WATER MANAGEMENT

The following section discusses the current WRF water management practices and related construction activities carried out since the December 2019 WRMP (Golder, 2019c).

8.1 Runoff Management and Water Treatment

In compliance with Baffinland's Type A Water License, runoff from the WRF and surrounding disturbed area are collected in a network of ditches and directed towards the WRF Pond. Dewatering from Deposit 1 is also discharged into the WRF Pond. Clean, non-contact water from upstream of the WRF is diverted around the WRF by diversion berms. In addition, as part of Baffinland's snow management plan, clean snow is stockpiled in designated areas outside of the WRF Pond catchment to limit clean melt water from reporting into the WRF Pond.

Baffinland continues to maintain and operate a WTP to allow for treatment of surface runoff collected at the WRF Pond prior to discharge to the receiving environment.

Discharge from the WTP and/or WRF shall not exceed the effluent quality limits set-out in Part F, Item 24 in Type A Water License 2AM-MRY1325 and site-specific indicators shown in Table 2 below.

Table 2: Discharge Performance Indicators and Thresholds

Indicator	Units	Maximum Concentration of Any Grab Sample
pH		6.0 < pH < 9.5
Arsenic	mg/L	0.5
Copper	mg/L	0.30
Lead	mg/L	0.20
Nickel	mg/L	0.50
Zinc	mg/L	0.5
TSS	mg/L	15
Oil and Grease		No visible sheen
Toxicity		Non-Acutely Toxic

Any contaminants of potential concern identified from on-going testing will be measured to provide temporal data on effluent quality that could potentially affect the receiving water quality.

Baffinland has implemented an Aquatic Effects Monitoring Plan (AEMP) to monitor environmental effects of effluent discharge to the receiving environment at Mary River. Results of the AEMP can trigger additional adaptive management actions such as further treatment of the WRF Pond effluent, if required.

9.0 WRF DESIGN CRITERIA

The following design criteria have been developed giving consideration to the criteria established under the LOM WRMP (Baffinland, 2014):

- Runoff and seepage from the WRF will be collected at the WRF Pond. Collected flows can be treated if required to comply with requirements of the Type A Water License 2AM-MRY1325 and MDMER.
- The WRF will be developed in a manner conducive to permafrost aggradation.
- The following conditions define the WRF geometry (Baffinland, 2014):
 - Overall external side slopes of 2H:1V. Exterior slopes will be benched with inter bench slopes of 1.5H:1V.
 - Minimum crest width of 25 m.
 - The perimeter of the WRF will be a minimum of 31 m from any water body.

Additional criteria are necessary to achieve the WRF development strategy to minimize release of acidity and limit ARD production as described in Section 4.0.

10.0 WRF DEVELOPMENT STRATEGY

The primary objectives of WRF development are safety of personnel and the environment, and long-term physical and chemical stability. Thin lift deposition of waste rock is expected to create a more homogenous stockpile and reduce segregation that may create preferential air and water flow paths throughout the stockpile (i.e., reduce flow channelization and potential for oxygen supply to PAG materials). Waste rock placement locations and lift thickness also focus on the continuous development and raising of permafrost within the WRF. It is expected that permafrost aggradation will provide an effective barrier to acid-forming reactions as absence of oxygen and water supply limits potential for sulphide oxidation and ARD transport, and the rate of sulphide oxidation is greatly reduced at low temperatures.

The following WRF development strategies were initially presented in the Interim Waste Rock Management Plan in March 2019 (Golder, 2019a) and remain mostly applicable, with adjustments and additions made based on the experience gained since then:

- **Footprint expansion:** The first lift of the WRF on native ground shall be Non-AG waste rock. Waste rock placement over native ground shall be carried out in the winter to the extent practicable. As a minimum, the lift should be allowed to freeze prior to layering activities. Maintaining a frozen base and perimeter is expected to reduce potential for seepage.
- **Stockpile expansion construction:** Waste rock placed over an area of new WRF expansion shall be carried out in a manner conducive to aggrading permafrost, to limit potential for further development of ARD.
- **Material separation:** PAG and Non-AG waste rock placement locations at the WRF shall be documented. Non-AG material that may be intermixed with PAG material shall follow the waste rock deposition strategies for PAG material.

- **Stockpile exterior face:** PAG waste rock shall be placed 4 m (minimum) interior from ultimate and temporary stockpile faces to conservatively maintain the PAG material interior from the permafrost active zone which has been measured up to 2.9 m in thickness.
- **Lift thickness:** Waste rock placement to target a maximum 5 m lift thickness during a single deposition event. This lift thickness has been established to reduce the potential for waste rock segregation during placement while remaining operationally feasible with the available equipment. Reducing the segregation of deposited waste rock is expected to reduce the potential for the development of preferential water and air flow paths that can deliver water and oxygen to PAG waste rock.
- **Successive lift placement:** Placement of successive waste rock lifts shall consider the waste rock and environment conditions as described below:
 - When the waste rock temperature at the time of placement is below 0°C, successive lifts may be continuously placed over a given footprint.
 - During summer deposition, when the waste rock temperature is greater than 0°C, a total maximum of 7 m of successive lifts should be placed at a given location. To the extent practical, thicker lifts should be placed in early summer, and thinner lifts should be placed during late summer to promote faster cooling, and to allow for material deposited in late summer to freeze faster in the subsequent winter.
 - When the waste rock temperature is above 0°C and the air temperature below 0°C, to the extent possible, the surface of the waste rock should be kept clear of snow as required to promote freezing prior to placement of the subsequent lift.
 - To the extent possible, the deposition of successive lifts should occur in such a way that prevents the formation of depressions or low points with a difference in elevation between adjacent areas greater than 7 m. End-dumping waste rock to fill depressions will typically cause waste rock segregation that could potentially serve as a preferential flow path for air and water.
- **Capping winter PAG placement:** To the extent practicable, PAG waste rock shall be covered with a minimum of 3 m of waste (PAG or Non-AG) before the next summer.
- **Capping PAG placement:** To the extent practicable, PAG waste rock, irrespective of winter or summer deposition, shall be covered with a minimum of 3 m of waste (preferably non-AG) within 12 months of initial placement. In all cases, PAG waste rock must be covered with a minimum of 3 m of waste (preferably non-AG) within 24 months of initial placement.

11.0 WASTE ROCK VOLUMES AND DEPOSITION PLAN

The WRF development considers winter (October through May) and summer (June through September) deposition. These periods have been defined based on climatic records from the Mary River meteorological station (Golder 2018). The projected quantities of waste rock to be stored at the WRF during each deposition period based on the mine plan provided by Baffinland are summarized in Table 3. The total waste rock volume for disposal at the WRF from June 2023 through September 2026 is estimated to be 6.65 Mm³. These values may change as the mining plan may be revised to reflect operational requirements.

Table 3: Summary of waste rock volumes by deposition season

Deposition Period	Total Waste Rock Loose Volume (Mm ³)	Total Non-AG Loose Volume (Mm ³)	Total PAG Loose Volume (Mm ³)
June through September 2023	0.68	0.61	0.07
October 2023 through May 2024	1.2	1.10	0.10
June through September 2024	0.55	0.51	0.04
October 2024 through May 2025	1.19	1.09	0.10
June through September 2025	0.62	0.57	0.05
October 2025 through May 2026	1.54	1.41	0.14
June through September 2026	0.86	0.79	0.08

Conceptual waste rock deposition plans were prepared by Baffinland for each season presented in Table 3, and are presented in Appendix C. The conceptual waste rock deposition plans were used as input into the water balance (Section 6.0) and water quality (Section 7.0) models. The actual waste rock deposition locations are expected to vary, and will be determined by Baffinland based on operational requirements, following the design criteria and development strategies presented under Sections 9.0 and 10.0.

12.0 DISCUSSION AND RECOMMENDATIONS

It is acknowledged that, while Baffinland has undertaken recent actions to address the occurrence of ARD and ML at the WRF, operation of a WRF water treatment plant will continue for the interim, until it's clear that there is negligible risk for required water treatment. In general, as discussed in Section 7.0, WRF chemistry improves as a function of the proportion of available Non-AG rock, thus as the proportion of non-AG rock increases over time the water quality improves. Nickel is the most relevant parameter with respect to potential for exceedance of MDMER. Assuming up to 5% of material is misclassified as Non-AG rock when it is actually PAG rock (all other conditions remaining as expected) results in a median predicted Nickel value of 0.14 mg/L which is still below the MDMER guideline values. It is noted that the PAG rock from the existing WRF comprises a small percentage of the total expected tonnage of waste rock to be deposited over the life of mine and will be fully encapsulated prior to closure. The lessons learned from the early stages of the WRF development have been applied and will continue going forward to reduce potential for further ARD and ML development as the WRF expands.

It is Baffinland's intent to construct the WRF in a manner that results in freeze back of summer placed waste rock by the following winter. Additional expansions of the WRF will be required to allow for optimal waste rock placement for short-term permafrost aggradation. It is recommended, that planning of subsequent WRF and water management expansions should be advanced to provide increased flexibility for waste rock deposition.

While it is desirable to achieve freeze back of waste rock within 1 year following placement, it is not a strict requirement to achieve geochemical stability. As noted under Appendix A1, the results of humidity cell testing indicates that sulphide oxidation and onset of strong acidic conditions may be delayed under the proper conditions (AMEC 2017). To the extent possible, PAG waste rock placed during winter should be covered with a 3.0 m thick (minimum) layer of waste rock (preferably non-AG) before the next summer. PAG rock, irrespective of winter or summer deposition, should be covered within 12 months of initial placement, and no longer than two years after deposition with a minimum of 3 m of waste rock (preferably non-AG). Alternating PAG and Non-AG layers will increase buffering, and the Non-AG cover will reduce runoff from PAG waste rock which, as noted in Section 7.0, is the primary contributor of low pH and elevated metal loadings runoff from the WRF.

Ongoing thermal and water quality performance evaluation of the WRF will continue in order to confirm the long-term waste rock deposition strategy and improve the understanding of the WRF thermal performance. The installation of additional instrumentation will be considered as the WRF expands to verify the WRF performance. A longer-term review of the waste rock deposition, integrated with construction of the life of mine water management structures, expansion of the WRF ditch network, and the life of mine waste rock production schedule is recommended to be able to continue to develop and refine the WRF management strategy.

13.0 LIMITATIONS

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14.0 CLOSURE

Should you have questions or concerns regarding the content of this report, please do not hesitate to contact WSP.

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APPENDIX A1

2020 to 2022 Waste Rock Geochemistry Report



REPORT

2020 to 2022 Waste Rock Geochemistry

Baffinland Iron Mines Mary River Project

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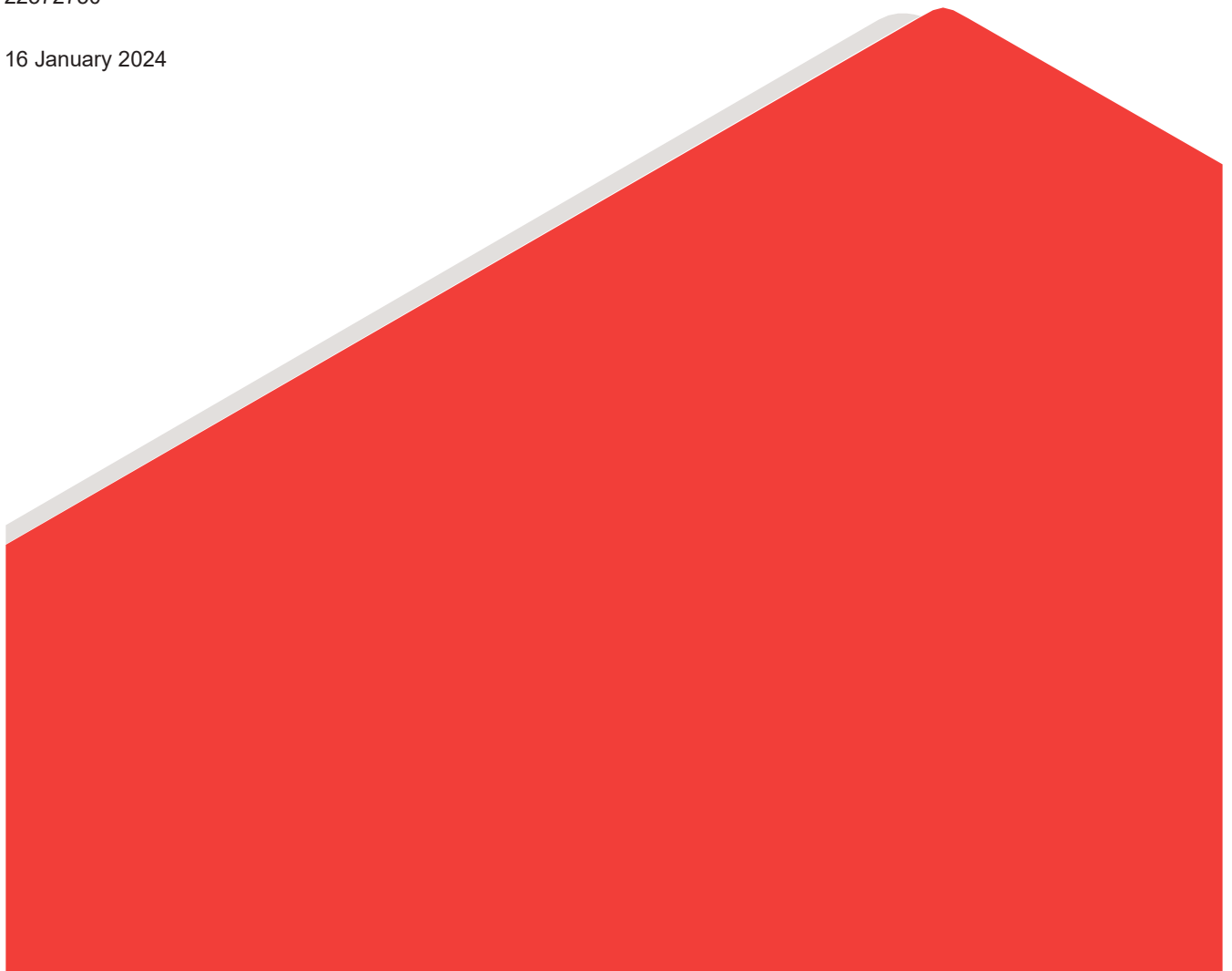
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APPENDICES

APPENDIX A

Sample Locations and Results of On-Site Analysis of Blasthole Cuttings (BIM 2023)

(Data Available Electronically on Request)

APPENDIX B

Sample Summary and Analytical Results of Split Sample Off-Site Analyses (2020 through 2022)

APPENDIX C

Summary Seepage and Runoff Water Quality Sampling Results from the WRF (2018 through 2022)

APPENDIX D

Laboratory Certificates of Analyses for Off Site Analyses of Split Samples (2020 through 2022)

1.0 INTRODUCTION

Baffinland Iron Mines Corporation's (Baffinland) Mary River Project (the Site) is an operational iron mine on Baffin Island in Nunavut, Canada. Baffinland has retained WSP Canada Inc. (WSP) to assist with developing an updated Waste Rock Management Plan (WRMP) for deposition of Potential Acid Generating (PAG) and Non-potentially Acid Generating (Non-PAG) waste rock at their Waste Rock Facility (WRF).

This geochemical monitoring update report provides a review of results of geochemical sampling completed from 2020 through 2022. Results were collected following guidelines developed subsequent to geochemical test work and review completed in 2018 which identified dissolution of soluble sulphate minerals as a potential cause of observed acidity within the waste rock material. The current investigation includes review of 8603 samples that included measurements of total sulphur and paste pH from on site as well as review of results from a subset of 396 supplemental samples sent for additional analysis. Site water quality measurements were also reviewed for potential metal leaching and acidity trends.

2.0 GEOCHEMISTRY BACKGROUND

Geochemical characterization to assess the potential for metal leaching and acid rock drainage in waste rock at the Baffinland Mary River site has been addressed in multiple reports since 2006.

Previous geochemical characterization reports are summarized in Table 1.

Table 1: Previous Geochemical Reports

Document	Date
Environmental Characterization of Deposit No. 1 Waste Rock, Ore & Construction Materials (Knight Piésold 2008)	18 December 2008
Mine Rock ML ARD Characterization Report Deposit 1 Mary River Project (BIM 2014)	26 March 2014
Waste Rock Geological and Geochemical Characterization Program (2012 to 2014) [January 2012] - Appendix 3 to Life-of-Mine Waste Rock Management Plan Rev 0 (BIM 2012)	30 April 2014
Mary River Deposit 1,5-Year Pit ML/ARD Characterization Rev 1 – Issued for Phase 1, WRMP [April 2014] (AMEC 2014)	30 April 2014
2016 Review of Mine Rock Humidity Cell Program (AMEC 2016)	24 March 2016
2017 Review of Mine Rock Humidity Cell Program (AMEC 2017)	15 March 2017
Ongoing Humidity Cell Testing – Review and Recommendations for Path Forward (Golder 2018)	08 May 2018
2019 Geochemistry Waste Rock Investigation Results – Baffinland Iron Mines Mary River Project (Golder 2019)	31 December 2019

Of the several previous geochemical studies, the report from 2014 (BIM 2014) is considered to be reasonably representative of the overall Deposit 1 characteristics, whereas the 2018 and 2019 data and report were focused on specific aspects of the deposit related to more clearly defining ARD criteria. When comparing the current dataset to background data, the 2014 dataset is used to represent historical data. Each of the key study periods is briefly described below.

2006 to 2008

The historical geochemical context prior to 2014 is summarized in the BIM 2014 document. Between 2006 and 2008 a total of 125 samples of waste rock, ore and overburden were collected, analyzed and reported by Knight Piésold (Knight Piésold 2008). The 2008 study results showed 9% of footwall, and 12% of hanging wall samples

had an NPR of less than 2 and that several parameters were susceptible for leaching, in particular aluminum, barium, iron and manganese in some footwall samples. Ten humidity cell tests were operated during this period as discussed in later reports.

2008 to 2014

The BIM 2014 ML/ARD report on Deposit 1 considers and discusses results from 776 waste rock samples collected between 2010 and 2012 subdivided between the structural and lithological distributions on site. Static testing completed on these samples included ABA, NAG, pH, and elemental analysis, with a subset of testing submitted for short term leach tests, mineralogical analysis and kinetic testing.

Kinetic testing was completed on 27 waste rock samples including the 10 samples from 2008 and 17 additional samples initiated in 2011. The kinetic test results presented in BIM (2014) included nine standard humidity cell tests and eight humidity cells that used NP depleted samples (to assess mineral reaction rates and acid buffering capacity in the absence of carbonate NP).

The static testing results noted that waste rock generally has low neutralization potential (NP). Sulphur is primarily in the form of sulphide and the deposit typically had low acid potential (AP). Samples classified as potentially acid generating (NP/AP ratio less than 2) typically had sulphide content greater than 0.5%. It was observed that sulphide content was typically greater in the HWS and FWS which are located in closer proximity to the ore zones.

The 2014 study results showed, based on an NPR of less than 2, that approximately 10% of samples classified as PAG and 5% as uncertain, whereas this number was considerably higher (up to 52%) when considering carbonate NPR (CaNPR). The study concluded that the NAG pH results support the use of an NPR threshold of <2 as reasonable to define Non-PAG materials. When considering the waste rock model, the 2014 study indicated approximately 11% of rock could be expected to be PAG based on NPR less than 2. The study did identify a "short term risk of ML/ARD" occurring with upper regions or just above the High-Grade Magnetite Iron Formation however failed to identify the cause, which was later identified as observation of the presence of soluble sulphate minerals (e.g., melanterite) (Golder 2019).

Guidance on PAG waste rock management was also detailed in BIM (2014) which indicated that a total Sulphur cut-off of <0.2% to define Non-PAG material was the most appropriate approach to prevent PAG waste rock being identified as Non-PAG. Using the sulphur cut-off, opposed to NPR <2, was considered conservative in that it would result in greater in life of mine projected PAG quantities while still correctly classifying material as PAG or Non-PAG.

2014 through 2019

Humidity Cell Testing (HCT) updates were presented in several technical memorandums (AMEC 2016; AMEC 2017; and Golder 2018). Humidity cell tests are long-term kinetic tests in which leachate from subsequent wetting and drying cycles on samples of waste rock is collected and analysed to evaluate potential for geochemical weathering and resulting drainage quality. Ten HCTs were run for 53 weeks in 2008 and 2009. Nineteen were initiated in 2011 and 2014, including nine standard humidity cells, two standard humidity cells with mineralized waste, and eight carbonate depleted humidity cells. These HCTs were run between 170 and 356 weeks.

Humidity cells initiated in 2011 and 2014 mostly exhibited pH between 5.5 and 7, though 3 had slowly declining pH to minimums of 4.5 and 5 after about two years. Metal and sulphate release were found to be low, though concentrations of Cd, Co, Cu, Ni, Pb and Zn were highest in HCTs with pH less than 5. Most PAG HCTs presented weakly acidic leaching (e.g., $6 > \text{pH} > 4.5$) within 20 to 30 weeks of initiation suggesting that PAG material could produce weakly acidic runoff within the first of year of placement if stored within the active zone. However, the onset of moderate to strongly acidic conditions (e.g., $\text{pH} < 4.5$) was estimated by AMEC (2017a) to take at least 20 years in the absence of other mitigating factors (e.g., temperature).

Observed metals that produced elevated concentrations in the HCTs were consistent with the observed elevated metals in the WRF runoff water quality at Site between 2017 and 2019, however the concentrations are not in agreement with concentrations of some metals (e.g., Nickel) being higher in the WRF runoff compared to the HCT results. In addition, the WRF runoff was observed to have elevated sulphate and iron that has not been observed in the HCT data. Due to the inconsistencies, the remaining active HCTs were terminated, and a field-based monitoring approach was developed in 2019 as detailed in Golder (2019).

A geochemical investigation was completed in 2019 with the sampling consisting of the collection of 29 borehole samples from four boreholes and one test pit from the WRF and 40 blasthole samples from the standard production blasthole sampling program in Deposit 1. The blasthole investigation focused on samples with total sulphur contents $<0.25\%$ to determine if these low sulphur samples contained soluble sulphate minerals that would release acidity. The purpose of the sampling was to better characterize the waste material in the WRF in the vicinity of poor runoff water quality and to assess the presence and effect of soluble sulphate minerals in waste rock classified as Non-PAG. All samples were sent for static geochemical analysis, including elemental analysis (by ICP-MS), acid-base accounting (ABA) and shake flask extraction (SFE).

From the 2019 samples, a total of seven samples including four samples classified as Non-PAG and three samples classified as PAG (based on current segregation criteria) had either paste or SFE pH values below 6 suggesting some stored acidity within these samples. In terms of metal leaching potential, samples with higher levels of total sulphur ($>0.25 \text{ wt}\%$) tended to have lower pH, higher Ni and higher Cd in SFE when compared to samples with lower sulphur content. Nickel concentrations show a general increase in concentrations with decreasing pH values in SFE results while other parameters had no discernible trends.

The 2019 program concluded that classification of PAG waste should consider both total sulphur evaluation coupled with paste pH evaluation, and that waste should be encapsulated within frozen portions of the WRF to reduce the potential for release of acidic water resulting from the presence of soluble sulphate minerals.

3.0 GEOCHEMISTRY UPDATE

BIM continues to sample the expected waste materials and conduct analysis for paste pH and total sulphur routinely as part of ongoing operations. Geochemical sampling is conducted by BIM staff on blasthole cuttings at regular intervals prior to blasting and hauling. A subset of these operational samples are also sent off-site for additional analysis at a rate of one blasthole sample per 40,000 tonnes of blasted waste material. The current geochemistry update includes a review of data collected by Baffinland from 2020 through to the end of 2022. The data contemplated in this report were provided electronically by BIM in March of 2023 and includes:

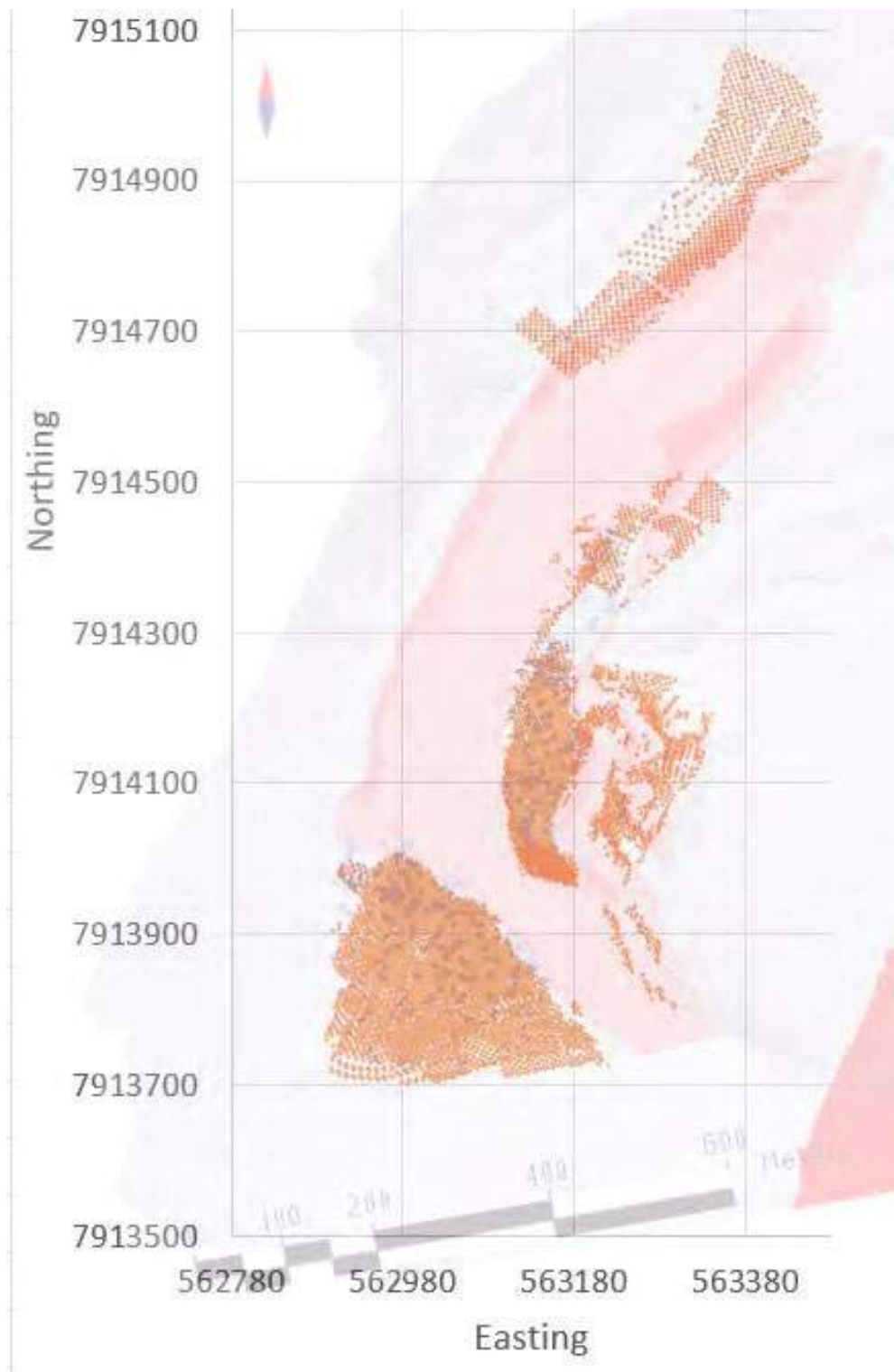
- On-site test results from the 8603 blasthole samples that included paste pH results and XRF results for total sulphur and several parameters reported as oxides (Al_2O_3 , CaO , Fe , FeO , K_2O , MgO , Mn , Na_2O , TiO_2 , P , SiO_2 , Fe_2O_3) as available from 2020 through to the end of 2022 (Appendix A).

- Analytical laboratory test results on 396 samples (a subset of the above samples) that were submitted for additional off-site laboratory analysis between 2020 and the end of 2022 (Appendix B).
- Results of seepage and runoff water quality from the vicinity of the WRF from 2018 through 2022 (Appendix C).

The Laboratory certificates for the 396 split samples analysed off-site are presented in Appendix D.

3.1 Sample Distribution

Testing of the larger set of 8603 operational samples was completed for decision making on site, as such lithological information for these samples is not included in the database, however it is considered that the 396 supplemental samples submitted for additional laboratory analysis provide a reasonable representation of materials encountered for each year contemplated. Figure 1 presents the spatial distribution of the 8603 geochemical samples where paste pH data was available in relation to the current Deposit 1 mining area ore solids shown in red. The location of the 396 supplemental samples is provided in Figure 2 and a summary by lithology is presented in Table 2, and the details for these samples are provided in Table B1 in Appendix B.



Note: Not to scale – provided for illustration only, paste pH locations are shown in orange overlying ore and split sample locations (blue).

Figure 1: Spatial Distribution of 2020 to 2022 On-Site Analysis Locations



Note: Ore solids are shown in red with transparency for reference; sample locations are in blue

Figure 2: Spatial Distribution of 2020 to 2022 Blasthole Samples Submitted for Off-Site Analysis

Table 2: Number of Split Samples Based on the Sample Lithology and Collection Year

Lithology	2020	2021	2022	Total
Footwall schist	7	16	3	26 (7%)
Footwall waste	28	86	66	180 (45%)
High grade iron oxide	5	8	0	13 (3%)
Overburden	13	5	9	27 (7%)
Unclassified	6	8	1	15 (4%)
Undifferentiated gneiss/schist/ amphibolite/ultramafics	28	66	41	135 (34%)
Total	87	189	120	396 (100%)

Note: Percentages provided are percentage of samples from a lithology relative to total number of samples

3.2 Laboratory Analysis Methods

On-site testing was completed by Australian Laboratory Services (ALS) and included paste pH as well as, total S and whole rock analysis by XRF and a subset of total carbon and total S by LECO furnace. The splits from the on-site testing as identified in Section 3.1 they were sent to ALS in Vancouver for analysis using test methods as described in this section.

These samples underwent testing to determine acid generation potential, short term acidity and metal leaching potential which included the following:

- Acid base accounting (ABA – paste pH, sulphur species, (including total sulphur, sulphate sulphur, and sulphide sulphur), bulk NP, inorganic carbon) to inventory the AP and NP present in each sample, and
- Shake Flask Extraction (SFE) leach test performed according to the method described in Price (1997) and MEND (2009) and is used to assess short-term metal leaching potential.

3.2.1 Acid-Base Accounting

Acid-base accounting was performed to evaluate the acid generation potential. As part of ABA, the bulk quantities of acid generating minerals (e.g., sulphide minerals) and acid neutralizing minerals (e.g., carbonate minerals) are measured to assess whether the materials tested will have sufficient capacity to neutralize acidity or if the materials have the potential to generate acidity. The methodology performed on the samples is a modified Sobek method (Sobek et al., 1978) that includes analysis for paste pH, sulphur species, acid potential (AP), neutralization potential (NP) and inorganic carbon.

Paste pH

On-site paste pH was conducted as per the GARD guidelines and consisted of mixing approximately equal quantities of solids and water and measuring the resulting pH of the liquid.

Acid Potential (AP)

The acid potential (AP) represents the bulk amount of acidity that can be produced. The AP is based on sulphur content and determined by calculating the amount of acid that could be produced if all sulphur is converted to sulphuric acid (H_2SO_4). It is used as a predictive tool to determine the total amount of acid that could be generated through oxidation reactions during weathering, however, in reality - under natural conditions - not all sulphur will necessarily oxidize to produce acid due to limiting factors such as oxygen availability or mineral availability within the rock. The AP for the data is calculated from the total sulphur content opposed to sulphide-sulphur since it is known at Baffinland that total sulphur concentrations also include reactive forms of sulphate. It should be noted

that although the dissolution of sulphate minerals can contribute some AP in the short-term, sulphate minerals do not generally contribute to the long-term acid generation potential of a material. Therefore, calculation of AP using the total sulphur content is considered a reasonably conservative estimate.

Neutralization Potential (NP) and Carbonate Neutralization Potential (CaNP)

The neutralization potential (NP) represents the bulk amount of acidity that the sample can potentially consume or neutralize. The “bulk” NP is determined by acidifying the sample with sulphuric acid. Following the acidification of the sample, the amount of acid that is consumed during the test period is determined by a reverse titration. Negative NP values indicate that samples that contain stored acidity in the form of soluble phases that contribute acidity upon dissolution.

The carbonate neutralization potential (CaNP) is a calculated value that represents the bulk amount of acidity that the sample can potentially consume through the dissolution of carbonate minerals. The CaNP is calculated from the carbonate content (wt % as CO_3). The effectiveness of CaNP can be influenced by some carbonate minerals such as siderite that contribute to the carbonate content of the sample but do not contribute to the buffering capacity of the material.

The NP and CaNP are typically compared for the purpose of evaluating the mineralogical source of NP in a sample. The difference between the NP and CaNP is that the NP represents the ‘bulk’ neutralization potential, whereas CaNP is solely based on the carbonate content of a sample. Thus, in addition to the consumption of acid by readily soluble carbonate minerals, the ‘bulk’ NP incorporates the consumption of acid by less soluble, slower reacting, aluminosilicate, silicate and/or other minerals. If the NP is approximately equal to the CaNP, the NP is likely attributable to the dissolution of carbonate minerals. In cases where the NP is significantly greater than CaNP, the NP could be overestimated due to the partial dissolution of the less soluble, non-carbonate minerals. The rate of aluminosilicate or silicate mineral dissolution may be too slow to provide effective neutralizing capacity depending on the ambient field conditions. However, aluminosilicate and silicates can be the predominant neutralizing mineral phases under low-pH conditions or where water-rock interaction times are long.

3.2.2 Short-Term Leach Tests

Short-term leach tests are commonly used as a qualitative screening tool to identify elements of potential environmental concern and to assist with the selection of samples for additional testing if required. The results of short-term leach tests do not directly translate to the expected environmental behaviour of materials due to:

- relatively small sample size and volume;
- the short duration of the test that may not be sufficient to account for representative water-rock interaction times and mineral reaction rates (i.e., sulphide oxidation);
- the enhanced dissolution of some mineral phases due to lab-imposed conditions (i.e., pH, redox, agitation); and
- ambient conditions that differ from laboratory conditions.

Although there are limitations with the testing, it is a useful indication of the soluble metals that can be readily leached from the test materials; as such, it is intended to be used as a screening tool to identify metals of potential concern.

The short-term leach test used in this case was shake flash extraction (SFE) leach testing. This testing was completed to measure the concentrations of constituents in the sample leachate that are readily soluble in water.

The SFE leach method is described in Price (1997) and MEND (2009). Samples are mixed with DI water at a 3:1 liquid to solid ratio in an extraction vessel. The vessel is shaken immediately, and an initial pH is recorded. The slurry is then shaken for twenty-four hours, after which a final pH is measured, and the supernatant water is extracted for analysis including the following parameters:

- Alkalinity, acidity, conductivity, sulphate, sulphur, silver, aluminium, antimony, arsenic, barium, boron, beryllium, bismuth, calcium, cadmium, cesium, cobalt, chromium, copper, iron, mercury, potassium, phosphorus, lithium, magnesium, manganese, molybdenum, sodium, nickel, lead, antimony, selenium, silicon, tin, rubidium, strontium, tellurium, titanium, thallium, thorium, uranium, vanadium, tungsten, zirconium, and zinc.

4.0 GEOCHEMICAL RESULTS

A description of the results and tabulated summaries are presented below with analysis and interpretation of the results in relation to on-site conditions provided within the respective subsections.

4.1 Analysis of on-site laboratory

Results from the on-site laboratory are labelled as on-site ALS lab are in Appendix A (available electronically on request). This section provides a review of on-site vs. analytical laboratory results for total sulphur and paste pH to assess the validity of the on-site measurements for continued use.

4.1.1 Sulphur Analysis (Total S – XRF vs. LECO)

The sulphur content of the 2020 through 2022 blasthole dataset (395 samples) was reviewed to compare and assess potential impacts to Baffinland's PAG and Non-PAG classification criteria that would result from use of on-site XRF analyses in lieu of LECO analysis. Of note is that there were initially 396 samples in the dataset with one sample (S660936) considered an outlier as it was the only sample with a difference greater than one order of magnitude and was removed from the dataset, with the resulting dataset having 395 samples. The review focused on differences between on-site determinations of total Sulphur from blasthole cuttings using XRF methodology with laboratory data total sulphur content using the LECO Method (Table 3). There were 332 split samples where the sulphur analysis was completed using both methods, with the LECO analysis being completed at an off-site analytical laboratory. Of the remaining 331 samples only a single sample (S662722) was misclassified as Non-PAG using the XRF method (Total S% = 0.198) relative to the LECO method (Total S% = 0.22).

As can be observed in Figures 3 and 4 the total sulphur and sulphate sulphur values when plotted against each other generally ascribe to a 1:1 line indicating limited bias in the dataset in one method over the other. The average difference between the two methods for the entire dataset is 0.012 with a standard deviation on the differences of 0.020, and a 95th percentile value of 0.04. The highest differences between the two methods occurs at elevated sulphur concentrations (above 0.5 %S, which results in a trendline slightly above the 1:1 line but does not result in misclassification of samples.

Considering a subset of the data with values less than or equal to 0.25 total S (LECO) the average difference in the datasets is 0.008 with a standard deviation of 0.007 and a 95th percentile difference of 0.021.

As can be observed in Figure 4, Considering only the values below 0.25 % S, the XRF analysis results are very close to those of the LECO analysis. It is considered that the XRF is a valid method of classifying the waste materials in the field and may be used in place of LECO analysis.

Table 3: Difference between Total Sulphur by XRF (Field) and Total Sulphur by LECO (Lab)

Statistical Values related to Absolute Difference of Total Sulphur Values (XRF vs. LECO)	Full Dataset 2020 - 2022	Where LECO Total S less than 0.25 % by weight
Count	331	307
Average Difference	0.012	0.008
Standard Deviation	0.020	0.007
median	0.007	0.007
95th percentile	0.04	0.021

Notes: Difference = absolute difference

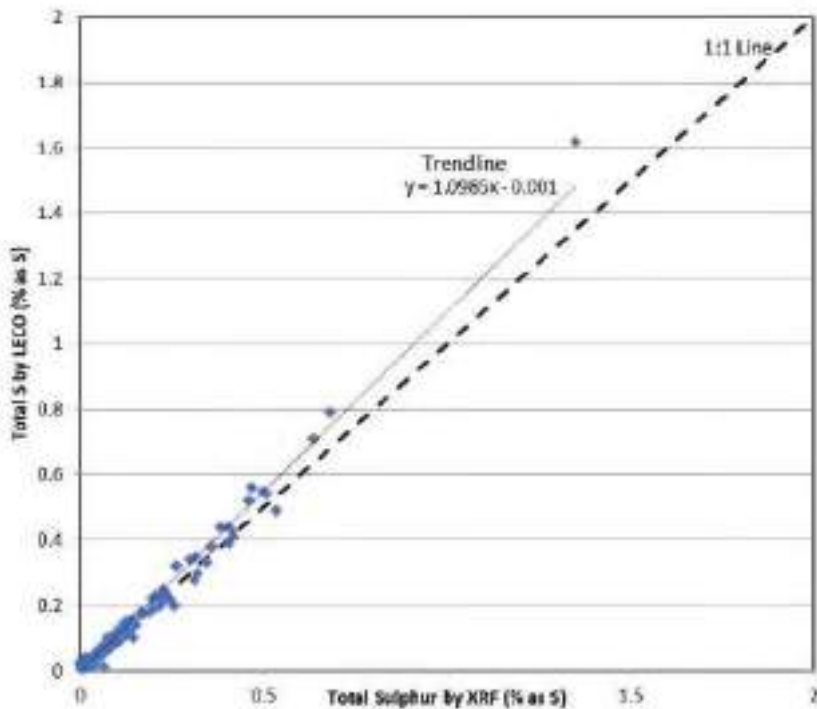


Figure 3: Total Sulphur by XRF vs. Total Sulphur by LECO, 2020 to 2022 Split Sample Dataset

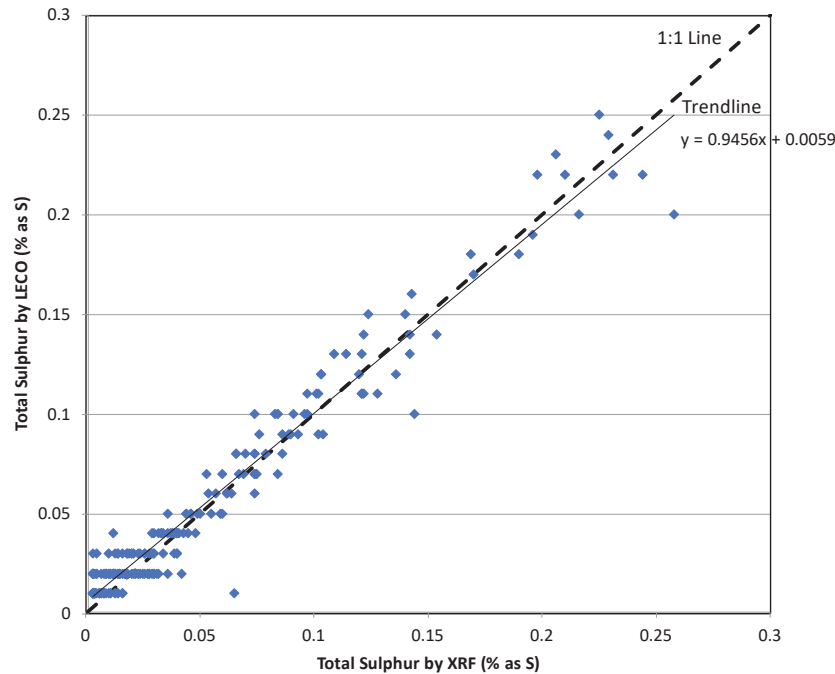


Figure 4: Total Sulphur by XRF vs. Total sulphur by LECO, 2020 to 2022 split sample dataset where LECO Total Sulphur less than 0.25 % by weight

4.1.2 Field Lab pH vs. Analytical Lab pH

When considering the 395 split samples the paste-pH and analytical laboratory pH values shows a pH range of 6.1 to 10, with a median value of 8.4. The overall field pH conditions as measured in 8603 samples were similar, however the range was slightly wider from 4.2 to 10.2 with a median value of 8.7 as described in Section 4.2. The pH values show slightly alkaline conditions in general.

A further review of the pH values was conducted for 307 split samples where data from the field laboratory and the off-site analytical laboratory was available. As can be observed in Figure 5 when the field and laboratory data are plotted against each other the results generally ascribe to a 1:1 line with differences ranging from 0 to 1.4 pH units. The trendline shows a slight bias towards higher values being observed in the field data, generally by less than 0.7 pH units, with an average difference between the two methods for the entire dataset of 0.3 units, standard deviation on the differences of 0.2, and a 95th percentile difference value of 0.7.

Given the observed pH values it is considered that field pH measurements are reasonable for decision making purposes.

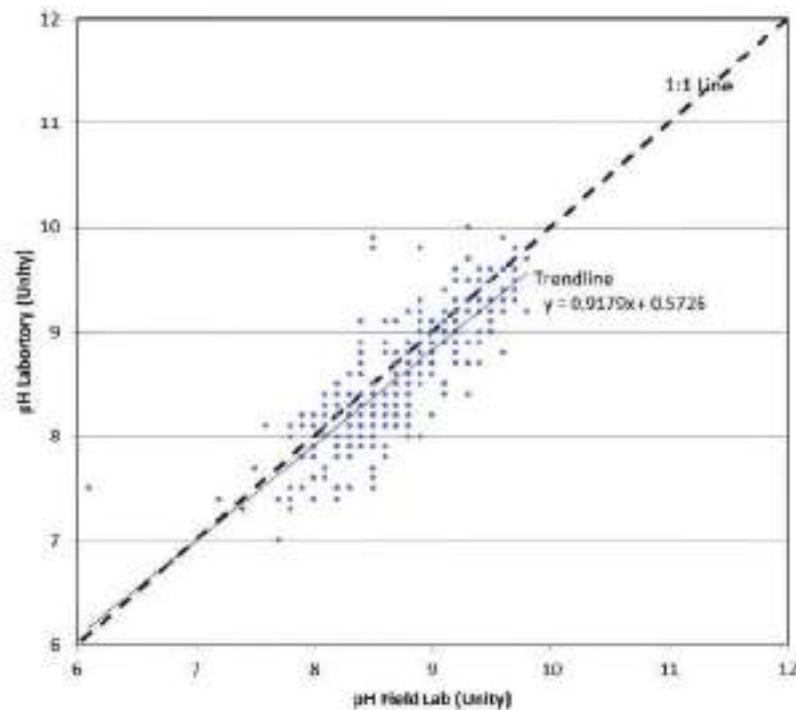


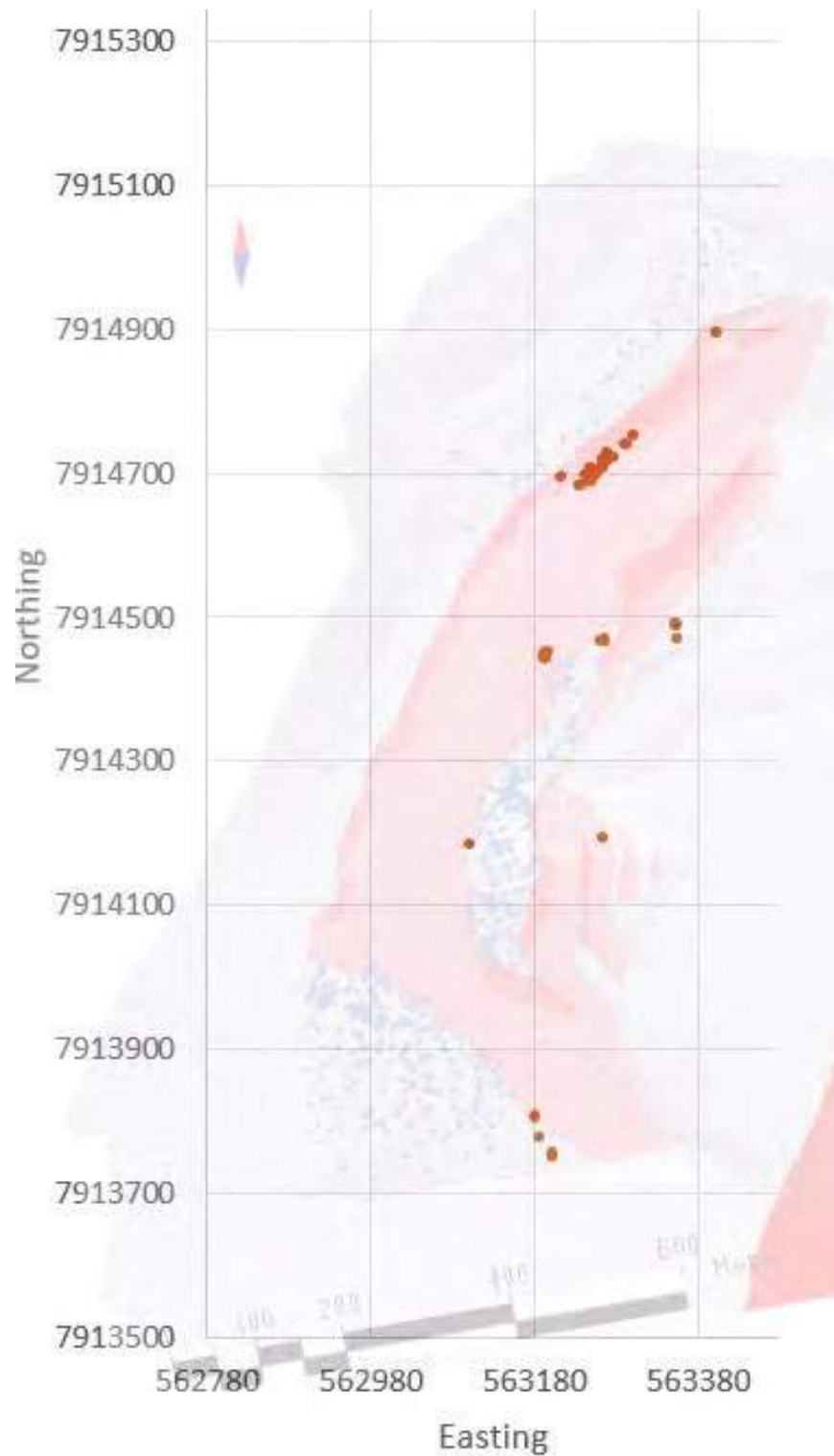
Figure 5: Field Lab pH vs. Analytical Lab pH, 2020 to 2022 Dataset

4.2 Results of on-site Paste pH and Total Sulphur by XRF

When considering the dataset of 8603 samples the paste pH ranges from 4.2 to 10.2 with a median of 8.7. Of the 8603 samples 0.4 % of samples (33 samples) had some associated acidity (paste pH values of less than 6) and were distributed near the ore zones (Figure 6).

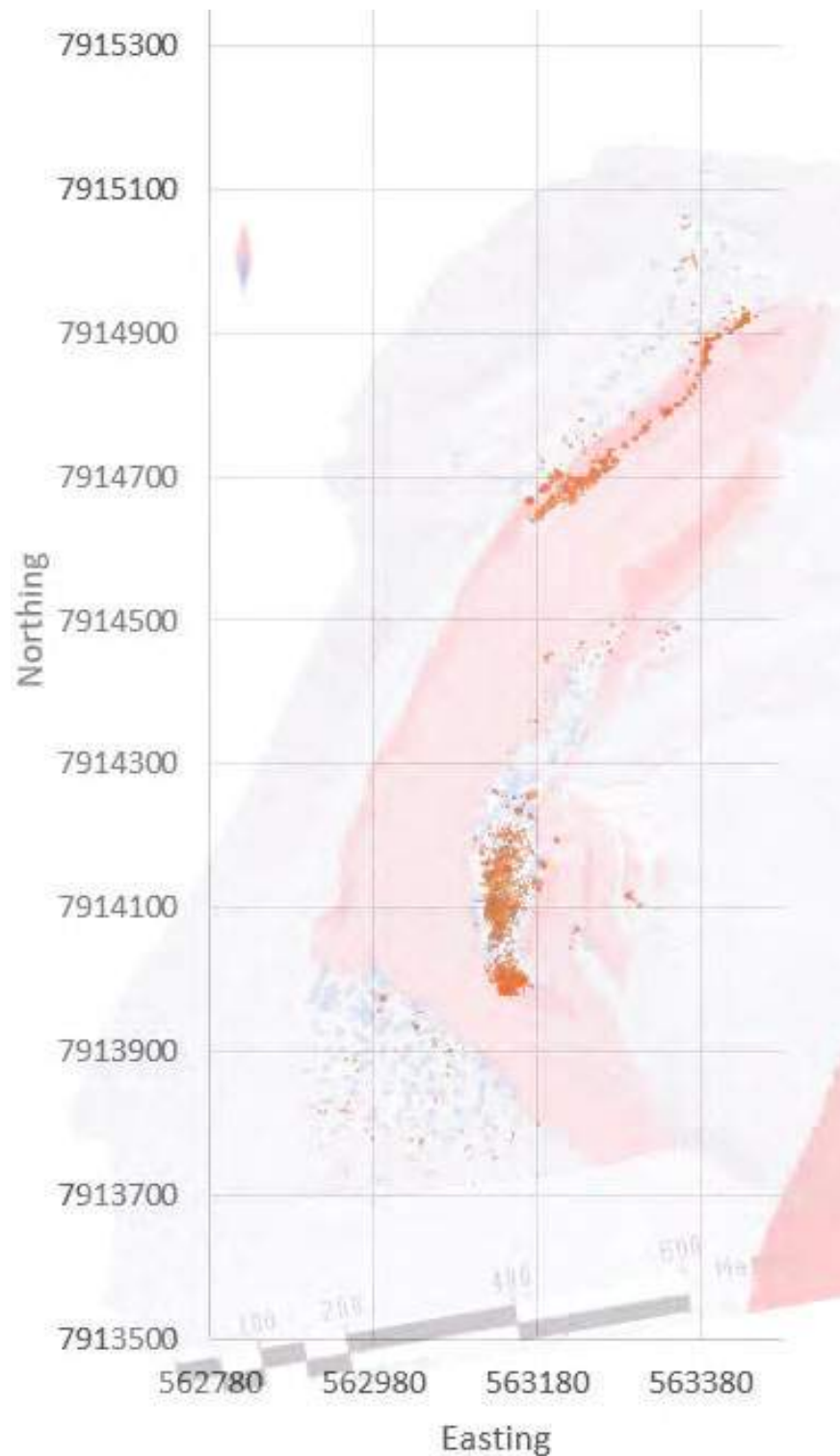
Although additional samples for total sulphur are available in the database the analysis of the broader database is limited to 8602 samples where both total sulphur and paste pH were available. The results of these analyses show a range of sulphur content from a detection limit of 0.003 wt. % to 3.74 wt. %, with a median value of 0.019 wt. % and an average value of 0.09 wt. %. Spatially samples with the highest total sulphur values appear to be focused near the ore zones, whereas further from the ore zone areas samples only sporadically had values of greater than 0.2 wt. % sulphide, up to about 0.5 wt. % S. Figure 7 shows the distribution of samples with total S greater than 0.2 Wt. %.

When considering paste pH and total sulphur content together, Of the 33 samples with lower paste pH, 25 were associated with total sulphur values above 0.2 weight percent and would otherwise have been classified as acid generating, one sample did not have an associated sulphur analysis result, and eight samples were characterized by low pH with no associated elevated sulphur content. Possible causes of low pH in the absence of elevated total sulphur include stored oxidation products, or soluble sulphate minerals.



Note: Not to scale – provided for illustration only, paste pH locations are shown in orange overlying ore and split sample locations.

Figure 6: Spatial Distribution of 2020 to 2022 On-Site Analysis Locations with Paste pH of less than 6



Note: Not to scale – provided for illustration only, Total sulphur locations where values are greater than 0.2 are shown in orange overlying ore (solid shading) and split sample (in blue) locations. Marker size varies, with larger marker size indicative of higher total sulphur values.

Figure 7 Spatial Distribution of 2020 to 2022 On-Site Analysis Locations with Total Sulphur Values Greater than 0.2 Percent by Weight

4.3 Acid Base Accounting Results

Acid base accounting was performed on all split samples submitted for off-site analysis. The ABA results are summarized in Table 4 (detailed in Table B2 in Appendix B) and plotted in Figures 8, 9 and B3 (in Appendix B). The results are discussed below.

Table 4: Summary of ABA Results by Year

7.5	2020					2021					2022				
	Count	Min	Max	Median	Average	Count	Min	Max	Median	Average	Count	Min	Max	Median	Average
pH (s.u.)	87	6.1	9.1	7.9	-	188	6.8	9.8	8.45	-	120	7	10	8.7	-
Total Sulphur (%)	87	0.01	1.34	0.03	0.10	188	0.01	1.62	0.02	0.06	120	0.01	0.54	0.035	0.091
Sulphide Sulphur (%)	87	0.01	1.32	0.03	0.09	188	0.01	1.6	0.02	0.06	120	0.01	0.54	0.03	0.086
AP (kg CaCO ₃ /tonne)	87	0.3	41.9	0.9	3.1	188	0.3	50.6	0.6	2.0	120	0.3	16.9	1.1	2.8
NP (kg CaCO ₃ /tonne)	87	3	22	13	12.8	188	5	71	18	20.3	120	3	76	17	18.2
NNP (kg CaCO ₃ /tonne)	87	-32	18	11	9.7	188	-23	70	17	18.4	120	-5	75	14	15.4
NPR (NP:AP ratio)	87	0.24	115.2	14.93	4.1	188	0.55	403.2	32	10.3	120	0.68	128	14.4	6.4

Note: Averages for NNP and NPR, are calculated based on average AP and average NP.

Sulphur Species

The concentrations of total sulphur, sulphide-sulphur and sulphate-sulphur were analysed as part of the ABA analyses. Total sulphur on the split samples ranged from 0.01 to 1.62 wt% as S, sulphide-sulphur ranged from 0.01 to 1.62 wt% as S and sulphate-sulphur ranged from 0.01 to 0.3 wt% as S.

For the 395 split samples, a plot of total sulphur content versus sulphide-sulphur content is presented in Figure 8. The reference lines on the plots indicate a 1:1 ratio of the plotted parameters. In Figure 8, the majority of the data falls on to the 1:1 line indicating that majority the sulphur content contained in most samples is in sulphide form. There are about 20 blasthole sample results which plot below the line, particularly at the lower sulphur contents suggesting that these samples contain more sulphate sulphur, which may be indicative of previous oxidation products being present.

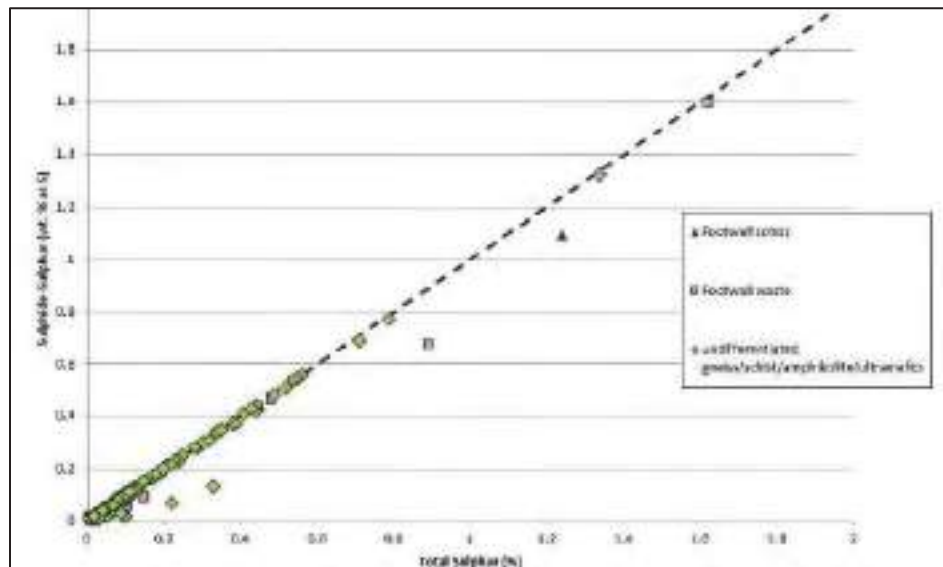


Figure 8: Total Sulphur Plotted Against Sulphide-sulphur (dashed line represents 1 to 1 ratio)

Acid Production Potential (AP)

The AP (described in section 2.3.2) ranges from 0.3 to 51 kg CaCO_3 /tonne within the split sample dataset, with the highest values tending to be from undifferentiated gneiss/schist/amphibolite/ultramafic lithologies, followed by random samples from footwall waste (one sample), overburden (two samples), and high-grade iron oxide lithologies (one sample). The AP is directly associated with sulphide content, which is very strongly correlated with total sulphur. As such, spatially, higher AP values appear to be focused near the ore zones, whereas further from the ore zone areas samples only sporadically had AP values of greater than 6.2 kg/t as CaCO_3 , up to about 15.6 kg/t as CaCO_3 . This lower AP is found through a full range lithologies. The overall average AP is 2.75 when calculated based on the average total sulphur content from on-site measurements and 2.5 when considering only the 395 split samples (including values below detection limit at the detection limit value).

Neutralization Potential (NP)

The NP (described in section 2.3.2) was measured for 395 samples with values range between 3.0 and 76 kg CaCO_3 /tonne in the split sample dataset. A review of carbonate data from the 2020 through 2022 data set shows that most samples were below detection, which does not allow for appropriate evaluation of the carbonate

component of NP for this dataset. Of note is that the detection limit values are higher than those of historical data from BIM (2014).

ABA Classification - Neutralization Potential Ratio (NPR)

Acid generation potential can be interpreted according to the ratio of NP to AP, referred to as the neutralization potential ratio (NPR), according to the guidelines recommended by MEND (2009) (Table 5). These guidelines are not the only measure of potential for acid generation and should be taken within the context of the overall evaluation. An initial review of NPR values on the split sample set is provided below with additional discussion considering the full dataset and observations on site provided in Section 4.4.

Table 5: Acid Generation Potential Criteria based on NPR (MEND, 2009)

Acid Generation Potential	Criteria	Comments
Potentially Acid Generating (PAG)	$\text{NPR} < 1$	Potentially acid generating unless sulphide minerals are non-reactive.
Uncertain	$1 \leq \text{NPR} \leq 2$	Possibly acid generating if NP is insufficiently reactive or is depleted at a rate faster than sulphides.
Non-potentially Acid Generating (Non-PAG)	$\text{NPR} > 2$	Not expected to generate acidity.

Figure 9 presents the results of ABA classification considering only the NPR criteria. Of the 395 split samples, a total of 369 samples (93%) had NPR values greater than 2 and are classified as Non-PAG. There were 19 samples (5%) with NPR values between (or equal to) 1 and 2 and are classified as “uncertain” (i.e., having unknown acid generation potential). Nine samples (2%) had NPR values less than 1 and are therefore classified as PAG. In practice materials represented by NPR less than or equal to 2 (7% of the overall samples) are treated as though they were PAG. The PAG samples tended to be from undifferentiated gneiss/schist/amphibolite/ultramafic lithologies, followed by one sample from footwall, two samples from overburden, and one sample from high grade iron oxide lithologies, whereas uncertain and Non-PAG samples are found in a wide range of lithologies including chlorite schist lithologies.

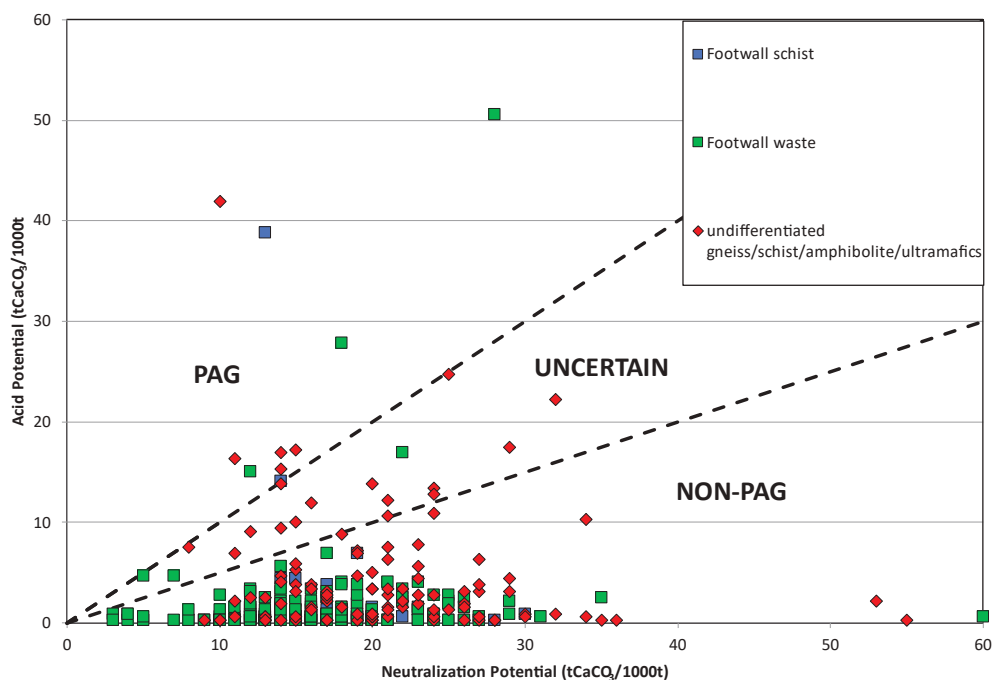


Figure 9: ABA Classification of Split Samples Based on Acid-Neutralization vs Acid-Producing Potential

4.3.1 ABA comparison to historical data

In Figure 10 the current split sample data set is overlain on the historical 2014 BIM dataset from Deposit 1. Table 6 provides the statistical results from each data set. As can be observed from the data, the 2020 through 2022 data is generally consistent with, and falls within the range of results, of the 2014 data. The data grouping from the more recent data set appears to be somewhat tighter with more samples from the historical 2014 dataset being considered PAG. NPR comparison shows that the NPR in 2020 through 2022 (average of 21.3) was higher than that observed in the 2014 dataset (average of 11.8), but again, falls within the range of results of the 2014 data. These differences are likely due to the sample distribution of the 2020-2022 data relative to the broader deposit coverage of the 2014 dataset, with some possible influence due to the discrete samples used in the 2014 dataset. The 2020-2022 data set is limited to those zones mined during that time and would not be expected to be completely representative of the overall 2014 dataset.

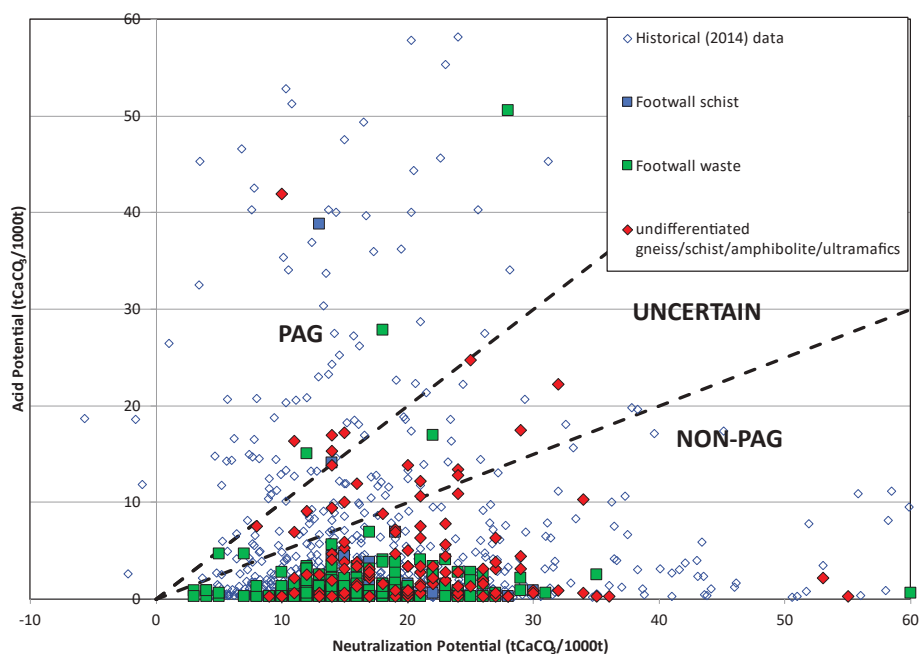


Figure 10: ABA Classification of Split Samples Overlying Historical Data from BIM (2014)

Table 6: Summary Comparison of ABA Results from Deposit 1 Historical Data (BIM 2014) and 2020-2022 Data

Parameter	Historical (BIM 2014)					2020-2022				
	Count	Min	Max	Median	Average	Count	Min	Max	Median	Average
pH (s.u.)	780	3.8	10	9.0	-	395	6.1	10	8.4	-
Total Sulphur (%)	780	0.005	22	0.04	0.32	395	0.01	1.62	0.02	0.08
Sulphide Sulphur (%)	780	0.01	23	0.02	0.25	395	0.01	1.6	0.02	0.07
AP (kg CaCO ₃ /tonne)	780	0.2	694	1.4	10	395	0.3	50.6	0.6	2.5
NP (kg CaCO ₃ /tonne)	780	-18	487	15	21	395	3.0	76	16	18
NNP (kg CaCO ₃ /tonne)	780	-660	481	12	11	395	-32	75	15	16
NPR (NP:AP ratio)	780	-0.9	388	11.8	2.1	395	0.2	403	21.3	7.3
CaNP (kg CaCO ₃ /tonne)	780	0.04	514	0.417	10.2	-	-	-	-	-
Carb-NNP (kg CaCO ₃ /tonne)	780	-692	508	-0.333	0.27	-	-	-	-	-
CaNPR (CarbNP:APratio)	780	0.0002	357	0.291	1.03	-	-	-	-	-

Note: Averages for NNP, NPR, Carb-NNP and Carb-NPR are calculated based on averages of AG, NP and CaNP.

In the historical data the carbonate detection limit was 0.005 relative to a detection limit of 0.05 in the 2020 through 2022 data. While most of the more recent data was below the detection limit of 0.05, for the historical dataset of 780 samples, 557 contained measurable carbonate minerals which, even when assuming that the remaining 223 samples had no CaNP, resulted in an average CaNP value of 10.2 kg CaCO₃/tonne and a CaNP/AP ratio of 1. This indicates that only about 9% of the overall NP in Deposit 1 originates from carbonate minerals. Although the CaNP/AP ratio suggests there is sufficient carbonate minerals to neutralize acidity produced, the iron carbonate siderite is present in the deposit but does not contribute to buffering of acidity,

therefore the actual CaNP availability is expected to be somewhat less than observed. Feldspar, biotite, and muscovite are some of the silicate minerals present in the rock matrix (BIM, 2014) and are however expected to provide buffering capacity as measured in the NP of the samples.

4.4 Field Classification of Waste Rock

There are several laboratory test methods used to assist in classification of waste rock as PAG or Non-acid generating (Non-AG), including ABA, NAGpH, Humidity cell testing, and mineralogical assessment. All of these methods were used in the initial and subsequent geochemical classification of potential waste rock at the BIM Mary River Deposit 1 as summarized above and in BIM 2014.

When considering how to address waste rock classification in a field setting, it is necessary to use this information gathered in a laboratory setting to develop a system of waste rock classification that can be applied rapidly in a field setting to develop a reasonable and consistent method of correctly identifying which materials must be treated or mitigated due to acid generation potential. Further it is necessary to monitor, review and update the classification as necessary based on observed field conditions.

For the BIM Mary River Deposit 1 the current the field the methodology involves testing of drillhole cuttings from each blasthole and measuring the paste pH and total sulphur content. A field classification system was developed for waste rock as summarized in BIM 2014 whereby materials with greater than 0.2 wt. % Total S would be considered PAG for the purposes of material management and materials with less than or equal to 0.2 wt% Total S were considered suitable for use as capping material or for other purposes on site. This criterion was refined in 2019 to consider the possible presence of soluble sulphate minerals (e.g., melanterite) that were observed in portions of the deposit and that appeared to be influencing the water quality of the waste rock pile (Golder 2019) by adding paste pH as an addition criterion. Currently where total S is greater than or equal to 0.2 wt% Total S or if paste pH is <6 the material is treated as PAG. Table 7 provides a summary of the current field classification criteria.

Table 7: Acid Generation Potential Criteria Field Classification – Baffinland Mary River Site

Acid Generation Potential	Criteria
Treat as Potentially Acid Generating (PAG)	Total sulphur \geq 0.20 wt% as S
Treat as Potentially Acid Generating (PAG)	Total sulphur < 0.20 wt% as S and paste pH \leq 6
Treat as Non-Potentially Acid Generating (Non-PAG)	Total sulphur < 0.20 wt% as S and paste pH > 6

4.4.1 Waste Rock Classification Criteria Review

As part of ongoing geochemical review, the current test samples from 2020 through 2022 were reviewed based on laboratory testing and field criteria observations to determine if there were differences in classifications using field data relative to those as observed in the laboratory. The use of total sulphur, as well as the combination of total sulphur plus sample pH (or paste pH) was evaluated as compared to the NPR developed through full ABA test work. This review took place on 395 split samples that underwent both field testing (pH and total S) and analytical laboratory testing which also included ABA analysis.

Based on the existing criteria, of the 395 samples a total of 35 samples have total sulphur greater than >0.20 wt% and are classified as PAG, whereas 360 samples classified as Non-PAG using based on total sulphur less or equal to 0.20 wt%. Of the 35 PAG samples NPR ratios confirm that 26 samples are correctly categorized whereas nine samples are incorrectly categorized as PAG when ABA results indicate they are Non-PAG. Only two samples out of the 395 samples (0.51%) were incorrectly classified as Non-PAG based on the use of total sulphur criteria.

Table 5 provides a summary of the review of the use of total sulphur criteria of greater than 0.2 wt% as an analogue for NPR of 2 is shown in Table 8. Table 8 shows that the uncertainty when using 0.2% S as an analogue for NPR of less than or equal to 2 is approximately 0.5%, with 0.51% of samples being incorrectly categorized as Non-PAG based on the recent ABA data collected. This recent ABA data continues to support the use of the 0.2 wt. % Total Sulphur criteria (and the recently added paste pH criteria of 6) as being a suitable analogue for NPR of less than or equal to 2.

Table 8: Assessment of Sample ABA Categorization using Total Sulphur as a Surrogate for NPR

2020-2022 Dataset								
Description	Correctly Categorized using Total S				Incorrectly Categorized using Total S			
	NPR > 2 as Non-PAG	NPR ≤ 2 as PAG	1 ≤ NPR ≤ 2 as PAG	NPR < 1 as PAG	NPR > 2 as PAG	NPR ≤ 2 as Non-PAG	1 ≤ NPR ≤ 2 as Non-PAG	NPR < 1 as Non-PAG
Total in dataset	395	395	395	395	395	395	395	395
Subset categorized correct/incorrect	386	386	386	386	9	9	9	9
Number of Samples	360	26	17	9	9	2	2	0
Percent of overall dataset	91.1%	6.6%	4.3%	2%	2%	0.51%	0.51%	0%

Note: of total of 395 samples 386 were correctly categorized using total Sulphur as a surrogate for NPR, whereas 9 samples were incorrectly categorized based on total Sulphur.

4.4.2 Mineral Forms and Implications of Misclassification on Design and Operation of WRF

In Baffinland Mary River Deposit 1 the primary buffering minerals are less soluble, slower reacting silicate minerals with only approximately 10% of the NP from carbonate minerals. Iron carbonate minerals as well as calcium/magnesium carbonates make up this component of the NP, with the iron carbonate component (e.g., Siderite) not supplying buffering capacity. The soluble sulphate mineral melanterite which has the potential to release acidity upon interaction with water, even in the absence of oxygen, was observed in very minor quantities as described in Golder 2019. No additional mineralogy data was provided in the 2020 through 2022 dataset, however the 2014 mineralogical data shows that feldspar, biotite and muscovite are some of the silicate minerals present in the rock matrix (BIM 2014) and are expected to provide buffering capacity as measured in the NP of the samples.

The presence of soluble sulphate minerals (e.g., melanterite) has the possibility of confounding interpretation of ABA results. Of note is that soluble sulphate minerals would be expected to result in observations of negative NP values if present. Within the current dataset of 395 split samples, the minimum NP value observed was 3 mg/kg as CaCO₃ with a median of 16 mg/kg as CaCO₃ and an average of 18 mg/kg as CaCO₃, indicating that soluble sulphates are unlikely present in significant quantities in the subset of samples submitted for ABA analysis. This is consistent with the observed neutral pH values from this dataset.

When considering paste pH in addition to total sulphur values for the 395 split samples no differences were observed in classification criteria due to the elevated paste pH values, however, when we consider the entire field dataset of 8603 samples where paste pH was recorded only 33 samples (0.38%) had paste pH values of less than 6, were treated as acid generating and may be considered as having some potential for presence of soluble

sulphate minerals. Of these 33 samples 26 would have otherwise been classified as PAG based on total sulphur content alone.

Assuming an overall misclassification rate of 0.51% based on comparisons with NPR for the split samples (Table 8) and providing for 0.38% of these samples containing some soluble sulphate minerals results, only 0.002% of rock placed in the WRF with soluble sulphate minerals has some potential of being incorrectly managed, the volumes of which are provided in Table 9.

Table 9: Assessment Rock Quantities Potentially Misclassified

Waste Dump Deposition Period	Waste Volumes by Depositional Season - 2023-2026 Plan			Volumes based on 2020-2022 Uncertainty (reported as Loose Volumes in 1000 m ³)					
	Total Waste Loose Volume (k m ³)	Total NAG Loose Volume (k m ³)	Total PAG Loose Volume (k m ³)	Total	PAG classified as PAG	PAG classified as Non-PAG	Non-PAG classified as Non-PAG	Non-PAG classified as PAG	Rock with SS Classified as Non-PAG
Jun 2023 through Sept 2023	678	621	60	678	45	3	618	15	0.01
Oct 2023 through May 2024	1202	1102	107	1202	79	6	1095	27	0.02
Jun 2024 through Sept 2024	554	508	49	554	36	3	505	13	0.01
Oct 2024 through May 2025	1192	1092	106	1192	78	6	1086	27	0.02
Jun 2025 through Sept 2025	621	569	55	621	41	3	566	14	0.01
Oct 2025 through May 2026	1543	1414	137	1543	102	8	1406	35	0.03
Jun 2026 through Sept 2026	862	790	76	862	57	4	786	20	0.02

The mineralogical makeup of the deposit must be considered in the context of the overall geochemical data set. The humidity cell data indicates that in the absence of soluble sulphate minerals the minimum time to acidification due to acid generation will be on the order of years based on the available silicate and carbonate minerals whereas the on-site and supplemental geochemical evaluations show that only a very small proportion of the overall rock would be misclassified as Non-PAG.

When considering the existing laboratory and field data, including historical mineralogy, humidity cell data and static test data, as well as current on-site analysis it is expected that the current waste rock management plan of thin lift deposition to promote freezing and only Non-PAG materials placed near the pile edge will be effective in minimizing the potential for acid generation. Implications of potential misclassification of waste rock at the rates expected on water quality are expected to be minor as such there are not expected to be any further implications to the design and operation of the WRF, provided appropriate placement and mitigation measures continue to be followed. Should the volume of misclassified material or amount of materials with soluble sulphate increase based

on ongoing monitoring or continued acidic seepage be observed then the potential implications would need to be re-assessed.

4.5 Leachate Potential

The potential for metal leaching was evaluated based on data from SFE testing on the solids collected as well as evaluation of on-site water quality analysis of runoff and seepage collected around the WRF. Observed values were compared to Schedule 4, Table 1 of the Metal and Diamonds Mining Effluent Regulations Schedule 4 (MDMER 2023) for purposes of determining parameters that may need to be further evaluated as part of an overall site water quality prediction. Although the SFE results are compared to regulatory criteria, it is important to note that these regulatory criteria do not apply to short-term leach test results and therefore should not be interpreted within a regulatory context. Rather, these comparisons are conducted herein to qualitatively identify parameters that are leachable from test materials at concentrations that may require further evaluation in the context of the ambient environment or conditions under which the materials will be stored or exposed.

4.5.1 Shake Flask Extraction

SFE testing was performed on the 396 split samples submitted to the analytical laboratory, with one sample considered an outlier due to inconsistent total sulphur results for a dataset of 395 samples. A summary of values for selected parameters is provided in Table 10 with the full dataset provided in Table A3. Additional discussion of the SFE results in the context of the observed site water quality is provided in Section 4.5.2. A summary of the results for key parameters from the SFE testing is as follows:

- The pH values ranged from 5.9 to 9.6, with sulphate concentrations ranging from 0.5 to 996 mg/L and a median value of 7.3. In general, the SFE results show slightly higher sulphate sulphur concentrations at lower pH values, more prevalent as the pH decreases below about 7.5 (Figure 11).
- Arsenic (As) concentrations ranged from <0.001 to 0.1 mg/L. No samples were greater than the MDMER criteria of 0.1 mg/L.
- Copper (Cu) concentrations ranged from <0.001 to 0.57 mg/L. Only one sample was greater than the MDMER criteria of 0.1 mg/L.
- Nickel (Ni) concentrations ranged from <0.0005 to 0.21 mg/L, with all but one sample having nickel concentration of less than 0.05 mg/L. No samples had concentration greater than the MDMER criteria of 0.25 mg/L. There was a slight increase in concentrations with increasing pH in the samples (Figure 11).
- Lead (Pb) concentrations ranged from <0.0001 to 0.39 mg/L. Four samples were greater than the MDMER criteria of 0.08 mg/L.
- Zinc (Zn) concentrations ranged from <0.01 to 2.1 mg/L. Three samples were found above the MDMER criteria of 0.4 mg/L.

Overall SFE data indicate relatively low concentrations of most parameters. Figure 11 provides an example of sulphate and nickel concentrations as a function of pH whereas Figure 12 provides these same parameters as a function of sample date. As can be observed concentration of sulphate appeared to decrease slightly with pH and remained consistent from 2020 through 2022, whereas concentrations of nickel are slightly higher at higher pH, and in samples from 2021 and 2022, possibly as a function of slight spatial differences in deposit chemistry. These differences are not considered significant for the purposes of overall deposit characterization.

Of note is that there is little in way of positive correlation between the total sulphur values observed in the ABA testing and the observed SFE results as exemplified for iron and nickel in Figure 13, suggesting that the samples did not undergo secondary oxidation prior to analysis, and that for fresh samples there is little correlation between PAG/Non-AG designation and leachate quality. Generally, it would be expected that other parameters concentrations would be influenced by the sulphide content or pH of the samples if samples were allowed to oxidize. These parameters include sulphate as well as metals such as iron, nickel and copper which often have higher concentrations observed when pH values are lower. Given the near neutral or alkaline pH of the SFE sample results this was not observed in SFE results from 2020 through 2022.

It is necessary to consider these results within the context of the overall site water quality as discussed in Section 4.5.3 since the geochemical conditions (e.g., pH, redox, alkalinity) will differ on a broader scale relative to those observed from individual test samples in the laboratory.

Table 10: Summary of pH and Selected Parameter Concentrations from SFE Results (by Year)

Parameter (Unit)	2020			2021			2022		
	Min	Max	Average	Min	Max	Average	Min	Max	Average
pH (s.u.)	5.9	9.2	-	6.1	9.5	-	6.7	9.6	-
Arsenic (mg/L)	<0.001	0.003	0.0018	<0.001	0.1	0.013	<0.001	0.012	0.0066
Calcium (mg/L)	0.1	43	2.5	0.1	55	1.4	0.2	19	2.2
Copper (mg/L)	<0.001	0.047	0.0075	<0.001	0.57	0.027	<0.001	0.19	0.024
Iron(mg/L)	0.03	9.3	3.9	0.03	50	8.1	0.03	61	8.8
Lead (mg/L)	<0.0001	0.014	0.0019	<0.0001	0.11	0.0054	<0.0001	0.39	0.022
Nickel (mg/L)	<0.0005	0.028	0.0025	0.0006	0.21	0.0076	<0.0005	0.025	0.0064
Sulphate (mg/L)	0.5	996	72	0.5	856	34	0.6	454	27
Zinc (mg/L)	<0.01	0.03	0.022	<0.01	2.1	0.092	<0.01	0.59	0.096

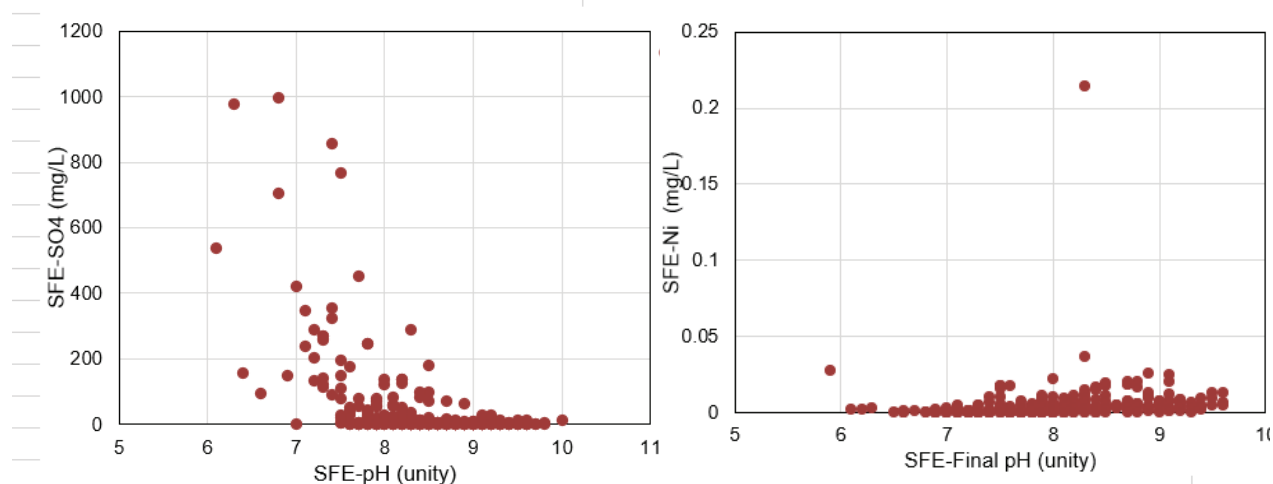


Figure 11: pH vs. Sulphate and pH vs. Nickel - SFE Data from 2020 through 2022

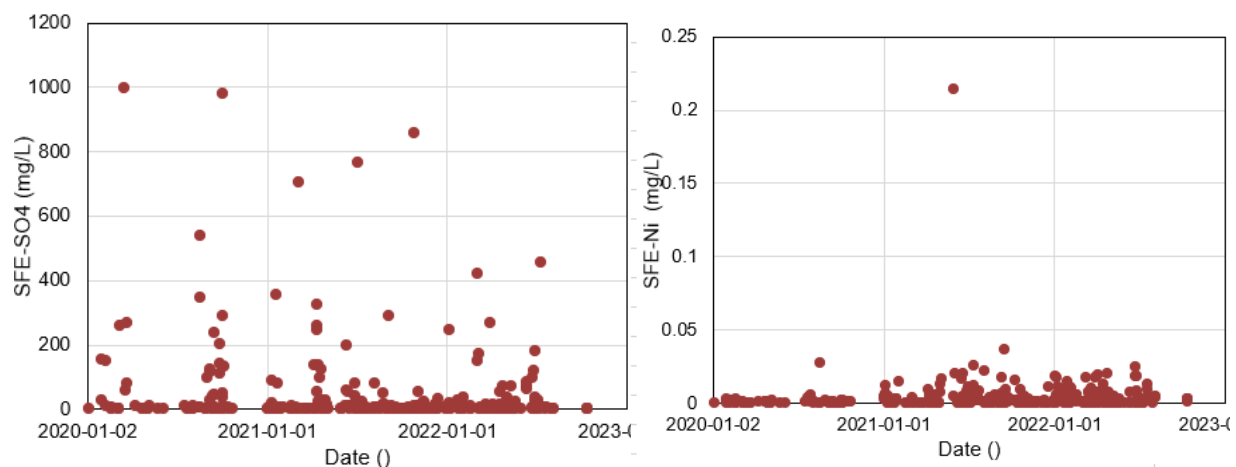


Figure 12: Sulphate and Nickel Over Time - SFE Data from 2020 through 2022

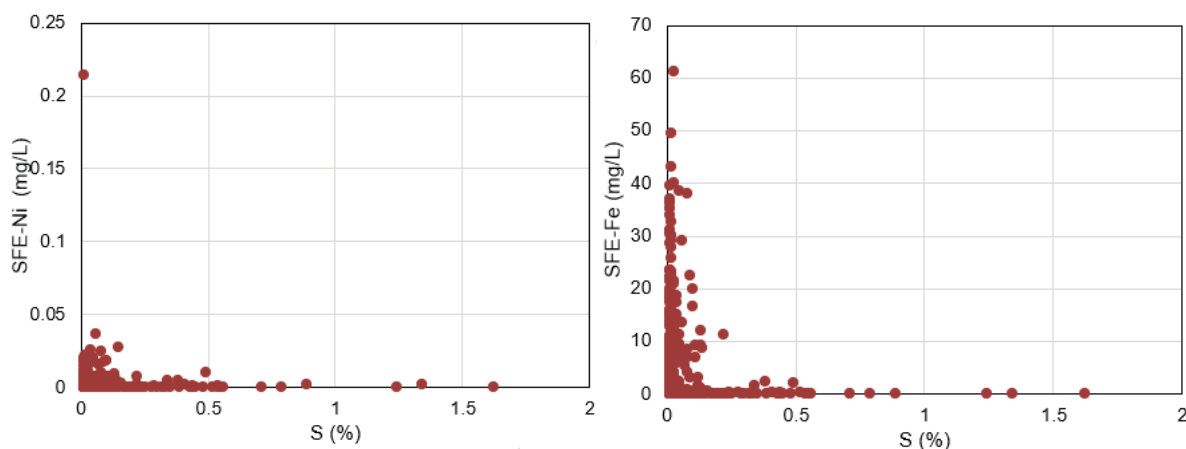


Figure 13: Total S (solid) vs. Ni (SFE leachate), and Total S (solid) vs. Fe (SFE leachate) - from 2020 through 2022

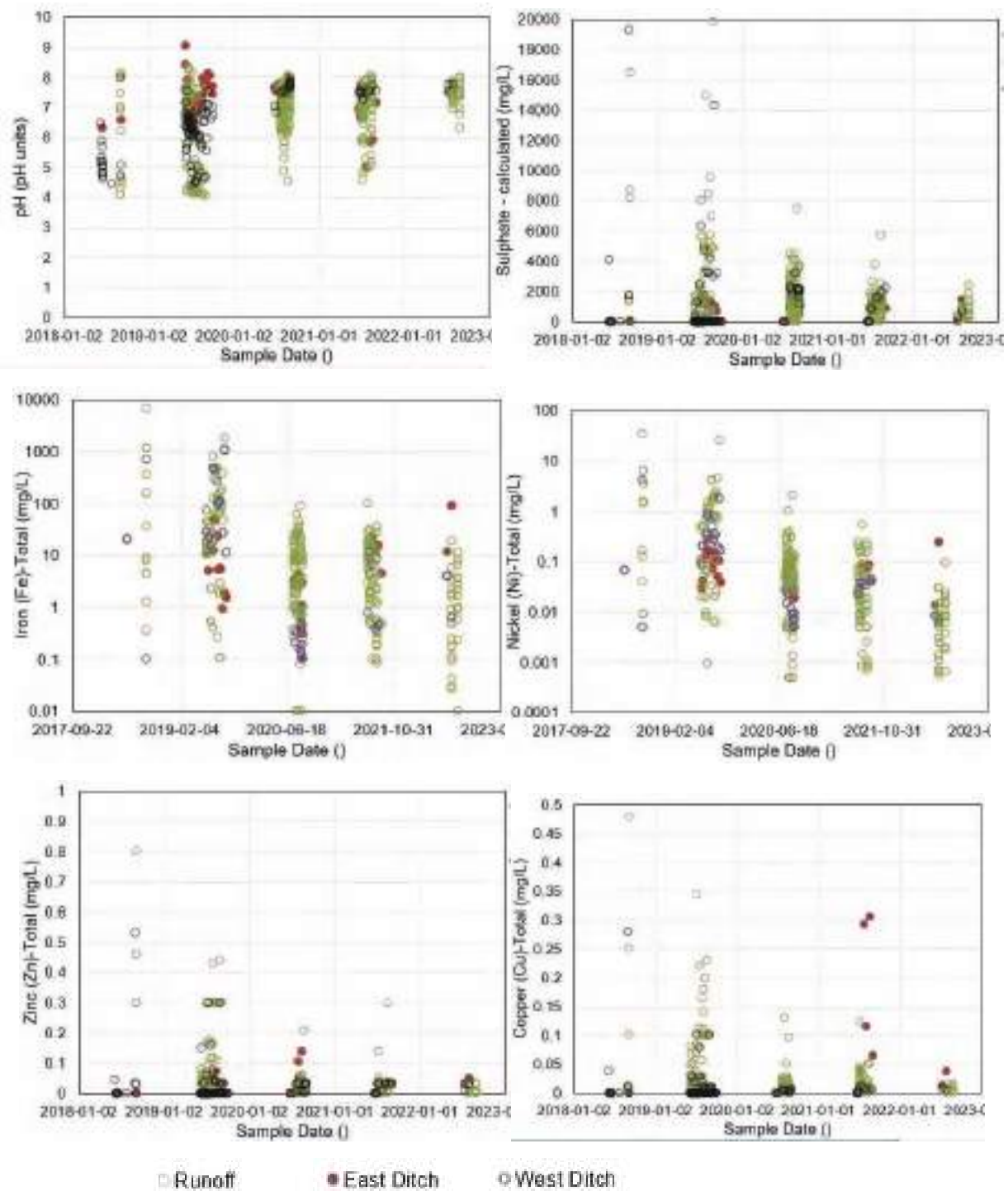
4.5.2 Summary of on-site water quality measurements

BIM has setup an internal mechanism and schedule for collection of waste rock pile run-off and seepage water samples to monitor water quality coming from the waste rock deposit. BIM provided data on a total of 239 samples of runoff and seepage from collection ditches collected between 2020 and the end of 2022. The data originates from general locations: runoff (83 samples in 2020, 69 in 2021, 31 in 2022), west ditch seepage (14 samples in 2020, 10 in 2021, 2 in 2022) and east ditch seepage (17 samples in 2020, 11 in 2021, two in 2022). Some additional data is available from 2018 and 2019 and is shown in Figure 14 for context but is not otherwise considered as part of this report due to differing WRF conditions during this time period. Table 11 provides the average concentrations in each year for selected parameters. Appendix C provides a more detailed summary table for each year and location, whereas the full dataset from which the summary is derived is provided as part of Appendix A (electronic available upon request). Of note is that the 2022 water quality to the east ditch was influenced by pumping from the pit. Figure 14 shows the water quality observed over time from leachate and seepage collection ditches from 2018 through 2022.

Results of the on-site water quality measurements (Figure 14) demonstrate improvement in observed runoff and seepage water quality from 2018 through to 2022. The range of values observed between 2020 and 2022 for some of the key parameters are as follows:

- pH ranged from 4.6 to 8.1 overall, improving to more neutral conditions, with near neutral to alkaline values observed in all seepage and runoff locations in 2022.
- Sulphate concentrations ranged from 1.5 to 7.5 g/L overall and decreased substantially from 2020 and 2022.
- Iron concentrations (shown in log scale in Figure 14) decrease substantially starting in 2020. In 2022 the concentrations in the east ditch were higher than those from the West Ditch or Runoff, potentially reflecting the influence of the addition of water from the pit.
- Nickel concentrations ranged from 0.0005 to 2.1 mg/L between 2020 and 2022, decreasing substantially over time with the 2022 runoff values all below 0.1 mg/L. Concentrations in the west ditch which are more indicative of seepage were below 0.01 mg/L in 2022.
- zinc concentrations ranged from 0.003 to 0.3 mg/L between 2020 and 2022, with all concentrations observed in 2022 less than 0.05 mg/L.
- copper ranged from 0.0005 to 0.13 mg L⁻¹, between 2020 and 2022, with all concentrations observed in 2022 less than 0.04 mg/L. The concentrations in the East Ditch appear to be elevated relative to the runoff, potentially reflecting the influence of the addition of water from the pit.

When considering the dataset from 2018 onwards a trend of increasing pH values and associated decreasing concentrations of key parameters can be observed (Figures 14). The figure shows that pH values below 4.5 were not observed following 2019. Lower concentrations were observed in the last full year of data (2022) for the seepage and runoff from the WRF: the pH ranged from 6.3 to 8; zinc and nickel concentrations ranged from 0.00056 to 0.24 mg L⁻¹ and from 0.003 to 0.048 mg L⁻¹, respectively (both below MDMER limits); and the sulphate concentrations were between 15 to 2413 mg L⁻¹.



Note: Some data from 2018 and 2019 plots above y axis range; Iron and Nickel Y-axis in Logarithmic scale

Figure 14: Concentrations Over Time in WRF Runoff and Seepage for Selected Parameters

Table 11: Average and Peak Water Quality Values of WRF Runoff and Seepage for Selected Parameters

Parameter	Average Values			Maximum Values		
	2020	2021	2022	2020	2021	2022
WRF Runoff						
pH (s.u.)-range	4.5 – 8.0	4.6 – 8.1	6.3 – 8.0	8.0	8.1	8.0
Conductivity (umhos/cm)	2662	1699	1227	8270	7230	3720
Aluminum (mg/L)	4.2	3.6	1.4	35	68	11
Arsenic (mg/L)	0.0012	0.0013	0.0005	0.0056	0.0143	0.0015
Calcium (mg/L)	90.4	57.4	46.2	210	142	104
Cobalt (mg/L)	0.084	0.041	0.009	1.71	0.32	0.12
Copper (mg/L)	0.011	0.014	0.005	0.13	0.12	0.015
Iron (mg/L)	10.1	8.6	2.6	91	100	18.7
Lead (mg/L)	0.0017	0.0023	0.0007	0.014	0.037	0.003
Magnesium (mg/L)	415	224	152	1610	1420	623
Nickel (mg/L)	0.12	0.05	0.01	2.1	0.54	0.10
Sulphate (mg/L); Calculated	1809	954	617	7455	5688	2413
Zinc (mg/L)	0.03	0.03	0.02	0.21	0.30	0.03
WRF West Ditch Seepage						
pH (s.u.)-range	6.8 – 7.9	7.2 - 7.7	7.7	7.9	7.7	7.7
Conductivity (umhos/cm)	3,131	2,588	1,051	4190	3560	1430
Aluminum (mg/L)	0.11	1.81	1.50	0.3	6.3	2.6
Arsenic (mg/L)	0.0007	0.001	0.0007	0.001	0.0015	0.001
Calcium (mg/L)	212	112	46	306	165	67
Cobalt (mg/L)	0.012	0.033	0.0052	0.02	0.05	0.01
Copper (mg/L)	0.0037	0.0072	0.0063	0.01	0.01	0.008
Iron (mg/L)	0.24	3.45	2.35	0.47	11.8	4.1
Lead (mg/L)	0.0003	0.0018	0.0008	0.0005	0.005	0.001
Magnesium (mg/L)	415	351	113	631	529	155
Nickel (mg/L)	0.012	0.036	0.007	0.029	0.046	0.008
Sulphate (mg/L); Calculated	2,086	1,526	482	3203	2221	650
Zinc (mg/L)	0.02	0.03	0.02	0.03	0.03	0.03
WRF East Ditch Seepage						
pH (s.u.)-range	6.9 – 8.0	5.0 - 7.1	7.5	8.0	7.1	7.5
Conductivity (umhos/cm)	1,819	1,529	1,178	2310	2320	2270
Aluminum (mg/L)	0.19	3.87	8.21	0.79	10.4	8.8
Arsenic (mg/L)	0.0007	0.001	0.001	0.001	0.002	0.001
Calcium (mg/L)	103	59	20	124	91	35
Cobalt (mg/L)	0.035	0.063	0.097	0.08	0.11	0.19
Copper (mg/L)	0.005	0.142	0.025	0.007	0.31	0.037
Iron (mg/L)	1.9	13.0	50.3	4.4	21.2	89
Lead (mg/L)	0.0004	0.0027	0.0033	0.0005	0.009	0.0037
Magnesium (mg/L)	206	190	154	318	308	296
Nickel (mg/L)	0.037	0.055	0.126	0.08	0.085	0.24
Sulphate (mg/L); Calculated	941	868	716	1371	1416	1416
Zinc (mg/L)	0.04	0.03	0.04	0.14	0.03	0.05

4.5.3 Site Water Quality Comparison to SFE and Linkages to ARD/ML on site

In general, SFE testing is completed on fresh samples with limited potential for oxidation, thus the pH results are neutral to alkaline and metal concentrations are generally low. In contrast, the on-site materials have been exposed to weathering, some release of acidity and metals which have been buffered or mitigated either through freezing of the pile or through interaction with neutralizing minerals.

There is a link between the observed water quality in the WRF ditches, the nature of the ARD/ML stored in the WRF and the conditions under which it is stored which is not reflected in the SFE results. As described in Golder (2019) Past management practices allowed for some materials that were PAG (or contained soluble sulphate minerals) to be placed near the edges of the pile in lifts of sufficient height that they could remain above freezing conditions long enough to produce acidity and leach metals which reported as runoff or in the collection ditches. This contributed to the lower pH water with elevated metals concentrations that was observed in places from 2018 and 2019. Following a review and update of the management procedures to focus on thin lift placement and isolation of ML/ARD materials near the centre of the pile to promote freezing an improvement in water quality has been observed. Current water quality results from 2020 through 2022 show that the mitigation measures put in place are reducing release of metals and acidity. The runoff and seepage samples from 2022 had neutral pH values and do not contain any metal values above MDMER criteria. Observations show that sulphate, iron and nickel concentrations are all correlated with pH measurements and decreasing over time. It is not possible to determine based on the results if the cause of the previously observed conditions are soluble sulphate minerals, or minor amounts of oxidation as the mitigation measures in place are designed to deal with both conditions by limiting release of water as well as limiting oxidation rates.

5.0 CONCLUSIONS

This current geochemical monitoring update report provides a review of results of geochemical sampling completed from 2020 through 2022 and includes review of 8603 on-site samples that contained measurements of total sulphur and paste pH from on site as well as review of results from a subset of 396 supplemental samples sent for additional analysis. Site water quality measurements were also reviewed for potential metal leaching and acidity trends. Key conclusions from the completed review and analysis are as follows:

Field vs. Analytical results:

- A review of samples where both on-site analysis and analytical laboratory results shows very good agreement for total sulphur analysis and paste pH analysis between field analysis and off-site analytical analysis, indicating that the results of field analysis of total sulphur and paste pH are reasonable for decision making purposes. For total sulphur analysis, the XRF analysis results are very close to those of the LECO analysis. It is considered that the XRF is a valid method of classifying the waste materials in the field and may be used in place of LECO analysis.

Total Sulphur and ABA results:

- Considering the dataset of 8603 on-site analysis of paste pH of the 8603 samples 0.4 % of samples (33 samples) had some associated acidity (paste pH values of less than 6) and were distributed near the ore zones. Of the 33 samples with lower paste pH, 25 were associated with total sulphur values above 0.2 weight percent and would otherwise have been classified as acid generating, one sample did not have an associated sulphur analysis result, and eight samples were characterized by low pH with no associated elevated sulphur content. Possible causes of low pH in the absence of elevated total sulphur include stored oxidation products, or soluble sulphate minerals.

- When considering the ABA data from 395 split samples Relative to historical data the 2020 through 2022 dataset appeared to have a somewhat narrower range of results and fewer samples being considered PAG (9 of 395 or 2%), with an additional 19 samples (5%) considered uncertain. Spatially samples with the highest total sulphur values appear to be focused near the ore zones.
- In the historical data the carbonate detection limit was 0.005 relative to a detection limit of 0.05 in the 2020 through 2022 data. While most of the more recent data was below the detection limit of 0.05, for the historical dataset only about 9% of the overall NP in Deposit 1 originates from carbonate minerals.

Review of sample representativeness / uncertainty:

- Baffinland currently segregates waste rock material as PAG and Non-AG using a total sulphur cut-off of 0.20 wt% as S and paste pH greater than 6. The uncertainty when using 0.2% S as an analogue for NPR of less than or equal to 2 is approximately 0.5%, with 0.51% of samples being incorrectly categorized as Non-PAG based on the recent ABA data collected. This recent ABA data continues to support the use of the 0.2 wt. % Total Sulphur criteria (and the recently added paste pH criteria of 6) as being a suitable analogue for NPR of less than or equal to 2.
- When further considering potential soluble sulphate mineral misclassification, when considering that only about 0.38% of materials contain soluble sulphate based on overall paste pH measurements, and a misclassification rate of 0.51%, only 0.002% of rock placed in the WRF with soluble sulphate minerals has some potential of being incorrectly managed.
- A review of the available on-site water quality data indicates that misclassification and placement of materials with stored acidity in areas it should not be placed is not appreciable, as is exemplified by the improvement in WRF water quality observed on site.

Leachate Chemistry from lab testing and on-site site runoff and seepage measurements:

- The laboratory short term leach testing was completed on fresh samples with limited oxidation; thus, the pH results are neutral to alkaline and metal concentrations are generally low relative to what has previously been observed under field conditions.
- There has been an observed improvement in on site water quality with an observed increase in pH and decrease in metals concentrations from 2018 through 2022. All 2022 measurements of on-site runoff and seepage were of neutral pH with no exceedances of the MDMER guideline values with the exception of total suspended solids.
- It is considered that the proper use of the waste rock screening criteria coupled with updated rock management practices is resulting in the observed improvement in water quality on-site.
- The on-site testing shows that a very small proportion (<0.4%) of waste materials have stored acidity or potential for acidification due to oxidation.

Operational procedures currently appear to be effective in reducing and managing ARD/ML on site. The geochemical results from SFE testing and on-site water quality analysis indicate that the overall waste rock pile design and placement, as presented in the previous WRMPs (including use of thin lifts to promote freezing and placement of Non-AG material around the edges of the pile), are reasonable and appropriate to reduce potential for acid generation and metal leaching. Regular operational monitoring and material segregation is still required to confirm the future geochemical performance of the WR, however based on low potential rock misclassification

rates, coupled with on-site observations of seepage and runoff water quality from 2020 through 2022 that show improving water quality over time, the current waste rock segregation criteria is considered reasonable and appropriate.

6.0 CLOSURE

We trust that this report meets your current needs. Should you have any comments or questions this document, please do not hesitate to contact the undersigned.

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APPENDIX A

**Sample Locations and Results of
On-Site Analysis of Blasthole Cuttings
(BIM 2023)**

(Data Available Electronically on Request)

APPENDIX B

**Sample Summary and Analytical Results
of Split Sample Off-Site Analyses
(2020 through 2022)**

Table B1
Blasthole Database Sample Information

Blasthole	Bench	Lithology Description	Field Classification ¹
R797878+R797990	600	Uncalssified	NAG
S113810+S113784	580	high grade iron oxide	NAG
S113836+S113783	580	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S112288+S112259	580	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S112280+S112286	600	Uncalssified	NAG
S112537+S112538	590	high grade iron oxide	NAG
S112540+S112545	640	Footwall waste	NAG
S112539+S112546	640	Footwall waste	NAG
S112798+S112794	640	Footwall waste	NAG
S112790+S112840	640	Footwall waste	NAG
S112816+S112809	640	Footwall waste	NAG
S112908+S112011	580	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S111556+S111776	640	Footwall waste	PAG
S111761+S113462	640	Footwall waste	NAG
S111789+S111739	-	Footwall schist	NAG
S111773+S111762	640	Footwall schist	PAG
S113100+S113466	640	Footwall waste	NAG
S113233+S113268	590	Footwall waste	NAG
S113294+S109197	590	Footwall waste	NAG
S109071+S109185	590	Footwall waste	NAG
S109138+S109163	590	Footwall waste	NAG
S109161+S109204	590	Footwall waste	NAG
S109272+S109295	580	Overburden	NAG
S109266+S109325	580	Overburden	NAG
S109415+S109423	-	Footwall waste	NAG
S110078+S110013	580	Overburden	NAG
S110286+S110293	580	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S108739+S108760	580	Footwall schist	NAG
S108881+S108885	580	Footwall waste	NAG
S108886+S666176	580	Footwall waste	NAG
S108960+S108965	580	Footwall waste	NAG
S108977+S108979	580	Footwall waste	NAG
S108991+S108995	580	Uncalssified	NAG
S666051+S666054	580	Footwall waste	NAG
S666084+S666089	580	Footwall waste	NAG
S666113+S666119	580	Footwall waste	NAG
S666123+S666125	580	Footwall waste	NAG
S666131+S666132	580	Footwall waste	NAG
S666144+S666146	580	Footwall waste	NAG
S666147+S666148	580	Footwall waste	NAG
S666151+S666153	580	Footwall waste	NAG
S666301+S666299	580	Footwall schist	NAG
S666302+S666300	580	high grade iron oxide	NAG

Notes:

¹ Field Classification based on total sulphur content and pH. Material considered PAG if S-total > 0.20 wt% or S-total ≤ 0.20 wt% and pH <6, and Non-PAG if S-total ≤ 0.20 wt% and pH ≥6.

Blasthole Database Sample Information

Blasthole	Bench	Lithology Description	ABA Classification ¹
S666542+S666557	580	Unclassified	NAG
S666613+S666610	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S666640+S666641	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S666663+S666664	660	Unclassified	NAG
S666909+S666954	580	Footwall schist	NAG
S666939+S666964	580	Footwall waste	NAG
S666947+S666948	580	Footwall waste	NAG
S666974+S667165	580	high grade iron oxide	NAG
S667190+S667145	580	Overburden	NAG
S667217+S667058	580	Overburden	NAG
S667236+S667275	580	high grade iron oxide	NAG
S667367+S667371	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667379+S667378	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667404+S667429	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667408+S667411	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667453+S667451	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667446+S667445	570	Overburden	NAG
S667442+S667495	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667470+S667498	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667483+S667488	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667485+S667494	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667491+S667487	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667555+S667554	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667557+S667497	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667496+S667500	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667765+S667790	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667772+S667770	570	Overburden	NAG
S668169+S667791	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S668162+S668208	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S668186+S667869	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667810+S667808	570	Overburden	PAG
S668211+S668212	570	Overburden	NAG
S668222+S668223	570	Overburden	NAG
S667864+S667825	570	Overburden	PAG
S667892+S667898	570	Overburden	NAG
S667928+S667908	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667905+S667977	570	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S667902+S667900	570	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S667922+S667950	570	Overburden	PAG
S667963+S667907	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S667949+S667933	570	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S668537+S668538	570	Footwall schist	NAG
S668536+S668539	570	Footwall schist	NAG

Notes:

¹ Field Classification based on total sulphur content and pH. Material considered PAG if S-total > 0.20 wt% or S-total ≤ 0.20 wt% and pH <6, and Non-PAG if S-total ≤ 0.20 wt% and pH ≥6.

Table B1
Blasthole Database Sample Information

Blasthole	Bench	Lithology Description	ABA Classification ¹
S668744+S668745	580	Uncalssified	NAG
S670694	570	Footwall waste	NAG
S670709	570	Footwall waste	NAG
S670764	570	Footwall waste	NAG
S670765	570	Footwall waste	NAG
S670766	570	Footwall waste	NAG
S670792	570	Footwall waste	NAG
S670793	570	Footwall waste	NAG
S670794	570	Footwall waste	NAG
S670795	570	Footwall waste	NAG
S670818	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S670829	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S670963	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S670964	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S670965	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S670966	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S670967	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S671194	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S671195	570	high grade iron oxide	NAG
S671196	570	high grade iron oxide	NAG
S671197	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S671356	570	high grade iron oxide	NAG
S671528	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S671586	560	Footwall waste	NAG
S671587	560	Footwall waste	NAG
S671588	560	Footwall waste	NAG
S671725	560	high grade iron oxide	NAG
S671961	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S660109	560	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S660121	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S660658	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S660208	560	Footwall waste	NAG
S660269	560	Footwall waste	NAG
S660377	570	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S660389	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S660390	570	high grade iron oxide	NAG
S660854	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S660866	560	Overburden	NAG
S660912	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S660936	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S661046	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S661056	560	Footwall schist	NAG
S661691	560	Footwall waste	NAG

Notes:

¹ Field Classification based on total sulphur content and pH. Material considered PAG if S-total > 0.20 wt% or S-total ≤ 0.20 wt% and pH <6, and Non-PAG if S-total ≤ 0.20 wt% and pH ≥6.

Blasthole Database Sample Information

Blasthole	Bench	Lithology Description	ABA Classification ¹
S661692	560	Footwall waste	NAG
S661726	560	Footwall waste	NAG
S661733	560	Footwall waste	NAG
S661737	560	Footwall waste	NAG
S661738	560	Footwall waste	NAG
S661812	570	Overburden	NAG
S661813	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S661845	640	Overburden	NAG
S661858	570	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S661960	570	high grade iron oxide	NAG
S662027	640	Overburden	NAG
S662028	640	Footwall waste	NAG
S662177	640	Footwall waste	NAG
S662201	640	Overburden	NAG
S662286	640	high grade iron oxide	PAG
S662320	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S662548	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S662578	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S662621	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S662638	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S662722	560	Footwall waste	PAG
S662738	560	Footwall waste	NAG
S662770	560	Footwall waste	NAG
S662854	560	Footwall waste	NAG
S662857	560	Footwall waste	NAG
S662890	560	Footwall waste	NAG
S662963	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S663190	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S663211	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S663274	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S663348	550	Footwall schist	NAG
S663368	550	Footwall schist	NAG
S663375	-	Unclassified	NAG
S663397	550	Footwall schist	NAG
S663410	550	Footwall waste	NAG
S663467	560	Unclassified	NAG
S663730	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S663721	550	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S663743	550	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S663775	550	Footwall waste	NAG
S663824	550	Footwall waste	NAG
S663873	550	Footwall waste	NAG
S663928	550	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG

Notes:

¹ Field Classification based on total sulphur content and pH. Material considered PAG if S-total > 0.20 wt% or S-total ≤ 0.20 wt% and pH <6, and Non-PAG if S-total ≤ 0.20 wt% and pH ≥6.

Table B1
Blasthole Database Sample Information

Blasthole	Bench	Lithology Description	ABA Classification ¹
S664110	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S664157	550	Footwall waste	NAG
S664194	550	Footwall waste	NAG
S664195	550	Footwall waste	NAG
S664240	550	Footwall waste	NAG
S664258	550	Footwall waste	NAG
S664259	550	Footwall waste	NAG
S664416	550	Footwall waste	NAG
S664431	550	Footwall waste	NAG
S664454	550	Footwall waste	NAG
S664485	550	Footwall waste	NAG
S664492	550	Uncalssified	NAG
S664605	550	Footwall waste	NAG
S664636	550	Footwall waste	NAG
S664915	-	Footwall schist	NAG
S664943	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S664954	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S664967	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S665012	-	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S665038	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S665045	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S665358	550	Footwall waste	NAG
S665425	550	Footwall waste	NAG
S665426	550	Footwall waste	NAG
S665451	550	Footwall waste	NAG
S665656	540	Footwall schist	NAG
S665657	540	Footwall waste	NAG
S665658	540	Footwall waste	NAG
S665659	540	Footwall schist	NAG
S665734	540	Footwall waste	NAG
S665786	540	Footwall schist	NAG
S665811	540	Footwall waste	NAG
S665963	540	Footwall schist	NAG
S672059	550	Footwall schist	NAG
S672156	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S672171	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S672187	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S672220	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S672238	560	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S672403	-	Footwall schist	NAG
S672420	-	Uncalssified	NAG
S672569	-	Uncalssified	NAG
S672674	-	Footwall waste	NAG

Notes:

¹ Field Classification based on total sulphur content and pH. Material considered PAG if S-total > 0.20 wt% or S-total <= 0.20 wt% and pH <6, and Non-PAG if S-total <= 0.20 wt% and pH >=6.

Table B1
Blasthole Database Sample Information

Blasthole	Bench	Lithology Description	ABA Classification ¹
S672675	-	Footwall waste	NAG
S672676	-	Footwall waste	NAG
S672730	-	Footwall waste	NAG
S672758	-	Footwall waste	NAG
S672789	-	Footwall waste	NAG
S673035	-	Footwall waste	NAG
S673054	-	Footwall waste	NAG
S673102	-	Footwall waste	NAG
S673406	540	Footwall waste	NAG
S673408	540	Footwall schist	NAG
S673438	540	Footwall waste	NAG
S673508	540	Footwall waste	NAG
S673512	540	Footwall waste	NAG
S673728	-	Footwall schist	NAG
S673746	-	Footwall waste	NAG
S673754	-	Footwall waste	NAG
S673815	-	Unclassified	NAG
S673925	540	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S673949	-	Footwall waste	NAG
S673972	540	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S674155	540	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S674161	-	Footwall waste	NAG
S674385	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S674392	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S674400	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S674410	550	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S674412	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S674484	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S674492	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S674544	550	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S674802	540	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S674793	540	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S674806	530	Footwall waste	NAG
S674825	530	Footwall waste	NAG
S674837	530	Footwall waste	NAG
S674887	530	Footwall waste	NAG
S674930	530	Footwall waste	NAG
S674947	530	Footwall waste	NAG
S674966	530	Footwall waste	NAG
S675033	540	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S675150	-	Unclassified	NAG
S675175	540	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S675222	540	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG

Notes:

¹ Field Classification based on total sulphur content and pH. Material considered PAG if S-total > 0.20 wt% or S-total ≤ 0.20 wt% and pH <6, and Non-PAG if S-total ≤ 0.20 wt% and pH ≥6.

Blasthole Database Sample Information

Blasthole	Bench	Lithology Description	ABA Classification ¹
S675314	530	Footwall waste	NAG
S675341	530	Footwall waste	NAG
S675367	530	Footwall waste	NAG
S675385	530	Footwall waste	NAG
S675398	530	Footwall waste	NAG
S675420	530	Footwall waste	NAG
S675763	530	Footwall schist	NAG
S675861	530	Footwall schist	NAG
S675948	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S675964	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S676113	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S676166	530	high grade iron oxide	NAG
S676460	530	Footwall waste	NAG
S676472	530	Footwall schist	NAG
S676779	530	Footwall waste	NAG
S676794	530	Footwall waste	NAG
S676804	530	Uncalssified	NAG
S676839	530	Footwall waste	NAG
S676895	530	Footwall waste	NAG
S676945	530	Footwall waste	NAG
S676978	530	Footwall waste	NAG
S676989	530	Footwall waste	NAG
S677027	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S677049	-	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S677100	530	Footwall waste	NAG
S677142	530	Footwall waste	NAG
S677607	-	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S677624	-	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
S677653	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S677668	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S677688	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
S677808	520	Footwall waste	NAG
S677827	520	Footwall waste	NAG
S677887	520	Footwall waste	NAG
S677900	520	Footwall waste	NAG
S677906	520	Footwall waste	NAG
B625662	540	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B625663	540	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B625664	520	Footwall waste	NAG
B625676	520	Footwall schist	NAG
B625683	520	Footwall waste	NAG
B625906	530	Overburden	NAG
B626264	520	Footwall waste	NAG

Notes:

¹ Field Classification based on total sulphur content and pH. Material considered PAG if S-total > 0.20 wt% or S-total <= 0.20 wt% and pH <6, and Non-PAG if S-total <= 0.20 wt% and pH >=6.

Table B1
Blasthole Database Sample Information

Blasthole	Bench	Lithology Description	ABA Classification ¹
B626265	520	Footwall waste	NAG
B626302	520	Footwall waste	NAG
B626314	520	Footwall waste	NAG
B626326	520	Footwall waste	NAG
B626952	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B626972	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B627000	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B627106	530	Overburden	NAG
B627271	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B627356	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B627389	520	Overburden	NAG
B627414	520	Footwall waste	NAG
B627591	520	Footwall waste	NAG
B627592	520	Footwall waste	NAG
B627851	530	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B627842	530	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B628011	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B627997	530	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B627992	530	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B628037	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B628293	520	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B628297	520	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B628303	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B628533	-	Footwall waste	NAG
B628558	-	Footwall waste	NAG
B628690	520	Footwall waste	NAG
B628727	520	Footwall waste	NAG
B628752	520	Footwall waste	NAG
B628776	520	Footwall waste	NAG
B628790	520	Footwall waste	NAG
B628821	520	Footwall waste	NAG
B628884	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B628940	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B629329	520	Footwall schist	NAG
B629344	520	Footwall waste	NAG
B629378	520	Footwall waste	NAG
B629391	520	Footwall waste	NAG
B629510	-	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B629533	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B629584	530	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B629819	510	Footwall waste	NAG
B629821	510	Footwall waste	NAG
B629846	510	Footwall waste	NAG

Notes:

¹ Field Classification based on total sulphur content and pH. Material considered PAG if S-total > 0.20 wt% or S-total ≤ 0.20 wt% and pH <6, and Non-PAG if S-total ≤ 0.20 wt% and pH ≥6.

Table B1
Blasthole Database Sample Information

Blasthole	Bench	Lithology Description	ABA Classification ¹
B629849	510	Footwall waste	NAG
B629919	510	Footwall waste	NAG
B630004	510	Overburden	NAG
B630005	510	Footwall waste	NAG
B630061	510	Footwall waste	NAG
B630226	520	Footwall waste	NAG
B630627	510	Footwall waste	NAG
B630629	510	Footwall waste	NAG
B630605	520	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B630829	520	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B630842	520	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B630868	520	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B630915	520	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B631209	520	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B631232	520	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B631245	520	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B631297	520	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B631901	520	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B632258	650	Footwall waste	NAG
B632287	650	Footwall waste	NAG
B632288	650	Footwall waste	NAG
B632721	640	Footwall waste	NAG
B632731	640	Footwall waste	NAG
B632739	640	Footwall waste	NAG
B632769	640	Footwall waste	NAG
B632800	640	Footwall waste	NAG
B632806	640	Footwall waste	NAG
B632821	640	Footwall waste	NAG
B632831	640	Footwall waste	PAG
B632856	640	Footwall waste	NAG
B632906	640	Overburden	NAG
B633053	640	Footwall waste	NAG
B633077	640	Footwall waste	NAG
B633122	640	Overburden	NAG
B633141	640	Overburden	NAG
B633168	640	Overburden	NAG
B633242	640	Unclassified	NAG
B633308	640	Overburden	NAG
B633459	510	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B633565	510	undifferentiated gneiss/schist/amphibolite/ultramafics	PAG
B633859	510	Footwall waste	NAG
B633860	510	Footwall waste	NAG
B633925	510	Footwall waste	NAG

Notes:

¹ Field Classification based on total sulphur content and pH. Material considered PAG if S-total > 0.20 wt% or S-total ≤ 0.20 wt% and pH <6, and Non-PAG if S-total ≤ 0.20 wt% and pH ≥6.

Table B1
Blasthole Database Sample Information

Blasthole	Bench	Lithology Description	ABA Classification ¹
B633929	510	Footwall waste	NAG
B633971	510	Footwall waste	NAG
B634381	510	undifferentiated gneiss/schist/amphibolite/ultramafics	NAG
B634433	510	Footwall waste	NAG
B634434	510	Footwall waste	NAG
B636102	500	Footwall schist	NAG
B636103	500	Footwall waste	NAG
B636150	500	Footwall waste	NAG
B636151	500	Footwall waste	NAG

Notes:

Data extracted from electronic data file "SFE ABA Results_forGolderv2" supplied electronically from BIM
in email from T. Brisco to K. DeVos and A. Parada, March 24, 2023

¹ Field Classification based on total sulphur content and pH. Material considered PAG if S-total > 0.20 wt% or S-total <= 0.20 wt% and pH <6, and Non-PAG if S-total <=

Table B2
ABA Results

Sample ID	Sample Type	Lithology	Final pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbonate	NP ⁽³⁾	AP ⁽⁴⁾	Net NP ⁽⁶⁾	NPR ⁽⁵⁾
			s.u.			%						
R7978/R8+R797990	Blasthole	Unclassified	7.6	<0.01	<0.01	<0.01	<0.05	<0.2	14.0	0.31	13.69	44.8
S113810+S113784	Blasthole	high grade iron oxide	6.4	0.15	0.09	0.12	<0.05	<0.2	7.0	4.69	2.31	1.49
S113836+S113783	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.6	0.01	0.01	<0.01	<0.05	<0.2	9.0	<0.01	8.69	28.8
S112288+S112259	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	6.9	0.04	0.04	0.01	<0.05	<0.2	8.0	1.25	6.75	6.4
S112280+S112286	Blasthole	Unclassified	7.8	0.04	0.04	<0.01	<0.05	<0.2	13.0	1.25	11.75	10.4
S112537+S112538	Blasthole	high grade iron oxide	7.0	<0.01	<0.01	0.01	<0.05	<0.2	8.0	0.31	7.69	25.6
S112540+S112545	Blasthole	Footwall waste	7.9	<0.01	<0.01	<0.01	<0.05	<0.2	10.0	0.31	9.69	32.0
S112539+S112546	Blasthole	Footwall waste	8.0	0.06	0.06	<0.01	<0.05	<0.2	14.0	1.88	12.13	7.47
S112798+S112794	Blasthole	Footwall waste	8.7	<0.01	<0.01	<0.01	<0.05	<0.2	12.0	0.31	11.69	38.4
S112790+S112840	Blasthole	Footwall waste	8.5	0.06	0.06	<0.01	<0.05	<0.2	16.0	1.88	14.13	8.53
S112816+S112809	Blasthole	Footwall waste	9.1	0.03	0.03	<0.01	<0.05	<0.2	14.0	0.94	13.06	14.93
S112908+S112011	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.3	0.05	0.05	0.02	<0.05	<0.2	18.0	1.56	16.44	11.52
S111556+S111776	Blasthole	Footwall waste	6.8	1.24	1.09	0.16	<0.05	<0.2	13.0	38.75	-25.75	0.34
S111761+S113462	Blasthole	Footwall waste	8.1	0.03	0.03	<0.01	<0.05	<0.2	14.0	0.94	13.06	14.93
S111789+S111739	Blasthole	Footwall schist	7.7	0.04	0.04	<0.01	<0.05	<0.2	12.0	1.25	10.75	9.6
S111773+S111762	Blasthole	Footwall schist	7.3	0.45	0.44	0.03	<0.05	<0.2	14.0	14.06	-0.06	1.0
S113100+S113466	Blasthole	Footwall waste	8.7	0.04	0.04	<0.01	<0.05	<0.2	15.0	1.25	13.75	12.0
S113233+S113268	Blasthole	Footwall waste	8.4	0.02	0.02	0.01	<0.05	<0.2	15.0	0.63	14.38	24.0
S113294+S109197	Blasthole	Footwall waste	8.6	0.02	0.02	<0.01	<0.05	<0.2	14.0	<0.05	13.38	22.4
S109071+S109185	Blasthole	Footwall waste	8.8	0.02	0.02	<0.01	<0.05	<0.2	16.0	0.63	15.38	25.6
S109138+S109163	Blasthole	Footwall waste	8.3	0.02	0.02	<0.01	<0.05	<0.2	17.0	0.63	16.38	27.2
S109161+S109204	Blasthole	Footwall waste	8.5	0.03	0.03	0.01	<0.05	<0.2	14.0	0.94	13.06	14.93
S109272+S109295	Blasthole	Overburden	7.7	0.03	0.03	0.02	<0.05	<0.2	17.0	0.94	16.06	18.13
S109266+S109325	Blasthole	Overburden	7.7	0.07	0.07	<0.01	<0.05	<0.2	16.0	2.19	13.81	7.31
S109416+S109423	Blasthole	Footwall waste	8.8	0.03	0.03	<0.01	<0.05	<0.2	14.0	0.94	13.06	14.93
S110078+S110013	Blasthole	Overburden	7.8	<0.01	<0.01	<0.01	<0.05	<0.2	17.0	0.31	16.69	54.4
S110286+S110293	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.6	0.05	0.05	0.02	<0.05	<0.2	16.0	1.56	14.44	10.24
S108739+S108760	Blasthole	Footwall schist	8.2	0.01	0.01	<0.01	<0.05	<0.2	11.0	0.31	10.69	35.2
S108881+S108895	Blasthole	Footwall waste	8.6	0.01	0.01	0.01	<0.05	<0.2	12.0	0.31	11.69	38.4
S108866+S66176	Blasthole	Footwall waste	8.5	0.01	0.01	<0.01	<0.05	<0.2	11.0	<0.05	10.69	35.2
S108960+S108965	Blasthole	Footwall waste	8.1	0.14	0.14	<0.01	<0.05	<0.2	14.0	4.38	9.63	3.2
S108977+S108979	Blasthole	Footwall waste	8.5	0.05	0.05	<0.01	<0.05	<0.2	12.0	1.56	10.44	7.68
S108991+S108995	Blasthole	Unclassified	8.9	<0.01	<0.01	<0.01	<0.05	<0.2	13.0	0.31	12.69	41.6
S666051+S666054	Blasthole	Footwall waste	9.1	<0.01	<0.01	<0.01	<0.05	<0.2	11.0	0.31	10.69	35.2
S666084+S666089	Blasthole	Footwall waste	8.7	0.01	0.01	<0.01	<0.05	<0.2	12.0	0.31	11.69	38.4
S666113+S666119	Blasthole	Footwall waste	8.7	0.02	0.02	<0.01	<0.05	<0.2	12.0	0.63	11.38	19.2
S666123+S666125	Blasthole	Footwall waste	8.5	<0.01	<0.01	<0.01	<0.05	<0.2	11.0	0.31	10.69	35.2
S666131+S666132	Blasthole	Footwall waste	8.2	0.01	0.01	<0.01	<0.05	<0.2	11.0	0.31	10.69	35.2
S666144+S666146	Blasthole	Footwall waste	8.4	0.01	0.01	<0.01	<0.05	<0.2	12.0	0.31	11.69	38.4
S666147+S666148	Blasthole	Footwall waste	8.6	0.01	0.01	<0.01	<0.05	<0.2	9.0	0.31	8.69	28.8
S666151+S666153	Blasthole	Footwall waste	8.3	<0.01	<0.01	<0.01	<0.05	<0.2	10.0	0.31	9.69	32.0
S666301+S666299	Blasthole	Footwall schist	8.8	0.01	0.01	<0.01	<0.05	<0.2	10.0	0.31	9.69	32.0
S666302+S666300	Blasthole	high grade iron oxide	7.7	0.01	0.01	<0.01	<0.05	<0.2	10.0	0.31	9.69	32.0
S666542+S666557	Blasthole	Unclassified	7.6	0.01	0.01	<0.01	<0.05	<0.2	9.0	0.31	8.69	28.8
S666613+S666610	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.1	0.1	0.06	0.02	<0.05	<0.2	12.0	3.13	8.88	3.84
S666640+S666641	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	6.1	0.15	0.09	0.04	<0.05	<0.2	5.0	4.69	0.31	1.07
S666663+S666664	Blasthole	Unclassified	8.4	0.01	0.01	<0.01	0.06	0.2	15.0	0.31	14.69	48.0
S666909+S666954	Blasthole	Footwall schist	8.5	<0.01	<0.01	<0.01	<0.05	<0.2	10.0	0.31	9.69	32.0
S666939+S666964	Blasthole	Footwall waste	8.4	0.01	0.01	0.02	<0.05	<0.2	12.0	0.31	11.69	38.4
S666947+S666948	Blasthole	Footwall waste	8.5	<0.01	<0.01	<0.01	<0.05	<0.2	10.0	0.31	9.69	32.0

Table B2
ABA Results

Sample ID	Sample Type	Lithology	Final pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur %	Total Carbon	Carbonate	NP ⁽³⁾	AP ⁽⁴⁾	Net NP ⁽⁶⁾	NPR ⁽⁵⁾
												ratio
S668974+S667165	Blasthole	high grade iron oxide	6.6	0.03	0.03	<0.01	<0.05	<0.2	4.0	0.94	3.06	4.27
S667190+S667145	Blasthole	Overburden	7.3	0.04	0.04	0.01	<0.05	<0.2	14.0	1.25	12.75	11.2
S667217+S667058	Blasthole	Overburden	7.8	0.04	0.04	0.04	<0.05	<0.2	13.75	1.25	13.75	12.0
S667236+S667275	Blasthole	high grade iron oxide	7.3	0.05	0.05	<0.01	<0.05	<0.2	12.0	1.56	10.44	7.68
S667367+S667371	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.7	0.05	0.05	0.02	<0.05	<0.2	11.0	1.56	9.44	7.04
S667379+S667378	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.7	0.06	0.06	0.02	<0.05	<0.2	12.0	1.88	10.13	6.4
S667404+S667429	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	0.1	0.1	0.02	<0.05	<0.2	12.0	3.13	8.88	3.84
S667408+S667411	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.02	0.02	0.02	<0.05	<0.2	16.0	0.63	15.38	25.6
S667453+S667451	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	0.02	0.02	0.02	<0.05	<0.2	18.0	0.63	17.38	28.8
S667446+S667445	Blasthole	Overburden	7.9	0.12	0.11	0.01	<0.05	<0.2	19.0	3.75	15.25	5.07
S667442+S667495	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.18	0.18	0.04	<0.05	<0.2	14.0	5.63	8.38	2.49
S667470+S667498	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.6	0.09	0.09	<0.01	<0.05	<0.2	10.0	2.81	7.19	3.56
S667483+S667488	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	0.02	0.02	0.01	<0.05	<0.2	16.0	0.63	15.38	25.6
S667485+S667494	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	0.12	0.12	0.01	<0.05	<0.2	18.0	3.75	14.25	4.8
S667491+S667487	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	0.08	0.08	0.01	<0.05	<0.2	17.0	2.5	14.5	6.8
S667555+S667554	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.11	0.11	0.02	<0.05	<0.2	14.0	3.44	10.56	4.07
S667557+S667497	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	0.04	0.04	0.02	<0.05	<0.2	18.0	1.25	16.75	14.4
S667496+S667500	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	0.11	0.1	0.02	<0.05	<0.2	16.0	3.44	12.56	4.65
S667765+S667790	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.1	0.08	0.08	0.02	<0.05	<0.2	13.0	2.5	10.5	5.2
S667772+S667770	Blasthole	Overburden	8.0	0.01	0.01	0.02	<0.05	<0.2	3.0	0.31	2.69	9.6
S668169+S667791	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.3	0.06	0.03	0.08	<0.05	<0.2	14.0	1.88	12.13	7.47
S668162+S668208	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.2	0.05	0.02	0.06	<0.05	<0.2	16.0	1.56	14.44	10.24
S668186+S687869	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.7	0.01	0.01	0.03	<0.05	<0.2	13.0	0.31	12.69	41.6
S667810+S667808	Blasthole	Overburden	7.5	0.54	0.54	0.05	<0.05	<0.2	22.0	16.88	5.13	1.3
S668211+S668212	Blasthole	Overburden	8.0	0.01	0.01	0.01	<0.05	<0.2	11.0	0.31	10.69	35.2
S668222+S668223	Blasthole	Overburden	7.5	<0.01	<0.01	0.01	<0.05	<0.2	7.0	0.31	6.69	22.4
S667864+S667825	Blasthole	Overburden	6.3	0.89	0.68	0.27	<0.05	<0.2	18.0	27.81	-9.81	0.65
S667892+S667898	Blasthole	Overburden	7.9	<0.01	<0.01	0.02	<0.05	<0.2	18.0	0.31	17.69	57.6
S667928+S667908	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.02	0.01	0.02	<0.05	<0.2	13.0	0.63	12.38	20.8
S667905+S667977	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.6	0.24	0.23	0.01	<0.05	<0.2	8.0	7.5	0.5	1.07
S667902+S667900	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.6	0.29	0.28	0.01	<0.05	<0.2	12.0	9.06	2.94	1.32
S667922+S667950	Blasthole	Overburden	7.2	0.48	0.47	0.03	<0.05	<0.2	12.0	15.0	-3.0	0.8
S667963+S667907	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	0.02	0.02	0.04	<0.05	<0.2	11.0	0.63	10.38	17.6
S667949+S667933	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.2	1.34	1.32	0.01	<0.05	<0.2	10.0	41.88	-31.88	0.24
S668537+S668538	Blasthole	Footwall schist	8.3	0.01	0.01	<0.01	<0.05	<0.2	14.0	0.31	13.69	44.8
S668536+S68539	Blasthole	Footwall schist	8.3	0.02	0.02	<0.01	<0.05	<0.2	13.0	0.63	12.38	20.8
S668744+S668745	Blasthole	Unclassified	8.2	<0.01	<0.01	0.01	<0.05	<0.2	10.0	0.31	9.69	32.0
S670694	Blasthole	Footwall waste	9.3	0.03	0.03	0.04	<0.05	<0.2	12.0	0.94	11.06	12.8
S670709	Blasthole	Footwall waste	9.1	0.05	0.04	0.05	<0.05	<0.2	12.0	1.56	10.44	7.68
S670764	Blasthole	Footwall waste	9.4	0.02	0.02	0.01	<0.05	<0.2	12.0	0.63	11.38	19.2
S670765	Blasthole	Footwall waste	9.3	<0.01	<0.01	0.02	<0.05	<0.2	14.0	0.31	13.69	44.8
S670766	Blasthole	Footwall waste	9.3	<0.01	<0.01	0.02	<0.05	<0.2	11.0	0.31	10.69	35.2
S670792	Blasthole	Footwall waste	9.6	0.02	0.01	0.02	<0.05	<0.2	12.0	0.63	11.38	19.2
S670793	Blasthole	Footwall waste	9.0	0.03	0.03	0.05	<0.05	<0.2	13.0	0.94	12.06	13.87
S670794	Blasthole	Footwall waste	9.6	<0.01	<0.01	0.02	<0.05	<0.2	15.0	0.31	14.69	48.0
S670795	Blasthole	Footwall waste	8.4	0.02	0.02	0.02	<0.05	<0.2	14.0	0.63	13.38	22.4
S670818	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.6	<0.01	<0.01	0.02	<0.05	<0.2	9.0	0.31	8.69	28.8
S670829	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.5	0.02	0.01	0.04	<0.05	<0.2	13.0	0.63	12.38	20.8
S670963	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	<0.01	<0.01	0.02	<0.05	<0.2	15.0	0.31	14.69	48.0
S670964	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.7	0.01	<0.01	0.01	<0.05	<0.2	14.0	0.31	13.69	44.8

Table B2
ABA Results

Sample ID	Sample Type	Lithology	Final pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbonate	NP ⁽³⁾	AP ⁽⁴⁾	Net NP ⁽⁶⁾	NPR ⁽⁵⁾
				S.U.		%						ratio
S670965	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.6	<0.01	<0.01	0.01	<0.05	<0.2	19.0	0.31	18.69	60.8
S670966	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.5	0.17	0.16	<0.01	<0.05	<0.2	15.0	5.31	9.69	2.82
S670967	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.4	0.03	0.02	0.03	<0.05	<0.2	20.0	0.94	19.06	21.33
S671194	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	<0.01	<0.01	0.03	<0.05	<0.2	17.0	0.31	16.69	54.4
S671195	Blasthole	high grade iron oxide	7.4	0.06	0.03	0.09	<0.05	<0.2	14.0	1.88	12.13	7.47
S671196	Blasthole	high grade iron oxide	8.1	<0.01	<0.01	0.02	<0.05	<0.2	14.0	0.31	13.69	44.8
S671197	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	<0.01	<0.01	0.02	<0.05	<0.2	13.0	0.31	12.69	41.6
S671356	Blasthole	high grade iron oxide	7.5	0.02	0.01	0.04	<0.05	<0.2	12.0	0.63	11.38	19.2
S671528	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.7	<0.01	<0.01	0.02	<0.05	<0.2	10.0	0.31	9.69	32.0
S671586	Blasthole	Footwall waste	9.1	<0.01	<0.01	0.02	<0.05	<0.2	11.0	0.31	10.69	35.2
S671587	Blasthole	Footwall waste	9.4	<0.01	<0.01	0.02	<0.05	<0.2	11.0	0.31	10.69	35.2
S671588	Blasthole	Footwall waste	9.3	<0.01	<0.01	0.02	<0.05	<0.2	10.0	0.31	9.69	32.0
S671725	Blasthole	high grade iron oxide	8.7	<0.01	<0.01	0.02	<0.05	<0.2	11.0	0.31	10.69	35.2
S671961	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.07	0.07	0.08	<0.05	<0.2	11.0	2.19	8.81	5.03
S680109	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.4	0.3	0.3	0.04	<0.05	<0.2	14.0	9.38	4.63	1.49
S680121	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.4	0.02	0.02	0.02	<0.05	<0.2	15.0	0.63	14.38	24.0
S680658	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.4	0.09	0.09	0.05	<0.05	<0.2	21.0	2.81	18.19	7.47
S680208	Blasthole	Footwall waste	8.6	<0.01	<0.01	0.01	<0.05	<0.2	14.0	0.31	13.69	44.8
S680289	Blasthole	Footwall waste	9.6	<0.01	<0.01	0.01	<0.05	<0.2	10.0	0.31	9.69	32.0
S680377	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	6.8	0.22	0.07	0.22	<0.05	<0.2	11.0	6.88	4.13	1.6
S680389	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.6	0.01	0.01	0.02	<0.05	<0.2	20.0	0.31	19.69	64.0
S680390	Blasthole	high grade iron oxide	8.4	0.02	0.02	0.02	<0.05	<0.2	13.0	0.63	12.38	20.8
S680854	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	<0.01	<0.01	0.01	<0.05	<0.2	20.0	0.31	19.69	64.0
S680866	Blasthole	Overburden	8.3	<0.01	<0.01	0.02	<0.05	<0.2	16.0	0.31	15.69	51.2
S680912	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.1	0.1	0.04	<0.05	<0.2	27.0	3.13	23.88	8.64
S680936	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	<0.01	<0.01	0.02	<0.05	<0.2	36.0	0.31	35.69	115.2
S681046	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.03	0.03	0.03	<0.05	<0.2	71.0	0.94	70.06	75.73
S681056	Blasthole	Footwall schist	9.1	0.03	0.03	0.03	<0.05	<0.2	30.0	0.94	29.06	32.0
S681691	Blasthole	Footwall waste	9.4	0.02	0.02	0.02	<0.05	<0.2	22.0	0.63	21.38	35.2
S681692	Blasthole	Footwall waste	8.2	0.12	0.12	0.02	<0.05	<0.2	17.0	3.75	13.25	4.53
S681726	Blasthole	Footwall waste	9.1	0.02	0.02	0.03	<0.05	<0.2	19.0	0.63	18.38	30.4
S681733	Blasthole	Footwall waste	9.0	0.01	0.01	0.01	<0.05	<0.2	14.0	0.31	13.69	44.8
S681737	Blasthole	Footwall waste	9.0	0.02	0.02	0.01	<0.05	<0.2	16.0	0.63	15.38	25.6
S681738	Blasthole	Footwall waste	9.2	0.02	0.02	0.01	<0.05	<0.2	15.0	0.63	14.38	24.0
S681812	Blasthole	Overburden	7.8	0.08	0.07	0.08	<0.05	<0.2	35.0	2.5	32.5	14.0
S681813	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.07	0.06	0.07	<0.05	<0.2	53.0	2.19	50.81	24.23
S681845	Blasthole	Overburden	8.2	0.04	0.04	0.04	<0.05	<0.2	15.0	1.25	13.75	12.0
S681858	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.4	0.07	0.06	0.06	<0.05	<0.2	17.0	2.19	14.81	7.77
S681960	Blasthole	high grade iron oxide	7.3	0.07	0.06	0.05	0.09	0.3	15.0	2.19	12.81	6.86
S682027	Blasthole	Overburden	7.9	0.03	0.03	0.04	<0.05	<0.2	17.0	0.94	16.06	18.13
S682028	Blasthole	Footwall waste	8.0	0.04	0.04	0.05	<0.05	<0.2	23.0	1.25	21.75	18.4
S682177	Blasthole	Footwall waste	8.5	0.14	0.14	0.02	<0.05	<0.2	15.0	4.38	10.63	3.43
S682201	Blasthole	Overburden	8.4	<0.01	<0.01	0.02	<0.05	<0.2	13.0	0.31	12.69	41.6
S682286	Blasthole	high grade iron oxide	8.2	1.62	1.6	0.09	<0.05	<0.2	28.0	50.63	-22.63	0.55
S682320	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.5	0.05	0.05	0.04	<0.05	<0.2	21.0	1.56	19.44	13.44
S682548	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.03	0.03	0.03	<0.05	<0.2	32.0	0.94	31.06	34.13
S682578	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.01	0.01	0.03	<0.05	<0.2	28.0	0.31	27.69	89.6
S682621	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	0.02	0.02	0.03	<0.05	<0.2	20.0	0.63	19.38	32.0
S682638	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.01	0.01	0.01	<0.05	<0.2	27.0	0.31	26.69	86.4
S682722	Blasthole	Footwall waste	9.3	0.22	0.22	<0.01	<0.05	<0.2	19.0	6.88	12.13	2.76

Table B2
ABA Results

Sample ID	Sample Type	Lithology	Final pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbonate	NP ⁽³⁾	AP ⁽⁴⁾	Net NP ⁽⁶⁾	NPR ⁽⁵⁾
												ratio
S662738	Blasthole	Footwall waste	8.8	0.02	0.02	<0.01	<0.05	<0.2	16.0	0.63	15.38	25.6
S662770	Blasthole	Footwall waste	8.8	0.02	0.02	<0.01	<0.05	<0.2	18.0	0.63	17.38	28.8
S662854	Blasthole	Footwall waste	8.5	0.01	0.01	<0.01	<0.05	<0.2	18.0	<0.01	17.69	57.6
S662857	Blasthole	Footwall waste	8.8	0.01	0.01	<0.01	<0.05	<0.2	17.0	0.31	16.69	54.4
S662890	Blasthole	Footwall waste	9.1	0.01	0.01	<0.01	<0.05	<0.2	16.0	0.31	15.69	51.2
S662963	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.4	0.1	0.1	0.01	<0.05	<0.2	63.0	3.13	59.88	20.16
S663190	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.03	0.03	0.01	<0.05	<0.2	30.0	0.94	29.06	32.0
S663211	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.5	0.1	0.08	0.01	<0.05	<0.2	26.0	3.13	22.88	8.32
S663274	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.04	0.04	0.01	<0.05	<0.2	25.0	1.25	23.75	20.0
S663348	Blasthole	Footwall schist	8.3	0.05	0.05	0.01	<0.05	<0.2	18.0	1.56	16.44	11.52
S663368	Blasthole	Footwall schist	8.4	0.01	0.01	0.01	<0.05	<0.2	17.0	0.31	16.69	54.4
S663375	Blasthole	Unclassified	8.0	<0.01	<0.01	<0.01	<0.05	<0.2	23.0	0.31	22.69	73.6
S663397	Blasthole	Footwall schist	8.8	0.02	0.02	0.01	<0.05	<0.2	18.0	0.63	17.38	28.8
S663410	Blasthole	Footwall waste	9.1	0.05	0.05	0.01	<0.05	<0.2	20.0	1.56	18.44	12.8
S663467	Blasthole	Unclassified	8.2	0.01	0.01	<0.01	<0.05	<0.2	10.0	0.31	9.69	32.0
S663730	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.06	0.06	0.01	<0.05	<0.2	23.0	1.88	21.13	12.27
S663721	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.71	0.69	<0.01	<0.05	<0.2	32.0	22.19	9.81	1.44
S663743	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	0.79	0.77	0.02	<0.05	<0.2	25.0	<0.05	0.31	1.01
S663775	Blasthole	Footwall waste	9.3	0.02	0.02	0.01	<0.05	<0.2	17.0	0.63	16.38	27.2
S663824	Blasthole	Footwall waste	8.7	0.01	0.01	0.01	<0.05	<0.2	21.0	0.31	20.69	67.2
S663873	Blasthole	Footwall waste	8.7	0.02	0.01	0.01	<0.05	<0.2	19.0	0.63	18.38	30.4
S663928	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.5	0.33	0.13	0.3	<0.05	<0.2	34.0	10.31	23.69	3.3
S664110	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.02	0.02	0.01	<0.05	<0.2	30.0	0.63	29.38	48.0
S664157	Blasthole	Footwall waste	9.0	0.02	0.02	<0.01	<0.05	<0.2	20.0	0.63	19.38	32.0
S664194	Blasthole	Footwall waste	9.5	0.03	0.03	0.01	<0.05	<0.2	19.0	0.94	18.06	20.27
S664195	Blasthole	Footwall waste	9.2	0.04	0.04	<0.01	<0.05	<0.2	17.0	1.25	15.75	13.6
S664240	Blasthole	Footwall waste	9.3	0.02	0.02	0.01	<0.05	<0.2	16.0	0.63	15.38	25.6
S664258	Blasthole	Footwall waste	9.2	0.02	0.02	<0.01	<0.05	<0.2	17.0	0.63	16.38	27.2
S664259	Blasthole	Footwall waste	8.9	0.04	0.04	<0.01	<0.05	<0.2	20.0	1.25	18.75	16.0
S664416	Blasthole	Footwall waste	9.0	0.06	0.06	0.02	<0.05	<0.2	19.0	1.88	17.13	10.13
S664431	Blasthole	Footwall waste	8.8	0.02	0.02	<0.01	<0.05	<0.2	20.0	0.63	19.38	32.0
S664454	Blasthole	Footwall waste	8.7	0.02	0.02	0.02	<0.05	<0.2	27.0	0.63	26.38	43.2
S664485	Blasthole	Footwall waste	9.8	0.01	0.01	0.02	<0.05	<0.2	16.0	0.31	15.69	51.2
S664492	Blasthole	Unclassified	9.2	0.04	0.04	<0.01	<0.05	<0.2	14.0	1.25	12.75	11.2
S664605	Blasthole	Footwall waste	9.0	0.04	0.04	<0.01	<0.05	<0.2	18.0	1.25	16.75	14.4
S664636	Blasthole	Footwall waste	9.6	0.01	0.01	0.02	<0.05	<0.2	20.0	0.31	19.69	64.0
S664915	Blasthole	Footwall schist	8.4	<0.01	<0.01	0.01	<0.05	<0.2	28.0	0.31	27.69	89.6
S664943	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.6	0.02	0.02	0.02	<0.05	<0.2	21.0	0.63	20.38	33.6
S664954	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	<0.01	<0.01	0.01	<0.05	<0.2	63.0	0.31	62.69	201.6
S664967	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.01	0.01	0.03	<0.05	<0.2	35.0	0.31	34.69	112.0
S665012	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.56	0.56	0.05	<0.05	<0.2	29.0	17.5	11.5	1.66
S665038	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.01	0.01	0.01	<0.05	<0.2	66.0	0.31	65.69	211.2
S665045	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.12	0.12	<0.01	<0.05	<0.2	27.0	3.75	23.25	7.2
S665358	Blasthole	Footwall waste	8.8	<0.01	<0.01	<0.01	<0.05	<0.2	12.0	0.31	11.69	38.4
S665425	Blasthole	Footwall waste	8.6	0.07	0.07	0.01	0.07	0.3	29.0	2.19	26.81	13.26
S665426	Blasthole	Footwall waste	8.8	<0.01	<0.01	<0.01	<0.05	<0.2	13.0	0.31	12.69	41.6
S665451	Blasthole	Footwall waste	8.7	<0.01	<0.01	<0.01	<0.05	<0.2	20.0	0.31	19.69	64.0
S665656	Blasthole	Footwall schist	8.2	0.02	0.02	<0.01	<0.05	<0.2	19.0	0.63	18.38	30.4
S665657	Blasthole	Footwall waste	9.5	<0.01	<0.01	<0.01	<0.05	<0.2	25.0	0.31	24.69	80.0
S665658	Blasthole	Footwall waste	9.0	0.01	0.01	0.02	<0.05	<0.2	20.0	0.31	19.69	64.0

Table B2
ABA Results

Sample ID	Sample Type	Lithology	Final pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbonate	NP ⁽³⁾	AP ⁽⁴⁾	Net NP ⁽⁶⁾	NPR ⁽⁵⁾
			s.u.			%						ratio
S665659	Blasthole	Footwall schist	9.5	<0.01	<0.01	0.01	<0.05	<0.2	19.0	0.31	18.69	60.8
S665734	Blasthole	Footwall waste	9.3	<0.01	<0.01	<0.01	<0.05	<0.2	16.0	0.31	15.69	51.2
S665786	Blasthole	Footwall schist	8.7	<0.01	<0.01	<0.01	<0.05	<0.2	17.0	<0.01	16.69	54.4
S665811	Blasthole	Footwall waste	8.7	<0.01	<0.01	0.01	<0.05	<0.2	15.0	0.31	14.69	48.0
S665963	Blasthole	Footwall schist	8.4	<0.01	<0.01	<0.01	<0.05	<0.2	18.0	0.31	17.69	57.6
S672059	Blasthole	Footwall schist	8.6	0.02	0.02	<0.01	<0.05	<0.2	24.0	0.63	23.38	38.4
S672156	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	0.01	0.01	<0.01	<0.05	<0.2	17.0	0.31	16.69	54.4
S672171	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.18	0.18	<0.01	<0.05	<0.2	63.0	5.63	57.38	11.2
S672187	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	<0.01	<0.01	<0.01	<0.05	<0.2	55.0	0.31	54.69	176.0
S672220	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.6	0.14	0.14	0.02	<0.05	<0.2	23.0	4.38	18.63	5.26
S672238	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.02	0.02	0.01	<0.05	<0.2	34.0	0.63	33.38	54.4
S672403	Blasthole	Footwall schist	8.6	<0.01	<0.01	<0.01	<0.05	<0.2	18.0	0.31	17.69	57.6
S672420	Blasthole	Unclassified	8.2	0.02	0.02	<0.01	<0.05	<0.2	18.0	0.63	17.38	28.8
S672569	Blasthole	Unclassified	8.4	0.01	0.01	<0.01	<0.05	<0.2	24.0	0.31	23.69	76.8
S672674	Blasthole	Footwall waste	8.7	0.08	0.08	<0.01	<0.05	<0.2	26.0	2.5	23.5	10.4
S672675	Blasthole	Footwall waste	8.9	0.06	0.06	<0.01	<0.05	<0.2	19.0	1.88	17.13	10.13
S672676	Blasthole	Footwall waste	9.0	0.01	0.01	<0.01	<0.05	<0.2	15.0	0.31	14.69	48.0
S672730	Blasthole	Footwall waste	9.3	0.01	0.01	0.01	<0.05	<0.2	16.0	0.31	15.69	51.2
S672758	Blasthole	Footwall waste	9.0	0.13	0.13	<0.01	<0.05	<0.2	21.0	4.06	16.94	5.17
S672789	Blasthole	Footwall waste	8.0	0.01	0.01	<0.01	<0.05	<0.2	27.0	0.31	26.69	86.4
S673035	Blasthole	Footwall waste	9.0	0.01	0.01	0.01	<0.05	<0.2	14.0	0.31	13.69	44.8
S673054	Blasthole	Footwall waste	9.0	0.02	0.02	<0.01	<0.05	<0.2	17.0	0.63	16.38	27.2
S673102	Blasthole	Footwall waste	9.4	0.03	0.02	<0.01	<0.05	<0.2	14.0	0.94	13.06	14.93
S673406	Blasthole	Footwall waste	8.6	0.01	0.01	<0.01	<0.05	<0.2	15.0	0.31	14.69	48.0
S673408	Blasthole	Footwall schist	8.6	0.02	0.02	0.01	<0.05	<0.2	17.0	0.63	16.38	27.2
S673438	Blasthole	Footwall waste	8.1	0.07	0.06	0.03	<0.05	<0.2	25.0	2.19	22.81	11.43
S673508	Blasthole	Footwall waste	8.7	0.09	0.09	0.03	<0.05	<0.2	25.0	<0.01	22.19	8.89
S673512	Blasthole	Footwall waste	8.5	0.07	0.07	0.02	<0.05	<0.2	22.0	2.19	19.81	10.06
S673728	Blasthole	Footwall schist	8.5	0.05	0.05	0.01	<0.05	<0.2	23.0	1.56	21.44	14.72
S673746	Blasthole	Footwall waste	8.5	<0.01	<0.01	0.03	<0.05	<0.2	21.0	0.31	20.69	67.2
S673754	Blasthole	Footwall waste	9.0	0.04	0.04	0.03	<0.05	<0.2	20.0	1.25	18.75	16.0
S673815	Blasthole	Unclassified	8.3	0.05	0.05	0.02	<0.05	<0.2	26.0	1.56	24.44	16.64
S673925	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	<0.01	<0.01	0.02	<0.05	<0.2	28.0	0.31	27.69	89.6
S673949	Blasthole	Footwall waste	8.8	<0.01	<0.01	0.01	<0.05	<0.2	21.0	0.31	20.69	67.2
S673972	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.4	0.1	0.02	0.12	<0.05	<0.2	29.0	3.13	25.88	9.28
S674155	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	<0.01	<0.01	0.02	<0.05	<0.2	24.0	0.31	23.69	76.8
S674161	Blasthole	Footwall waste	8.7	<0.01	<0.01	0.02	<0.05	<0.2	12.0	0.31	11.69	38.4
S674385	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.06	0.06	0.03	<0.05	<0.2	26.0	1.88	24.13	13.87
S674392	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.7	0.01	0.01	0.03	<0.05	<0.2	10.0	0.31	9.69	32.0
S674400	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.02	0.02	0.04	<0.05	<0.2	20.0	0.63	19.38	32.0
S674410	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.25	0.25	0.02	<0.05	<0.2	23.0	7.81	15.19	2.94
S674412	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.11	0.11	0.03	<0.05	<0.2	20.0	3.44	16.56	5.82
S674484	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.2	0.2	0.01	<0.05	<0.2	21.0	6.25	14.75	3.36
S674492	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.11	0.11	0.02	<0.05	<0.2	21.0	3.44	17.56	6.11
S674544	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.16	0.16	0.05	<0.05	<0.2	20.0	5.0	15.0	4.0
S674802	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.55	0.55	0.04	<0.05	<0.2	15.0	17.19	-2.19	0.87
S674793	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.02	0.02	0.02	<0.05	<0.2	20.0	0.63	19.38	32.0
S674806	Blasthole	Footwall waste	9.0	0.01	0.01	0.02	<0.05	<0.2	15.0	0.31	14.69	48.0
S674825	Blasthole	Footwall waste	9.3	0.01	0.01	0.02	<0.05	<0.2	16.0	0.31	15.69	51.2
S674837	Blasthole	Footwall waste	9.2	0.02	0.01	0.01	<0.05	<0.2	16.0	0.63	15.38	25.6

Table B2
ABA Results

Sample ID	Sample Type	Lithology	Final pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbonate	NP ⁽³⁾	AP ⁽⁴⁾	Net NP ⁽⁶⁾	NPR ⁽⁵⁾
			s.u.			%						ratio
S674887	Blashole	Footwall waste	8.9	<0.01	<0.01	0.01	<0.05	<0.2	11.0	0.31	10.69	35.2
S674930	Blashole	Footwall waste	8.7	0.02	0.02	0.04	<0.05	<0.2	20.0	0.63	19.38	32.0
S674947	Blashole	Footwall waste	9.5	0.02	0.02	0.02	<0.05	<0.2	15.0	0.63	14.38	24.0
S674966	Blashole	Footwall waste	9.3	<0.01	<0.01	0.02	<0.05	<0.2	13.0	0.31	12.69	41.6
S675033	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	0.44	0.44	<0.01	<0.05	<0.2	20.0	13.75	6.25	1.45
S675150	Blashole	Unclassified	8.5	<0.01	<0.01	0.01	<0.05	<0.2	17.0	0.31	16.69	54.4
S675175	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.04	0.03	0.01	<0.05	<0.2	21.0	1.25	19.75	16.8
S675222	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.5	0.11	0.11	0.02	<0.05	<0.2	20.0	3.44	16.56	5.82
S675314	Blashole	Footwall waste	8.6	0.01	0.01	0.02	<0.05	<0.2	15.0	0.31	14.69	48.0
S675341	Blashole	Footwall waste	8.9	0.01	0.01	<0.01	<0.05	<0.2	17.0	0.31	16.69	54.4
S675367	Blashole	Footwall waste	8.5	0.02	0.02	0.02	<0.05	<0.2	14.0	0.63	13.38	22.4
S675385	Blashole	Footwall waste	8.9	<0.01	<0.01	<0.01	<0.05	<0.2	15.0	0.31	14.69	48.0
S675398	Blashole	Footwall waste	8.4	<0.01	<0.01	0.01	<0.05	<0.2	16.0	0.31	15.69	51.2
S675420	Blashole	Footwall waste	8.4	<0.01	<0.01	0.02	<0.05	<0.2	15.0	0.31	14.69	48.0
S675763	Blashole	Footwall schist	8.3	<0.01	<0.01	0.01	<0.05	<0.2	25.0	0.31	24.69	80.0
S675861	Blashole	Footwall schist	9.1	0.01	0.01	0.02	<0.05	<0.2	14.0	0.31	13.69	44.8
S675948	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.08	0.08	0.01	<0.05	<0.2	17.0	2.5	14.5	6.8
S675964	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	<0.01	<0.01	0.01	<0.05	<0.2	26.0	0.31	25.69	83.2
S676113	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.09	0.09	0.02	<0.05	<0.2	23.0	2.81	20.19	8.18
S676166	Blashole	high grade iron oxide	8.3	<0.01	<0.01	<0.01	<0.05	<0.2	26.0	0.31	25.69	83.2
S676460	Blashole	Footwall waste	8.9	0.01	0.01	0.01	<0.05	<0.2	14.0	0.31	13.69	44.8
S676472	Blashole	Footwall schist	8.4	0.02	0.02	0.02	<0.05	<0.2	15.0	0.63	14.38	24.0
S676779	Blashole	Footwall waste	9.2	0.01	0.01	0.03	<0.05	<0.2	10.0	0.31	9.69	32.0
S676794	Blashole	Footwall waste	9.2	<0.01	<0.01	<0.01	<0.05	<0.2	5.0	0.31	4.69	16.0
S676804	Blashole	Unclassified	8.2	<0.01	<0.01	<0.01	0.06	0.2	17.0	0.31	16.69	54.4
S676839	Blashole	Footwall waste	9.2	0.03	0.02	<0.01	<0.05	<0.2	3.0	0.94	2.06	3.2
S676895	Blashole	Footwall waste	9.2	0.1	0.09	0.03	<0.05	<0.2	17.0	3.13	13.88	5.44
S676945	Blashole	Footwall waste	9.4	0.08	0.08	0.04	<0.05	<0.2	22.0	2.5	19.5	8.8
S676978	Blashole	Footwall waste	8.8	0.03	0.03	0.01	<0.05	<0.2	19.0	0.94	18.06	20.27
S676989	Blashole	Footwall waste	9.0	0.03	0.02	0.02	<0.05	<0.2	14.0	0.94	13.06	14.93
S677027	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.5	0.1	0.09	0.03	<0.05	<0.2	17.0	3.13	13.88	5.44
S677049	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	0.44	0.42	0.07	<0.05	<0.2	14.0	13.75	0.25	1.02
S677100	Blashole	Footwall waste	9.3	0.02	0.02	0.02	<0.05	<0.2	12.0	0.63	11.38	19.2
S677142	Blashole	Footwall waste	9.0	0.02	0.02	<0.01	<0.05	<0.2	10.0	0.63	9.38	16.0
S677607	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.34	0.34	0.17	<0.05	<0.2	21.0	10.63	10.38	1.98
S677624	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	0.38	0.37	0.03	<0.05	<0.2	16.0	11.88	4.13	1.35
S677653	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.19	0.18	0.04	<0.05	<0.2	15.0	5.94	9.06	2.53
S677668	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.12	0.12	0.04	<0.05	<0.2	15.0	3.75	11.25	4.0
S677688	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.4	0.18	0.18	0.02	<0.05	<0.2	23.0	5.63	17.38	4.09
S677808	Blashole	Footwall waste	8.9	0.02	0.01	0.01	<0.05	<0.2	13.0	0.63	12.38	20.8
S677827	Blashole	Footwall waste	9.0	0.04	0.04	0.02	<0.05	<0.2	18.0	1.25	16.75	14.4
S677887	Blashole	Footwall waste	8.9	0.01	0.01	0.03	<0.05	<0.2	15.0	0.31	14.69	48.0
S677900	Blashole	Footwall waste	9.2	0.03	0.02	<0.01	<0.05	<0.2	24.0	0.94	23.06	25.6
S677906	Blashole	Footwall waste	8.8	0.02	0.01	0.04	<0.05	<0.2	15.0	0.63	14.38	24.0
B625662	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.8	0.52	0.51	0.05	<0.05	<0.2	11.0	16.25	-5.25	0.68
B625663	Blashole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.15	0.15	0.05	<0.05	<0.2	14.0	4.69	9.31	2.99
B625664	Blashole	Footwall waste	8.7	0.02	0.01	0.01	<0.05	<0.2	11.0	0.63	10.38	17.6
B625676	Blashole	Footwall schist	9.1	0.03	0.03	0.03	<0.05	<0.2	17.0	0.94	16.06	18.13
B625683	Blashole	Footwall waste	9.0	0.03	0.02	0.03	0.76	2.8	76.0	0.94	75.06	81.07
B625906	Blashole	Overburden	8.1	0.08	0.08	0.03	<0.05	<0.2	22.0	2.5	19.5	8.8

Table B2
ABA Results

Sample ID	Sample Type	Lithology	Final pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbonate	NP ⁽³⁾	AP ⁽⁴⁾	Net NP ⁽⁶⁾	NPR ⁽⁵⁾
			S.U.			%						ratio
B626264	Blasthole	Footwall waste	8.9	0.02	0.02	0.02	<0.05	0.2	20.0	0.63	19.38	32.0
B626265	Blasthole	Footwall waste	9.4	0.03	0.02	<0.01	<0.05	<0.2	4.0	0.94	3.06	4.27
B626302	Blasthole	Footwall waste	9.2	0.08	0.07	0.04	<0.05	<0.2	17.0	2.5	14.5	6.8
B626314	Blasthole	Footwall waste	9.2	0.02	<0.01	0.02	<0.05	<0.2	5.0	0.63	4.38	8.0
B626326	Blasthole	Footwall waste	9.0	0.13	0.12	0.02	0.08	0.3	23.0	4.06	18.94	5.66
B626952	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.5	0.11	0.1	0.03	<0.05	<0.2	22.0	3.44	18.56	6.4
B626972	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.0	0.09	0.03	0.03	<0.05	<0.2	17.0	2.81	14.19	6.04
B627000	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.6	0.05	0.04	0.04	<0.05	<0.2	22.0	1.56	20.44	14.08
B627106	Blasthole	Overburden	8.0	0.02	0.01	0.03	<0.05	<0.2	24.0	0.63	23.38	38.4
B627271	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	0.09	0.09	0.01	<0.05	<0.2	24.0	2.81	21.19	8.53
B627356	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.05	0.04	0.04	<0.05	<0.2	18.0	1.56	16.44	11.52
B627389	Blasthole	Overburden	8.9	0.04	0.01	0.01	<0.05	<0.2	18.0	1.25	16.75	14.4
B627414	Blasthole	Footwall waste	8.7	0.02	0.01	0.01	0.19	0.7	31.0	0.63	30.38	49.6
B627591	Blasthole	Footwall waste	8.7	0.03	0.02	0.02	<0.05	<0.2	18.0	<0.05	17.06	19.2
B627592	Blasthole	Footwall waste	9.2	0.02	0.01	0.01	<0.05	<0.2	15.0	0.63	14.38	24.0
B627851	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.49	0.48	0.03	<0.05	<0.2	14.0	<0.05	-1.31	0.91
B627842	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	0.39	0.37	0.01	<0.05	<0.2	21.0	12.19	8.81	1.72
B628011	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.02	0.01	0.02	<0.05	<0.2	24.0	0.63	23.38	38.4
B627997	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.32	0.31	0.01	<0.05	<0.2	15.0	10.0	5.0	1.5
B627992	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	0.24	0.23	<0.01	<0.05	<0.2	21.0	7.5	13.5	2.8
B628037	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.12	0.11	0.01	<0.05	<0.2	16.0	3.75	12.25	4.27
B628293	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.3	0.1	0.1	0.02	<0.05	<0.2	15.0	3.13	11.88	4.8
B628297	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	0.05	0.05	0.01	<0.05	<0.2	26.0	1.56	24.44	16.64
B628303	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics		0.08	0.08	0.03	<0.05	<0.2	12.0	2.5	9.5	4.8
B628533	Blasthole	Footwall waste	9.5	0.01	<0.01	<0.01	<0.05	<0.2	4.0	0.31	3.69	12.8
B628558	Blasthole	Footwall waste	9.5	0.02	<0.01	0.01	<0.05	<0.2	12.0	0.63	11.38	19.2
B628690	Blasthole	Footwall waste	9.1	0.02	0.01	0.01	<0.05	<0.2	14.0	0.63	13.38	22.4
B628727	Blasthole	Footwall waste	9.0	0.02	0.02	0.02	<0.05	<0.2	15.0	0.63	14.38	24.0
B628752	Blasthole	Footwall waste	9.2	0.03	0.03	0.02	<0.05	<0.2	14.0	0.94	13.06	14.93
B628776	Blasthole	Footwall waste	8.9	0.13	0.13	0.02	<0.05	<0.2	18.0	4.06	13.94	4.43
B628790	Blasthole	Footwall waste	9.3	0.1	0.08	0.01	<0.05	<0.2	14.0	3.13	10.88	4.48
B628821	Blasthole	Footwall waste	8.8	0.02	0.01	0.01	<0.05	<0.2	18.0	0.63	17.38	28.8
B628884	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.04	0.04	0.01	<0.05	<0.2	16.0	1.25	14.75	12.8
B628940	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.07	0.06	0.01	<0.05	<0.2	22.0	2.19	19.81	10.06
B629329	Blasthole	Footwall schist	9.6	0.03	0.02	0.01	<0.05	<0.2	12.0	0.94	11.06	12.8
B629344	Blasthole	Footwall waste	9.5	0.01	<0.01	<0.01	<0.05	<0.2	13.0	0.31	12.69	41.6
B629378	Blasthole	Footwall waste	9.8	0.01	<0.01	0.01	<0.05	<0.2	15.0	0.31	14.69	48.0
B629391	Blasthole	Footwall waste	9.6	0.01	<0.01	<0.01	<0.05	<0.2	15.0	0.31	14.69	48.0
B629510	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.03	<0.01	0.02	<0.05	<0.2	19.0	0.94	18.06	20.27
B629533	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.13	0.12	0.01	<0.05	<0.2	14.0	4.06	9.94	3.45
B629584	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.11	0.11	0.01	<0.05	<0.2	16.0	3.44	12.56	4.65
B629819	Blasthole	Footwall waste	8.7	0.01	0.01	0.02	<0.05	<0.2	11.0	0.31	10.69	35.2
B629821	Blasthole	Footwall waste	8.6	0.01	0.01	0.02	<0.05	<0.2	16.0	0.31	15.69	51.2
B629846	Blasthole	Footwall waste	8.7	0.04	0.04	0.04	<0.05	<0.2	16.0	1.25	14.75	12.8
B629849	Blasthole	Footwall waste	9.0	0.04	0.04	0.02	<0.05	<0.2	18.0	1.25	16.75	14.4
B629919	Blasthole	Footwall waste	8.6	0.01	0.01	0.01	<0.05	<0.2	15.0	0.31	14.69	48.0
B630004	Blasthole	Overburden	8.5	0.01	0.01	0.03	<0.05	<0.2	26.0	0.31	25.69	83.2
B630005	Blasthole	Footwall waste	8.8	0.02	0.02	0.01	<0.05	<0.2	15.0	0.63	14.38	24.0
B630061	Blasthole	Footwall waste	9.1	0.04	0.04	0.02	<0.05	<0.2	23.0	1.25	21.75	18.4
B630226	Blasthole	Footwall waste	8.3	0.05	0.05	0.04	<0.05	<0.2	14.0	1.56	12.44	8.96

Table B2
ABA Results

Sample ID	Sample Type	Lithology	Final pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbonate	NP ⁽³⁾	AP ⁽⁴⁾	Net NP ⁽⁶⁾	NPR ⁽⁵⁾
			s.u.			%						ratio
B630627	Blasthole	Footwall waste	8.9	0.09	0.09	0.02	0.07	0.3	24.0	2.81	21.19	8.53
B630629	Blasthole	Footwall waste	9.7	0.02	0.02	0.02	<0.05	<0.2	15.0	0.63	14.38	24.0
B630605	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.43	0.43	0.03	<0.05	<0.2	24.0	13.44	10.56	1.79
B630829	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.54	0.54	0.03	<0.05	<0.2	14.0	16.88	-2.88	0.83
B630842	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.0	0.28	0.28	0.09	<0.05	<0.2	18.0	8.75	9.25	2.06
B630868	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.41	0.41	0.04	<0.05	<0.2	24.0	12.81	11.19	1.87
B630915	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.3	0.14	0.14	0.06	<0.05	<0.2	29.0	4.38	24.63	6.63
B631209	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.15	0.15	0.01	<0.05	<0.2	19.0	4.69	14.31	4.05
B631232	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.03	0.03	0.03	<0.05	<0.2	20.0	0.94	19.06	21.33
B631245	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.4	0.23	0.23	0.01	<0.05	<0.2	19.0	7.19	11.81	2.64
B631297	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.4	0.22	0.22	0.04	<0.05	<0.2	19.0	6.88	12.13	2.76
B631901	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.2	0.02	0.02	0.03	<0.05	<0.2	27.0	0.63	26.38	43.2
B632258	Blasthole	Footwall waste	8.5	0.03	0.03	0.03	<0.05	0.2	29.0	0.94	28.06	30.93
B632287	Blasthole	Footwall waste	8.4	0.06	0.06	0.02	<0.05	<0.2	25.0	1.88	23.13	13.33
B632288	Blasthole	Footwall waste	8.9	0.11	0.11	<0.01	<0.05	<0.2	12.0	3.44	8.56	3.49
B632721	Blasthole	Footwall waste	8.9	0.01	0.01	0.01	<0.05	<0.2	24.0	0.31	23.69	76.8
B632731	Blasthole	Footwall waste	9.5	0.08	0.08	0.01	<0.05	<0.2	13.0	2.5	10.5	5.2
B632739	Blasthole	Footwall waste	8.4	0.07	0.07	0.01	<0.05	<0.2	14.0	2.19	11.81	6.4
B632769	Blasthole	Footwall waste	8.7	0.02	0.02	0.02	<0.05	<0.2	13.0	0.63	12.38	20.8
B632800	Blasthole	Footwall waste	8.9	0.01	0.01	0.03	<0.05	<0.2	16.0	0.31	15.69	51.2
B632806	Blasthole	Footwall waste	9.6	0.02	0.02	0.01	<0.05	<0.2	17.0	0.63	16.38	27.2
B632821	Blasthole	Footwall waste	8.0	0.04	0.04	0.03	<0.05	<0.2	16.0	1.25	14.75	12.8
B632831	Blasthole	Footwall waste	8.5	0.22	0.22	0.03	<0.05	<0.2	17.0	6.88	10.13	2.47
B632856	Blasthole	Footwall waste	9.1	0.01	0.01	0.01	<0.05	<0.2	13.0	0.31	12.69	41.6
B632906	Blasthole	Overburden	8.2	0.03	0.03	0.01	0.17	0.6	24.0	0.94	23.06	25.6
B633053	Blasthole	Footwall waste	10.0	0.04	0.04	0.02	<0.05	<0.2	14.0	1.25	12.75	11.2
B633077	Blasthole	Footwall waste	9.2	0.11	0.11	0.03	<0.05	<0.2	22.0	3.44	18.56	6.4
B633122	Blasthole	Overburden	8.5	0.01	0.01	0.01	0.17	0.6	23.0	0.31	22.69	73.6
B633141	Blasthole	Overburden	8.6	0.01	0.01	0.03	0.07	0.3	19.0	0.31	18.69	60.8
B633168	Blasthole	Overburden	8.4	<0.01	<0.01	0.02	<0.05	0.2	20.0	0.31	19.69	64.0
B633242	Blasthole	Uncalssified	8.8	0.01	0.01	0.02	0.09	0.3	20.0	0.31	19.69	64.0
B633308	Blasthole	Overburden	8.7	0.02	0.02	0.01	0.61	2.2	60.0	0.63	59.38	96.0
B633459	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.7	0.2	0.2	0.05	<0.05	<0.2	27.0	6.25	20.75	4.32
B633565	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	7.9	0.35	0.35	0.03	<0.05	<0.2	24.0	10.94	13.06	2.19
B633859	Blasthole	Footwall waste	8.8	0.09	0.09	0.04	<0.05	<0.2	19.0	2.81	16.19	6.76
B633860	Blasthole	Footwall waste	9.0	0.01	0.01	0.02	<0.05	<0.2	8.0	0.31	7.69	25.6
B633925	Blasthole	Footwall waste	8.8	0.01	0.01	0.03	<0.05	<0.2	13.0	0.31	12.69	41.6
B633929	Blasthole	Footwall waste	9.7	0.02	0.02	0.03	<0.05	<0.2	16.0	0.63	15.38	25.6
B633971	Blasthole	Footwall waste	9.3	0.03	0.03	0.02	<0.05	<0.2	14.0	0.94	13.06	14.93
B634381	Blasthole	undifferentiated gneiss/schist/amphibolite/ultramafics	8.1	0.04	0.04	0.05	<0.05	<0.2	24.0	1.25	22.75	19.2
B634433	Blasthole	Footwall waste	9.6	0.01	0.01	0.02	<0.05	<0.2	14.0	0.31	13.69	44.8
B634434	Blasthole	Footwall waste	9.5	0.04	0.04	0.01	<0.05	<0.2	10.0	1.25	8.75	8.0
B636102	Blasthole	Footwall schist	8.9	0.01	0.01	0.02	<0.05	<0.2	20.0	0.31	19.69	64.0
B636103	Blasthole	Footwall waste	9.0	<0.01	<0.01	0.01	<0.05	<0.2	12.0	0.31	11.69	38.4
B636150	Blasthole	Footwall waste	8.7	0.01	0.01	0.01	<0.05	<0.2	13.0	0.31	12.69	41.6
B636151	Blasthole	Footwall waste	9.1	<0.01	<0.01	0.02	<0.05	<0.2	18.0	0.31	17.69	57.6

Notes: Data extratraded from electronic data file "SFE ABA Results_forGolderv2" supplied electronically from BIM in email from T. Brisco to K. DeVos and A. Parada, March 24, 2023



Table B3
Shake Flask Extraction Results

Sample ID	Sample Type	Matrix	Library	Flagged no unit	pH	Alkalinity mg/L in CaCl2	Conductivity uS/cm	Activity mg/L in CaCl2	SO ₄ mg/L	Cl ⁻ mg/L	H ₂ mg/L	A ₁ mg/L	A ₂ mg/L	A ₃ mg/L	Ba mg/L	B mg/L	Ba mg/L	B ₁ mg/L	B ₂ mg/L	Ca mg/L	Ca mg/L	Co mg/L	Q mg/L	Co mg/L	Pa mg/L	K mg/L		
2021-07-28-4797001	Blank/Prism	Blank/Prism	Blank/Prism	7.2	7.8	19	109	0	1.8	2.4	<0.0005	2.38	<0.0005	<0.0005	<0.0005	0.01	0.13	<0.0005	<0.0005	0.8	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.26	22.8
2021-07-28-4797002	Blank/Prism	Blank/Prism	Blank/Prism	7.1	7.6	15	129	0	29.5	0	<0.0005	3.36	<0.0005	<0.0005	<0.0005	0.07	0.07	<0.0005	<0.0005	1.6	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797003	Blank/Prism	Blank/Prism	Blank/Prism	6.9	6.9	15	129	0	1.89	4.8	<0.0005	4.89	<0.0005	<0.0005	<0.0005	0.04	0.35	<0.0005	<0.0005	1.6	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797004	Blank/Prism	Blank/Prism	Blank/Prism	6.9	7	15	129	0	1.8	4.8	<0.0005	5.89	<0.0005	<0.0005	<0.0005	0.15	0.15	<0.0005	<0.0005	2.8	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797005	Blank/Prism	Blank/Prism	Blank/Prism	7.5	6.9	25	119	0	4.8	2.1	<0.0005	12.17	<0.0005	<0.0005	<0.0005	0.11	0.04	<0.0005	<0.0005	1.1	0.00017	0.00017	0.00017	0.00017	0.00017	0.00017	0.00017	22.8
2021-07-28-4797006	Blank/Prism	Blank/Prism	Blank/Prism	8	6.7	24	100	0	3.1	2.1	<0.0005	7.37	<0.0005	<0.0005	<0.0005	0.09	0.25	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797007	Blank/Prism	Blank/Prism	Blank/Prism	9.2	6.1	60	137	0	3.3	2.4	<0.0005	9.4	<0.0005	<0.0005	<0.0005	0.04	0.09	<0.0005	<0.0005	1.9	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797008	Blank/Prism	Blank/Prism	Blank/Prism	6.8	6.8	25	120	0	1.89	0	<0.0005	3.41	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	4.9	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797009	Blank/Prism	Blank/Prism	Blank/Prism	7.4	7.1	10	129	0	29.5	0	<0.0005	3.36	<0.0005	<0.0005	<0.0005	0.07	0.07	<0.0005	<0.0005	1.6	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797010	Blank/Prism	Blank/Prism	Blank/Prism	6.8	7.3	6	627	0	29.5	4.4	<0.0005	3.36	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	1.6	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797011	Blank/Prism	Blank/Prism	Blank/Prism	7.9	8.4	23	129	0	3.3	1.9	<0.0005	4.89	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	1.6	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797012	Blank/Prism	Blank/Prism	Blank/Prism	6.9	6.6	25	134	0	2.2	7.4	<0.0005	8.39	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797013	Blank/Prism	Blank/Prism	Blank/Prism	7.7	8.3	19	139	0	49.3	2.1	<0.0005	3.38	<0.0005	<0.0005	<0.0005	0.13	0.13	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797014	Blank/Prism	Blank/Prism	Blank/Prism	7.2	7.7	14	149	0	0.3	2.3	<0.0005	2.48	<0.0005	<0.0005	<0.0005	0.11	0.04	<0.0005	<0.0005	1.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797015	Blank/Prism	Blank/Prism	Blank/Prism	8	6.7	24	157	0	0.7	7.4	<0.0005	11.17	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797016	Blank/Prism	Blank/Prism	Blank/Prism	7.2	7.8	14	114	0	45.3	13.3	<0.0005	7.37	<0.0005	<0.0005	<0.0005	0.09	0.19	<0.0005	<0.0005	1.9	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797017	Blank/Prism	Blank/Prism	Blank/Prism	7.8	6.2	25	121	0	8.7	2	<0.0005	12.17	<0.0005	<0.0005	<0.0005	0.07	0.07	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797018	Blank/Prism	Blank/Prism	Blank/Prism	7.9	8.6	35	109	0	1.8	2	<0.0005	21.9	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797019	Blank/Prism	Blank/Prism	Blank/Prism	8.5	6.1	23	99	0	4.8	1.8	<0.0005	25.17	<0.0005	<0.0005	<0.0005	0.13	0.13	<0.0005	<0.0005	0.3	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797020	Blank/Prism	Blank/Prism	Blank/Prism	8.9	8.0	23	131	0	1.8	1.3	<0.0005	15.1	<0.0005	<0.0005	<0.0005	0.12	0.04	<0.0005	<0.0005	0.3	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797021	Blank/Prism	Blank/Prism	Blank/Prism	9	8.7	25	98	0	45.3	1.9	<0.0005	15.3	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.3	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797022	Blank/Prism	Blank/Prism	Blank/Prism	8	8.7	26	101	0	2.4	1.7	<0.0005	12.8	<0.0005	<0.0005	<0.0005	0.11	0.09	<0.0005	<0.0005	0.3	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797023	Blank/Prism	Blank/Prism	Blank/Prism	7.8	8.2	19	98	0	9.2	1.9	<0.0005	15.9	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797024	Blank/Prism	Blank/Prism	Blank/Prism	7.7	6.4	16	90	0	1.1	2.3	<0.0005	11.9	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797025	Blank/Prism	Blank/Prism	Blank/Prism	7.6	8.3	16	76	0	40.5	1.9	<0.0005	11.5	<0.0005	<0.0005	<0.0005	0.18	0.18	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797026	Blank/Prism	Blank/Prism	Blank/Prism	7.1	7.9	14	126	0	1.7	4	<0.0005	2.48	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.4	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797027	Blank/Prism	Blank/Prism	Blank/Prism	7.4	7.6	19	76	0	3.2	4.4	<0.0005	4.37	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.3	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797028	Blank/Prism	Blank/Prism	Blank/Prism	5.9	6.1	2	1090	0	537	0.1	<0.0005	8.39	<0.0005	<0.0005	<0.0005	0.39	0.39	<0.0005	<0.0005	4.8	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797029	Blank/Prism	Blank/Prism	Blank/Prism	7.5	8.5	14	93	0	2.1	1.7	<0.0005	14.17	<0.0005	<0.0005	<0.0005	0.11	0.11	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797030	Blank/Prism	Blank/Prism	Blank/Prism	7.5	8.5	14	93	0	2.1	1.7	<0.0005	14.17	<0.0005	<0.0005	<0.0005	0.11	0.11	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797031	Blank/Prism	Blank/Prism	Blank/Prism	7.5	8.5	14	93	0	2.1	1.7	<0.0005	14.17	<0.0005	<0.0005	<0.0005	0.11	0.11	<0.0005	<0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797032	Blank/Prism	Blank/Prism	Blank/Prism	6.6	6.6	5	270	0	95.8	11.1	<0.0005	8.21	<0.0005	<0.0005	<0.0005	0.17	0.17	<0.0005	<0.0005	1.8	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797033	Blank/Prism	Blank/Prism	Blank/Prism	7.2	7.8	11	188	0	27.7	3.5	<0.0005	3.38	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.3	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797034	Blank/Prism	Blank/Prism	Blank/Prism	7.1	7.7	23	117	0	1.1	6.4	<0.0005	3.37	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.3	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797035	Blank/Prism	Blank/Prism	Blank/Prism	7.2	7.7	23	117	0	1.1	6.4	<0.0005	3.37	<0.0005	<0.0005	<0.0005	0.04	0.04	<0.0005	<0.0005	0.3	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797036	Blank/Prism	Blank/Prism	Blank/Prism	7.4	7.9	23	186	0	0.7	2.9	<0.0005	2.31	<0.0005	<0.0005	<0.0005	0.12	0.12	<0.0005	<0.0005	1.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797037	Blank/Prism	Blank/Prism	Blank/Prism	7.2	7.8	23	186	0	0.7	2.9	<0.0005	2.31	<0.0005	<0.0005	<0.0005	0.12	0.12	<0.0005	<0.0005	1.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22.8
2021-07-28-4797038	Blank/Prism	Blank/Prism	Blank/Prism	7.3	7.9	21	134	0	4.3	2																		

Table B3
Shake Flask Extraction Results

Sample ID	Sample Type	Matrix and Dispersing Agent	Library	Final pH	pH	Alkalinity	Conductivity	Activity	mg/L in Cd253	SO ₄	Q	Hg	A ₀	A	A ₀	B ₀	B ₁	B ₂	B ₃	B ₄	B ₅	B ₆	B ₇	B ₈	B ₉	B ₁₀	B ₁₁	B ₁₂	B ₁₃	B ₁₄	B ₁₅	B ₁₆	B ₁₇	B ₁₈	B ₁₉	B ₂₀	B ₂₁	B ₂₂	B ₂₃	B ₂₄	B ₂₅	B ₂₆	B ₂₇	B ₂₈	B ₂₉	B ₃₀	B ₃₁	B ₃₂	B ₃₃	B ₃₄	B ₃₅	B ₃₆	B ₃₇	B ₃₈	B ₃₉	B ₄₀	B ₄₁	B ₄₂	B ₄₃	B ₄₄	B ₄₅	B ₄₆	B ₄₇	B ₄₈	B ₄₉	B ₅₀	B ₅₁	B ₅₂	B ₅₃	B ₅₄	B ₅₅	B ₅₆	B ₅₇	B ₅₈	B ₅₉	B ₆₀	B ₆₁	B ₆₂	B ₆₃	B ₆₄	B ₆₅	B ₆₆	B ₆₇	B ₆₈	B ₆₉	B ₇₀	B ₇₁	B ₇₂	B ₇₃	B ₇₄	B ₇₅	B ₇₆	B ₇₇	B ₇₈	B ₇₉	B ₈₀	B ₈₁	B ₈₂	B ₈₃	B ₈₄	B ₈₅	B ₈₆	B ₈₇	B ₈₈	B ₈₉	B ₉₀	B ₉₁	B ₉₂	B ₉₃	B ₉₄	B ₉₅	B ₉₆	B ₉₇	B ₉₈	B ₉₉	B ₁₀₀	B ₁₀₁	B ₁₀₂	B ₁₀₃	B ₁₀₄	B ₁₀₅	B ₁₀₆	B ₁₀₇	B ₁₀₈	B ₁₀₉	B ₁₁₀	B ₁₁₁	B ₁₁₂	B ₁₁₃	B ₁₁₄	B ₁₁₅	B ₁₁₆	B ₁₁₇	B ₁₁₈	B ₁₁₉	B ₁₂₀	B ₁₂₁	B ₁₂₂	B ₁₂₃	B ₁₂₄	B ₁₂₅	B ₁₂₆	B ₁₂₇	B ₁₂₈	B ₁₂₉	B ₁₃₀	B ₁₃₁	B ₁₃₂	B ₁₃₃	B ₁₃₄	B ₁₃₅	B ₁₃₆	B ₁₃₇	B ₁₃₈	B ₁₃₉	B ₁₄₀	B ₁₄₁	B ₁₄₂	B ₁₄₃	B ₁₄₄	B ₁₄₅	B ₁₄₆	B ₁₄₇	B ₁₄₈	B ₁₄₉	B ₁₅₀	B ₁₅₁	B ₁₅₂	B ₁₅₃	B ₁₅₄	B ₁₅₅	B ₁₅₆	B ₁₅₇	B ₁₅₈	B ₁₅₉	B ₁₆₀	B ₁₆₁	B ₁₆₂	B ₁₆₃	B ₁₆₄	B ₁₆₅	B ₁₆₆	B ₁₆₇	B ₁₆₈	B ₁₆₉	B ₁₇₀	B ₁₇₁	B ₁₇₂	B ₁₇₃	B ₁₇₄	B ₁₇₅	B ₁₇₆	B ₁₇₇	B ₁₇₈	B ₁₇₉	B ₁₈₀	B ₁₈₁	B ₁₈₂	B ₁₈₃	B ₁₈₄	B ₁₈₅	B ₁₈₆	B ₁₈₇	B ₁₈₈	B ₁₈₉	B ₁₉₀	B ₁₉₁	B ₁₉₂	B ₁₉₃	B ₁₉₄	B ₁₉₅	B ₁₉₆	B ₁₉₇	B ₁₉₈	B ₁₉₉	B ₂₀₀	B ₂₀₁	B ₂₀₂	B ₂₀₃	B ₂₀₄	B ₂₀₅	B ₂₀₆	B ₂₀₇	B ₂₀₈	B ₂₀₉	B ₂₁₀	B ₂₁₁	B ₂₁₂	B ₂₁₃	B ₂₁₄	B ₂₁₅	B ₂₁₆	B ₂₁₇	B ₂₁₈	B ₂₁₉	B ₂₂₀	B ₂₂₁	B ₂₂₂	B ₂₂₃	B ₂₂₄	B ₂₂₅	B ₂₂₆	B ₂₂₇	B ₂₂₈	B ₂₂₉	B ₂₃₀	B ₂₃₁	B ₂₃₂	B ₂₃₃	B ₂₃₄	B ₂₃₅	B ₂₃₆	B ₂₃₇	B ₂₃₈	B ₂₃₉	B ₂₄₀	B ₂₄₁	B ₂₄₂	B ₂₄₃	B ₂₄₄	B ₂₄₅	B ₂₄₆	B ₂₄₇	B ₂₄₈	B ₂₄₉	B ₂₅₀	B ₂₅₁	B ₂₅₂	B ₂₅₃	B ₂₅₄	B ₂₅₅	B ₂₅₆	B ₂₅₇	B ₂₅₈	B ₂₅₉	B ₂₆₀	B ₂₆₁	B ₂₆₂	B ₂₆₃	B ₂₆₄	B ₂₆₅	B ₂₆₆	B ₂₆₇	B ₂₆₈	B ₂₆₉	B ₂₇₀	B ₂₇₁	B ₂₇₂	B ₂₇₃	B ₂₇₄	B ₂₇₅	B ₂₇₆	B ₂₇₇	B ₂₇₈	B ₂₇₉	B ₂₈₀	B ₂₈₁	B ₂₈₂	B ₂₈₃	B ₂₈₄	B ₂₈₅	B ₂₈₆	B ₂₈₇	B ₂₈₈	B ₂₈₉	B ₂₉₀	B ₂₉₁	B ₂₉₂	B ₂₉₃	B ₂₉₄	B ₂₉₅	B ₂₉₆	B ₂₉₇	B ₂₉₈	B ₂₉₉	B ₃₀₀	B ₃₀₁	B ₃₀₂	B ₃₀₃	B ₃₀₄	B ₃₀₅	B ₃₀₆	B ₃₀₇	B ₃₀₈	B ₃₀₉	B ₃₁₀	B ₃₁₁	B ₃₁₂	B ₃₁₃	B ₃₁₄	B ₃₁₅	B ₃₁₆	B ₃₁₇	B ₃₁₈	B ₃₁₉	B ₃₂₀	B ₃₂₁	B ₃₂₂	B ₃₂₃	B ₃₂₄	B ₃₂₅	B ₃₂₆	B ₃₂₇	B ₃₂₈	B ₃₂₉	B ₃₃₀	B ₃₃₁	B ₃₃₂	B ₃₃₃	B ₃₃₄	B ₃₃₅	B ₃₃₆	B ₃₃₇	B ₃₃₈	B ₃₃₉	B ₃₄₀	B ₃₄₁	B ₃₄₂	B ₃₄₃	B ₃₄₄	B ₃₄₅	B ₃₄₆	B ₃₄₇	B ₃₄₈	B ₃₄₉	B ₃₅₀	B ₃₅₁	B ₃₅₂	B ₃₅₃	B ₃₅₄	B ₃₅₅	B ₃₅₆	B ₃₅₇	B ₃₅₈	B ₃₅₉	B ₃₆₀	B ₃₆₁	B ₃₆₂	B ₃₆₃	B ₃₆₄	B ₃₆₅	B ₃₆₆	B ₃₆₇	B ₃₆₈	B ₃₆₉	B ₃₇₀	B ₃₇₁	B ₃₇₂	B ₃₇₃	B ₃₇₄	B ₃₇₅	B ₃₇₆	B ₃₇₇	B ₃₇₈	B ₃₇₉	B ₃₈₀	B ₃₈₁	B ₃₈₂	B ₃₈₃	B ₃₈₄	B ₃₈₅	B ₃₈₆	B ₃₈₇	B ₃₈₈	B ₃₈₉	B ₃₉₀	B ₃₉₁	B ₃₉₂	B ₃₉₃	B ₃₉₄	B ₃₉₅	B ₃₉₆	B ₃₉₇	B ₃₉₈	B ₃₉₉	B ₄₀₀	B ₄₀₁	B ₄₀₂	B ₄₀₃	B ₄₀₄	B ₄₀₅	B ₄₀₆	B ₄₀₇	B ₄₀₈	B ₄₀₉	B ₄₁₀	B ₄₁₁	B ₄₁₂	B ₄₁₃	B ₄₁₄	B ₄₁₅	B ₄₁₆	B ₄₁₇	B ₄₁₈	B ₄₁₉	B ₄₂₀	B ₄₂₁	B ₄₂₂	B ₄₂₃	B ₄₂₄	B ₄₂₅	B ₄₂₆	B ₄₂₇	B ₄₂₈	B ₄₂₉	B ₄₃₀	B ₄₃₁	B ₄₃₂	B ₄₃₃	B ₄₃₄	B ₄₃₅	B ₄₃₆	B ₄₃₇	B ₄₃₈	B ₄₃₉	B ₄₄₀	B ₄₄₁	B ₄₄₂	B ₄₄₃	B ₄₄₄	B ₄₄₅	B ₄₄₆	B ₄₄₇	B ₄₄₈	B ₄₄₉	B ₄₅₀	B ₄₅₁	B ₄₅₂	B ₄₅₃	B ₄₅₄	B ₄₅₅	B ₄₅₆	B ₄₅₇	B ₄₅₈	B ₄₅₉	B ₄₆₀	B ₄₆₁	B ₄₆₂	B ₄₆₃	B ₄₆₄	B ₄₆₅	B ₄₆₆	B ₄₆₇	B ₄₆₈	B ₄₆₉	B ₄₇₀	B ₄₇₁	B ₄₇₂	B ₄₇₃	B ₄₇₄	B ₄₇₅	B ₄₇₆	B ₄₇₇	B ₄₇₈	B ₄₇₉	B ₄₈₀	B ₄₈₁	B ₄₈₂	B ₄₈₃	B ₄₈₄	B ₄₈₅	B ₄₈₆	B ₄₈₇	B ₄₈₈	B ₄₈₉	B ₄₉₀	B ₄₉₁	B ₄₉₂	B ₄₉₃	B ₄₉₄	B ₄₉₅	B ₄₉₆	B ₄₉₇	B ₄₉₈	B ₄₉₉	B ₅₀₀	B ₅₀₁	B ₅₀₂	B ₅₀₃	B ₅₀₄	B ₅₀₅	B ₅₀₆	B ₅₀₇	B ₅₀₈	B ₅₀₉	B ₅₁₀	B ₅₁₁	B ₅₁₂	B ₅₁₃	B ₅₁₄	B ₅₁₅	B ₅₁₆	B ₅₁₇	B ₅₁₈	B ₅₁₉	B ₅₂₀	B ₅₂₁	B ₅₂₂	B ₅₂₃	B ₅₂₄	B ₅₂₅	B ₅₂₆	B ₅₂₇	B ₅₂₈	B ₅₂₉	B ₅₃₀	B ₅₃₁	B ₅₃₂	B ₅₃₃	B ₅₃₄	B ₅₃₅	B ₅₃₆	B ₅₃₇	B ₅₃₈	B ₅₃₉	B ₅₄₀	B ₅₄₁	B ₅₄₂	B ₅₄₃	B ₅₄₄	B ₅₄₅	B ₅₄₆	B ₅₄₇	B ₅₄₈	B ₅₄₉	B ₅₅₀	B ₅₅₁	B ₅₅₂	B ₅₅₃	B ₅₅₄	B ₅₅₅	B ₅₅₆	B ₅₅₇	B ₅₅₈	B ₅₅₉	B ₅₆₀	B ₅₆₁	B ₅₆₂	B ₅₆₃	B ₅₆₄	B ₅₆₅	B ₅₆₆	B ₅₆₇	B ₅₆₈	B ₅₆₉	B ₅₇₀	B ₅₇₁	B ₅₇₂	B ₅₇₃	B ₅₇₄	B ₅₇₅	B ₅₇₆	B ₅₇₇	B ₅₇₈	B ₅₇₉	B ₅₈₀	B ₅₈₁	B ₅₈₂	B ₅₈₃	B ₅₈₄	B ₅₈₅	B ₅₈₆	B ₅₈₇	B ₅₈₈	B ₅₈₉	B ₅₉₀	B ₅₉₁	B ₅₉₂	B ₅₉₃	B ₅₉₄	B ₅₉₅	B ₅₉₆	B ₅₉₇	B ₅₉₈	B ₅₉₉	B ₆₀₀	B ₆₀₁	B ₆₀₂	B ₆₀₃	B ₆₀₄	B ₆₀₅	B ₆₀₆	B ₆₀₇	B ₆₀₈	B ₆₀₉	B ₆₁₀	B ₆₁₁	B ₆₁₂	B ₆₁₃	B ₆₁₄	B ₆₁₅	B ₆₁₆	B ₆₁₇	B ₆₁₈	B ₆₁₉	B ₆₂₀	B ₆₂₁	B ₆₂₂	B ₆₂₃	B ₆₂₄	B ₆₂₅	B ₆₂₆	B ₆₂₇	B ₆₂₈	B ₆₂₉	B ₆₃₀	B ₆₃₁	B ₆₃₂	B ₆₃₃	B ₆₃₄	B ₆₃₅	B ₆₃₆	B ₆₃₇	B ₆₃₈	B ₆₃₉	B ₆₄₀	B ₆₄₁	B ₆₄₂	B ₆₄₃	B ₆₄₄	B ₆₄₅	B ₆₄₆	B ₆₄₇	B ₆₄₈	B ₆₄₉	B ₆₅₀	B ₆₅₁	B ₆₅₂	B ₆₅₃	B ₆₅₄	B ₆₅₅	B ₆₅₆	B ₆₅₇	B ₆₅₈	B ₆₅₉	B ₆₆₀	B ₆₆₁	B ₆₆₂	B ₆₆₃	B ₆₆₄	B ₆₆₅	B ₆₆₆	B ₆₆₇	B ₆₆₈	B ₆₆₉	B ₆₇₀	B ₆₇₁	B ₆₇₂	B ₆₇₃	B ₆₇₄	B ₆₇₅	B ₆₇₆	B ₆₇₇	B ₆₇₈	B ₆₇₉	B ₆₈₀	B ₆₈₁	B ₆₈₂	B ₆₈₃	B ₆₈₄	B ₆₈₅	B ₆₈₆	B ₆₈₇	B ₆₈₈	B ₆₈₉	B ₆₉₀	B ₆₉₁	B ₆₉₂	B ₆₉₃	B ₆₉₄	B ₆₉₅	B ₆₉₆	B ₆₉₇	B ₆₉₈	B ₆₉₉	B ₇₀₀	B ₇₀₁	B ₇₀₂	B ₇₀₃	B ₇₀₄	B ₇₀₅	B ₇₀₆	B ₇₀₇	B ₇₀₈	B ₇₀₉	B ₇₁₀	B ₇₁₁	B ₇₁₂	B ₇₁₃	B ₇₁₄	B ₇₁₅	B ₇₁₆	B ₇₁₇	B ₇₁₈	B ₇₁₉	B ₇₂₀	B ₇₂₁	B ₇₂₂	B ₇₂₃	B ₇₂₄	B ₇₂₅	B ₇₂₆	B ₇₂₇	B ₇₂₈	B ₇₂₉	B ₇₃₀	B ₇₃₁	B ₇₃₂	B ₇₃₃	B ₇₃₄	B ₇₃₅	B ₇₃₆	B ₇₃₇	B ₇₃₈	B ₇₃₉	B ₇₄₀	B ₇₄₁	B ₇₄₂	B ₇₄₃	B ₇₄₄	B ₇₄₅	B ₇₄₆	B ₇₄₇	B ₇₄₈	B ₇₄₉	B ₇₅₀	B ₇₅₁	B ₇₅₂	B ₇₅₃	B ₇₅₄	B ₇₅₅	B ₇₅₆	B ₇₅₇	B ₇₅₈	B ₇₅₉	B ₇₆₀	B ₇₆₁	B ₇₆₂	B ₇₆₃	B ₇₆₄	B ₇₆₅	B ₇₆₆	B ₇₆₇	B ₇₆₈	B ₇₆₉	B ₇₇₀	B ₇₇₁	B ₇₇₂	B ₇₇₃	B ₇₇₄	B ₇₇₅	B ₇₇₆	B ₇₇₇	B ₇₇₈	B ₇₇₉	B ₇₈₀	B ₇₈₁	B ₇₈₂	B ₇₈₃	B ₇₈₄	B ₇₈₅	B ₇₈₆	B ₇₈₇	B ₇₈₈	B ₇₈₉	B ₇₉₀	B ₇₉₁	B ₇₉₂	B ₇₉₃	B ₇₉₄	B ₇₉₅	B ₇₉₆	B ₇₉₇	B ₇₉₈	B ₇₉₉	B ₈₀₀	B ₈₀₁	B ₈₀₂	B ₈₀₃	B ₈₀₄	B ₈₀₅	B ₈₀₆	B ₈₀₇	B ₈₀₈	B ₈₀₉	B ₈₁₀	B ₈₁₁	B ₈₁₂	B ₈₁₃	B ₈₁₄	B ₈₁₅	B ₈₁₆	B ₈₁₇	B ₈₁₈	B ₈₁₉	B ₈₂₀	B ₈₂₁	B ₈₂₂	B ₈₂₃	B ₈₂₄	B ₈₂₅	B ₈₂₆	B ₈₂₇	B ₈₂₈	B ₈₂₉	B ₈₃₀	B ₈₃₁	B ₈₃₂	B ₈₃₃	B ₈₃₄	B ₈₃₅	B ₈₃₆	B ₈₃₇	B ₈₃₈	B ₈₃₉	B ₈₄₀	B ₈₄₁	B ₈₄₂	B ₈₄₃	B ₈₄₄	B ₈₄₅	B ₈₄₆	B ₈₄₇	B ₈₄₈	B ₈₄₉	B ₈₅₀	B ₈₅₁	B ₈₅₂	B ₈₅₃	B ₈₅₄	B ₈₅₅	B ₈₅₆	B ₈₅₇	B ₈₅₈	B ₈₅₉	B ₈₆₀	B ₈₆₁	B ₈₆₂	B ₈₆₃	B ₈₆₄	B ₈₆₅	B ₈₆₆	B ₈₆₇	B ₈₆₈	B ₈₆₉	B ₈₇₀	B ₈₇₁	B ₈₇₂	B ₈₇₃	B ₈₇₄	B ₈₇₅	B ₈₇₆	B ₈₇₇	B ₈₇₈	B ₈₇₉	B ₈₈₀	B ₈₈₁	B ₈₈₂	B ₈₈₃	B ₈₈₄	B ₈₈₅	B ₈₈₆	B ₈₈₇	B ₈₈₈	B ₈₈₉	B ₈₉₀	B ₈₉₁	B ₈₉₂	B ₈₉₃	B ₈₉₄	B ₈₉₅	B ₈₉₆	B ₈₉₇	B ₈₉₈	B ₈₉₉	B ₉₀₀	B ₉₀₁	B ₉₀₂	B ₉₀₃	B ₉₀₄	B ₉₀₅	B ₉₀₆	B ₉₀₇	B ₉₀₈	B ₉₀₉	B ₉₁₀	B ₉₁₁	B ₉₁₂	B ₉₁₃	B ₉₁₄	B ₉₁₅	B ₉₁₆	B ₉₁₇	B ₉₁₈	B ₉₁₉	B ₉₂₀	B ₉₂₁	B ₉₂₂	B ₉₂₃	B ₉₂₄	B ₉₂₅	B ₉₂₆	B ₉₂₇	B ₉₂₈	B ₉₂₉	B ₉₃₀	B ₉₃₁	B ₉₃₂	B ₉₃₃	B ₉₃₄	B ₉₃₅	B ₉₃₆	B ₉₃₇	B ₉₃₈	B
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Table B3
Shake Flask Extraction Results

Sample ID	Sample Type	Units	Latitude	Frequency	pH	Alkalinity	Conductivity	Salinity	Q ₁ mg/L	Hq	A ₁ mg/L	A ₂ mg/L	B ₁ mg/L	B ₂ mg/L	B ₃ mg/L	B ₄ mg/L	B ₅ mg/L	Ca mg/L	Cd mg/L	Co mg/L	Cu mg/L	Fe mg/L	K mg/L	
SE07102	Shallow	0.5m	SE07102	0.5m	9	8.3	74	149	0	1.3	16.0	-0.0005	22.4	0.0005	0.58	0.12	-0.0001	-0.0001	4.2	-0.0001	0.0003	0.0003	8.12	83.9
SE07102	Shallow	1.0m	SE07102	1.0m	6	8.2	62	108	0	6.3	37.4	-0.0005	17.7	-0.0005	0.58	0.12	-0.0001	-0.0001	4.2	-0.0001	0.0003	0.0003	8.12	83.9
SE07102	Shallow	1.5m	SE07102	1.5m	3	8.1	42	68	0	11.3	57.4	-0.0005	15.0	-0.0005	0.58	0.12	-0.0001	-0.0001	4.2	-0.0001	0.0003	0.0003	8.12	83.9
SE07102	Shallow	2.0m	SE07102	2.0m	1	8.0	18	149	0	23.4	1.7	-0.0005	5.05	0.0005	0.0005	0.0005	0.0005	0.0005	1.1	-0.0001	0.0003	0.0003	0.02	2.35
SE07102	Shallow	2.5m	SE07102	2.5m	0	7.9	15	159	0	35.4	-0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	3.0m	SE07102	3.0m	0	7.8	23	157	0	47.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	3.5m	SE07102	3.5m	0	7.7	31	157	0	59.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	4.0m	SE07102	4.0m	0	7.6	39	157	0	71.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	4.5m	SE07102	4.5m	0	7.5	47	157	0	83.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	5.0m	SE07102	5.0m	0	7.4	55	157	0	95.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	5.5m	SE07102	5.5m	0	7.3	63	157	0	107.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	6.0m	SE07102	6.0m	0	7.2	71	157	0	119.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	6.5m	SE07102	6.5m	0	7.1	79	157	0	131.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	7.0m	SE07102	7.0m	0	7.0	87	157	0	143.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	7.5m	SE07102	7.5m	0	6.9	95	157	0	155.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	8.0m	SE07102	8.0m	0	6.8	103	157	0	167.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	8.5m	SE07102	8.5m	0	6.7	111	157	0	179.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	9.0m	SE07102	9.0m	0	6.6	119	157	0	191.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	9.5m	SE07102	9.5m	0	6.5	127	157	0	203.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	10.0m	SE07102	10.0m	0	6.4	135	157	0	215.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	10.5m	SE07102	10.5m	0	6.3	143	157	0	227.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	11.0m	SE07102	11.0m	0	6.2	151	157	0	239.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	11.5m	SE07102	11.5m	0	6.1	159	157	0	251.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	12.0m	SE07102	12.0m	0	6.0	167	157	0	263.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	12.5m	SE07102	12.5m	0	5.9	175	157	0	275.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	13.0m	SE07102	13.0m	0	5.8	183	157	0	287.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	13.5m	SE07102	13.5m	0	5.7	191	157	0	299.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	14.0m	SE07102	14.0m	0	5.6	199	157	0	311.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	14.5m	SE07102	14.5m	0	5.5	207	157	0	323.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	15.0m	SE07102	15.0m	0	5.4	215	157	0	335.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	15.5m	SE07102	15.5m	0	5.3	223	157	0	347.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	16.0m	SE07102	16.0m	0	5.2	231	157	0	359.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	16.5m	SE07102	16.5m	0	5.1	239	157	0	371.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	17.0m	SE07102	17.0m	0	5.0	247	157	0	383.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	17.5m	SE07102	17.5m	0	4.9	255	157	0	395.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	18.0m	SE07102	18.0m	0	4.8	263	157	0	407.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	18.5m	SE07102	18.5m	0	4.7	271	157	0	419.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	19.0m	SE07102	19.0m	0	4.6	279	157	0	431.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	19.5m	SE07102	19.5m	0	4.5	287	157	0	443.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	20.0m	SE07102	20.0m	0	4.4	295	157	0	455.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	20.5m	SE07102	20.5m	0	4.3	303	157	0	467.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	21.0m	SE07102	21.0m	0	4.2	311	157	0	479.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	21.5m	SE07102	21.5m	0	4.1	319	157	0	491.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	22.0m	SE07102	22.0m	0	4.0	327	157	0	503.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	22.5m	SE07102	22.5m	0	3.9	335	157	0	515.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	23.0m	SE07102	23.0m	0	3.8	343	157	0	527.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	23.5m	SE07102	23.5m	0	3.7	351	157	0	539.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	24.0m	SE07102	24.0m	0	3.6	359	157	0	551.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	24.5m	SE07102	24.5m	0	3.5	367	157	0	563.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	25.0m	SE07102	25.0m	0	3.4	375	157	0	575.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
SE07102	Shallow	25.5m	SE07102	25.5m	0	3.3	383	157	0	587.4	-0.0005	5.08	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.		

Value (e.g., 0.7) [Color scale: 0.0 (blue) to 1.0 (red)]

Table B3
Shake Flask Extraction Results

Sample ID	Sample Type	Units & Dimensions	Length	U	N ₁	N ₂	N ₃	N ₄	N ₅	N ₆	N ₇	N ₈	N ₉	N ₁₀	N ₁₁	N ₁₂	N ₁₃	N ₁₄	N ₁₅	N ₁₆	N ₁₇	N ₁₈	N ₁₉	N ₂₀	N ₂₁	N ₂₂	N ₂₃	N ₂₄	N ₂₅	N ₂₆	N ₂₇	N ₂₈	N ₂₉	N ₃₀	N ₃₁	N ₃₂	N ₃₃	N ₃₄	N ₃₅	N ₃₆	N ₃₇	N ₃₈	N ₃₉	N ₄₀	N ₄₁	N ₄₂	N ₄₃	N ₄₄	N ₄₅	N ₄₆	N ₄₇	N ₄₈	N ₄₉	N ₅₀	N ₅₁	N ₅₂	N ₅₃	N ₅₄	N ₅₅	N ₅₆	N ₅₇	N ₅₈	N ₅₉	N ₆₀	N ₆₁	N ₆₂	N ₆₃	N ₆₄	N ₆₅	N ₆₆	N ₆₇	N ₆₈	N ₆₉	N ₇₀	N ₇₁	N ₇₂	N ₇₃	N ₇₄	N ₇₅	N ₇₆	N ₇₇	N ₇₈	N ₇₉	N ₈₀	N ₈₁	N ₈₂	N ₈₃	N ₈₄	N ₈₅	N ₈₆	N ₈₇	N ₈₈	N ₈₉	N ₉₀	N ₉₁	N ₉₂	N ₉₃	N ₉₄	N ₉₅	N ₉₆	N ₉₇	N ₉₈	N ₉₉	N ₁₀₀	N ₁₀₁	N ₁₀₂	N ₁₀₃	N ₁₀₄	N ₁₀₅	N ₁₀₆	N ₁₀₇	N ₁₀₈	N ₁₀₉	N ₁₁₀	N ₁₁₁	N ₁₁₂	N ₁₁₃	N ₁₁₄	N ₁₁₅	N ₁₁₆	N ₁₁₇	N ₁₁₈	N ₁₁₉	N ₁₂₀	N ₁₂₁	N ₁₂₂	N ₁₂₃	N ₁₂₄	N ₁₂₅	N ₁₂₆	N ₁₂₇	N ₁₂₈	N ₁₂₉	N ₁₃₀	N ₁₃₁	N ₁₃₂	N ₁₃₃	N ₁₃₄	N ₁₃₅	N ₁₃₆	N ₁₃₇	N ₁₃₈	N ₁₃₉	N ₁₄₀	N ₁₄₁	N ₁₄₂	N ₁₄₃	N ₁₄₄	N ₁₄₅	N ₁₄₆	N ₁₄₇	N ₁₄₈	N ₁₄₉	N ₁₅₀	N ₁₅₁	N ₁₅₂	N ₁₅₃	N ₁₅₄	N ₁₅₅	N ₁₅₆	N ₁₅₇	N ₁₅₈	N ₁₅₉	N ₁₆₀	N ₁₆₁	N ₁₆₂	N ₁₆₃	N ₁₆₄	N ₁₆₅	N ₁₆₆	N ₁₆₇	N ₁₆₈	N ₁₆₉	N ₁₇₀	N ₁₇₁	N ₁₇₂	N ₁₇₃	N ₁₇₄	N ₁₇₅	N ₁₇₆	N ₁₇₇	N ₁₇₈	N ₁₇₉	N ₁₈₀	N ₁₈₁	N ₁₈₂	N ₁₈₃	N ₁₈₄	N ₁₈₅	N ₁₈₆	N ₁₈₇	N ₁₈₈	N ₁₈₉	N ₁₉₀	N ₁₉₁	N ₁₉₂	N ₁₉₃	N ₁₉₄	N ₁₉₅	N ₁₉₆	N ₁₉₇	N ₁₉₈	N ₁₉₉	N ₂₀₀	N ₂₀₁	N ₂₀₂	N ₂₀₃	N ₂₀₄	N ₂₀₅	N ₂₀₆	N ₂₀₇	N ₂₀₈	N ₂₀₉	N ₂₁₀	N ₂₁₁	N ₂₁₂	N ₂₁₃	N ₂₁₄	N ₂₁₅	N ₂₁₆	N ₂₁₇	N ₂₁₈	N ₂₁₉	N ₂₂₀	N ₂₂₁	N ₂₂₂	N ₂₂₃	N ₂₂₄	N ₂₂₅	N ₂₂₆	N ₂₂₇	N ₂₂₈	N ₂₂₉	N ₂₃₀	N ₂₃₁	N ₂₃₂	N ₂₃₃	N ₂₃₄	N ₂₃₅	N ₂₃₆	N ₂₃₇	N ₂₃₈	N ₂₃₉	N ₂₄₀	N ₂₄₁	N ₂₄₂	N ₂₄₃	N ₂₄₄	N ₂₄₅	N ₂₄₆	N ₂₄₇	N ₂₄₈	N ₂₄₉	N ₂₅₀	N ₂₅₁	N ₂₅₂	N ₂₅₃	N ₂₅₄	N ₂₅₅	N ₂₅₆	N ₂₅₇	N ₂₅₈	N ₂₅₉	N ₂₆₀	N ₂₆₁	N ₂₆₂	N ₂₆₃	N ₂₆₄	N ₂₆₅	N ₂₆₆	N ₂₆₇	N ₂₆₈	N ₂₆₉	N ₂₇₀	N ₂₇₁	N ₂₇₂	N ₂₇₃	N ₂₇₄	N ₂₇₅	N ₂₇₆	N ₂₇₇	N ₂₇₈	N ₂₇₉	N ₂₈₀	N ₂₈₁	N ₂₈₂	N ₂₈₃	N ₂₈₄	N ₂₈₅	N ₂₈₆	N ₂₈₇	N ₂₈₈	N ₂₈₉	N ₂₉₀	N ₂₉₁	N ₂₉₂	N ₂₉₃	N ₂₉₄	N ₂₉₅	N ₂₉₆	N ₂₉₇	N ₂₉₈	N ₂₉₉	N ₃₀₀	N ₃₀₁	N ₃₀₂	N ₃₀₃	N ₃₀₄	N ₃₀₅	N ₃₀₆	N ₃₀₇	N ₃₀₈	N ₃₀₉	N ₃₁₀	N ₃₁₁	N ₃₁₂	N ₃₁₃	N ₃₁₄	N ₃₁₅	N ₃₁₆	N ₃₁₇	N ₃₁₈	N ₃₁₉	N ₃₂₀	N ₃₂₁	N ₃₂₂	N ₃₂₃	N ₃₂₄	N ₃₂₅	N ₃₂₆	N ₃₂₇	N ₃₂₈	N ₃₂₉	N ₃₃₀	N ₃₃₁	N ₃₃₂	N ₃₃₃	N ₃₃₄	N ₃₃₅	N ₃₃₆	N ₃₃₇	N ₃₃₈	N ₃₃₉	N ₃₄₀	N ₃₄₁	N ₃₄₂	N ₃₄₃	N ₃₄₄	N ₃₄₅	N ₃₄₆	N ₃₄₇	N ₃₄₈	N ₃₄₉	N ₃₅₀	N ₃₅₁	N ₃₅₂	N ₃₅₃	N ₃₅₄	N ₃₅₅	N ₃₅₆	N ₃₅₇	N ₃₅₈	N ₃₅₉	N ₃₆₀	N ₃₆₁	N ₃₆₂	N ₃₆₃	N ₃₆₄	N ₃₆₅	N ₃₆₆	N ₃₆₇	N ₃₆₈	N ₃₆₉	N ₃₇₀	N ₃₇₁	N ₃₇₂	N ₃₇₃	N ₃₇₄	N ₃₇₅	N ₃₇₆	N ₃₇₇	N ₃₇₈	N ₃₇₉	N ₃₈₀	N ₃₈₁	N ₃₈₂	N ₃₈₃	N ₃₈₄	N ₃₈₅	N ₃₈₆	N ₃₈₇	N ₃₈₈	N ₃₈₉	N ₃₉₀	N ₃₉₁	N ₃₉₂	N ₃₉₃	N ₃₉₄	N ₃₉₅	N ₃₉₆	N ₃₉₇	N ₃₉₈	N ₃₉₉	N ₄₀₀	N ₄₀₁	N ₄₀₂	N ₄₀₃	N ₄₀₄	N ₄₀₅	N ₄₀₆	N ₄₀₇	N ₄₀₈	N ₄₀₉	N ₄₁₀	N ₄₁₁	N ₄₁₂	N ₄₁₃	N ₄₁₄	N ₄₁₅	N ₄₁₆	N ₄₁₇	N ₄₁₈	N ₄₁₉	N ₄₂₀	N ₄₂₁	N ₄₂₂	N ₄₂₃	N ₄₂₄	N ₄₂₅	N ₄₂₆	N ₄₂₇	N ₄₂₈	N ₄₂₉	N ₄₃₀	N ₄₃₁	N ₄₃₂	N ₄₃₃	N ₄₃₄	N ₄₃₅	N ₄₃₆	N ₄₃₇	N ₄₃₈	N ₄₃₉	N ₄₄₀	N ₄₄₁	N ₄₄₂	N ₄₄₃	N ₄₄₄	N ₄₄₅	N ₄₄₆	N ₄₄₇	N ₄₄₈	N ₄₄₉	N ₄₅₀	N ₄₅₁	N ₄₅₂	N ₄₅₃	N ₄₅₄	N ₄₅₅	N ₄₅₆	N ₄₅₇	N ₄₅₈	N ₄₅₉	N ₄₆₀	N ₄₆₁	N ₄₆₂	N ₄₆₃	N ₄₆₄	N ₄₆₅	N ₄₆₆	N ₄₆₇	N ₄₆₈	N ₄₆₉	N ₄₇₀	N ₄₇₁	N ₄₇₂	N ₄₇₃	N ₄₇₄	N ₄₇₅	N ₄₇₆	N ₄₇₇	N ₄₇₈	N ₄₇₉	N ₄₈₀	N ₄₈₁	N ₄₈₂	N ₄₈₃	N ₄₈₄	N ₄₈₅	N ₄₈₆	N ₄₈₇	N ₄₈₈	N ₄₈₉	N ₄₉₀	N ₄₉₁	N ₄₉₂	N ₄₉₃	N ₄₉₄	N ₄₉₅	N ₄₉₆	N ₄₉₇	N ₄₉₈	N ₄₉₉	N ₅₀₀	N ₅₀₁	N ₅₀₂	N ₅₀₃	N ₅₀₄	N ₅₀₅	N ₅₀₆	N ₅₀₇	N ₅₀₈	N ₅₀₉	N ₅₁₀	N ₅₁₁	N ₅₁₂	N ₅₁₃	N ₅₁₄	N ₅₁₅	N ₅₁₆	N ₅₁₇	N ₅₁₈	N ₅₁₉	N ₅₂₀	N ₅₂₁	N ₅₂₂	N ₅₂₃	N ₅₂₄	N ₅₂₅	N ₅₂₆	N ₅₂₇	N ₅₂₈	N ₅₂₉	N ₅₃₀	N ₅₃₁	N ₅₃₂	N ₅₃₃	N ₅₃₄	N ₅₃₅	N ₅₃₆	N ₅₃₇	N ₅₃₈	N ₅₃₉	N ₅₄₀	N ₅₄₁	N ₅₄₂	N ₅₄₃	N ₅₄₄	N ₅₄₅	N ₅₄₆	N ₅₄₇	N ₅₄₈	N ₅₄₉	N ₅₅₀	N ₅₅₁	N ₅₅₂	N ₅₅₃	N ₅₅₄	N ₅₅₅	N ₅₅₆	N ₅₅₇	N ₅₅₈	N ₅₅₉	N ₅₆₀	N ₅₆₁	N ₅₆₂	N ₅₆₃	N ₅₆₄	N ₅₆₅	N ₅₆₆	N ₅₆₇	N ₅₆₈	N ₅₆₉	N ₅₇₀	N ₅₇₁	N ₅₇₂	N ₅₇₃	N ₅₇₄	N ₅₇₅	N ₅₇₆	N ₅₇₇	N ₅₇₈	N ₅₇₉	N ₅₈₀	N ₅₈₁	N ₅₈₂	N ₅₈₃	N ₅₈₄	N ₅₈₅	N ₅₈₆	N ₅₈₇	N ₅₈₈	N ₅₈₉	N ₅₉₀	N ₅₉₁	N ₅₉₂	N ₅₉₃	N ₅₉₄	N ₅₉₅	N ₅₉₆	N ₅₉₇	N ₅₉₈	N ₅₉₉	N ₆₀₀	N ₆₀₁	N ₆₀₂	N ₆₀₃	N ₆₀₄	N ₆₀₅	N ₆₀₆	N ₆₀₇	N ₆₀₈	N ₆₀₉	N ₆₁₀	N ₆₁₁	N ₆₁₂	N ₆₁₃	N ₆₁₄	N ₆₁₅	N ₆₁₆	N ₆₁₇	N ₆₁₈	N ₆₁₉	N ₆₂₀	N ₆₂₁	N ₆₂₂	N ₆₂₃	N ₆₂₄	N ₆₂₅	N ₆₂₆	N ₆₂₇	N ₆₂₈	N ₆₂₉	N ₆₃₀	N ₆₃₁	N ₆₃₂	N ₆₃₃	N ₆₃₄	N ₆₃₅	N ₆₃₆	N ₆₃₇	N ₆₃₈	N ₆₃₉	N ₆₄₀	N ₆₄₁	N ₆₄₂	N ₆₄₃	N ₆₄₄	N ₆₄₅	N ₆₄₆	N ₆₄₇	N ₆₄₈	N ₆₄₉	N ₆₅₀	N ₆₅₁	N ₆₅₂	N ₆₅₃	N ₆₅₄	N ₆₅₅	N ₆₅₆	N ₆₅₇	N ₆₅₈	N ₆₅₉	N ₆₆₀	N ₆₆₁	N ₆₆₂	N ₆₆₃	N ₆₆₄	N ₆₆₅	N ₆₆₆	N ₆₆₇	N ₆₆₈	N ₆₆₉	N ₆₇₀	N ₆₇₁	N ₆₇₂	N ₆₇₃	N ₆₇₄	N ₆₇₅	N ₆₇₆	N ₆₇₇	N ₆₇₈	N ₆₇₉	N ₆₈₀	N ₆₈₁	N ₆₈₂	N ₆₈₃	N ₆₈₄	N ₆₈₅	N ₆₈₆	N ₆₈₇	N ₆₈₈	N ₆₈₉	N ₆₉₀	N ₆₉₁	N ₆₉₂	N ₆₉₃	N ₆₉₄	N ₆₉₅	N ₆₉₆	N ₆₉₇	N ₆₉₈	N ₆₉₉	N ₇₀₀	N ₇₀₁	N ₇₀₂	N ₇₀₃	N ₇₀₄	N ₇₀₅	N ₇₀₆	N ₇₀₇	N ₇₀₈	N ₇₀₉	N ₇₁₀	N ₇₁₁	N ₇₁₂	N ₇₁₃	N ₇₁₄	N ₇₁₅	N ₇₁₆	N ₇₁₇	N ₇₁₈	N ₇₁₉	N ₇₂₀	N ₇₂₁	N ₇₂₂	N ₇₂₃	N ₇₂₄	N ₇₂₅	N ₇₂₆	N ₇₂₇	N ₇₂₈	N ₇₂₉	N ₇₃₀	N ₇₃₁	N ₇₃₂	N ₇₃₃	N ₇₃₄	N ₇₃₅	N ₇₃₆	N ₇₃₇	N ₇₃₈	N ₇₃₉	N ₇₄₀	N ₇₄₁	N ₇₄₂	N ₇₄₃	N ₇₄₄	N ₇₄₅	N ₇₄₆	N ₇₄₇	N ₇₄₈	N ₇₄₉	N ₇₅₀	N ₇₅₁	N ₇₅₂	N ₇₅₃	N ₇₅₄	N ₇₅₅	N ₇₅₆	N ₇₅₇	N ₇₅₈	N ₇₅₉	N ₇₆₀	N ₇₆₁	N ₇₆₂	N ₇₆₃	N ₇₆₄	N ₇₆₅	N ₇₆₆	N ₇₆₇	N ₇₆₈	N ₇₆₉	N ₇₇₀	N ₇₇₁	N ₇₇₂	N ₇₇₃	N ₇₇₄	N ₇₇₅	N ₇₇₆	N ₇₇₇	N ₇₇₈	N ₇₇₉	N ₇₈₀	N ₇₈₁	N ₇₈₂	N ₇₈₃	N ₇₈₄	N ₇₈₅	N ₇₈₆	N ₇₈₇	N ₇₈₈	N ₇₈₉	N ₇₉₀	N ₇₉₁	N ₇₉₂	N ₇₉₃	N ₇₉₄	N ₇₉₅	N ₇₉₆	N ₇₉₇	N ₇₉₈	N ₇₉₉	N ₈₀₀	N ₈₀₁	N ₈₀₂	N ₈₀₃	N ₈₀₄	N ₈₀₅	N ₈₀₆	N ₈₀₇	N ₈₀₈	N ₈₀₉	N ₈₁₀	N ₈₁₁	N ₈₁₂	N ₈₁₃	N ₈₁₄	N ₈₁₅	N ₈₁₆	N ₈₁₇	N ₈₁₈	N ₈₁₉	N ₈₂₀	N ₈₂₁	N ₈₂₂	N ₈₂₃	N ₈₂₄	N ₈₂₅	N ₈₂₆	N ₈₂₇	N ₈₂₈	N ₈₂₉	N ₈₃₀	N ₈₃₁	N ₈₃₂	N ₈₃₃	N ₈₃₄	N ₈₃₅	N ₈₃₆	N ₈₃₇	N ₈₃₈	N ₈₃₉	N ₈₄₀	N ₈₄₁	N ₈₄₂	N ₈₄₃	N ₈₄₄	N ₈₄₅	N ₈₄₆	N ₈₄₇	N ₈₄₈	N ₈₄₉	N ₈₅₀	N ₈₅₁	N ₈₅₂	N ₈₅₃	N ₈₅₄	N ₈₅₅	N ₈₅₆	N ₈₅₇	N ₈₅₈	N ₈₅₉	N ₈₆₀	N ₈₆₁	N ₈₆₂	N ₈₆₃	N ₈₆₄	N ₈₆₅	N ₈₆₆	N ₈₆₇	N ₈₆₈	N ₈₆₉	N ₈₇₀	N ₈₇₁	N ₈₇₂	N ₈₇₃	N ₈₇₄	N ₈₇₅	N ₈₇₆	N ₈₇₇	N ₈₇₈	N ₈₇₉	N ₈₈₀	N ₈₈₁	N ₈₈₂	N ₈₈₃	N ₈₈₄	N ₈₈₅	N ₈₈₆	N ₈₈₇	N ₈₈₈	N ₈₈₉	N ₈₉₀	N ₈₉₁	N ₈₉₂	N ₈₉₃	N ₈₉₄	N ₈₉₅	N ₈₉₆	N ₈₉₇	N ₈₉₈	N ₈₉₉	N ₉₀₀	N ₉₀₁	N ₉₀₂	N ₉₀₃	N ₉₀₄	N ₉₀₅	N ₉₀₆	N ₉₀₇	N ₉₀₈	N ₉₀₉	N ₉₁₀	N ₉₁₁	N ₉₁₂	N ₉₁₃	N ₉₁₄	N ₉₁₅	N ₉₁₆	N ₉₁₇	N ₉₁₈	N ₉₁₉	N ₉₂₀	N ₉₂₁	N ₉₂₂	N ₉₂₃	N ₉₂₄	N ₉₂₅	N ₉₂₆	N ₉₂₇	N ₉₂₈	N ₉₂₉	N ₉₃₀	N ₉₃₁	N ₉₃₂	N ₉₃₃	N ₉₃₄	N ₉₃₅	N ₉₃₆	N ₉₃₇	N ₉₃₈	N ₉₃₉	N ₉₄₀	N ₉₄₁	N ₉₄₂	N ₉₄₃	N ₉₄₄	N ₉₄₅	N ₉₄₆	N ₉₄₇	N ₉₄₈	N ₉₄₉	N ₉₅₀	N ₉₅₁	N ₉₅₂	N ₉₅₃	N ₉₅₄	N ₉₅₅	N ₉₅₆	N ₉₅₇	N ₉₅₈ </
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Note s:

Value (e.g., 0.7) - Denotes a value exceeding the Metal and Diamonds Mining Effluent Regulations (MDMER) criterion

Table B3
Shake Flask Extraction Results

Sample ID	Sample Type	Units & Dimensions	Unit	W	h	Na	N	R ₁	S ₁	S ₂	S ₃	S ₄	S ₅	S ₆	T	T ₁	T ₂	T ₃	T ₄	T ₅	T ₆	T ₇	T ₈	T ₉	T ₁₀	T ₁₁	T ₁₂	T ₁₃	T ₁₄	T ₁₅	T ₁₆	T ₁₇	T ₁₈	T ₁₉	T ₂₀	T ₂₁	T ₂₂	T ₂₃	T ₂₄	T ₂₅	T ₂₆	T ₂₇	T ₂₈	T ₂₉	T ₃₀	T ₃₁	T ₃₂	T ₃₃	T ₃₄	T ₃₅	T ₃₆	T ₃₇	T ₃₈	T ₃₉	T ₄₀	T ₄₁	T ₄₂	T ₄₃	T ₄₄	T ₄₅	T ₄₆	T ₄₇	T ₄₈	T ₄₉	T ₅₀	T ₅₁	T ₅₂	T ₅₃	T ₅₄	T ₅₅	T ₅₆	T ₅₇	T ₅₈	T ₅₉	T ₆₀	T ₆₁	T ₆₂	T ₆₃	T ₆₄	T ₆₅	T ₆₆	T ₆₇	T ₆₈	T ₆₉	T ₇₀	T ₇₁	T ₇₂	T ₇₃	T ₇₄	T ₇₅	T ₇₆	T ₇₇	T ₇₈	T ₇₉	T ₈₀	T ₈₁	T ₈₂	T ₈₃	T ₈₄	T ₈₅	T ₈₆	T ₈₇	T ₈₈	T ₈₉	T ₉₀	T ₉₁	T ₉₂	T ₉₃	T ₉₄	T ₉₅	T ₉₆	T ₉₇	T ₉₈	T ₉₉	T ₁₀₀	T ₁₀₁	T ₁₀₂	T ₁₀₃	T ₁₀₄	T ₁₀₅	T ₁₀₆	T ₁₀₇	T ₁₀₈	T ₁₀₉	T ₁₁₀	T ₁₁₁	T ₁₁₂	T ₁₁₃	T ₁₁₄	T ₁₁₅	T ₁₁₆	T ₁₁₇	T ₁₁₈	T ₁₁₉	T ₁₂₀	T ₁₂₁	T ₁₂₂	T ₁₂₃	T ₁₂₄	T ₁₂₅	T ₁₂₆	T ₁₂₇	T ₁₂₈	T ₁₂₉	T ₁₃₀	T ₁₃₁	T ₁₃₂	T ₁₃₃	T ₁₃₄	T ₁₃₅	T ₁₃₆	T ₁₃₇	T ₁₃₈	T ₁₃₉	T ₁₄₀	T ₁₄₁	T ₁₄₂	T ₁₄₃	T ₁₄₄	T ₁₄₅	T ₁₄₆	T ₁₄₇	T ₁₄₈	T ₁₄₉	T ₁₅₀	T ₁₅₁	T ₁₅₂	T ₁₅₃	T ₁₅₄	T ₁₅₅	T ₁₅₆	T ₁₅₇	T ₁₅₈	T ₁₅₉	T ₁₆₀	T ₁₆₁	T ₁₆₂	T ₁₆₃	T ₁₆₄	T ₁₆₅	T ₁₆₆	T ₁₆₇	T ₁₆₈	T ₁₆₉	T ₁₇₀	T ₁₇₁	T ₁₇₂	T ₁₇₃	T ₁₇₄	T ₁₇₅	T ₁₇₆	T ₁₇₇	T ₁₇₈	T ₁₇₉	T ₁₈₀	T ₁₈₁	T ₁₈₂	T ₁₈₃	T ₁₈₄	T ₁₈₅	T ₁₈₆	T ₁₈₇	T ₁₈₈	T ₁₈₉	T ₁₉₀	T ₁₉₁	T ₁₉₂	T ₁₉₃	T ₁₉₄	T ₁₉₅	T ₁₉₆	T ₁₉₇	T ₁₉₈	T ₁₉₉	T ₂₀₀	T ₂₀₁	T ₂₀₂	T ₂₀₃	T ₂₀₄	T ₂₀₅	T ₂₀₆	T ₂₀₇	T ₂₀₈	T ₂₀₉	T ₂₁₀	T ₂₁₁	T ₂₁₂	T ₂₁₃	T ₂₁₄	T ₂₁₅	T ₂₁₆	T ₂₁₇	T ₂₁₈	T ₂₁₉	T ₂₂₀	T ₂₂₁	T ₂₂₂	T ₂₂₃	T ₂₂₄	T ₂₂₅	T ₂₂₆	T ₂₂₇	T ₂₂₈	T ₂₂₉	T ₂₃₀	T ₂₃₁	T ₂₃₂	T ₂₃₃	T ₂₃₄	T ₂₃₅	T ₂₃₆	T ₂₃₇	T ₂₃₈	T ₂₃₉	T ₂₄₀	T ₂₄₁	T ₂₄₂	T ₂₄₃	T ₂₄₄	T ₂₄₅	T ₂₄₆	T ₂₄₇	T ₂₄₈	T ₂₄₉	T ₂₅₀	T ₂₅₁	T ₂₅₂	T ₂₅₃	T ₂₅₄	T ₂₅₅	T ₂₅₆	T ₂₅₇	T ₂₅₈	T ₂₅₉	T ₂₆₀	T ₂₆₁	T ₂₆₂	T ₂₆₃	T ₂₆₄	T ₂₆₅	T ₂₆₆	T ₂₆₇	T ₂₆₈	T ₂₆₉	T ₂₇₀	T ₂₇₁	T ₂₇₂	T ₂₇₃	T ₂₇₄	T ₂₇₅	T ₂₇₆	T ₂₇₇	T ₂₇₈	T ₂₇₉	T ₂₈₀	T ₂₈₁	T ₂₈₂	T ₂₈₃	T ₂₈₄	T ₂₈₅	T ₂₈₆	T ₂₈₇	T ₂₈₈	T ₂₈₉	T ₂₉₀	T ₂₉₁	T ₂₉₂	T ₂₉₃	T ₂₉₄	T ₂₉₅	T ₂₉₆	T ₂₉₇	T ₂₉₈	T ₂₉₉	T ₃₀₀	T ₃₀₁	T ₃₀₂	T ₃₀₃	T ₃₀₄	T ₃₀₅	T ₃₀₆	T ₃₀₇	T ₃₀₈	T ₃₀₉	T ₃₁₀	T ₃₁₁	T ₃₁₂	T ₃₁₃	T ₃₁₄	T ₃₁₅	T ₃₁₆	T ₃₁₇	T ₃₁₈	T ₃₁₉	T ₃₂₀	T ₃₂₁	T ₃₂₂	T ₃₂₃	T ₃₂₄	T ₃₂₅	T ₃₂₆	T ₃₂₇	T ₃₂₈	T ₃₂₉	T ₃₃₀	T ₃₃₁	T ₃₃₂	T ₃₃₃	T ₃₃₄	T ₃₃₅	T ₃₃₆	T ₃₃₇	T ₃₃₈	T ₃₃₉	T ₃₄₀	T ₃₄₁	T ₃₄₂	T ₃₄₃	T ₃₄₄	T ₃₄₅	T ₃₄₆	T ₃₄₇	T ₃₄₈	T ₃₄₉	T ₃₅₀	T ₃₅₁	T ₃₅₂	T ₃₅₃	T ₃₅₄	T ₃₅₅	T ₃₅₆	T ₃₅₇	T ₃₅₈	T ₃₅₉	T ₃₆₀	T ₃₆₁	T ₃₆₂	T ₃₆₃	T ₃₆₄	T ₃₆₅	T ₃₆₆	T ₃₆₇	T ₃₆₈	T ₃₆₉	T ₃₇₀	T ₃₇₁	T ₃₇₂	T ₃₇₃	T ₃₇₄	T ₃₇₅	T ₃₇₆	T ₃₇₇	T ₃₇₈	T ₃₇₉	T ₃₈₀	T ₃₈₁	T ₃₈₂	T ₃₈₃	T ₃₈₄	T ₃₈₅	T ₃₈₆	T ₃₈₇	T ₃₈₈	T ₃₈₉	T ₃₉₀	T ₃₉₁	T ₃₉₂	T ₃₉₃	T ₃₉₄	T ₃₉₅	T ₃₉₆	T ₃₉₇	T ₃₉₈	T ₃₉₉	T ₄₀₀	T ₄₀₁	T ₄₀₂	T ₄₀₃	T ₄₀₄	T ₄₀₅	T ₄₀₆	T ₄₀₇	T ₄₀₈	T ₄₀₉	T ₄₁₀	T ₄₁₁	T ₄₁₂	T ₄₁₃	T ₄₁₄	T ₄₁₅	T ₄₁₆	T ₄₁₇	T ₄₁₈	T ₄₁₉	T ₄₂₀	T ₄₂₁	T ₄₂₂	T ₄₂₃	T ₄₂₄	T ₄₂₅	T ₄₂₆	T ₄₂₇	T ₄₂₈	T ₄₂₉	T ₄₃₀	T ₄₃₁	T ₄₃₂	T ₄₃₃	T ₄₃₄	T ₄₃₅	T ₄₃₆	T ₄₃₇	T ₄₃₈	T ₄₃₉	T ₄₄₀	T ₄₄₁	T ₄₄₂	T ₄₄₃	T ₄₄₄	T ₄₄₅	T ₄₄₆	T ₄₄₇	T ₄₄₈	T ₄₄₉	T ₄₅₀	T ₄₅₁	T ₄₅₂	T ₄₅₃	T ₄₅₄	T ₄₅₅	T ₄₅₆	T ₄₅₇	T ₄₅₈	T ₄₅₉	T ₄₆₀	T ₄₆₁	T ₄₆₂	T ₄₆₃	T ₄₆₄	T ₄₆₅	T ₄₆₆	T ₄₆₇	T ₄₆₈	T ₄₆₉	T ₄₇₀	T ₄₇₁	T ₄₇₂	T ₄₇₃	T ₄₇₄	T ₄₇₅	T ₄₇₆	T ₄₇₇	T ₄₇₈	T ₄₇₉	T ₄₈₀	T ₄₈₁	T ₄₈₂	T ₄₈₃	T ₄₈₄	T ₄₈₅	T ₄₈₆	T ₄₈₇	T ₄₈₈	T ₄₈₉	T ₄₉₀	T ₄₉₁	T ₄₉₂	T ₄₉₃	T ₄₉₄	T ₄₉₅	T ₄₉₆	T ₄₉₇	T ₄₉₈	T ₄₉₉	T ₅₀₀	T ₅₀₁	T ₅₀₂	T ₅₀₃	T ₅₀₄	T ₅₀₅	T ₅₀₆	T ₅₀₇	T ₅₀₈	T ₅₀₉	T ₅₁₀	T ₅₁₁	T ₅₁₂	T ₅₁₃	T ₅₁₄	T ₅₁₅	T ₅₁₆	T ₅₁₇	T ₅₁₈	T ₅₁₉	T ₅₂₀	T ₅₂₁	T ₅₂₂	T ₅₂₃	T ₅₂₄	T ₅₂₅	T ₅₂₆	T ₅₂₇	T ₅₂₈	T ₅₂₉	T ₅₃₀	T ₅₃₁	T ₅₃₂	T ₅₃₃	T ₅₃₄	T ₅₃₅	T ₅₃₆	T ₅₃₇	T ₅₃₈	T ₅₃₉	T ₅₄₀	T ₅₄₁	T ₅₄₂	T ₅₄₃	T ₅₄₄	T ₅₄₅	T ₅₄₆	T ₅₄₇	T ₅₄₈	T ₅₄₉	T ₅₅₀	T ₅₅₁	T ₅₅₂	T ₅₅₃	T ₅₅₄	T ₅₅₅	T ₅₅₆	T ₅₅₇	T ₅₅₈	T ₅₅₉	T ₅₆₀	T ₅₆₁	T ₅₆₂	T ₅₆₃	T ₅₆₄	T ₅₆₅	T ₅₆₆	T ₅₆₇	T ₅₆₈	T ₅₆₉	T ₅₇₀	T ₅₇₁	T ₅₇₂	T ₅₇₃	T ₅₇₄	T ₅₇₅	T ₅₇₆	T ₅₇₇	T ₅₇₈	T ₅₇₉	T ₅₈₀	T ₅₈₁	T ₅₈₂	T ₅₈₃	T ₅₈₄	T ₅₈₅	T ₅₈₆	T ₅₈₇	T ₅₈₈	T ₅₈₉	T ₅₉₀	T ₅₉₁	T ₅₉₂	T ₅₉₃	T ₅₉₄	T ₅₉₅	T ₅₉₆	T ₅₉₇	T ₅₉₈	T ₅₉₉	T ₆₀₀	T ₆₀₁	T ₆₀₂	T ₆₀₃	T ₆₀₄	T ₆₀₅	T ₆₀₆	T ₆₀₇	T ₆₀₈	T ₆₀₉	T ₆₁₀	T ₆₁₁	T ₆₁₂	T ₆₁₃	T ₆₁₄	T ₆₁₅	T ₆₁₆	T ₆₁₇	T ₆₁₈	T ₆₁₉	T ₆₂₀	T ₆₂₁	T ₆₂₂	T ₆₂₃	T ₆₂₄	T ₆₂₅	T ₆₂₆	T ₆₂₇	T ₆₂₈	T ₆₂₉	T ₆₃₀	T ₆₃₁	T ₆₃₂	T ₆₃₃	T ₆₃₄	T ₆₃₅	T ₆₃₆	T ₆₃₇	T ₆₃₈	T ₆₃₉	T ₆₄₀	T ₆₄₁	T ₆₄₂	T ₆₄₃	T ₆₄₄	T ₆₄₅	T ₆₄₆	T ₆₄₇	T ₆₄₈	T ₆₄₉	T ₆₅₀	T ₆₅₁	T ₆₅₂	T ₆₅₃	T ₆₅₄	T ₆₅₅	T ₆₅₆	T ₆₅₇	T ₆₅₈	T ₆₅₉	T ₆₆₀	T ₆₆₁	T ₆₆₂	T ₆₆₃	T ₆₆₄	T ₆₆₅	T ₆₆₆	T ₆₆₇	T ₆₆₈	T ₆₆₉	T ₆₇₀	T ₆₇₁	T ₆₇₂	T ₆₇₃	T ₆₇₄	T ₆₇₅	T ₆₇₆	T ₆₇₇	T ₆₇₈	T ₆₇₉	T ₆₈₀	T ₆₈₁	T ₆₈₂	T ₆₈₃	T ₆₈₄	T ₆₈₅	T ₆₈₆	T ₆₈₇	T ₆₈₈	T ₆₈₉	T ₆₉₀	T ₆₉₁	T ₆₉₂	T ₆₉₃	T ₆₉₄	T ₆₉₅	T ₆₉₆	T ₆₉₇	T ₆₉₈	T ₆₉₉	T ₇₀₀	T ₇₀₁	T ₇₀₂	T ₇₀₃	T ₇₀₄	T ₇₀₅	T ₇₀₆	T ₇₀₇	T ₇₀₈	T ₇₀₉	T ₇₁₀	T ₇₁₁	T ₇₁₂	T ₇₁₃	T ₇₁₄	T ₇₁₅	T ₇₁₆	T ₇₁₇	T ₇₁₈	T ₇₁₉	T ₇₂₀	T ₇₂₁	T ₇₂₂	T ₇₂₃	T ₇₂₄	T ₇₂₅	T ₇₂₆	T ₇₂₇	T ₇₂₈	T ₇₂₉	T ₇₃₀	T ₇₃₁	T ₇₃₂	T ₇₃₃	T ₇₃₄	T ₇₃₅	T ₇₃₆	T ₇₃₇	T ₇₃₈	T ₇₃₉	T ₇₄₀	T ₇₄₁	T ₇₄₂	T ₇₄₃	T ₇₄₄	T ₇₄₅	T ₇₄₆	T ₇₄₇	T ₇₄₈	T ₇₄₉	T ₇₅₀	T ₇₅₁	T ₇₅₂	T ₇₅₃	T ₇₅₄	T ₇₅₅	T ₇₅₆	T ₇₅₇	T ₇₅₈	T ₇₅₉	T ₇₆₀	T ₇₆₁	T ₇₆₂	T ₇₆₃	T ₇₆₄	T ₇₆₅	T ₇₆₆	T ₇₆₇	T ₇₆₈	T ₇₆₉	T ₇₇₀	T ₇₇₁	T ₇₇₂	T ₇₇₃	T ₇₇₄	T ₇₇₅	T ₇₇₆	T ₇₇₇	T ₇₇₈	T ₇₇₉	T ₇₈₀	T ₇₈₁	T ₇₈₂	T ₇₈₃	T ₇₈₄	T ₇₈₅	T ₇₈₆	T ₇₈₇	T ₇₈₈	T ₇₈₉	T ₇₉₀	T ₇₉₁	T ₇₉₂	T ₇₉₃	T ₇₉₄	T ₇₉₅	T ₇₉₆	T ₇₉₇	T ₇₉₈	T ₇₉₉	T ₈₀₀	T ₈₀₁	T ₈₀₂	T ₈₀₃	T ₈₀₄	T ₈₀₅	T ₈₀₆	T ₈₀₇	T ₈₀₈	T ₈₀₉	T ₈₁₀	T ₈₁₁	T ₈₁₂	T ₈₁₃	T ₈₁₄	T ₈₁₅	T ₈₁₆	T ₈₁₇	T ₈₁₈	T ₈₁₉	T ₈₂₀	T ₈₂₁	T ₈₂₂	T ₈₂₃	T ₈₂₄	T ₈₂₅	T ₈₂₆	T ₈₂₇	T ₈₂₈	T ₈₂₉	T ₈₃₀	T ₈₃₁	T ₈₃₂	T ₈₃₃	T ₈₃₄	T ₈₃₅	T ₈₃₆	T ₈₃₇	T ₈₃₈	T ₈₃₉	T ₈₄₀	T ₈₄₁	T ₈₄₂	T ₈₄₃	T ₈₄₄	T ₈₄₅	T ₈₄₆	T ₈₄₇	T ₈₄₈	T ₈₄₉	T ₈₅₀	T ₈₅₁	T ₈₅₂	T ₈₅₃	T ₈₅₄	T ₈₅₅	T ₈₅₆	T ₈₅₇	T ₈₅₈	T ₈₅₉	T ₈₆₀	T ₈₆₁	T ₈₆₂	T ₈₆₃	T ₈₆₄	T ₈₆₅	T ₈₆₆	T ₈₆₇	T ₈₆₈	T ₈₆₉	T ₈₇₀	T ₈₇₁	T ₈₇₂	T ₈₇₃	T ₈₇₄	T ₈₇₅	T ₈₇₆	T ₈₇₇	T ₈₇₈	T ₈₇₉	T ₈₈₀	T ₈₈₁	T ₈₈₂	T ₈₈₃	T ₈₈₄	T ₈₈₅	T ₈₈₆	T ₈₈₇	T ₈₈₈	T ₈₈₉	T ₈₉₀	T ₈₉₁	T ₈₉₂	T ₈₉₃	T ₈₉₄	T ₈₉₅	T ₈₉₆	T ₈₉₇	T ₈₉₈	T ₈₉₉	T ₉₀₀	T ₉₀₁	T ₉₀₂	T ₉₀₃	T ₉₀₄	T ₉₀₅	T ₉₀₆	T ₉₀₇	T ₉₀₈	T ₉₀₉	T ₉₁₀	T ₉₁₁	T ₉₁₂	T ₉₁₃	T ₉₁₄	T ₉₁₅	T ₉₁₆	T ₉₁₇	T ₉₁₈	T ₉₁₉	T ₉₂₀	T ₉₂₁	T ₉₂₂	T ₉₂₃	T ₉₂₄	T ₉₂₅	T ₉₂₆	T ₉₂₇	T ₉₂₈	T ₉₂₉	T ₉₃₀	T ₉₃₁	T ₉₃₂	T ₉₃₃	T ₉₃₄	T ₉₃₅	T ₉₃₆	T ₉₃₇	T ₉₃₈	T ₉₃₉	T ₉₄₀	T ₉₄₁	T ₉₄₂	T ₉₄₃	T ₉₄₄	T ₉₄₅	T ₉₄₆	T ₉₄₇	T ₉₄₈	T ₉₄₉	T ₉₅₀	T<
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Value (e.g., 0.7)

Table B3
Shake Flask Extraction Results

Sample ID	Sample Type	Mean and Diamond Mining Effluent Regulations (MDER) value*	U	A ₁	A ₂	A ₃	A ₄	A ₅	A ₆	A ₇	A ₈	A ₉	A ₁₀	A ₁₁	A ₁₂	A ₁₃	A ₁₄	A ₁₅	A ₁₆	A ₁₇	A ₁₈	A ₁₉	A ₂₀	A ₂₁	A ₂₂	A ₂₃	A ₂₄	A ₂₅	A ₂₆	A ₂₇	A ₂₈	A ₂₉	A ₃₀	A ₃₁	A ₃₂	A ₃₃	A ₃₄	A ₃₅	A ₃₆	A ₃₇	A ₃₈	A ₃₉	A ₄₀	A ₄₁	A ₄₂	A ₄₃	A ₄₄	A ₄₅	A ₄₆	A ₄₇	A ₄₈	A ₄₉	A ₅₀	A ₅₁	A ₅₂	A ₅₃	A ₅₄	A ₅₅	A ₅₆	A ₅₇	A ₅₈	A ₅₉	A ₆₀	A ₆₁	A ₆₂	A ₆₃	A ₆₄	A ₆₅	A ₆₆	A ₆₇	A ₆₈	A ₆₉	A ₇₀	A ₇₁	A ₇₂	A ₇₃	A ₇₄	A ₇₅	A ₇₆	A ₇₇	A ₇₈	A ₇₉	A ₈₀	A ₈₁	A ₈₂	A ₈₃	A ₈₄	A ₈₅	A ₈₆	A ₈₇	A ₈₈	A ₈₉	A ₉₀	A ₉₁	A ₉₂	A ₉₃	A ₉₄	A ₉₅	A ₉₆	A ₉₇	A ₉₈	A ₉₉	A ₁₀₀	A ₁₀₁	A ₁₀₂	A ₁₀₃	A ₁₀₄	A ₁₀₅	A ₁₀₆	A ₁₀₇	A ₁₀₈	A ₁₀₉	A ₁₁₀	A ₁₁₁	A ₁₁₂	A ₁₁₃	A ₁₁₄	A ₁₁₅	A ₁₁₆	A ₁₁₇	A ₁₁₈	A ₁₁₉	A ₁₂₀	A ₁₂₁	A ₁₂₂	A ₁₂₃	A ₁₂₄	A ₁₂₅	A ₁₂₆	A ₁₂₇	A ₁₂₈	A ₁₂₉	A ₁₃₀	A ₁₃₁	A ₁₃₂	A ₁₃₃	A ₁₃₄	A ₁₃₅	A ₁₃₆	A ₁₃₇	A ₁₃₈	A ₁₃₉	A ₁₄₀	A ₁₄₁	A ₁₄₂	A ₁₄₃	A ₁₄₄	A ₁₄₅	A ₁₄₆	A ₁₄₇	A ₁₄₈	A ₁₄₉	A ₁₅₀	A ₁₅₁	A ₁₅₂	A ₁₅₃	A ₁₅₄	A ₁₅₅	A ₁₅₆	A ₁₅₇	A ₁₅₈	A ₁₅₉	A ₁₆₀	A ₁₆₁	A ₁₆₂	A ₁₆₃	A ₁₆₄	A ₁₆₅	A ₁₆₆	A ₁₆₇	A ₁₆₈	A ₁₆₉	A ₁₇₀	A ₁₇₁	A ₁₇₂	A ₁₇₃	A ₁₇₄	A ₁₇₅	A ₁₇₆	A ₁₇₇	A ₁₇₈	A ₁₇₉	A ₁₈₀	A ₁₈₁	A ₁₈₂	A ₁₈₃	A ₁₈₄	A ₁₈₅	A ₁₈₆	A ₁₈₇	A ₁₈₈	A ₁₈₉	A ₁₉₀	A ₁₉₁	A ₁₉₂	A ₁₉₃	A ₁₉₄	A ₁₉₅	A ₁₉₆	A ₁₉₇	A ₁₉₈	A ₁₉₉	A ₂₀₀	A ₂₀₁	A ₂₀₂	A ₂₀₃	A ₂₀₄	A ₂₀₅	A ₂₀₆	A ₂₀₇	A ₂₀₈	A ₂₀₉	A ₂₁₀	A ₂₁₁	A ₂₁₂	A ₂₁₃	A ₂₁₄	A ₂₁₅	A ₂₁₆	A ₂₁₇	A ₂₁₈	A ₂₁₉	A ₂₂₀	A ₂₂₁	A ₂₂₂	A ₂₂₃	A ₂₂₄	A ₂₂₅	A ₂₂₆	A ₂₂₇	A ₂₂₈	A ₂₂₉	A ₂₃₀	A ₂₃₁	A ₂₃₂	A ₂₃₃	A ₂₃₄	A ₂₃₅	A ₂₃₆	A ₂₃₇	A ₂₃₈	A ₂₃₉	A ₂₄₀	A ₂₄₁	A ₂₄₂	A ₂₄₃	A ₂₄₄	A ₂₄₅	A ₂₄₆	A ₂₄₇	A ₂₄₈	A ₂₄₉	A ₂₅₀	A ₂₅₁	A ₂₅₂	A ₂₅₃	A ₂₅₄	A ₂₅₅	A ₂₅₆	A ₂₅₇	A ₂₅₈	A ₂₅₉	A ₂₆₀	A ₂₆₁	A ₂₆₂	A ₂₆₃	A ₂₆₄	A ₂₆₅	A ₂₆₆	A ₂₆₇	A ₂₆₈	A ₂₆₉	A ₂₇₀	A ₂₇₁	A ₂₇₂	A ₂₇₃	A ₂₇₄	A ₂₇₅	A ₂₇₆	A ₂₇₇	A ₂₇₈	A ₂₇₉	A ₂₈₀	A ₂₈₁	A ₂₈₂	A ₂₈₃	A ₂₈₄	A ₂₈₅	A ₂₈₆	A ₂₈₇	A ₂₈₈	A ₂₈₉	A ₂₉₀	A ₂₉₁	A ₂₉₂	A ₂₉₃	A ₂₉₄	A ₂₉₅	A ₂₉₆	A ₂₉₇	A ₂₉₈	A ₂₉₉	A ₃₀₀	A ₃₀₁	A ₃₀₂	A ₃₀₃	A ₃₀₄	A ₃₀₅	A ₃₀₆	A ₃₀₇	A ₃₀₈	A ₃₀₉	A ₃₁₀	A ₃₁₁	A ₃₁₂	A ₃₁₃	A ₃₁₄	A ₃₁₅	A ₃₁₆	A ₃₁₇	A ₃₁₈	A ₃₁₉	A ₃₂₀	A ₃₂₁	A ₃₂₂	A ₃₂₃	A ₃₂₄	A ₃₂₅	A ₃₂₆	A ₃₂₇	A ₃₂₈	A ₃₂₉	A ₃₃₀	A ₃₃₁	A ₃₃₂	A ₃₃₃	A ₃₃₄	A ₃₃₅	A ₃₃₆	A ₃₃₇	A ₃₃₈	A ₃₃₉	A ₃₄₀	A ₃₄₁	A ₃₄₂	A ₃₄₃	A ₃₄₄	A ₃₄₅	A ₃₄₆	A ₃₄₇	A ₃₄₈	A ₃₄₉	A ₃₅₀	A ₃₅₁	A ₃₅₂	A ₃₅₃	A ₃₅₄	A ₃₅₅	A ₃₅₆	A ₃₅₇	A ₃₅₈	A ₃₅₉	A ₃₆₀	A ₃₆₁	A ₃₆₂	A ₃₆₃	A ₃₆₄	A ₃₆₅	A ₃₆₆	A ₃₆₇	A ₃₆₈	A ₃₆₉	A ₃₇₀	A ₃₇₁	A ₃₇₂	A ₃₇₃	A ₃₇₄	A ₃₇₅	A ₃₇₆	A ₃₇₇	A ₃₇₈	A ₃₇₉	A ₃₈₀	A ₃₈₁	A ₃₈₂	A ₃₈₃	A ₃₈₄	A ₃₈₅	A ₃₈₆	A ₃₈₇	A ₃₈₈	A ₃₈₉	A ₃₉₀	A ₃₉₁	A ₃₉₂	A ₃₉₃	A ₃₉₄	A ₃₉₅	A ₃₉₆	A ₃₉₇	A ₃₉₈	A ₃₉₉	A ₄₀₀	A ₄₀₁	A ₄₀₂	A ₄₀₃	A ₄₀₄	A ₄₀₅	A ₄₀₆	A ₄₀₇	A ₄₀₈	A ₄₀₉	A ₄₁₀	A ₄₁₁	A ₄₁₂	A ₄₁₃	A ₄₁₄	A ₄₁₅	A ₄₁₆	A ₄₁₇	A ₄₁₈	A ₄₁₉	A ₄₂₀	A ₄₂₁	A ₄₂₂	A ₄₂₃	A ₄₂₄	A ₄₂₅	A ₄₂₆	A ₄₂₇	A ₄₂₈	A ₄₂₉	A ₄₃₀	A ₄₃₁	A ₄₃₂	A ₄₃₃	A ₄₃₄	A ₄₃₅	A ₄₃₆	A ₄₃₇	A ₄₃₈	A ₄₃₉	A ₄₄₀	A ₄₄₁	A ₄₄₂	A ₄₄₃	A ₄₄₄	A ₄₄₅	A ₄₄₆	A ₄₄₇	A ₄₄₈	A ₄₄₉	A ₄₅₀	A ₄₅₁	A ₄₅₂	A ₄₅₃	A ₄₅₄	A ₄₅₅	A ₄₅₆	A ₄₅₇	A ₄₅₈	A ₄₅₉	A ₄₆₀	A ₄₆₁	A ₄₆₂	A ₄₆₃	A ₄₆₄	A ₄₆₅	A ₄₆₆	A ₄₆₇	A ₄₆₈	A ₄₆₉	A ₄₇₀	A ₄₇₁	A ₄₇₂	A ₄₇₃	A ₄₇₄	A ₄₇₅	A ₄₇₆	A ₄₇₇	A ₄₇₈	A ₄₇₉	A ₄₈₀	A ₄₈₁	A ₄₈₂	A ₄₈₃	A ₄₈₄	A ₄₈₅	A ₄₈₆	A ₄₈₇	A ₄₈₈	A ₄₈₉	A ₄₉₀	A ₄₉₁	A ₄₉₂	A ₄₉₃	A ₄₉₄	A ₄₉₅	A ₄₉₆	A ₄₉₇	A ₄₉₈	A ₄₉₉	A ₅₀₀	A ₅₀₁	A ₅₀₂	A ₅₀₃	A ₅₀₄	A ₅₀₅	A ₅₀₆	A ₅₀₇	A ₅₀₈	A ₅₀₉	A ₅₁₀	A ₅₁₁	A ₅₁₂	A ₅₁₃	A ₅₁₄	A ₅₁₅	A ₅₁₆	A ₅₁₇	A ₅₁₈	A ₅₁₉	A ₅₂₀	A ₅₂₁	A ₅₂₂	A ₅₂₃	A ₅₂₄	A ₅₂₅	A ₅₂₆	A ₅₂₇	A ₅₂₈	A ₅₂₉	A ₅₃₀	A ₅₃₁	A ₅₃₂	A ₅₃₃	A ₅₃₄	A ₅₃₅	A ₅₃₆	A ₅₃₇	A ₅₃₈	A ₅₃₉	A ₅₄₀	A ₅₄₁	A ₅₄₂	A ₅₄₃	A ₅₄₄	A ₅₄₅	A ₅₄₆	A ₅₄₇	A ₅₄₈	A ₅₄₉	A ₅₅₀	A ₅₅₁	A ₅₅₂	A ₅₅₃	A ₅₅₄	A ₅₅₅	A ₅₅₆	A ₅₅₇	A ₅₅₈	A ₅₅₉	A ₅₆₀	A ₅₆₁	A ₅₆₂	A ₅₆₃	A ₅₆₄	A ₅₆₅	A ₅₆₆	A ₅₆₇	A ₅₆₈	A ₅₆₉	A ₅₇₀	A ₅₇₁	A ₅₇₂	A ₅₇₃	A ₅₇₄	A ₅₇₅	A ₅₇₆	A ₅₇₇	A ₅₇₈	A ₅₇₉	A ₅₈₀	A ₅₈₁	A ₅₈₂	A ₅₈₃	A ₅₈₄	A ₅₈₅	A ₅₈₆	A ₅₈₇	A ₅₈₈	A ₅₈₉	A ₅₉₀	A ₅₉₁	A ₅₉₂	A ₅₉₃	A ₅₉₄	A ₅₉₅	A ₅₉₆	A ₅₉₇	A ₅₉₈	A ₅₉₉	A ₆₀₀	A ₆₀₁	A ₆₀₂	A ₆₀₃	A ₆₀₄	A ₆₀₅	A ₆₀₆	A ₆₀₇	A ₆₀₈	A ₆₀₉	A ₆₁₀	A ₆₁₁	A ₆₁₂	A ₆₁₃	A ₆₁₄	A ₆₁₅	A ₆₁₆	A ₆₁₇	A ₆₁₈	A ₆₁₉	A ₆₂₀	A ₆₂₁	A ₆₂₂	A ₆₂₃	A ₆₂₄	A ₆₂₅	A ₆₂₆	A ₆₂₇	A ₆₂₈	A ₆₂₉	A ₆₃₀	A ₆₃₁	A ₆₃₂	A ₆₃₃	A ₆₃₄	A ₆₃₅	A ₆₃₆	A ₆₃₇	A ₆₃₈	A ₆₃₉	A ₆₄₀	A ₆₄₁	A ₆₄₂	A ₆₄₃	A ₆₄₄	A ₆₄₅	A ₆₄₆	A ₆₄₇	A ₆₄₈	A ₆₄₉	A ₆₅₀	A ₆₅₁	A ₆₅₂	A ₆₅₃	A ₆₅₄	A ₆₅₅	A ₆₅₆	A ₆₅₇	A ₆₅₈	A ₆₅₉	A ₆₆₀	A ₆₆₁	A ₆₆₂	A ₆₆₃	A ₆₆₄	A ₆₆₅	A ₆₆₆	A ₆₆₇	A ₆₆₈	A ₆₆₉	A ₆₇₀	A ₆₇₁	A ₆₇₂	A ₆₇₃	A ₆₇₄	A ₆₇₅	A ₆₇₆	A ₆₇₇	A ₆₇₈	A ₆₇₉	A ₆₈₀	A ₆₈₁	A ₆₈₂	A ₆₈₃	A ₆₈₄	A ₆₈₅	A ₆₈₆	A ₆₈₇	A ₆₈₈	A ₆₈₉	A ₆₉₀	A ₆₉₁	A ₆₉₂	A ₆₉₃	A ₆₉₄	A ₆₉₅	A ₆₉₆	A ₆₉₇	A ₆₉₈	A ₆₉₉	A ₇₀₀	A ₇₀₁	A ₇₀₂	A ₇₀₃	A ₇₀₄	A ₇₀₅	A ₇₀₆	A ₇₀₇	A ₇₀₈	A ₇₀₉	A ₇₁₀	A ₇₁₁	A ₇₁₂	A ₇₁₃	A ₇₁₄	A ₇₁₅	A ₇₁₆	A ₇₁₇	A ₇₁₈	A ₇₁₉	A ₇₂₀	A ₇₂₁	A ₇₂₂	A ₇₂₃	A ₇₂₄	A ₇₂₅	A ₇₂₆	A ₇₂₇	A ₇₂₈	A ₇₂₉	A ₇₃₀	A ₇₃₁	A ₇₃₂	A ₇₃₃	A ₇₃₄	A ₇₃₅	A ₇₃₆	A ₇₃₇	A ₇₃₈	A ₇₃₉	A ₇₄₀	A ₇₄₁	A ₇₄₂	A ₇₄₃	A ₇₄₄	A ₇₄₅	A ₇₄₆	A ₇₄₇	A ₇₄₈	A ₇₄₉	A ₇₅₀	A ₇₅₁	A ₇₅₂	A ₇₅₃	A ₇₅₄	A ₇₅₅	A ₇₅₆	A ₇₅₇	A ₇₅₈	A ₇₅₉	A ₇₆₀	A ₇₆₁	A ₇₆₂	A ₇₆₃	A ₇₆₄	A ₇₆₅	A ₇₆₆	A ₇₆₇	A ₇₆₈	A ₇₆₉	A ₇₇₀	A ₇₇₁	A ₇₇₂	A ₇₇₃	A ₇₇₄	A ₇₇₅	A ₇₇₆	A ₇₇₇	A ₇₇₈	A ₇₇₉	A ₇₈₀	A ₇₈₁	A ₇₈₂	A ₇₈₃	A ₇₈₄	A ₇₈₅	A ₇₈₆	A ₇₈₇	A ₇₈₈	A ₇₈₉	A ₇₉₀	A ₇₉₁	A ₇₉₂	A ₇₉₃	A ₇₉₄	A ₇₉₅	A ₇₉₆	A ₇₉₇	A ₇₉₈	A ₇₉₉	A ₈₀₀	A ₈₀₁	A ₈₀₂	A ₈₀₃	A ₈₀₄	A ₈₀₅	A ₈₀₆	A ₈₀₇	A ₈₀₈	A ₈₀₉	A ₈₁₀	A ₈₁₁	A ₈₁₂	A ₈₁₃	A ₈₁₄	A ₈₁₅	A ₈₁₆	A ₈₁₇	A ₈₁₈	A ₈₁₉	A ₈₂₀	A ₈₂₁	A ₈₂₂	A ₈₂₃	A ₈₂₄	A ₈₂₅	A ₈₂₆	A ₈₂₇	A ₈₂₈	A ₈₂₉	A ₈₃₀	A ₈₃₁	A ₈₃₂	A ₈₃₃	A ₈₃₄	A ₈₃₅	A ₈₃₆	A ₈₃₇	A ₈₃₈	A ₈₃₉	A ₈₄₀	A ₈₄₁	A ₈₄₂	A ₈₄₃	A ₈₄₄	A ₈₄₅	A ₈₄₆	A ₈₄₇	A ₈₄₈	A ₈₄₉	A ₈₅₀	A ₈₅₁	A ₈₅₂	A ₈₅₃	A ₈₅₄	A ₈₅₅	A ₈₅₆	A ₈₅₇	A ₈₅₈	A ₈₅₉	A ₈₆₀	A ₈₆₁	A ₈₆₂	A ₈₆₃	A ₈₆₄	A ₈₆₅	A ₈₆₆	A ₈₆₇	A ₈₆₈	A ₈₆₉	A ₈₇₀	A ₈₇₁	A ₈₇₂	A ₈₇₃	A ₈₇₄	A ₈₇₅	A ₈₇₆	A ₈₇₇	A ₈₇₈	A ₈₇₉	A ₈₈₀	A ₈₈₁	A ₈₈₂	A ₈₈₃	A ₈₈₄	A ₈₈₅	A ₈₈₆	A ₈₈₇	A ₈₈₈	A ₈₈₉	A ₈₉₀	A ₈₉₁	A ₈₉₂	A ₈₉₃	A ₈₉₄	A ₈₉₅	A ₈₉₆	A ₈₉₇	A ₈₉₈	A ₈₉₉	A ₉₀₀	A ₉₀₁	A ₉₀₂	A ₉₀₃	A ₉₀₄	A ₉₀₅	A ₉₀₆	A ₉₀₇	A ₉₀₈	A ₉₀₉	A ₉₁₀	A ₉₁₁	A ₉₁₂	A ₉₁₃	A ₉₁₄	A ₉₁₅	A ₉₁₆	A ₉₁₇	A ₉₁₈	A ₉₁₉	A ₉₂₀	A ₉₂₁	A ₉₂₂	A ₉₂₃	A ₉₂₄	A ₉₂₅	A ₉₂₆	A ₉₂₇	A ₉₂₈	A ₉₂₉	A ₉₃₀	A ₉₃₁	A ₉₃₂	A ₉₃₃	A ₉₃₄	A ₉₃₅	A ₉₃₆	A ₉₃₇	A ₉₃₈	A ₉₃₉	A ₉₄₀	A ₉₄₁	A ₉₄₂	A ₉₄₃	A ₉₄₄	A ₉₄₅	A ₉₄₆	A
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Table B3
Shake Flask Extraction Results

Sample ID	Sample Type	Mean and Standard Deviation	Limiting	U	A ₁	A ₂	A ₃	A ₄	A ₅	A ₆	A ₇	A ₈	A ₉	A ₁₀	A ₁₁	A ₁₂	A ₁₃	A ₁₄	A ₁₅	A ₁₆	A ₁₇	A ₁₈	A ₁₉	A ₂₀	A ₂₁	A ₂₂	A ₂₃	A ₂₄	A ₂₅	A ₂₆	A ₂₇	A ₂₈	A ₂₉	A ₃₀	A ₃₁	A ₃₂	A ₃₃	A ₃₄	A ₃₅	A ₃₆	A ₃₇	A ₃₈	A ₃₉	A ₄₀	A ₄₁	A ₄₂	A ₄₃	A ₄₄	A ₄₅	A ₄₆	A ₄₇	A ₄₈	A ₄₉	A ₅₀	A ₅₁	A ₅₂	A ₅₃	A ₅₄	A ₅₅	A ₅₆	A ₅₇	A ₅₈	A ₅₉	A ₆₀	A ₆₁	A ₆₂	A ₆₃	A ₆₄	A ₆₅	A ₆₆	A ₆₇	A ₆₈	A ₆₉	A ₇₀	A ₇₁	A ₇₂	A ₇₃	A ₇₄	A ₇₅	A ₇₆	A ₇₇	A ₇₈	A ₇₉	A ₈₀	A ₈₁	A ₈₂	A ₈₃	A ₈₄	A ₈₅	A ₈₆	A ₈₇	A ₈₈	A ₈₉	A ₉₀	A ₉₁	A ₉₂	A ₉₃	A ₉₄	A ₉₅	A ₉₆	A ₉₇	A ₉₈	A ₉₉	A ₁₀₀	A ₁₀₁	A ₁₀₂	A ₁₀₃	A ₁₀₄	A ₁₀₅	A ₁₀₆	A ₁₀₇	A ₁₀₈	A ₁₀₉	A ₁₁₀	A ₁₁₁	A ₁₁₂	A ₁₁₃	A ₁₁₄	A ₁₁₅	A ₁₁₆	A ₁₁₇	A ₁₁₈	A ₁₁₉	A ₁₂₀	A ₁₂₁	A ₁₂₂	A ₁₂₃	A ₁₂₄	A ₁₂₅	A ₁₂₆	A ₁₂₇	A ₁₂₈	A ₁₂₉	A ₁₃₀	A ₁₃₁	A ₁₃₂	A ₁₃₃	A ₁₃₄	A ₁₃₅	A ₁₃₆	A ₁₃₇	A ₁₃₈	A ₁₃₉	A ₁₄₀	A ₁₄₁	A ₁₄₂	A ₁₄₃	A ₁₄₄	A ₁₄₅	A ₁₄₆	A ₁₄₇	A ₁₄₈	A ₁₄₉	A ₁₅₀	A ₁₅₁	A ₁₅₂	A ₁₅₃	A ₁₅₄	A ₁₅₅	A ₁₅₆	A ₁₅₇	A ₁₅₈	A ₁₅₉	A ₁₆₀	A ₁₆₁	A ₁₆₂	A ₁₆₃	A ₁₆₄	A ₁₆₅	A ₁₆₆	A ₁₆₇	A ₁₆₈	A ₁₆₉	A ₁₇₀	A ₁₇₁	A ₁₇₂	A ₁₇₃	A ₁₇₄	A ₁₇₅	A ₁₇₆	A ₁₇₇	A ₁₇₈	A ₁₇₉	A ₁₈₀	A ₁₈₁	A ₁₈₂	A ₁₈₃	A ₁₈₄	A ₁₈₅	A ₁₈₆	A ₁₈₇	A ₁₈₈	A ₁₈₉	A ₁₉₀	A ₁₉₁	A ₁₉₂	A ₁₉₃	A ₁₉₄	A ₁₉₅	A ₁₉₆	A ₁₉₇	A ₁₉₈	A ₁₉₉	A ₂₀₀	A ₂₀₁	A ₂₀₂	A ₂₀₃	A ₂₀₄	A ₂₀₅	A ₂₀₆	A ₂₀₇	A ₂₀₈	A ₂₀₉	A ₂₁₀	A ₂₁₁	A ₂₁₂	A ₂₁₃	A ₂₁₄	A ₂₁₅	A ₂₁₆	A ₂₁₇	A ₂₁₈	A ₂₁₉	A ₂₂₀	A ₂₂₁	A ₂₂₂	A ₂₂₃	A ₂₂₄	A ₂₂₅	A ₂₂₆	A ₂₂₇	A ₂₂₈	A ₂₂₉	A ₂₃₀	A ₂₃₁	A ₂₃₂	A ₂₃₃	A ₂₃₄	A ₂₃₅	A ₂₃₆	A ₂₃₇	A ₂₃₈	A ₂₃₉	A ₂₄₀	A ₂₄₁	A ₂₄₂	A ₂₄₃	A ₂₄₄	A ₂₄₅	A ₂₄₆	A ₂₄₇	A ₂₄₈	A ₂₄₉	A ₂₅₀	A ₂₅₁	A ₂₅₂	A ₂₅₃	A ₂₅₄	A ₂₅₅	A ₂₅₆	A ₂₅₇	A ₂₅₈	A ₂₅₉	A ₂₆₀	A ₂₆₁	A ₂₆₂	A ₂₆₃	A ₂₆₄	A ₂₆₅	A ₂₆₆	A ₂₆₇	A ₂₆₈	A ₂₆₉	A ₂₇₀	A ₂₇₁	A ₂₇₂	A ₂₇₃	A ₂₇₄	A ₂₇₅	A ₂₇₆	A ₂₇₇	A ₂₇₈	A ₂₇₉	A ₂₈₀	A ₂₈₁	A ₂₈₂	A ₂₈₃	A ₂₈₄	A ₂₈₅	A ₂₈₆	A ₂₈₇	A ₂₈₈	A ₂₈₉	A ₂₉₀	A ₂₉₁	A ₂₉₂	A ₂₉₃	A ₂₉₄	A ₂₉₅	A ₂₉₆	A ₂₉₇	A ₂₉₈	A ₂₉₉	A ₃₀₀	A ₃₀₁	A ₃₀₂	A ₃₀₃	A ₃₀₄	A ₃₀₅	A ₃₀₆	A ₃₀₇	A ₃₀₈	A ₃₀₉	A ₃₁₀	A ₃₁₁	A ₃₁₂	A ₃₁₃	A ₃₁₄	A ₃₁₅	A ₃₁₆	A ₃₁₇	A ₃₁₈	A ₃₁₉	A ₃₂₀	A ₃₂₁	A ₃₂₂	A ₃₂₃	A ₃₂₄	A ₃₂₅	A ₃₂₆	A ₃₂₇	A ₃₂₈	A ₃₂₉	A ₃₃₀	A ₃₃₁	A ₃₃₂	A ₃₃₃	A ₃₃₄	A ₃₃₅	A ₃₃₆	A ₃₃₇	A ₃₃₈	A ₃₃₉	A ₃₄₀	A ₃₄₁	A ₃₄₂	A ₃₄₃	A ₃₄₄	A ₃₄₅	A ₃₄₆	A ₃₄₇	A ₃₄₈	A ₃₄₉	A ₃₅₀	A ₃₅₁	A ₃₅₂	A ₃₅₃	A ₃₅₄	A ₃₅₅	A ₃₅₆	A ₃₅₇	A ₃₅₈	A ₃₅₉	A ₃₆₀	A ₃₆₁	A ₃₆₂	A ₃₆₃	A ₃₆₄	A ₃₆₅	A ₃₆₆	A ₃₆₇	A ₃₆₈	A ₃₆₉	A ₃₇₀	A ₃₇₁	A ₃₇₂	A ₃₇₃	A ₃₇₄	A ₃₇₅	A ₃₇₆	A ₃₇₇	A ₃₇₈	A ₃₇₉	A ₃₈₀	A ₃₈₁	A ₃₈₂	A ₃₈₃	A ₃₈₄	A ₃₈₅	A ₃₈₆	A ₃₈₇	A ₃₈₈	A ₃₈₉	A ₃₉₀	A ₃₉₁	A ₃₉₂	A ₃₉₃	A ₃₉₄	A ₃₉₅	A ₃₉₆	A ₃₉₇	A ₃₉₈	A ₃₉₉	A ₄₀₀	A ₄₀₁	A ₄₀₂	A ₄₀₃	A ₄₀₄	A ₄₀₅	A ₄₀₆	A ₄₀₇	A ₄₀₈	A ₄₀₉	A ₄₁₀	A ₄₁₁	A ₄₁₂	A ₄₁₃	A ₄₁₄	A ₄₁₅	A ₄₁₆	A ₄₁₇	A ₄₁₈	A ₄₁₉	A ₄₂₀	A ₄₂₁	A ₄₂₂	A ₄₂₃	A ₄₂₄	A ₄₂₅	A ₄₂₆	A ₄₂₇	A ₄₂₈	A ₄₂₉	A ₄₃₀	A ₄₃₁	A ₄₃₂	A ₄₃₃	A ₄₃₄	A ₄₃₅	A ₄₃₆	A ₄₃₇	A ₄₃₈	A ₄₃₉	A ₄₄₀	A ₄₄₁	A ₄₄₂	A ₄₄₃	A ₄₄₄	A ₄₄₅	A ₄₄₆	A ₄₄₇	A ₄₄₈	A ₄₄₉	A ₄₅₀	A ₄₅₁	A ₄₅₂	A ₄₅₃	A ₄₅₄	A ₄₅₅	A ₄₅₆	A ₄₅₇	A ₄₅₈	A ₄₅₉	A ₄₆₀	A ₄₆₁	A ₄₆₂	A ₄₆₃	A ₄₆₄	A ₄₆₅	A ₄₆₆	A ₄₆₇	A ₄₆₈	A ₄₆₉	A ₄₇₀	A ₄₇₁	A ₄₇₂	A ₄₇₃	A ₄₇₄	A ₄₇₅	A ₄₇₆	A ₄₇₇	A ₄₇₈	A ₄₇₉	A ₄₈₀	A ₄₈₁	A ₄₈₂	A ₄₈₃	A ₄₈₄	A ₄₈₅	A ₄₈₆	A ₄₈₇	A ₄₈₈	A ₄₈₉	A ₄₉₀	A ₄₉₁	A ₄₉₂	A ₄₉₃	A ₄₉₄	A ₄₉₅	A ₄₉₆	A ₄₉₇	A ₄₉₈	A ₄₉₉	A ₅₀₀	A ₅₀₁	A ₅₀₂	A ₅₀₃	A ₅₀₄	A ₅₀₅	A ₅₀₆	A ₅₀₇	A ₅₀₈	A ₅₀₉	A ₅₁₀	A ₅₁₁	A ₅₁₂	A ₅₁₃	A ₅₁₄	A ₅₁₅	A ₅₁₆	A ₅₁₇	A ₅₁₈	A ₅₁₉	A ₅₂₀	A ₅₂₁	A ₅₂₂	A ₅₂₃	A ₅₂₄	A ₅₂₅	A ₅₂₆	A ₅₂₇	A ₅₂₈	A ₅₂₉	A ₅₃₀	A ₅₃₁	A ₅₃₂	A ₅₃₃	A ₅₃₄	A ₅₃₅	A ₅₃₆	A ₅₃₇	A ₅₃₈	A ₅₃₉	A ₅₄₀	A ₅₄₁	A ₅₄₂	A ₅₄₃	A ₅₄₄	A ₅₄₅	A ₅₄₆	A ₅₄₇	A ₅₄₈	A ₅₄₉	A ₅₅₀	A ₅₅₁	A ₅₅₂	A ₅₅₃	A ₅₅₄	A ₅₅₅	A ₅₅₆	A ₅₅₇	A ₅₅₈	A ₅₅₉	A ₅₆₀	A ₅₆₁	A ₅₆₂	A ₅₆₃	A ₅₆₄	A ₅₆₅	A ₅₆₆	A ₅₆₇	A ₅₆₈	A ₅₆₉	A ₅₇₀	A ₅₇₁	A ₅₇₂	A ₅₇₃	A ₅₇₄	A ₅₇₅	A ₅₇₆	A ₅₇₇	A ₅₇₈	A ₅₇₉	A ₅₈₀	A ₅₈₁	A ₅₈₂	A ₅₈₃	A ₅₈₄	A ₅₈₅	A ₅₈₆	A ₅₈₇	A ₅₈₈	A ₅₈₉	A ₅₉₀	A ₅₉₁	A ₅₉₂	A ₅₉₃	A ₅₉₄	A ₅₉₅	A ₅₉₆	A ₅₉₇	A ₅₉₈	A ₅₉₉	A ₆₀₀	A ₆₀₁	A ₆₀₂	A ₆₀₃	A ₆₀₄	A ₆₀₅	A ₆₀₆	A ₆₀₇	A ₆₀₈	A ₆₀₉	A ₆₁₀	A ₆₁₁	A ₆₁₂	A ₆₁₃	A ₆₁₄	A ₆₁₅	A ₆₁₆	A ₆₁₇	A ₆₁₈	A ₆₁₉	A ₆₂₀	A ₆₂₁	A ₆₂₂	A ₆₂₃	A ₆₂₄	A ₆₂₅	A ₆₂₆	A ₆₂₇	A ₆₂₈	A ₆₂₉	A ₆₃₀	A ₆₃₁	A ₆₃₂	A ₆₃₃	A ₆₃₄	A ₆₃₅	A ₆₃₆	A ₆₃₇	A ₆₃₈	A ₆₃₉	A ₆₄₀	A ₆₄₁	A ₆₄₂	A ₆₄₃	A ₆₄₄	A ₆₄₅	A ₆₄₆	A ₆₄₇	A ₆₄₈	A ₆₄₉	A ₆₅₀	A ₆₅₁	A ₆₅₂	A ₆₅₃	A ₆₅₄	A ₆₅₅	A ₆₅₆	A ₆₅₇	A ₆₅₈	A ₆₅₉	A ₆₆₀	A ₆₆₁	A ₆₆₂	A ₆₆₃	A ₆₆₄	A ₆₆₅	A ₆₆₆	A ₆₆₇	A ₆₆₈	A ₆₆₉	A ₆₇₀	A ₆₇₁	A ₆₇₂	A ₆₇₃	A ₆₇₄	A ₆₇₅	A ₆₇₆	A ₆₇₇	A ₆₇₈	A ₆₇₉	A ₆₈₀	A ₆₈₁	A ₆₈₂	A ₆₈₃	A ₆₈₄	A ₆₈₅	A ₆₈₆	A ₆₈₇	A ₆₈₈	A ₆₈₉	A ₆₉₀	A ₆₉₁	A ₆₉₂	A ₆₉₃	A ₆₉₄	A ₆₉₅	A ₆₉₆	A ₆₉₇	A ₆₉₈	A ₆₉₉	A ₇₀₀	A ₇₀₁	A ₇₀₂	A ₇₀₃	A ₇₀₄	A ₇₀₅	A ₇₀₆	A ₇₀₇	A ₇₀₈	A ₇₀₉	A ₇₁₀	A ₇₁₁	A ₇₁₂	A ₇₁₃	A ₇₁₄	A ₇₁₅	A ₇₁₆	A ₇₁₇	A ₇₁₈	A ₇₁₉	A ₇₂₀	A ₇₂₁	A ₇₂₂	A ₇₂₃	A ₇₂₄	A ₇₂₅	A ₇₂₆	A ₇₂₇	A ₇₂₈	A ₇₂₉	A ₇₃₀	A ₇₃₁	A ₇₃₂	A ₇₃₃	A ₇₃₄	A ₇₃₅	A ₇₃₆	A ₇₃₇	A ₇₃₈	A ₇₃₉	A ₇₄₀	A ₇₄₁	A ₇₄₂	A ₇₄₃	A ₇₄₄	A ₇₄₅	A ₇₄₆	A ₇₄₇	A ₇₄₈	A ₇₄₉	A ₇₅₀	A ₇₅₁	A ₇₅₂	A ₇₅₃	A ₇₅₄	A ₇₅₅	A ₇₅₆	A ₇₅₇	A ₇₅₈	A ₇₅₉	A ₇₆₀	A ₇₆₁	A ₇₆₂	A ₇₆₃	A ₇₆₄	A ₇₆₅	A ₇₆₆	A ₇₆₇	A ₇₆₈	A ₇₆₉	A ₇₇₀	A ₇₇₁	A ₇₇₂	A ₇₇₃	A ₇₇₄	A ₇₇₅	A ₇₇₆	A ₇₇₇	A ₇₇₈	A ₇₇₉	A ₇₈₀	A ₇₈₁	A ₇₈₂	A ₇₈₃	A ₇₈₄	A ₇₈₅	A ₇₈₆	A ₇₈₇	A ₇₈₈	A ₇₈₉	A ₇₉₀	A ₇₉₁	A ₇₉₂	A ₇₉₃	A ₇₉₄	A ₇₉₅	A ₇₉₆	A ₇₉₇	A ₇₉₈	A ₇₉₉	A ₈₀₀	A ₈₀₁	A ₈₀₂	A ₈₀₃	A ₈₀₄	A ₈₀₅	A ₈₀₆	A ₈₀₇	A ₈₀₈	A ₈₀₉	A ₈₁₀	A ₈₁₁	A ₈₁₂	A ₈₁₃	A ₈₁₄	A ₈₁₅	A ₈₁₆	A ₈₁₇	A ₈₁₈	A ₈₁₉	A ₈₂₀	A ₈₂₁	A ₈₂₂	A ₈₂₃	A ₈₂₄	A ₈₂₅	A ₈₂₆	A ₈₂₇	A ₈₂₈	A ₈₂₉	A ₈₃₀	A ₈₃₁	A ₈₃₂	A ₈₃₃	A ₈₃₄	A ₈₃₅	A ₈₃₆	A ₈₃₇	A ₈₃₈	A ₈₃₉	A ₈₄₀	A ₈₄₁	A ₈₄₂	A ₈₄₃	A ₈₄₄	A ₈₄₅	A ₈₄₆	A ₈₄₇	A ₈₄₈	A ₈₄₉	A ₈₅₀	A ₈₅₁	A ₈₅₂	A ₈₅₃	A ₈₅₄	A ₈₅₅	A ₈₅₆	A ₈₅₇	A ₈₅₈	A ₈₅₉	A ₈₆₀	A ₈₆₁	A ₈₆₂	A ₈₆₃	A ₈₆₄	A ₈₆₅	A ₈₆₆	A ₈₆₇	A ₈₆₈	A ₈₆₉	A ₈₇₀	A ₈₇₁	A ₈₇₂	A ₈₇₃	A ₈₇₄	A ₈₇₅	A ₈₇₆	A ₈₇₇	A ₈₇₈	A ₈₇₉	A ₈₈₀	A ₈₈₁	A ₈₈₂	A ₈₈₃	A ₈₈₄	A ₈₈₅	A ₈₈₆	A ₈₈₇	A ₈₈₈	A ₈₈₉	A ₈₉₀	A ₈₉₁	A ₈₉₂	A ₈₉₃	A ₈₉₄	A ₈₉₅	A ₈₉₆	A ₈₉₇	A ₈₉₈	A ₈₉₉	A ₉₀₀	A ₉₀₁	A ₉₀₂	A ₉₀₃	A ₉₀₄	A ₉₀₅	A ₉₀₆	A ₉₀₇	A ₉₀₈	A ₉₀₉	A ₉₁₀	A ₉₁₁	A ₉₁₂	A ₉₁₃	A ₉₁₄	A ₉₁₅	A ₉₁₆	A ₉₁₇	A ₉₁₈	A ₉₁₉	A ₉₂₀	A ₉₂₁	A ₉₂₂	A ₉₂₃	A ₉₂₄	A ₉₂₅	A ₉₂₆	A ₉₂₇	A ₉₂₈	A ₉₂₉	A ₉₃₀	A ₉₃₁	A ₉₃₂	A ₉₃₃	A ₉₃₄	A ₉₃₅	A ₉₃₆	A ₉₃₇	A ₉₃₈	A ₉₃₉	A ₉₄₀	A ₉₄₁	A ₉₄₂	A ₉₄₃	A ₉₄₄	A ₉₄₅	A ₉₄₆	A
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APPENDIX C

**Summary Seepage and Runoff Water
Quality Sampling Results from the WRF
(2018 through 2022)**

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Units	Sample Date	Conductivity	Hardness (as CaCO3)	pH	Total Suspended Solids	Total Dissolved Solids	Turbidity	Acidity (as CaCO3)	Alkalinity, Total (as CaCO3)	Ammonia, Total (as N)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Total Kjeldahl Nitrogen
East Ditch	L26039742	MS-08-EAST-2021-06-21_1110	2021-06-21	umhos/cm	2021-06-21	1683	6.83	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301632-1	MS-08-EAST-DITCH	2019-07-01	umhos/cm	2019-07-01	6.88	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2312016-1	MS-08-EAST-INFLOW	2019-07-17	umhos/cm	2019-07-17	2660	-	6.15	-	-	-	-	-	89	-	-	-	-
East Ditch	L2305949-3	MS-08-EAST-INFLOW	2019-07-14	umhos/cm	2019-07-14	-	-	6.28	-	-	-	-	-	-	-	-	-	-
East Ditch	L2306761-1	MS-08-EAST-INFLOW	2019-07-09	umhos/cm	2019-07-09	2330	-	6.45	-	-	-	-	-	1.06	-	-	-	-
East Ditch	L2306224-1	MS-08-EAST-INFLOW	2019-07-06	umhos/cm	2019-07-06	-	-	6.32	-	-	-	-	-	-	-	-	-	-
East Ditch	L2309409-1	MS-08-EAST-INFLOW	2019-07-13	umhos/cm	2019-07-13	316	-	6.53	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305072-1	MS-08-EAST-INFLOW	2019-07-05	umhos/cm	2019-07-05	-	-	6.36	-	-	-	-	-	-	-	-	-	-
East Ditch	L2298973-3	MS-08-EAST-INFLOW	2019-06-23	umhos/cm	2019-06-23	-	-	6.58	-	-	-	-	-	-	-	-	-	-
East Ditch	L2300534-3	MS-08-EAST-INFLOW	2019-06-25	umhos/cm	2019-06-25	-	-	6.38	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305680-1	MS-08-EAST-INFLOW	2019-06-27	umhos/cm	2019-06-27	-	-	6.38	-	-	-	-	-	-	-	-	-	-
East Ditch	L2306636-1	MS-08-EAST-INFLOW	2019-07-08	umhos/cm	2019-07-08	-	-	6.6	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305269-1	MS-08-EAST-INFLOW	2019-07-11	umhos/cm	2019-07-11	-	-	6.62	-	-	-	-	-	-	-	-	-	-
East Ditch	L2300513-3	MS-08-EAST-INFLOW	2019-06-26	umhos/cm	2019-06-26	-	-	6.64	-	-	-	-	-	-	-	-	-	-
East Ditch	L2307801-1	MS-08-EAST-INFLOW	2019-07-10	umhos/cm	2019-07-10	-	-	6.65	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301572-3	MS-08-EAST-INFLOW	2019-06-29	umhos/cm	2019-06-29	-	-	6.67	-	-	-	-	-	-	-	-	-	-
East Ditch	L2313935-4	MS-08-EAST-INFLOW	2019-07-20	umhos/cm	2019-07-20	-	-	6.67	-	-	-	-	-	-	-	-	-	-
East Ditch	L2309409-1	MS-08-EAST-INFLOW	2019-07-12	umhos/cm	2019-07-12	-	-	6.7	-	-	-	-	-	-	-	-	-	-
East Ditch	L2315508-1	MS-08-EAST-INFLOW	2019-07-23	umhos/cm	2019-07-23	-	-	6.82	-	-	-	-	-	-	-	-	-	-
East Ditch	L2295991-3	MS-08-EAST-INFLOW	2019-06-20	umhos/cm	2019-06-20	-	-	6.83	-	-	-	-	-	-	-	-	-	-
East Ditch	L2304339-1	MS-08-EAST-INFLOW	2019-07-03	umhos/cm	2019-07-03	-	-	6.83	-	-	-	-	-	-	-	-	-	-
East Ditch	L2298689-3	MS-08-EAST-INFLOW	2019-06-22	umhos/cm	2019-06-22	-	-	6.85	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301607-3	MS-08-EAST-INFLOW	2019-06-30	umhos/cm	2019-06-30	-	-	6.85	-	-	-	-	-	-	-	-	-	-
East Ditch	L2304338-1	MS-08-EAST-INFLOW	2019-07-04	umhos/cm	2019-07-04	-	-	6.86	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301467-3	MS-08-EAST-INFLOW	2019-06-28	umhos/cm	2019-06-28	-	-	6.88	-	-	-	-	-	-	-	-	-	-
East Ditch	L2318395-4	MS-08-EAST-INFLOW	2019-07-28	umhos/cm	2019-07-28	-	-	6.89	-	-	-	-	-	-	-	-	-	-
East Ditch	L2482854-4	MS-08-EAST-INFLOW	2020-08-03	umhos/cm	2020-08-03	2170	-	6.9	-	-	-	-	-	2.55	-	-	-	-
East Ditch	L2297625-3	MS-08-EAST-INFLOW	2020-06-24	umhos/cm	2020-06-24	-	-	6.94	-	-	-	-	-	-	-	-	-	-
East Ditch	L2488588-1	MS-08-EAST-INFLOW	2020-08-12	umhos/cm	2020-08-12	2310	-	6.94	-	-	-	-	-	2.21	-	-	-	-
East Ditch	L2481535-2	MS-08-EAST-INFLOW	2020-07-29	umhos/cm	2020-07-29	2090	-	6.98	-	-	-	-	-	3.14	-	-	-	-
East Ditch	L2303578-3	MS-08-EAST-INFLOW	2019-07-02	umhos/cm	2019-07-02	1810	-	7.01	-	-	-	-	-	1.24	-	-	-	-
East Ditch	L2295155-3	MS-08-EAST-INFLOW	2019-06-19	umhos/cm	2019-06-19	-	-	7.03	-	-	-	-	-	-	-	-	-	-
East Ditch	L2322461-1	MS-08-EAST-INFLOW	2019-08-02	umhos/cm	2019-08-02	-	-	7.03	-	-	-	-	-	-	-	-	-	-
East Ditch	L2291173-3	MS-08-EAST-INFLOW	2019-06-13	umhos/cm	2019-06-13	-	-	7.06	-	-	-	-	-	-	-	-	-	-
East Ditch	L247770-3	MS-08-EAST-INFLOW	2020-07-21	umhos/cm	2020-07-21	1650	-	7.07	-	-	-	-	-	3.15	-	-	-	-
East Ditch	L2294118-3	MS-08-EAST-INFLOW	2019-06-18	umhos/cm	2019-06-18	753	-	7.12	-	-	-	-	-	0.615	-	-	-	-
East Ditch	L2290598-3	MS-08-EAST-INFLOW	2019-06-12	umhos/cm	2019-06-12	316	-	7.16	-	-	-	-	-	0.335	-	-	-	-
East Ditch	L2296841-3	MS-08-EAST-INFLOW	2019-06-21	umhos/cm	2019-06-21	-	-	7.19	-	-	-	-	-	-	-	-	-	-
East Ditch	L2318249-4	MS-08-EAST-INFLOW	2019-07-25	umhos/cm	2019-07-25	-	-	7.22	-	-	-	-	-	-	-	-	-	-
East Ditch	L2330905-5	MS-08-EAST-INFLOW	2019-08-18	umhos/cm	2019-08-18	-	-	7.24	-	-	-	-	-	-	-	-	-	-
East Ditch	L2325445-7	MS-08-EAST-INFLOW	2019-08-08	umhos/cm	2019-08-08	-	-	7.28	-	-	-	-	-	-	-	-	-	-
East Ditch	L2323296-1	MS-08-EAST-INFLOW	2019-08-06	umhos/cm	2019-08-06	1610	-	7.31	-	-	-	-	-	0.68	-	-	-	-
East Ditch	L2320850-1	MS-08-EAST-INFLOW	2019-07-31	umhos/cm	2019-07-31	697	-	7.38	-	-	-	-	-	0.322	-	-	-	-
East Ditch	L2326464-5	MS-08-EAST-INFLOW	2019-08-11	umhos/cm	2019-08-11	-	-	7.38	-	-	-	-	-	-	-	-	-	-
East Ditch	L2327090-6	MS-08-EAST-INFLOW	2019-08-13	umhos/cm	2019-08-13	-	-	7.38	-	-	-	-	-	1.12	-	-	-	-
East Ditch	L2327382-8	MS-08-EAST-INFLOW	2019-08-16	umhos/cm	2019-08-16	2200	-	7.38	-	-	-	-	-	-	-	-	-	-
East Ditch	L2327382-8	MS-08-EAST-INFLOW	2019-10-01	umhos/cm	2019-10-01	-	-	7.43	-	-	-	-	-	-	-	-	-	-
East Ditch	L2288447-3	MS-08-EAST-INFLOW	2019-06-10	umhos/cm	2019-06-10	-	-	7.47	-	-	-	-	-	-	-	-	-	-
East Ditch	L2322234-3	MS-08-EAST-INFLOW	2019-06-14	umhos/cm	2019-06-14	-	-	7.47	-	-	-	-	-	-	-	-	-	-
East Ditch	L232454-3	MS-08-EAST-INFLOW	2019-06-15	umhos/cm	2019-06-15	-	-	7.5	-	-	-	-	-	-	-	-	-	-
East Ditch	L2405307-2	MS-08-EAST-INFLOW	2020-06-30	umhos/cm	2020-06-30	-	-	7.52	-	-	-	-	-	-	-	-	-	-
East Ditch	L232486-3	MS-08-EAST-INFLOW	2019-06-16	umhos/cm	2019-06-16	-	-	7.54	-	-	-	-	-	-	-	-	-	-
East Ditch	L2287932-3	MS-08-EAST-INFLOW	2019-06-07	umhos/cm	2019-06-07	-	-	7.59	-	-	-	-	-	-	-	-	-	-
East Ditch	L2496104-1	MS-08-EAST-INFLOW	2020-08-26	umhos/cm	2020-08-26	1920	-	7.6	-	-	-	-	-	1.68	-	-	-	-
East Ditch	L2496103-2	MS-08-EAST-INFLOW	2020-08-26	umhos/cm	2020-08-26	2040	-	7.64	-	-	-	-	-	1.75	-	-	-	-
East Ditch	L2339733-5	MS-08-EAST-INFLOW	2019-08-31	umhos/cm	2019-08-31	-	-	7.65	-	-	-	-	-	-	-	-	-	-
East Ditch	L2467060-4	MS-08-EAST-INFLOW	2020-06-25	umhos/cm	2020-06-25	-	-	7.66	-	-	-	-	-	-	-	-	-	-
East Ditch	L2496705-2	MS-08-EAST-INFLOW	2020-08-31	umhos/cm	2020-08-31	1390	-	7.68	-	-	-	-	-	1.17	-	-	-	-
East Ditch	L2496140-2	MS-08-EAST-INFLOW	2020-08-30	umhos/cm	2020-08-30	1980	-	7.7	-	-	-	-	-	1.9	-	-	-	-
East Ditch	L2358842-5	MS-08-EAST-INFLOW	2019-10-02	umhos/cm	2019-10-02	-	-	7.7	-	-	-	-	-	-	-	-	-	-
East Ditch	L2340461-5	MS-08-EAST-INFLOW	2019-09-03	umhos/cm	2019-09-03	1774	-	7.74	-	-	-	-	-	0.88	-	-	-	-
East Ditch	L2496047-3	MS-08-EAST-INFLOW	2020-08-27	umhos/cm	2020-08-27	1560	-	7.81	-	-	-	-	-	1	-	-	-	-
East Ditch	L2496120-2	MS-08-EAST-INFLOW	2020-08-29	umhos/cm	2020-08-29	1700	-	7.81	-	-	-	-	-	0.965	-	-	-	-
East Ditch	L2342313-5	MS-08-EAST-INFLOW	2019-09-05	umhos/cm	2019-09-05	1700	-	7.83	-	-	-	-	-	-	-	-	-	-
East Ditch	L2335475-3	MS-08-EAST-INFLOW	2019-08-25	umhos/cm	2019-08-25	-	-	7.87	-	-	-	-	-	-	-	-	-	-
East Ditch	L2293024-3	MS-08-EAST-INFLOW	2019-06-17	umhos/cm	2019-06-17	-	-	7.88	-	-	-	-	-	-	-	-	-	-
East Ditch	L2497356-2	MS-08-EAST-INFLOW	2020-09-01	umhos/cm	2020-09-01	1430	-	7.88	-	-	-	-	-	1.16	-	-	-	-
East Ditch	L2335451-4	MS-08-EAST-INFLOW	2019-06-23	umhos/cm	2019-06-23	-	-	7.96	-	-	-	-	-	-	-	-	-	-
East Ditch	L2337960-3	MS-08-EAST-INFLOW	2019-06-27	umhos/cm	2019-06-27	1310	-	7.99	-	-	-	-	-	0.416	-	-	-	-
East Ditch	L2496049-2	MS-08-EAST-INFLOW	2020-06-28	umhos/cm	2020-06-28	1200	-	8	-	-	-	-	-	0.127	-	-	-	-
East Ditch	L2350914-2	MS-08-EAST-INFLOW	2019-09-19	umhos/cm	2019-09-19	-	-	8.05	-	-	-	-	-	-	-	-	-	-
East Ditch	L2346689-2	MS-08-EAST-INFLOW	2019-09-12	umhos/cm	2019-09-12	-	-	8.1	-	-	-	-	-	-	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Units	Sample Date	Conductivity	Hardness (as CaCO3)	pH	Total Suspended Solids	Total Dissolved Solids	Turbidity	Acidity (as CaCO3)	Alkalinity, Total (as CaCO3)	Ammonia, Total (as N)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Total Kjeldahl Nitrogen
East Ditch	L2348201-1	MS-08-EAST-INFLOW	2019-09-16		2019-09-16			8.1	-	-	-	-	-	-	-	-	-	-
East Ditch	L2345723-3	MS-08-EAST-INFLOW	2019-09-11		2019-09-11	1400		8.13	-	-	-	-	-	0.327	-	-	-	-
East Ditch	L2288069-3	MS-08-EAST-INFLOW	2019-06-09		2019-06-09			8.41	-	-	-	-	-	-	-	-	-	-
East Ditch	L2288035-3	MS-08-EAST-INFLOW	2019-06-08		2019-06-08			9.05	-	-	-	-	-	-	-	-	-	-
East Ditch	L2472802-3	MS-08-EAST-INFLOW	2020-07-10		2020-07-10			7.74	-	-	-	-	-	-	-	-	-	-
East Ditch	L2605651-3	MS-08-EAST-INFLOW	2021-06-23		2021-06-23			6.98	-	-	-	-	-	-	-	-	-	-
East Ditch	L2606859-2	MS-08-EAST-INFLOW	2021-06-26		2021-06-26			6.86	-	-	-	-	-	-	-	-	-	-
East Ditch	L2606871-2	MS-08-EAST-INFLOW	2021-06-27		2021-06-27			6.95	-	-	-	-	-	-	-	-	-	-
East Ditch	L2609262-2	MS-08-EAST-INFLOW	2021-07-01		2021-07-01			6.64	-	-	-	-	-	-	-	-	-	-
East Ditch	L2610945-4	MS-08-EAST-INFLOW	2021-07-05		2021-07-05	674		6.94	-	-	-	-	-	0.68	-	-	-	-
East Ditch	L2612337-1	MS-08-EAST-INFLOW	2021-07-11		2021-07-11	462		7	-	-	-	-	-	0.394	-	-	-	-
East Ditch	L2618285-2	MS-08-EAST-INFLOW	2021-07-24		2021-07-24	2010		4.99	-	-	-	-	-	1.67	-	-	-	-
East Ditch	L2623788-4	MS-08-EAST-INFLOW	2021-08-06		2021-08-06	2060		5.86	-	-	-	-	-	1.54	-	-	-	-
East Ditch	L2629919-2	MS-08-EAST-INFLOW	2021-08-22		2021-08-22	2320		5.91	-	-	-	-	-	1.72	-	-	-	-
East Ditch	L2635846-2	MS-08-EAST-INFLOW	2021-09-05		2021-09-05	1650		7.13	-	-	-	-	-	0.627	-	-	-	-
East Ditch	L2725730-5	MS-08-EAST-INFLOW	2022-07-28		2022-07-28	2270		7.04	-	-	-	-	-	2.82	-	-	-	-
East Ditch	L2322461-2	MS-08-EAST-INFLOW1	2019-08-02		2019-08-02			7.04	-	-	-	-	-	-	-	-	-	-
East Ditch	L2477770-4	MS-08-EAST-INFLOW1	2020-07-21		2020-07-21	1650		7.11	-	-	-	-	-	3.16	-	-	-	-
East Ditch	L2486140-3	MS-08-EAST-INFLOW1	2020-08-30		2020-08-30	1980		7.7	-	-	-	-	-	1.92	-	-	-	-
East Ditch	L2343354-4	MS-08-EAST-INFLOW	2019-09-08		2019-09-08			8.02	-	-	-	-	-	-	-	-	-	-
East Ditch	L2727349-1	MS-08-EXPLORE-EASTDITCH	2022-07-10		2022-07-10	85.4		7.48	-	-	-	-	-	0.158	-	-	-	-
East Ditch	L2113626-4	MS-08-INFLOW-EAST	2018-06-16		2018-06-16			6.3	-	-	-	-	-	-	-	-	-	-
East Ditch	L2160094-4	MS-08-INFLOW-EAST	2018-09-06		2018-09-06			6.57	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-1	CENTRAL-KEY-IN	2019-07-23		2019-07-23			7.36	426	1160	223	-	-	-	-	-	-	-
Runoff	L2312012-3	CENTRAL-KEY-IN	2019-07-17		2019-07-17	1530		7.39	425	1300	160	-	-	2.26	-	-	-	-
Runoff	L2328009-6	INFLUENT-CENTRAL-KEYIN	2019-08-13		2019-08-13	2610		6.6	14	2540	24.3	-	-	3.6	-	-	-	-
Runoff	L2287151-3	MS-08-EMERGENCY-DITCH	2019-06-06		2019-06-06			7.63	-	-	-	-	-	-	-	-	-	-
Runoff	L2340467-1	PAG WR (max)	2019-09-03		2019-09-03	40800		4.05	337	110000	318	-	-	23.1	-	-	-	-
Runoff	L2303565-5	MS-SP-02	2019-07-02		2019-07-02	2870		4.08	62.5	128000	127	-	-	-	-	-	-	-
Runoff	L2337954-1	MS-SP-02	2019-07-27		2019-07-27	16600		4.18	7.7	2920	13.2	-	-	2.1	-	-	-	-
Runoff	L2320849-3	MS-SP-02	2019-07-30		2019-07-30	13800		4.64	74.4	27300	87.5	-	-	11.4	-	-	-	-
Runoff	L2298517-8	MS-SP-02	2019-06-24		2019-06-24			4.88	148	18900	105	-	-	4.76	-	-	-	-
Runoff	L2315510-3	MS-SP-02	2019-07-23		2019-07-23			5.03	7.2	2200	22.8	-	-	-	-	-	-	-
Runoff	L2328009-2	MS-SP-02	2019-08-13		2019-08-13	10000		5.13	213	14500	158	-	-	4.85	-	-	-	-
Runoff	L2290620-5	MS-SP-02	2019-06-12		2019-06-12	965		5.67	121	14300	104	-	-	1.03	-	-	-	-
Runoff	L2323304-3	MS-SP-02	2019-08-06		2019-08-06	8670		5.72	16	663	31.3	-	-	4.01	-	-	-	-
Runoff	L2306749-3	MS-SP-04	2019-07-09		2019-07-09	3400		5.81	63.2	11800	53.6	-	-	2.4	-	-	-	-
Runoff	L2328009-1	MS-SP-04	2019-08-13		2019-08-13	6710		4.13	7.6	3790	9.55	-	-	2.4	-	-	-	-
Runoff	L2333401-1	MS-SP-04	2019-08-20		2019-08-20	6850		4.13	6	8640	9.04	-	-	4.67	-	-	-	-
Runoff	L2312012-1	MS-SP-04	2019-07-17		2019-07-17	4060		4.13	17.8	10000	7.43	-	-	4.72	-	-	-	-
Runoff	L2320849-4	MS-SP-04	2019-07-30		2019-07-30	4300		4.14	2.8	4450	11.5	-	-	3.07	-	-	-	-
Runoff	L2290620-6	MS-SP-04	2019-06-12		2019-06-12	2500		4.19	4	3530	10.3	-	-	1.28	-	-	-	-
Runoff	L2315510-4	MS-SP-04	2019-07-23		2019-07-23			4.23	9.6	5890	14	-	-	3.67	-	-	-	-
Runoff	L2323304-4	MS-SP-04	2019-08-06		2019-08-06	5940		4.26	5.2	7500	8.05	-	-	-	-	-	-	-
Runoff	L2288517-9	MS-SP-04	2019-06-24		2019-06-24			6.06	3.2	1930	7.12	-	-	-	-	-	-	-
Runoff	L2158115-6	MS-SP-04	2018-09-04		2018-09-04			6.22	3.2	12500	19.4	-	-	-	-	-	-	-
Runoff	L2294129-9	MS-SP-0401	2019-06-18		2019-06-18	2450		4.25	4	2340	8.37	-	-	2.01	-	-	-	-
Runoff	L2730435-1	MS-WRF-22-01	2022-08-28		2022-08-28	768		8.02	2	540	1.06	-	-	0.026	-	-	-	-
Runoff	L2730435-2	MS-WRF-22-02	2022-08-28		2022-08-28	745		7.94	9.1	516	2.27	-	-	0.051	-	-	-	-
Runoff	L2730426-1	MS-WRF-22-05	2022-08-27		2022-08-27	960		7.78	77.3	890	21.3	-	-	0.178	-	-	-	-
Runoff	L2730426-2	MS-WRF-22-05A	2022-08-27		2022-08-27	963		7.79	75.9	889	41.7	-	-	0.154	-	-	-	-
Runoff	L2730426-3	MS-WRF-22-05B	2022-08-27		2022-08-27	938		7.6	37.4	866	9.85	-	-	0.077	-	-	-	-
Runoff	L2730426-4	MS-WRF-22-06A	2022-08-27		2022-08-27	3100		7.36	12.3	2880	7.05	-	-	4.58	-	-	-	-
Runoff	L2730426-5	MS-WRF-22-09	2022-08-27		2022-08-27	1930		7.41	116	1500	55.4	-	-	1.81	-	-	-	-
Runoff	L2730426-6	MS-WRF-22-09A	2022-08-27		2022-08-27	2270		7.42	196	2020	73	-	-	2.31	-	-	-	-
Runoff	L2730426-7	MS-WRF-22-10	2022-08-27		2022-08-27	3210		7.5	14.9	2030	4.77	-	-	2.95	-	-	-	-
Runoff	L2730426-8	MS-WRF-22-12A	2022-08-27		2022-08-27	3720		6.32	64.5	3520	59.2	-	-	0.279	-	-	-	-
Runoff	L2730426-9	MS-WRF-22-12B	2022-08-27		2022-08-27	1540		6.77	2.2	1200	0.5	-	-	0.156	-	-	-	-
Runoff	L2730426-10	MS-WRF-22-18	2022-08-27		2022-08-27	1020		6.98	32	766	32.9	-	-	0.159	-	-	-	-
Runoff	L2730426-11	MS-WRF-22-18A	2022-08-27		2022-08-27	1020		7.4	35	785	43.5	-	-	0.141	-	-	-	-
Runoff	L2478363-1	WRP-20-01	2020-07-22		2020-07-22	1430		7.73	7.3	1150	1.9	-	-	0.0586	-	-	-	-
Runoff	L2488602-1	WRP-20-01	2020-08-12		2020-08-12	1170		7.75	252	872	33.8	-	-	0.098	-	-	-	-
Runoff	L2482855-1	WRP-20-01A	2020-08-03		2020-08-03	1040		7.88	237	781	19.1	-	-	0.098	-	-	-	-
Runoff	L2482855-2	WRP-20-01A	2020-08-03		2020-08-03	1380		7.71	576	1140	24.6	-	-	0.231	-	-	-	-
Runoff	L2488602-2	WRP-20-01A	2020-08-12		2020-08-12	1330		7.72	121	1030	7.02	-	-	0.136	-	-	-	-
Runoff	L2478363-2	WRP-20-02	2020-07-22		2020-07-22	2220		7.66	72.4	2030	11.2	-	-	0.282	-	-	-	-
Runoff	L2485466-4	WRP-20-03	2020-08-21		2020-08-21	545		8.03	20.1	461	7.94	-	-	0.005	-	-	-	-
Runoff	L2478363-3	WRP-20-04	2020-07-22		2020-07-22	2310		7.63	267	2160	23.8	-	-	0.381	-	-	-	-
Runoff	L2496722-5	WRP-20-04	2020-08-31		2020-08-31	1220		7.76	2	940	4.4	-	-	0.067	-	-	-	-
Runoff	L2488602-3	WRP-20-04	2020-08-12		2020-08-12	1660		7.81	52.2	1390	11.1	-	-	0.0937	-	-	-	-
Runoff	L2485466-2	WRP-20-04	2020-08-21		2020-08-21	1390		7.81	27.2	1210	35.5	-	-	0.107	-	-	-	-
Runoff	L2482855-3	WRP-20-04	2020-08-03		2020-08-03	1650		7.82	9.4	1370	3.21	-	-	0.219	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Units	Sample Date	Conductivity	Hardness (as CaCO3)	pH	Total Suspended Solids	Total Dissolved Solids	Turbidity	Acidity (as CaCO3)	Alkalinity, Total (as CaCO3)	Ammonia, Total (as N)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Total Kjeldahl Nitrogen
						umhos/cm	mg/L	pH units	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Runoff	L2495466-1	WRP-20-04A	2020-08-21		2020-08-21	1600	-	7.71	5.2	1430	1.78	-	-	0.202	-	-	-	-
Runoff	L2478363-4	WRP-20-05	2020-07-22		2020-07-22	4370	-	7.4	40.9	4740	10.6	-	-	1.47	-	-	-	-
Runoff	L2482855-4	WRP-20-05	2020-08-03		2020-08-03	3980	-	7.63	46.2	4230	16.7	-	-	1.77	-	-	-	-
Runoff	L2495466-3	WRP-20-05	2020-08-21		2020-08-21	1620	-	7.33	5	1650	5.11	-	-	0.149	-	-	-	-
Runoff	L2488602-4	WRP-20-05A	2020-08-12		2020-08-12	5120	-	7.47	266	5450	23.3	-	-	1.24	-	-	-	-
Runoff	L2496722-6	WRP-20-05A	2020-08-31		2020-08-31	4490	-	7.47	16.4	5300	22.7	-	-	1.61	-	-	-	-
Runoff	L2482855-5	WRP-20-05A	2020-08-03		2020-08-03	3600	-	7.55	62.4	3760	15.8	-	-	1.49	-	-	-	-
Runoff	L2478363-5	WRP-20-07	2020-07-22		2020-07-22	4150	-	7.2	234	4460	32	-	-	1.94	-	-	-	-
Runoff	L2488602-5	WRP-20-07	2020-08-12		2020-08-12	5220	-	7.35	330	5920	18.8	-	-	1.76	-	-	-	-
Runoff	L2482855-6	WRP-20-07	2020-08-03		2020-08-03	4080	-	7.38	233	4320	14.3	-	-	1.66	-	-	-	-
Runoff	L2495466-7	WRP-20-07	2020-08-21		2020-08-21	3820	-	7.4	19.2	4290	11.8	-	-	1.43	-	-	-	-
Runoff	L2496722-7	WRP-20-07	2020-08-31		2020-08-31	4660	-	7.53	68.8	4780	17.8	-	-	1.69	-	-	-	-
Runoff	L2495466-8	WRP-20-0702	2020-08-21		2020-08-21	2	-	6.14	2	10	0.1	-	-	0.005	-	-	-	-
Runoff	L2496722-8	WRP-20-07A	2020-08-31		2020-08-31	2980	-	7.27	4.4	3270	40	-	-	1.47	-	-	-	-
Runoff	L2478363-6	WRP-20-08	2020-07-22		2020-07-22	5590	-	6.6	180	6270	13.7	-	-	3.39	-	-	-	-
Runoff	L2485466-6	WRP-20-08	2020-08-21		2020-08-21	4440	-	6.97	115	5060	30	-	-	2.38	-	-	-	-
Runoff	L2478363-7	WRP-20-09	2020-07-22		2020-07-22	3950	-	6.77	5.6	4220	4.35	-	-	2.61	-	-	-	-
Runoff	L2485466-5	WRP-20-10	2020-08-21		2020-08-21	8770	-	4.55	32.7	11000	31.3	-	-	7.6	-	-	-	-
Runoff	L2478363-8	WRP-20-10	2020-07-22		2020-07-22	4170	-	7	13.7	4430	1.62	-	-	3.95	-	-	-	-
Runoff	L2482855-7	WRP-20-11	2020-08-03		2020-08-03	5370	-	4.87	162	6160	78.7	-	-	5.36	-	-	-	-
Runoff	L2478363-9	WRP-20-11	2020-07-22		2020-07-22	3770	-	6.68	44.7	3810	41.9	-	-	5.59	-	-	-	-
Runoff	L2478363-10	WRP-20-12	2020-07-22		2020-07-22	4140	-	6.57	46.2	4280	20.7	-	-	6.29	-	-	-	-
Runoff	L2485466-16	WRP-20-12	2020-06-22		2020-06-22	1320	-	7.24	215	1110	44.7	-	-	2.31	-	-	-	-
Runoff	L2485466-20	WRP-20-1203	2020-08-22		2020-08-22	2	-	6.6	2	10	0.1	-	-	0.005	-	-	-	-
Runoff	L2478363-11	WRP-20-13	2020-07-22		2020-07-22	4120	-	6.25	60.2	4110	19.5	-	-	6.33	-	-	-	-
Runoff	L2485466-12	WRP-20-13	2020-08-22		2020-08-22	1980	-	7.21	167	1760	47.1	-	-	6.12	-	-	-	-
Runoff	L2485429-1	WRP-20-14	2020-08-04		2020-08-04	4730	-	5.31	35.8	4790	31.9	-	-	5.47	-	-	-	-
Runoff	L2488602-6	WRP-20-14	2020-08-12		2020-08-12	5360	-	6.19	121	5520	11.5	-	-	4.92	-	-	-	-
Runoff	L2478363-12	WRP-20-14	2020-07-22		2020-07-22	2310	-	6.28	138	4100	27.5	-	-	6.71	-	-	-	-
Runoff	L2485466-21	WRP-20-14	2020-08-22		2020-08-22	3310	-	6.61	109	2170	30.3	-	-	7.2	-	-	-	-
Runoff	L2488602-7	WRP-20-1401	2020-08-12		2020-08-12	5360	-	6.24	111	5790	13.1	-	-	4.92	-	-	-	-
Runoff	L2485429-2	WRP-20-1403	2020-08-04		2020-08-04	3	-	5.85	3	10	0.48	-	-	0.01	-	-	-	-
Runoff	L2478363-13	WRP-20-15	2020-07-22		2020-07-22	2240	-	6.4	40.5	2040	29.7	-	-	3.57	-	-	-	-
Runoff	L2485429-3	WRP-20-15	2020-08-04		2020-08-04	2200	-	6.61	20.8	2070	10.8	-	-	3.33	-	-	-	-
Runoff	L2485466-19	WRP-20-15	2020-08-22		2020-08-22	2350	-	6.81	4.4	1960	4.86	-	-	2.5	-	-	-	-
Runoff	L2496722-9	WRP-20-15	2020-08-31		2020-08-31	2300	-	6.99	14	2280	0.92	-	-	2.93	-	-	-	-
Runoff	L2488602-8	WRP-20-15	2020-08-12		2020-08-12	2480	-	7.05	14.5	2580	2.83	-	-	3.23	-	-	-	-
Runoff	L2485429-4	WRP-20-1501	2020-08-04		2020-08-04	2190	-	6.71	5.2	2040	3.6	-	-	3.32	-	-	-	-
Runoff	PAG WIR (75th)	WRP-20-17	2020-08-22		2020-08-22	9000	-	6.51	2.6	3010	5.26	-	-	2.45	-	-	-	-
Runoff	L2485429-5	WRP-20-17	2020-08-04		2020-08-04	3040	-	6.64	94.2	3080	8.27	-	-	2.45	-	-	-	-
Runoff	L2496722-4	WRP-20-17	2020-08-31		2020-08-31	3950	-	6.79	45.6	2920	4.33	-	-	2.85	-	-	-	-
Runoff	L2478363-14	WRP-20-1702	2020-07-22		2020-07-22	2920	-	6.87	37.7	2790	15.2	-	-	2.42	-	-	-	-
Runoff	L2485429-6	WRP-20-18	2020-08-04		2020-08-04	3	-	5.61	3	10	0.56	-	-	0.01	-	-	-	-
Runoff	L2485429-7	WRP-20-18	2020-07-24		2020-07-24	3260	-	6.33	39.2	3360	46.5	-	-	2.39	-	-	-	-
Runoff	L2495466-14	WRP-20-18	2020-06-22		2020-06-22	2180	-	6.97	3.6	3280	4.35	-	-	1.91	-	-	-	-
Runoff	L2496722-3	WRP-20-18	2020-06-31		2020-06-31	3140	-	6.75	21.2	2630	23.9	-	-	2.4	-	-	-	-
Runoff	L2488602-9	WRP-20-18	2020-06-12		2020-06-12	3700	-	6.94	26.8	3090	60.3	-	-	2.82	-	-	-	-
Runoff	L2479665-2	WRP-20-1801	2020-07-24		2020-07-24	3220	-	7.23	43.6	3790	17	-	-	1.75	-	-	-	-
Runoff	L2485429-8	WRP-20-19	2020-08-04		2020-08-04	2410	-	6.68	4.7	3240	3.62	-	-	1.9	-	-	-	-
Runoff	L2488602-10	WRP-20-19	2020-08-12		2020-08-12	2900	-	6.22	41.2	2150	65.3	-	-	3.51	-	-	-	-
Runoff	L2479665-3	WRP-20-19	2020-07-24		2020-07-24	2450	-	6.24	22	2330	50.3	-	-	3.59	-	-	-	-
Runoff	L2495466-15	WRP-20-19	2020-08-22		2020-08-22	1540	-	6.32	22.9	2340	34.5	-	-	3.9	-	-	-	-
Runoff	L2496722-1	WRP-20-19	2020-08-31		2020-08-31	2430	-	7.16	162	1030	31.4	-	-	1.65	-	-	-	-
Runoff	L2479665-4	WRP-20-1901	2020-07-24		2020-07-24	2470	-	7.43	6	2160	2.79	-	-	3.47	-	-	-	-
Runoff	L2485429-9	WRP-20-20	2020-08-04		2020-08-04	2590	-	6.3	24.9	2340	35.5	-	-	3.9	-	-	-	-
Runoff	L2479665-5	WRP-20-20	2020-07-24		2020-07-24	2520	-	5.85	14.4	2430	67.4	-	-	3.36	-	-	-	-
Runoff	L2496722-2	WRP-20-20	2020-08-31		2020-08-31	2960	-	6.1	28.7	2380	56.3	-	-	3.73	-	-	-	-
Runoff	L2485466-17	WRP-20-20	2020-08-22		2020-08-22	883	-	6.38	570	2830	45.4	-	-	5.46	-	-	-	-
Runoff	L2485466-9	WRP-20-20A	2020-08-22		2020-08-22	1200	-	7	216	692	36.5	-	-	1.37	-	-	-	-
Runoff	L2485429-10	WRP-20-20A	2020-08-04		2020-08-04	3430	-	6.25	181	1010	70.6	-	-	1.73	-	-	-	-
Runoff	L2479665-6	WRP-20-21	2020-07-24		2020-07-24	2300	-	6.32	22.6	3130	4.32	-	-	4.18	-	-	-	-
Runoff	L2479665-7	WRP-20-22	2020-07-24		2020-07-24	2390	-	7.19	206	2030	32.5	-	-	4.7	-	-	-	-
Runoff	L2485466-18	WRP-20-22	2020-08-22		2020-08-22	2180	-	7.1	388	2120	45.1	-	-	3.7	-	-	-	-
Runoff	L2479665-8	WRP-20-2201	2020-07-24		2020-07-24	2380	-	7.39	22.8	2010	38	-	-	3.69	-	-	-	-
Runoff	L2485429-11	WRP-20-23	2020-08-04		2020-08-04	1580	-	7.12	232	2180	26.7	-	-	3.72	-	-	-	-
Runoff	L2479665-9	WRP-20-24	2020-07-24		2020-07-24	1700	-	6.99	35.2	1220	11.3	-	-	1.91	-	-	-	-
Runoff	L2479665-10	WRP-20-24	2020-07-24		2020-07-24	1820	-	7.22	12	1370	1.84	-	-	2.07	-	-	-	-
Runoff	L2485466-11	WRP-20-25	2020-08-22		2020-08-22	1340	-	7.48	17.2	1070	0.62	-	-	8.97	-	-	-	-
Runoff	L2479665-11	WRP-20-25	2020-07-24		2020-07-24	720	-	7.63	25.3	1030	4.8	-	-	6.53	-	-	-	-
Runoff	L2485466-11	WRP-20-25	2020-08-22		2020-08-22	375	-	7.57	471	466	43.3	-	-	3.87	-	-	-	-
Runoff	L2627498-16	WRP-21-01_16-08-2021_1405	2021-08-16		2021-08-16	712	-	8.03	9	236	12.7	-	-	0.391	-	-	-	-
Runoff	L2627498-26	WRP-21-01_16-08-2021_1405	2021-08-16		2021-08-16	728	-	7.89	2	470	1.7	-	-	0.267	-	-	-	-
Runoff						2	-	7.97	2	511	0.77	-	-	0.238	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Conductivity	Hardness (as CaCO3)	pH	Total Suspended Solids	Total Dissolved Solids	Turbidity	Acidity (as CaCO3)	Alkalinity, Total (as CaCO3)	Ammonia, Total (as N)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Total Kjeldahl Nitrogen
			Units	umhos/cm	mg/L	pH units	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Runoff	L2610912-9	WRP-21-01 2021-07-05 1410	2021-07-05	127	-	7.84	613	485	246	-	-	0.88	-	-	-	-
Runoff	L2612335-1	WRP-21-01 2021-07-11 0910	2021-07-11	2150	-	7.51	230	1880	11.3	-	-	2.53	-	-	-	-
Runoff	L2627498-25	WRP-21-02 16-08-2021 1345	2021-08-16	1140	-	7.86	2	838	0.16	-	-	0.762	-	-	-	-
Runoff	L2610912-8	WRP-21-02 2021-07-05 1350	2021-07-05	915	-	7.77	1350	642	1300	-	-	0.7	-	-	-	-
Runoff	L2612335-2	WRP-21-02 2021-07-11 0930	2021-07-11	1390	-	7.47	66.6	1050	10.2	-	-	0.882	-	-	-	-
Runoff	L2612335-3	WRP-21-02A 2021-07-11 0945	2021-07-11	1360	-	7.47	41.1	2840	6.34	-	-	5.65	-	-	-	-
Runoff	L2618284-11	WRP-21-02A 2021-07-23 1940	2021-07-23	1940	-	7.38	33.3	1640	1.14	-	-	3.47	-	-	-	-
Runoff	L2627498-24	WRP-21-03 16-08-2021 1320	2021-08-16	1290	-	7.73	2	882	0.32	-	-	2.57	-	-	-	-
Runoff	L2610912-7	WRP-21-03 2021-07-05 1340	2021-07-05	2300	-	7.68	179	2040	29	-	-	3.79	-	-	-	-
Runoff	L2627498-17	WRP-21-04 2021-07-05 1320	2021-07-05	2760	-	7.52	2150	2490	3910	-	-	4.85	-	-	-	-
Runoff	L2612335-4	WRP-21-04A 16-08-2021 1240	2021-08-16	7230	-	6.23	17.1	8840	30.4	-	-	8.16	-	-	-	-
Runoff	L2612335-5	WRP-21-04A 2021-07-11 1005	2021-07-11	4400	-	6	88.9	4560	42.6	-	-	10.9	-	-	-	-
Runoff	L2627498-18	WRP-21-04B 16-08-2021 1300	2021-08-16	1860	-	7.59	9.9	1580	4.13	-	-	3.77	-	-	-	-
Runoff	L2627498-19	WRP-21-05 16-08-2021 1205	2021-08-16	1960	-	7.62	3	1740	2.49	-	-	2.89	-	-	-	-
Runoff	L2610912-5	WRP-21-05 2021-07-05 1300	2021-07-05	1530	-	7.52	260	1210	26.4	-	-	4.19	-	-	-	-
Runoff	L2612335-5	WRP-21-05 2021-07-11 1025	2021-07-11	1010	-	7.48	5.9	743	3.35	-	-	1.87	-	-	-	-
Runoff	L2610912-4	WRP-21-06 2021-07-05 1245	2021-07-05	1550	-	7.21	415	1280	54.7	-	-	3.07	-	-	-	-
Runoff	L2612335-7	WRP-21-06 2021-07-11 1040	2021-07-11	1080	-	7.54	111	779	11.5	-	-	2.37	-	-	-	-
Runoff	L2627498-21	WRP-21-07 16-08-2021 1140	2021-08-16	3110	-	6.93	24.7	3120	7.17	-	-	3.68	-	-	-	-
Runoff	L2610912-3	WRP-21-07 2021-07-05 1155	2021-07-05	2860	-	7.11	149	2780	59.5	-	-	2.15	-	-	-	-
Runoff	L2612335-8	WRP-21-07A 2021-07-11 1110	2021-07-11	1230	-	6.79	160	974	36.1	-	-	0.799	-	-	-	-
Runoff	L2627498-22	WRP-21-07B 16-08-2021 1130	2021-08-16	2010	-	7.38	2	1840	0.79	-	-	3.19	-	-	-	-
Runoff	L2612335-9	WRP-21-07B 2021-07-11 1125	2021-07-11	333	-	7.11	139	210	86.5	-	-	0.426	-	-	-	-
Runoff	L2627498-23	WRP-21-08 16-08-2021 1115	2021-08-16	3160	-	7.14	14	3040	2.82	-	-	4.77	-	-	-	-
Runoff	L2610912-2	WRP-21-08 2021-07-05 1125	2021-07-05	1660	-	6.87	242	1450	80.7	-	-	1.55	-	-	-	-
Runoff	L2612335-10	WRP-21-08 2021-07-11 1140	2021-07-11	522	-	6.83	69.1	331	22.2	-	-	0.48	-	-	-	-
Runoff	L2618284-10	WRP-21-08 2021-07-23 1490	2021-07-23	1490	-	6.84	53.5	1300	8.01	-	-	1.43	-	-	-	-
Runoff	L2627498-20	WRP-21-09 16-08-2021 1050	2021-08-16	3740	-	7.55	34	3920	23.2	-	-	3.75	-	-	-	-
Runoff	L2612335-11	WRP-21-09 2021-07-05 1110	2021-07-05	2550	-	5.91	238	2440	91.7	-	-	2.32	-	-	-	-
Runoff	L2610912-1	WRP-21-09 2021-07-11 1200	2021-07-11	1590	-	5.82	91.7	1330	17	-	-	1.43	-	-	-	-
Runoff	L2618284-9	WRP-21-10 15-08-2021 1500	2021-07-23	4730	-	5.02	12.2	5420	12.5	-	-	3.37	-	-	-	-
Runoff	L2627498-9	WRP-21-10 2021-07-05 1550	2021-08-15	1080	-	7.2	9.5	775	8.97	-	-	0.789	-	-	-	-
Runoff	L2610912-14	WRP-21-10 2021-07-05 1550	2021-07-05	850	-	7.2	108	647	82.7	-	-	0.266	-	-	-	-
Runoff	L2612335-12	WRP-21-11 2021-07-11 1240	2021-07-11	874	-	7.23	136	643	41	-	-	0.317	-	-	-	-
Runoff	L2618284-11	WRP-21-11 2021-07-23 1630	2021-07-23	1630	-	7.08	2	1420	0.74	-	-	0.613	-	-	-	-
Runoff	L2627498-7	WRP-21-11 15-08-2021 1435	2021-08-15	630	-	7.31	8.1	420	13.7	-	-	0.531	-	-	-	-
Runoff	L2612335-13	WRP-21-11 2021-07-11 1255	2021-07-11	249	-	6.73	59.5	150	31.9	-	-	0.228	-	-	-	-
Runoff	L2627498-8	WRP-21-11 15-08-2021 1415	2021-08-15	1330	-	6.78	7.8	1090	4.28	-	-	1.01	-	-	-	-
Runoff	L2610912-13	WRP-21-11 2021-07-05 1530	2021-07-05	949	-	6.84	4260	5944	1070	-	-	0.9	-	-	-	-
Runoff	L2612335-14	WRP-21-11 2021-07-11 1310	2021-07-11	969	-	6.76	62.3	176	11.3	-	-	0.232	-	-	-	-
Runoff	L2618284-6	WRP-21-11 2021-07-23 1260	2021-07-23	1260	-	6.98	91.2	1030	41.6	-	-	1.02	-	-	-	-
Runoff	L2610912-11	WRP-21-12 2021-07-05 1520	2021-07-05	1980	-	6.98	892	355	320	-	-	1.04	-	-	-	-
Runoff	L2627498-10	WRP-21-13 15-08-2021 1400	2021-08-15	2060	-	6.84	9.5	1940	34.4	-	-	1.37	-	-	-	-
Runoff	L2610912-10	WRP-21-13 2021-07-05 1505	2021-07-05	1900	-	4.57	69.4	1520	60.1	-	-	1.67	-	-	-	-
Runoff	L2612335-15	WRP-21-13 2021-07-11 1320	2021-07-11	1930	-	5.92	128	1640	47.6	-	-	1.29	-	-	-	-
Runoff	L2618284-5	WRP-21-13 2021-07-23 1230	2021-07-23	2790	-	5.26	10	2780	32.1	-	-	2.44	-	-	-	-
Runoff	L2627498-12	WRP-21-14 15-08-2021 1255	2021-08-15	2860	-	5.16	169	2970	139	-	-	2.5	-	-	-	-
Runoff	L2618284-1	WRP-21-14 2021-07-12 1300	2021-07-12	2020	-	4.8	110	1670	32.7	-	-	1.89	-	-	-	-
Runoff	L2618284-4	WRP-21-14 2021-07-22 1300	2021-07-22	2770	-	4.91	29	2760	19.6	-	-	2.49	-	-	-	-
Runoff	L2627498-1	WRP-21-14A 15-08-2021 1150	2021-08-15	2120	-	5.04	14.5	1920	21.1	-	-	2.45	-	-	-	-
Runoff	L2627498-13	WRP-21-14B 15-08-2021 1225	2021-08-15	2240	-	5.42	16.3	2100	32.7	-	-	2.4	-	-	-	-
Runoff	L2627498-14	WRP-21-14C 15-08-2021 1240	2021-08-15	2230	-	6.29	20.5	2100	56.5	-	-	2.05	-	-	-	-
Runoff	L2627498-3	WRP-21-15 15-08-2021 1125	2021-08-15	2960	-	5.79	69.5	2930	115	-	-	2.07	-	-	-	-
Runoff	L2618284-2	WRP-21-15 2021-07-12 1325	2021-07-12	1590	-	6.41	29.5	1280	45.4	-	-	1.52	-	-	-	-
Runoff	L2612842-3	WRP-21-16 2021-07-12 1340	2021-07-12	1280	-	6.66	59.5	1010	54.6	-	-	1.3	-	-	-	-
Runoff	L2618284-3	WRP-21-16 2021-07-22 1140	2021-07-22	1140	-	7.45	101	915	29	-	-	2.69	-	-	-	-
Runoff	L2627498-2	WRP-21-17 15-08-2021 1105	2021-08-15	1110	-	7.52	8.2	862	6.93	-	-	1.18	-	-	-	-
Runoff	L2618284-4	WRP-21-17 2021-07-12 1350	2021-07-12	1230	-	6.57	63.5	923	43.1	-	-	1.54	-	-	-	-
Runoff	L2627498-4	WRP-21-18 15-08-2021 1055	2021-08-15	1040	-	7.67	184	763	2.63	-	-	0.749	-	-	-	-
Runoff	L2612842-5	WRP-21-18 2021-07-12 1435	2021-07-12	619	-	7.18	184	403	129	-	-	0.599	-	-	-	-
Runoff	L2627498-7	WRP-21-19 15-08-2021 1030	2021-08-15	959	-	7.18	10.2	667	14.3	-	-	3.81	-	-	-	-
Runoff	L2618284-2	WRP-21-19 2021-07-12 1450	2021-07-12	1710	-	7.42	67.5	473	53.7	-	-	2.87	-	-	-	-
Runoff	L2612842-6	WRP-21-19 2021-07-22 1760	2021-07-22	1760	-	7.08	32.7	1390	30.1	-	-	7.15	-	-	-	-
Runoff	L2627498-5	WRP-21-19A 15-08-2021 1020	2021-08-15	258	-	7.97	12.9	88	12.1	-	-	0.517	-	-	-	-
Runoff	L2627498-6	WRP-21-20 15-08-2021 1005	2021-08-15	245	-	8.08	3.9	80	8.82	-	-	0.073	-	-	-	-
Runoff	L2612842-7	WRP-21-20 2021-07-12 1510	2021-07-12	155	-	7.47	30.3	90	45.3	-	-	0.0512	-	-	-	-
Runoff	L2618284-1	WRP-21-20 2021-07-22 1222	2021-07-22	222	-	7.88	2	135	4	-	-	0.0638	-	-	-	-
Runoff	L2612842-1	WRP-22-01 2022-07-28 494	2022-07-28	494	-	7.86	106	319	41.4	-	-	0.06	-	-	-	-
Runoff	L2725732-1	WRP-22-01 2022-07-28 508	2022-07-28	508	-	7.86	4.8	313	2.5	-	-	0.069	-	-	-	-
Runoff	L2725732-2	WRP-22-02 2022-07-28 671	2022-07-28	671	-	7.7	2	451	0.35	-	-	0.279	-	-	-	-
Runoff	L2725732-3	WRP-22-03 2022-07-28 642	2022-07-28	642	-	7.78	2	432	0.65	-	-	0.23	-	-	-	-
Runoff	L2725732-4	WRP-22-04 2022-07-28 644	2022-07-28	644	-	7.75	23.7	433	17.7	-	-	0.219	-	-	-	-
Runoff	L2725732-5	WRP-22-05 2022-07-28 976	2022-07-28	976	-	7.51	5.2	887	3.3	-	-	1.47	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Units	Sample Date	Conductivity	Hardness (as CaCO3)	pH	Total Suspended Solids	Total Dissolved Solids	Turbidity	Acidity (as CaCO3)	Alkalinity, Total (as CaCO3)	Ammonia, Total (as N)	Chloride	Fluoride (F)	Nitrate (as N)	Total Kjeldahl Nitrogen
						umhos/cm	mg/L	pH units	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Runoff	L2725732-7	WRP-22-07	2022-07-28	WRP-22-07-28	1730	-	-	7.92	41.4	1450	36.5	-	-	2.98	-	-	-	-
Runoff	L2725732-8	WRP-22-08	2022-07-28	WRP-22-08	1550	-	-	7.92	28	1250	36.4	-	-	2.07	-	-	-	-
Runoff	L2725732-9	WRP-22-09	2022-07-28	WRP-22-09	952	-	-	7.47	51.2	702	16	-	-	1.21	-	-	-	-
Runoff	L2725732-10	WRP-22-10	2022-07-28	WRP-22-10	1200	-	-	7.47	5.7	900	37.1	-	-	1.49	-	-	-	-
Runoff	L2725732-11	WRP-22-11	2022-07-28	WRP-22-11	1300	-	-	7.59	339	1000	173	-	-	1.74	-	-	-	-
Runoff	L2725732-12	WRP-22-12	2022-07-28	WRP-22-12	1930	-	-	7.14	8.3	1590	7.94	-	-	1.69	-	-	-	-
Runoff	L2725732-13	WRP-22-13	2022-07-29	WRP-22-13	987	-	-	7.36	7.1	729	6.23	-	-	0.305	-	-	-	-
Runoff	L2725732-14	WRP-22-14	2022-07-29	WRP-22-14	717	-	-	7.3	12	527	10.4	-	-	0.16	-	-	-	-
Runoff	L2725732-15	WRP-22-15	2022-07-29	WRP-22-15	494	-	-	7.39	194	369	245	-	-	0.067	-	-	-	-
Runoff	L2725732-16	WRP-22-16	2022-07-29	WRP-22-16	484	-	-	7.23	7.2	322	5.37	-	-	0.02	-	-	-	-
Runoff	L2725732-17	WRP-22-17	2022-07-29	WRP-22-17	886	-	-	6.95	4.7	683	3.64	-	-	0.364	-	-	-	-
Runoff	L2725732-18	WRP-22-18	2022-07-29	WRP-22-18	583	-	-	7.33	22.7	414	16.7	-	-	0.207	-	-	-	-
Runoff	L2725732-19	WRP-22-19	2022-07-29	WRP-22-19	583	-	-	6.92	-	-	-	-	-	-	-	-	-	-
Runoff	L2157407-6	WRPP	2018-09-01	2018-09-01	-	-	-	4.63	61	29100	81.6	-	-	-	-	-	-	-
Runoff	L2158115-4	WRP-S10	2018-09-04	2018-09-04	-	-	-	4.24	22.4	9260	29	-	-	3.88	-	-	-	-
Runoff	L2306749-1	WRP-S10	2019-07-09	2019-07-09	6330	-	-	4.32	22	42100	32.1	-	-	-	-	-	-	-
Runoff	L2158115-3	WRP-S10	2018-09-04	2018-09-04	-	-	-	4.32	22	42100	32.1	-	-	-	-	-	-	-
Runoff	L2298517-5	WRP-S10	2019-06-24	2019-06-24	-	-	-	4.38	2	2960	6.17	-	-	-	-	-	-	-
Runoff	L2320849-1	WRP-S10	2019-07-30	2019-07-30	2340	-	-	4.91	397	2290	2.93	-	-	1.27	-	-	-	-
Runoff	L2290620-2	WRP-S10	2019-06-12	2019-06-12	1730	-	-	4.98	10.4	1500	12.2	-	-	1.5	-	-	-	-
Runoff	L2290620-3	WRP-S11	2019-06-12	2019-06-12	127	-	-	6.9	111	162	273	-	-	0.125	-	-	-	-
Runoff	L2298517-7	WRP-S11	2019-06-24	2019-06-24	-	-	-	7.23	2	391	2.68	-	-	-	-	-	-	-
Runoff	L2315510-2	WRP-S12	2019-07-23	2019-07-23	-	-	-	5.24	43.2	4280	45.4	-	-	-	-	-	-	-
Runoff	L2303565-4	WRP-S12	2019-07-02	2019-07-02	1320	-	-	6.71	3.9	1140	5.35	-	-	1.59	-	-	-	-
Runoff	L2298517-6	WRP-S12	2019-06-24	2019-06-24	-	-	-	7.23	2	430	2.67	-	-	-	-	-	-	-
Runoff	L2290620-4	WRP-S12	2019-06-12	2019-06-12	252	-	-	7.47	29.2	250	129	-	-	0.102	-	-	-	-
Runoff	L2320849-2	WRP-S12	2019-07-30	2019-07-30	1640	-	-	7.61	6.4	1550	5.47	-	-	1.03	-	-	-	-
Runoff	L2157407-16	WRP-S14	2018-09-01	2018-09-01	-	-	-	7.45	72	2190	3.89	-	-	-	-	-	-	-
Runoff	L2303565-3	WRP-S15	2019-07-02	2019-07-02	3120	-	-	4.57	72	3240	89.9	-	-	2.27	-	-	-	-
Runoff	L23237954-2	WRP-S15	2019-08-27	2019-08-27	5600	-	-	4.71	22.7	6890	29.2	-	-	3.59	-	-	-	-
Runoff	L2323304-1	WRP-S15	2019-08-06	2019-08-06	5390	-	-	4.82	28.4	6890	39.7	-	-	2.73	-	-	-	-
Runoff	L2306749-2	WRP-S15	2019-07-09	2019-07-09	2530	-	-	6.19	99.2	2630	137	-	-	1.22	-	-	-	-
Runoff	L2298517-3	WRP-S15	2019-06-24	2019-06-24	-	-	-	6.31	54	880	82.4	-	-	-	-	-	-	-
Runoff	L2294129-8	WRP-S15	2019-06-18	2019-06-18	611	-	-	7.1	30	441	285	-	-	0.041	-	-	-	-
Runoff	L2158115-7	WRP-S15NEW	2018-09-04	2018-09-04	-	-	-	8.03	12.4	250	27.2	-	-	-	-	-	-	-
Runoff	L2320124-4	WRP-S16	2019-07-17	2019-07-17	6040	-	-	4.42	30	7500	50.2	-	-	3.01	-	-	-	-
Runoff	L2333401-3	WRP-S16	2019-08-20	2019-08-20	5320	-	-	4.58	57.6	7370	62.4	-	-	3.54	-	-	-	-
Runoff	L2326009-4	WRP-S16	2019-08-13	2019-08-13	5190	-	-	4.83	40	6260	29	-	-	3.53	-	-	-	-
Runoff	L2323304-2	WRP-S16	2019-08-06	2019-08-06	5340	-	-	4.96	21.2	6390	20.1	-	-	2.76	-	-	-	-
Runoff	L2290620-8	WRP-S16	2019-06-12	2019-06-12	1670	-	-	5.81	72	1410	59.8	-	-	1.34	-	-	-	-
Runoff	L2298517-4	WRP-S16	2019-06-24	2019-06-24	-	-	-	7.42	90	120	229	-	-	-	-	-	-	-
Runoff	L2158115-8	WRP-S16NEW	2018-09-04	2018-09-04	-	-	-	4.5	22.4	12000	36.1	-	-	-	-	-	-	-
Runoff	L2290620-7	WRP-S17	2019-06-12	2019-06-12	200	-	-	6.99	71.2	195	145	-	-	0.181	-	-	-	-
Runoff	L2303565-1	WRP-S17	2019-07-02	2019-07-02	927	-	-	7.85	127	75	237	-	-	0.17	-	-	-	-
Runoff	L2306749-5	WRP-S17	2019-07-09	2019-07-09	249	-	-	8.16	36.4	174	43.7	-	-	-	-	-	-	-
Runoff	L2306749-4	WRP-S18	2019-07-09	2019-07-09	6760	-	-	4.28	189	12400	129	-	-	9.01	-	-	-	-
Runoff	L2312012-2	WRP-S18	2019-07-17	2019-07-17	5460	-	-	4.36	161	6310	160	-	-	14	-	-	-	-
Runoff	L2303565-6	WRP-S18	2019-07-02	2019-07-02	645	-	-	7.42	102	498	67.8	-	-	0.468	-	-	-	-
Runoff	L2298517-10	WRP-S18	2019-06-24	2019-06-24	-	-	-	7.82	55.1	289	138	-	-	-	-	-	-	-
Runoff	L2303565-2	WRP-S4	2019-07-02	2019-07-02	124	-	-	7.44	170	103	319	-	-	0.17	-	-	-	-
Runoff	L2326009-5	WRP-S4	2019-08-13	2019-08-13	1060	-	-	7.61	3.6	798	173	-	-	1.77	-	-	-	-
Runoff	L2298517-2	WRP-S4	2019-06-24	2019-06-24	-	-	-	8.25	4.4	90	32.2	-	-	-	-	-	-	-
Runoff	L2326009-3	WRP-S5	2019-08-13	2019-08-13	1440	-	-	6.97	14.8	1190	18.8	-	-	3	-	-	-	-
Runoff	L2333401-2	WRP-S5	2019-08-20	2019-08-20	1220	-	-	7.41	5.4	1130	13.8	-	-	1.39	-	-	-	-
Runoff	L2290620-1	WRP-S5	2019-06-12	2019-06-12	-	-	-	7.52	80	180	248	-	-	0.06	-	-	-	-
Runoff	L2158115-5	WRP-S5	2018-09-04	2018-09-04	-	-	-	8.13	-	-	-	-	-	-	-	-	-	-
Runoff	L2298517-1	WRP-S5	2019-06-24	2019-06-24	-	-	-	8.31	9.2	168	111	-	-	-	-	-	-	-
Runoff	L2157407-10	WRP-S6	2018-09-01	2018-09-01	-	-	-	7	-	-	-	-	-	-	-	-	-	-
West Ditch	L2722749-4	MS-08EXPLORE-WESTDITCH	2022-07-10	2022-07-10	672	-	-	7.74	-	-	-	-	-	0.74	-	-	-	-
West Ditch	L2115219-3	MS-08INFLOW-WEST	2018-06-20	2018-06-20	-	-	-	4.63	-	-	-	-	-	-	-	-	-	-
West Ditch	L2115893-3	MS-08INFLOW-WEST	2018-06-20	2018-06-20	-	-	-	4.71	-	-	-	-	-	-	-	-	-	-
West Ditch	L2114971-3	MS-08INFLOW-WEST	2018-06-19	2018-06-19	-	-	-	4.8	-	-	-	-	-	-	-	-	-	-
West Ditch	L2113672-2	MS-08INFLOW-WEST	2018-06-17	2018-06-17	-	-	-	4.81	-	-	-	-	-	-	-	-	-	-
West Ditch	L2113576-3	MS-08INFLOW-WEST	2018-06-15	2018-06-15	-	-	-	5.03	-	-	-	-	-	-	-	-	-	-
West Ditch	L2114098-3	MS-08INFLOW-WEST	2018-06-18	2018-06-18	-	-	-	5.03	-	-	-	-	-	-	-	-	-	-
West Ditch	L2160094-1	MS-08INFLOW-WEST	2018-09-06	2018-09-06	-	-	-	5.07	-	-	-	-	-	-	-	-	-	-
West Ditch	L2110885-3	MS-08INFLOW-WEST	2018-06-12	2018-06-12	-	-	-	5.17	-	-	-	-	-	-	-	-	-	-
West Ditch	L2113626-3	MS-08INFLOW-WEST	2018-06-16	2018-06-16	-	-	-	5.18	-	-	-	-	-	-	-	-	-	-
West Ditch	L2110060-3	MS-08INFLOW-WEST	2018-06-10	2018-06-10	-	-	-	5.34	80.9	650	86.1	-	-	-	-	-	-	-
West Ditch	L2112194-3	MS-08INFLOW-WEST	2018-06-14	2018-06-14	-	-	-	5.67	-	-	-	-	-	-	-	-	-	-
West Ditch	L2111853-3	MS-08INFLOW-WEST	2018-06-13	2018-06-13	-	-	-	5.88	-	-	-	-	-	-	-	-	-	-
West Ditch	L2108641-2	MS-08INFLOW-WEST	2018-06-07	2018-06-07	-	-	-	6.44	560	309	230	-	-	-	-	-	-	-
West Ditch	L2289069-4	MS-08WEST INFLOW	2019-06-09	2019-06-09	-	-	-	6.36	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301632-4	MS-08WEST-DITCH	2019-07-01	2019-07-01	-	-	-	6.33	-	-	-	-	-	-	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Units	Sample Date	Conductivity	Hardness (as CaCO3)	pH	Total Suspended Solids	Total Dissolved Solids	Turbidity	Acidity (as CaCO3)	Alkalinity, Total (as CaCO3)	Ammonia, Total (as N)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Total Kjeldahl Nitrogen
						umhos/cm	mg/L	pH units	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2335451-5	MS-08-WEST-INFLOW	2019-08-23		2019-08-23	-	-	6.97	-	-	-	-	-	-	-	-	-	-
West Ditch	L2316395-5	MS-08-WEST-INFLOW	2018-07-28		2018-07-28	-	-	4.42	-	-	-	-	-	-	-	-	-	-
West Ditch	L2306761-4	MS-08-WEST-INFLOW	2019-07-09		2019-07-09	7500	-	4.44	-	-	-	-	-	10	-	-	-	-
West Ditch	L2318249-5	MS-08-WEST-INFLOW	2019-07-25		2019-07-25	-	-	4.48	-	-	-	-	-	-	-	-	-	-
West Ditch	L2313935-5	MS-08-WEST-INFLOW	2019-07-20		2019-07-20	-	-	4.53	-	-	-	-	-	-	-	-	-	-
West Ditch	L2312016-4	MS-08-WEST-INFLOW	2019-07-17		2019-07-17	5470	-	4.55	-	-	-	-	-	9.21	-	-	-	-
West Ditch	L2320850-4	MS-08-WEST-INFLOW	2019-07-31		2019-07-31	4160	-	4.65	-	-	-	-	-	3.14	-	-	-	-
West Ditch	L2340461-4	MS-08-WEST-INFLOW	2019-08-03		2019-08-03	14100	-	4.67	-	-	-	-	-	22.9	-	-	-	-
West Ditch	L23056805-4	MS-08-WEST-INFLOW	2019-07-08		2019-07-08	-	-	4.81	-	-	-	-	-	-	-	-	-	-
West Ditch	L2322461-5	MS-08-WEST-INFLOW	2019-08-02		2019-08-02	-	-	5.02	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305072-5	MS-08-WEST-INFLOW	2019-07-05		2019-07-05	-	-	5.04	-	-	-	-	-	-	-	-	-	-
West Ditch	L2280598-4	MS-08-WEST-INFLOW	2019-06-12		2019-06-12	790	-	5.34	-	-	-	-	-	0.482	-	-	-	-
West Ditch	L2342313-4	MS-08-WEST-INFLOW	2019-09-05		2019-09-05	-	-	5.55	-	-	-	-	-	-	-	-	-	-
West Ditch	L2291173-4	MS-08-WEST-INFLOW	2019-06-13		2019-06-13	-	-	5.58	-	-	-	-	-	-	-	-	-	-
West Ditch	L2330905-2	MS-08-WEST-INFLOW	2019-08-18		2019-08-18	-	-	5.68	-	-	-	-	-	-	-	-	-	-
West Ditch	L2327988-3	MS-08-WEST-INFLOW	2019-08-13		2019-08-13	4980	-	5.78	-	-	-	-	-	3.31	-	-	-	-
West Ditch	L2295991-4	MS-08-WEST-INFLOW	2019-06-20		2019-06-20	-	-	5.82	-	-	-	-	-	-	-	-	-	-
West Ditch	L2343354-1	MS-08-WEST-INFLOW	2019-09-08		2019-09-08	-	-	5.95	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305224-5	MS-08-WEST-INFLOW	2019-07-06		2019-07-06	-	-	5.99	-	-	-	-	-	-	-	-	-	-
West Ditch	L2326464-3	MS-08-WEST-INFLOW	2019-08-11		2019-08-11	-	-	6.02	-	-	-	-	-	-	-	-	-	-
West Ditch	L2308409-5	MS-08-WEST-INFLOW	2019-07-12		2019-07-12	-	-	6.04	-	-	-	-	-	-	-	-	-	-
West Ditch	L2325445-3	MS-08-WEST-INFLOW	2019-08-08		2019-08-08	-	-	6.07	-	-	-	-	-	-	-	-	-	-
West Ditch	L2288617-4	MS-08-WEST-INFLOW	2019-06-25		2019-06-25	-	-	6.09	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301467-4	MS-08-WEST-INFLOW	2019-06-28		2019-06-28	-	-	6.11	-	-	-	-	-	-	-	-	-	-
West Ditch	L2307801-4	MS-08-WEST-INFLOW	2019-07-10		2019-07-10	-	-	6.14	-	-	-	-	-	-	-	-	-	-
West Ditch	L2315508-5	MS-08-WEST-INFLOW	2019-07-23		2019-07-23	-	-	6.2	-	-	-	-	-	-	-	-	-	-
West Ditch	L2295155-4	MS-08-WEST-INFLOW	2019-06-19		2019-06-19	-	-	6.26	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301572-4	MS-08-WEST-INFLOW	2019-06-29		2019-06-29	-	-	6.26	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301607-4	MS-08-WEST-INFLOW	2019-07-11		2019-07-11	-	-	6.3	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301607-4	MS-08-WEST-INFLOW	2019-06-30		2019-06-30	-	-	6.31	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292454-4	MS-08-WEST-INFLOW	2019-06-15		2019-06-15	-	-	6.32	-	-	-	-	-	1.5	-	-	-	-
West Ditch	L2303578-4	MS-08-WEST-INFLOW	2019-07-02		2019-07-02	3260	-	6.39	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292234-4	MS-08-WEST-INFLOW	2019-06-14		2019-06-14	-	-	6.4	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309549-4	MS-08-WEST-INFLOW	2019-07-14		2019-07-14	-	-	6.44	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305269-5	MS-08-WEST-INFLOW	2019-07-07		2019-07-07	-	-	6.44	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305344	MS-08-WEST-INFLOW	2019-06-27		2019-06-27	-	-	6.5	-	-	-	-	-	1.29	-	-	-	-
West Ditch	L2337960-4	MS-08-WEST-INFLOW	2019-08-27		2019-08-27	3670	-	6.52	-	-	-	-	-	-	-	-	-	-
West Ditch	L2296973-4	MS-08-WEST-INFLOW	2019-06-23		2019-06-23	-	-	6.52	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309510-5	MS-08-WEST-INFLOW	2019-07-13		2019-07-13	-	-	6.54	-	-	-	-	-	-	-	-	-	-
West Ditch	L2293024-4	MS-08-WEST-INFLOW	2019-06-17		2019-06-17	-	-	6.55	-	-	-	-	-	1.11	-	-	-	-
West Ditch	L2294118-4	MS-08-WEST-INFLOW	2019-06-18		2019-06-18	1920	-	6.59	-	-	-	-	-	-	-	-	-	-
West Ditch	L2304339-4	MS-08-WEST-INFLOW	2019-07-03		2019-07-03	-	-	6.63	-	-	-	-	-	-	-	-	-	-
West Ditch	L2297932-4	MS-08-WEST-INFLOW	2019-06-07		2019-06-07	-	-	6.63	-	-	-	-	-	-	-	-	-	-
West Ditch	L2355516-2	MS-08-WEST-INFLOW	2019-09-27		2019-09-27	-	-	6.63	-	-	-	-	-	-	-	-	-	-
West Ditch	L2358541-4	MS-08-WEST-INFLOW	2019-06-21		2019-06-21	-	-	6.64	-	-	-	-	-	-	-	-	-	-
West Ditch	L2297625-4	MS-08-WEST-INFLOW	2019-06-24		2019-06-24	-	-	6.65	-	-	-	-	-	-	-	-	-	-
West Ditch	L2285959-4	MS-08-WEST-INFLOW	2019-06-22		2019-06-22	-	-	6.72	-	-	-	-	-	-	-	-	-	-
West Ditch	L2300513-4	MS-08-WEST-INFLOW	2019-06-26		2019-06-26	-	-	6.72	-	-	-	-	-	-	-	-	-	-
West Ditch	L2357363-3	MS-08-WEST-INFLOW	2019-10-01		2019-10-01	-	-	6.75	-	-	-	-	-	0.81	-	-	-	-
West Ditch	L2288447-4	MS-08-WEST-INFLOW	2019-06-10		2019-06-10	-	-	6.76	-	-	-	-	-	-	-	-	-	-
West Ditch	L2339733-6	MS-08-WEST-INFLOW	2019-08-31		2019-08-31	-	-	6.81	-	-	-	-	-	-	-	-	-	-
West Ditch	L2287151-4	MS-08-WEST-INFLOW	2019-06-06		2019-06-06	-	-	6.81	-	-	-	-	-	-	-	-	-	-
West Ditch	L2304338-5	MS-08-WEST-INFLOW	2019-07-04		2019-07-04	-	-	6.82	-	-	-	-	-	-	-	-	-	-
West Ditch	L2468307-1	MS-08-WEST-INFLOW	2020-06-30		2020-06-30	-	-	6.84	-	-	-	-	-	-	-	-	-	-
West Ditch	L2330756-2	MS-08-WEST-INFLOW	2019-08-16		2019-08-16	-	-	6.84	-	-	-	-	-	-	-	-	-	-
West Ditch	L2358842-2	MS-08-WEST-INFLOW	2019-10-02		2019-10-02	-	-	6.99	-	-	-	-	-	-	-	-	-	-
West Ditch	L2467060-3	MS-08-WEST-INFLOW	2020-06-25		2020-06-25	-	-	7.03	-	-	-	-	-	-	-	-	-	-
West Ditch	L2346688-1	MS-08-WEST-INFLOW	2019-09-12		2019-09-12	-	-	7.05	-	-	-	-	-	-	-	-	-	-
West Ditch	L2345723-2	MS-08-WEST-INFLOW	2019-09-11		2019-09-11	4180	-	7.1	-	-	-	-	-	-	-	-	-	-
West Ditch	L2288035-4	MS-08-WEST-INFLOW	2020-06-08		2020-06-08	-	-	7.15	-	-	-	-	-	1.19	-	-	-	-
West Ditch	L2477770-6	MS-08-WEST-INFLOW	2020-07-21		2020-07-21	3430	-	7.47	-	-	-	-	-	-	-	-	-	-
West Ditch	L2485888-3	MS-08-WEST-INFLOW	2020-08-12		2020-08-12	-	-	7.47	-	-	-	-	-	0.613	-	-	-	-
West Ditch	L2482854-5	MS-08-WEST-INFLOW	2020-08-03		2020-08-03	3120	-	7.51	-	-	-	-	-	0.771	-	-	-	-
West Ditch	L2348201-2	MS-08-WEST-INFLOW	2019-09-16		2019-09-16	-	-	7.52	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292486-4	MS-08-WEST-INFLOW	2020-07-29		2020-07-29	3220	-	7.54	-	-	-	-	-	0.763	-	-	-	-
West Ditch	L2481535-1	MS-08-WEST-INFLOW	2020-08-26		2020-08-26	-	-	7.62	-	-	-	-	-	0.46	-	-	-	-
West Ditch	L2496104-4	MS-08-WEST-INFLOW	2020-06-26		2020-06-26	3180	-	7.68	-	-	-	-	-	0.466	-	-	-	-
West Ditch	L2496103-1	MS-08-WEST-INFLOW	2020-08-30		2020-08-30	3220	-	7.72	-	-	-	-	-	0.333	-	-	-	-
West Ditch	L2496140-1	MS-08-WEST-INFLOW	2020-06-29		2020-06-29	3170	-	7.75	-	-	-	-	-	0.318	-	-	-	-
West Ditch	L2496049-1	MS-08-WEST-INFLOW	2020-08-28		2020-08-28	3070	-	7.77	-	-	-	-	-	0.408	-	-	-	-
West Ditch	L2496047-1	MS-08-WEST-INFLOW	2020-06-27		2020-06-27	2730	-	7.8	-	-	-	-	-	0.35	-	-	-	-
West Ditch	L2496705-1	MS-08-WEST-INFLOW	2020-08-31		2020-08-31	1980	-	7.92	-	-	-	-	-	0.214	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Units	Sample Date	Conductivity	Hardness (as CaCO3)	pH	Total Suspended Solids	Total Dissolved Solids	Turbidity	Acidity (as CaCO3)	Alkalinity, Total (as CaCO3)	Ammonia, Total (as N)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Total Kjeldahl Nitrogen
West Ditch	L2497356-1	MS-08-WEST-INFLOW	2020-09-01		2023-09-01	3190	-	7.86	-	-	-	-	-	0.54	-	-	-	-
West Ditch	L2332396-5	MS-08-WEST-INFLOW	2019-06-06		2019-08-06	4140	-	5.93	-	-	-	-	-	2.15	-	-	-	-
West Ditch	L2603974-4	MS-08-WEST-INFLOW	2021-06-21		2021-06-21	-	-	7.47	-	-	-	-	-	-	-	-	-	-
West Ditch	L2606659-5	MS-08-WEST-INFLOW	2021-06-26		2021-06-26	-	-	7.51	-	-	-	-	-	-	-	-	-	-
West Ditch	L2606871-5	MS-08-WEST-INFLOW	2021-06-27		2021-06-27	-	-	7.57	-	-	-	-	-	-	-	-	-	-
West Ditch	L2606262-5	MS-08-WEST-INFLOW	2021-07-01		2021-07-01	-	-	7.46	-	-	-	-	-	-	-	-	-	-
West Ditch	L2610945-3	MS-08-WEST-INFLOW	2021-07-05		2021-07-05	1170	-	7.71	-	-	-	-	-	1.68	-	-	-	-
West Ditch	L2612337-6	MS-08-WEST-INFLOW	2021-07-11		2021-07-11	1150	-	7.25	-	-	-	-	-	1.27	-	-	-	-
West Ditch	L2616285-7	MS-08-WEST-INFLOW	2021-07-24		2021-07-24	2620	-	7.42	-	-	-	-	-	2.64	-	-	-	-
West Ditch	L2659919-4	MS-08-WEST-INFLOW	2021-08-22		2021-08-22	3240	-	7.72	-	-	-	-	-	2.94	-	-	-	-
West Ditch	L2635846-3	MS-08-WEST-INFLOW	2021-09-05		2021-09-05	3560	-	7.55	-	-	-	-	-	2.37	-	-	-	-
West Ditch	L2725730-1	MS-08-WEST-INFLOW	2022-07-28		2022-07-28	1430	-	7.76	-	-	-	-	-	0.809	-	-	-	-
West Ditch	L2291173-5	MS-08-WEST-INFLOW	2019-06-13		2019-06-13	-	-	5.58	-	-	-	-	-	-	-	-	-	-
West Ditch	L2332396-2	MS-08-WEST-INFLOW	2019-08-06		2019-08-06	4130	-	5.98	-	-	-	-	-	2.13	-	-	-	-
West Ditch	L2307801-5	MS-08-WEST-INFLOW	2019-07-10		2019-07-10	-	-	6.12	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292454-5	MS-08-WEST-INFLOW	2019-06-15		2019-06-15	-	-	6.31	-	-	-	-	-	-	-	-	-	-
West Ditch	L2339733-7	MS-08-WEST-INFLOW	2019-08-31		2019-08-31	-	-	6.8	-	-	-	-	-	-	-	-	-	-
West Ditch	L2692788-3	MS-08-WEST-INFLOW	2021-08-06		2021-08-06	2790	-	7.54	-	-	-	-	-	3.01	-	-	-	-
West Ditch	L2335475-4	WRP-B7	2019-08-25		2019-08-25	-	-	6.51	-	-	-	-	-	-	-	-	-	-
West Ditch	L2157407-14	WRP-B7	2018-09-01		2018-09-01	-	-	4.72	-	-	-	-	-	-	-	-	-	-
West Ditch	L2157407-9	WRPT-2	2018-09-01		2018-09-01	-	-	7.99	-	-	-	-	-	-	-	-	-	-

Notes: Based on data supplied by BIM, April 2023. Certificates of Analysis available upon request from BIM.

Highlighted values are presented at detection limit values

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units>	Phosphorus, Total	Sulfate (SO4)	Cyanide, Total	Dissolved Organic Carbon	Total Organic Carbon	Aluminum (Al)-Total	Antimony (Sb)-Total	Arsenic (As)-Total	Barium (Ba)-Total	Beryllium (Be)-Total	Bismuth (Bi)-Total	Boron (B)-Total
East Ditch	L2039742	MS-08-EAST-2021-06-21 1110	2021-06-21	Units>	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
East Ditch	L2201824	MS-08-EAST-DITCH	2019-07-01	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2312016	MS-08-EAST-INFLOW	2019-07-01	-	-	-	-	-	-	5.98	0.001	0.001	0.0535	0.001	0.0005	0.1
East Ditch	L2306494	MS-08-EAST-INFLOW	2019-07-17	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2306761	MS-08-EAST-INFLOW	2019-07-14	-	-	-	-	-	-	1.24	0.001	0.001	0.0304	0.001	0.0005	0.1
East Ditch	L2305224	MS-08-EAST-INFLOW	2019-07-09	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2309409	MS-08-EAST-INFLOW	2019-07-06	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305071	MS-08-EAST-INFLOW	2019-07-13	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305072	MS-08-EAST-INFLOW	2019-07-13	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2296973	MS-08-EAST-INFLOW	2019-07-05	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2296617	MS-08-EAST-INFLOW	2019-06-23	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305343	MS-08-EAST-INFLOW	2019-06-25	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305343	MS-08-EAST-INFLOW	2019-06-27	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305806	MS-08-EAST-INFLOW	2019-07-08	-	-	-	-	-	-	0.374	-	-	-	-	-	-
East Ditch	L2305836	MS-08-EAST-INFLOW	2019-07-11	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305269	MS-08-EAST-INFLOW	2019-07-07	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2300513	MS-08-EAST-INFLOW	2019-06-26	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2307801	MS-08-EAST-INFLOW	2019-07-10	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301572	MS-08-EAST-INFLOW	2019-06-29	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2313935	MS-08-EAST-INFLOW	2019-07-20	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2309409	MS-08-EAST-INFLOW	2019-07-12	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2315508	MS-08-EAST-INFLOW	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2295991	MS-08-EAST-INFLOW	2019-06-20	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2304339	MS-08-EAST-INFLOW	2019-07-03	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2296969	MS-08-EAST-INFLOW	2019-06-22	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301607	MS-08-EAST-INFLOW	2019-06-30	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2304338	MS-08-EAST-INFLOW	2019-07-04	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301467	MS-08-EAST-INFLOW	2019-06-28	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2318395	MS-08-EAST-INFLOW	2019-07-28	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2482854	MS-08-EAST-INFLOW	2020-08-03	-	-	-	-	-	0.05	0.001	0.001	0.001	0.0403	0.001	0.0005	0.1
East Ditch	L2297625	MS-08-EAST-INFLOW	2020-08-12	-	-	-	-	-	-	0.1	0.0005	0.0005	0.0361	0.0005	0.00025	0.05
East Ditch	L2485688	MS-08-EAST-INFLOW	2020-06-24	-	-	-	-	-	0.263	0.0001	0.0001	0.00012	0.0383	0.0001	0.00005	0.045
East Ditch	L2481535	MS-08-EAST-INFLOW	2020-07-29	-	-	-	-	-	4.69	0.001	0.001	0.001	0.0371	0.001	0.0005	0.1
East Ditch	L2303578	MS-08-EAST-INFLOW	2019-07-02	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2295155	MS-08-EAST-INFLOW	2019-06-19	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2322461	MS-08-EAST-INFLOW	2019-08-02	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2291173	MS-08-EAST-INFLOW	2019-06-13	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2477770	MS-08-EAST-INFLOW	2020-07-21	-	-	-	-	-	-	0.207	0.001	0.001	0.0366	0.001	0.0005	0.1
East Ditch	L2294118	MS-08-EAST-INFLOW	2019-06-18	-	-	-	-	-	-	2.2	0.001	0.001	0.0211	0.001	0.0005	0.1
East Ditch	L2290598	MS-08-EAST-INFLOW	2019-06-12	-	-	-	-	-	-	6.05	0.001	0.001	0.0278	0.001	0.0005	0.1
East Ditch	L2296841	MS-08-EAST-INFLOW	2019-06-21	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2318249	MS-08-EAST-INFLOW	2019-07-25	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2339055	MS-08-EAST-INFLOW	2019-08-18	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2323296	MS-08-EAST-INFLOW	2019-08-08	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2320850	MS-08-EAST-INFLOW	2019-07-31	-	-	-	-	-	-	0.374	0.001	0.001	0.0196	0.001	0.0005	0.1
East Ditch	L2296464	MS-08-EAST-INFLOW	2019-08-13	-	-	-	-	-	-	13.8	0.001	0.0021	0.0886	0.001	0.0005	0.1
East Ditch	L2297656	MS-08-EAST-INFLOW	2019-08-11	-	-	-	-	-	-	1.12	0.001	0.001	0.0255	0.001	0.0005	0.1
East Ditch	L2297383	MS-08-EAST-INFLOW	2019-08-16	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2288473	MS-08-EAST-INFLOW	2019-10-01	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2282234	MS-08-EAST-INFLOW	2019-06-10	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2292454	MS-08-EAST-INFLOW	2019-06-14	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2468307	MS-08-EAST-INFLOW	2020-06-15	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2292486	MS-08-EAST-INFLOW	2020-06-30	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2287932	MS-08-EAST-INFLOW	2019-06-16	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2287932	MS-08-EAST-INFLOW	2019-06-07	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2496104	MS-08-EAST-INFLOW	2020-08-28	-	-	-	-	-	0.133	0.0001	0.0001	0.00013	0.0444	0.0001	0.00005	0.03
East Ditch	L2496103	MS-08-EAST-INFLOW	2020-08-26	-	-	-	-	-	0.145	0.0001	0.0001	0.00014	0.0463	0.0001	0.00005	0.031
East Ditch	L2397335	MS-08-EAST-INFLOW	2019-08-31	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2467060	MS-08-EAST-INFLOW	2020-06-25	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2467052	MS-08-EAST-INFLOW	2020-08-31	-	-	-	-	-	-	0.788	0.001	0.001	0.0348	0.001	0.0005	0.1
East Ditch	L2468140	MS-08-EAST-INFLOW	2020-08-30	-	-	-	-	-	0.281	0.001	0.001	0.001	0.0506	0.001	0.0005	0.1
East Ditch	L2358842	MS-08-EAST-INFLOW	2019-10-02	-	-	-	-	-	-	0.212	0.001	0.001	0.0186	0.001	0.0005	0.1
East Ditch	L2340461	MS-08-EAST-INFLOW	2020-09-03	-	-	-	-	-	0.081	0.001	0.001	0.001	0.0408	0.001	0.0005	0.1
East Ditch	L2468047	MS-08-EAST-INFLOW	2020-08-27	-	-	-	-	-	-	0.081	0.001	0.001	0.0408	0.001	0.0005	0.1
East Ditch	L2468120	MS-08-EAST-INFLOW	2020-08-29	-	-	-	-	-	-	0.0583	0.0001	0.00012	0.0426	0.0001	0.00005	0.027
East Ditch	L2342313	MS-08-EAST-INFLOW	2019-09-05	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2335475	MS-08-EAST-INFLOW	2019-08-25	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2293024	MS-08-EAST-INFLOW	2019-06-17	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2497356	MS-08-EAST-INFLOW	2020-09-01	-	-	-	-	-	0.082	0.001	0.001	0.001	0.0309	0.001	0.0005	0.1
East Ditch	L2335451	MS-08-EAST-INFLOW	2019-08-23	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2337960	MS-08-EAST-INFLOW	2019-08-27	-	-	-	-	-	0.394	0.001	0.001	0.001	0.0184	0.001	0.0005	0.1
East Ditch	L2496049	MS-08-EAST-INFLOW	2020-08-28	-	-	-	-	-	0.05	0.001	0.001	0.001	0.0435	0.001	0.0005	0.1
East Ditch	L2350914	MS-08-EAST-INFLOW	2019-08-19	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2346689	MS-08-EAST-INFLOW	2019-09-12	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units>	Phosphorus, Total	Sulfate (SO4)	Cyanide, Total	Dissolved Organic Carbon	Total Organic Carbon	Aluminum (Al)-Total	Antimony (Sb)-Total	Arsenic (As)-Total	Barium (Ba)-Total	Beryllium (Be)-Total	Bismuth (Bi)-Total	Boron (B)-Total
East Ditch	L2348201-1	MS-08-EAST-INFLOW	2019-09-16	Units>	-	-	-	-	-	0.959	0.001	0.001	0.0246	0.001	0.0005	0.1
East Ditch	L2345725-3	MS-08-EAST-INFLOW	2019-09-11	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2348069-3	MS-08-EAST-INFLOW	2019-09-09	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2288036-3	MS-08-EAST-INFLOW	2019-06-08	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L247290-23	MS-08-EAST-INFLOW	2020-07-10	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2405651-3	MS-08-EAST-INFLOW	2021-06-23	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2406899-2	MS-08-EAST-INFLOW	2021-06-26	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2406871-2	MS-08-EAST-INFLOW	2021-06-27	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2409262-2	MS-08-EAST-INFLOW	2021-07-01	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2610945-4	MS-08-EAST-INFLOW	2021-07-05	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2612337-1	MS-08-EAST-INFLOW	2021-07-11	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2618285-2	MS-08-EAST-INFLOW	2021-07-24	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2623788-4	MS-08-EAST-INFLOW	2021-08-06	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2623919-2	MS-08-EAST-INFLOW	2021-08-22	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2635846-2	MS-08-EAST-INFLOW	2021-09-05	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2725730-5	MS-08-EAST-INFLOW	2022-07-28	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2322461-2	MS-08-EAST-INFLOW01	2019-08-02	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2477770-4	MS-08-EAST-INFLOW01	2020-07-21	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2466140-3	MS-08-EAST-INFLOW01	2020-08-30	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2343354-4	MS-08-EAST-INFLOW	2019-09-08	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2722749-1	MS-08-EXPLORE-EASTDITCH	2022-07-10	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2713626-4	MS-08-INFLOW-EAST	2018-06-16	-	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2160094-4	MS-08-INFLOW-EAST	2018-09-06	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-1	CENTRAL-KEY-IN	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2312012-3	CENTRAL-KEY-IN	2019-07-17	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2328009-6	INFLUENT-CENTRAL-KEYIN	2019-08-13	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2287151-3	MS-08-EMERGENCY-DITCH	2019-06-06	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2340467-1	MS-SP-02	2019-09-03	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	PAG WR (max)	MS-SP-02	2019-09-01	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2303565-5	MS-SP-02	2019-07-02	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2327954-1	MS-SP-02	2019-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2320849-3	MS-SP-02	2019-07-30	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2298517-8	MS-SP-02	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-3	MS-SP-02	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2328092	MS-SP-02	2019-08-13	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2329020-5	MS-SP-02	2019-06-12	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2323304-3	MS-SP-02	2019-08-06	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2367749-3	MS-SP-04	2019-07-09	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2328091-1	MS-SP-04	2019-08-13	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2333401-1	MS-SP-04	2019-08-20	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2312012-1	MS-SP-04	2019-07-17	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2320849-4	MS-SP-04	2019-07-30	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2306206-6	MS-SP-04	2019-06-12	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-4	MS-SP-04	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2323304-4	MS-SP-04	2019-08-06	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2286317-9	MS-SP-04	2018-06-24	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2158115-6	MS-SP-04	2018-09-04	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2294129-9	MS-SP-0401	2019-06-18	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730435-1	MS-WRF-22-01	2022-08-28	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730435-2	MS-WRF-22-02	2022-08-28	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-1	MS-WRF-22-05	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-2	MS-WRF-22-05A	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-3	MS-WRF-22-05B	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-4	MS-WRF-22-06A	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-5	MS-WRF-22-09	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-6	MS-WRF-22-09A	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-7	MS-WRF-22-10	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-8	MS-WRF-22-12	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-9	MS-WRF-22-12A	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-10	MS-WRF-22-12A	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2730426-11	MS-WRF-22-18A	2022-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2478363-1	WRP-20-01	2020-07-22	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2488602-1	WRP-20-01	2020-08-12	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2482855-1	WRP-20-01A	2020-08-03	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2482855-2	WRP-20-01A	2020-08-03	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2488602-2	WRP-20-01A	2020-08-12	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2478363-2	WRP-20-02	2020-07-22	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2495466-4	WRP-20-03	2020-08-21	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2478363-3	WRP-20-04	2020-07-22	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2496722-5	WRP-20-04	2020-08-31	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2488602-3	WRP-20-04	2020-08-12	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2495466-2	WRP-20-04	2020-08-21	-	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2482855-3	WRP-20-04	2020-08-03	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units>	Sample Date	Phosphorus, Total	Sulfate (SO4)	Cyanide, Total	Dissolved Organic Carbon	Total Organic Carbon	Aluminum (Al)-Total	Antimony (Sb)-Total	Arsenic (As)-Total	Barium (Ba)-Total	Beryllium (Be)-Total	Bismuth (Bi)-Total	Boron (B)-Total
Runoff	L2495468-1	WRP-20-04A	2020-08-21	Units>	2020-08-21	-	-	-	-	mg/L	0.0593	0.0001	0.0001	0.0247	0.0001	0.00005	0.01
Runoff	L2478363-4	WRP-20-05	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	1.02	0.001	0.001	0.0259	0.001	0.0005	0.1
Runoff	L2482855-4	WRP-20-05	2020-08-03	2020-08-03	2020-08-03	-	-	-	-	-	1.65	0.001	0.001	0.0446	0.001	0.0005	0.1
Runoff	L2495466-3	WRP-20-05	2020-08-21	2020-08-21	2020-08-21	-	-	-	-	-	0.312	0.0001	0.0001	0.0381	0.0001	0.00005	0.01
Runoff	L2488602-4	WRP-20-09A	2020-08-12	2020-08-12	2020-08-12	-	-	-	-	-	15.9	0.0005	0.0005	0.00214	0.14	0.00088	0.037
Runoff	L2496722-8	WRP-20-09A	2020-08-31	2020-08-31	2020-08-31	-	-	-	-	-	51.3	0.001	0.001	0.0601	0.0001	0.0005	0.1
Runoff	L2482855-5	WRP-20-09A	2020-08-03	2020-08-03	2020-08-03	-	-	-	-	-	0.922	0.001	0.001	0.03	0.001	0.0005	0.1
Runoff	L2478363-5	WRP-20-07	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	11.3	0.001	0.001	0.0613	0.001	0.0005	0.1
Runoff	L2488602-5	WRP-20-07	2020-08-12	2020-08-12	2020-08-12	-	-	-	-	-	23.8	0.0005	0.0005	0.00313	0.139	0.00048	0.05
Runoff	L2495466-6	WRP-20-07	2020-08-03	2020-08-03	2020-08-03	-	-	-	-	-	57.2	0.001	0.001	0.0507	0.001	0.0005	0.1
Runoff	L2495466-7	WRP-20-07	2020-08-21	2020-08-21	2020-08-21	-	-	-	-	-	0.674	0.0005	0.0005	0.0402	0.0005	0.00025	0.05
Runoff	L2496722-7	WRP-20-07	2020-08-31	2020-08-31	2020-08-31	-	-	-	-	-	3.41	0.001	0.001	0.0394	0.001	0.0005	0.1
Runoff	L2495466-8	WRP-20-07A	2020-08-21	2020-08-21	2020-08-21	-	-	-	-	-	0.003	0.0001	0.0001	0.0001	0.0001	0.00005	0.01
Runoff	L2496722-8	WRP-20-08	2020-08-31	2020-08-31	2020-08-31	-	-	-	-	-	3.96	0.001	0.001	0.187	0.001	0.0005	0.1
Runoff	L2478363-6	WRP-20-08	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	3.66	0.001	0.001	0.0333	0.001	0.0005	0.1
Runoff	L2495466-6	WRP-20-08	2020-08-21	2020-08-21	2020-08-21	-	-	-	-	-	4.63	0.0005	0.0005	0.0275	0.0005	0.00025	0.062
Runoff	L2478363-7	WRP-20-09	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	0.704	0.001	0.001	0.0212	0.001	0.0005	0.1
Runoff	L2495466-5	WRP-20-10	2020-08-21	2020-08-21	2020-08-21	-	-	-	-	-	13.5	0.002	0.002	0.0491	0.0054	0.001	0.2
Runoff	L2478363-8	WRP-20-10	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	0.877	0.001	0.001	0.0994	0.001	0.0005	0.1
Runoff	L2482855-7	WRP-20-11	2020-08-03	2020-08-03	2020-08-03	-	-	-	-	-	34.9	0.001	0.001	0.0641	0.0111	0.0005	0.1
Runoff	L2478363-9	WRP-20-11	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	5.08	0.001	0.001	0.127	0.001	0.0005	0.1
Runoff	L2478363-10	WRP-20-12	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	3.89	0.001	0.001	0.0587	0.0018	0.0005	0.1
Runoff	L2495466-16	WRP-20-12	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	11.4	0.0001	0.0001	0.00434	0.0313	0.000122	0.03
Runoff	L2495466-20	WRP-20-1203	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	0.003	0.0001	0.0001	0.0001	0.0001	0.00005	0.01
Runoff	L2478363-11	WRP-20-13	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	0.765	0.001	0.001	0.0344	0.001	0.0005	0.1
Runoff	L2495466-12	WRP-20-13	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	6.73	0.0001	0.0001	0.0242	0.00036	0.000085	0.06
Runoff	L2485429-1	WRP-20-14	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	1.39	0.001	0.001	0.0316	0.0013	0.0005	0.1
Runoff	L2488602-6	WRP-20-14	2020-08-12	2020-08-12	2020-08-12	-	-	-	-	-	1.73	0.0005	0.0005	0.0319	0.0005	0.00025	0.087
Runoff	L2478363-12	WRP-20-14	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	8.72	0.001	0.001	0.0014	0.0019	0.00058	0.1
Runoff	L2495466-21	WRP-20-14	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	5.05	0.0001	0.0001	0.0201	0.00031	0.000062	0.061
Runoff	L2488602-7	WRP-20-1401	2020-08-12	2020-08-12	2020-08-12	-	-	-	-	-	1.9	0.0005	0.0005	0.0068	0.0307	0.00025	0.088
Runoff	L2485429-2	WRP-20-1403	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	0.005	0.0001	0.0001	0.0001	0.0001	0.00005	0.01
Runoff	L2478363-13	WRP-20-15	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	0.626	0.001	0.001	0.0246	0.001	0.0005	0.1
Runoff	L2485429-3	WRP-20-15	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	0.692	0.001	0.001	0.0217	0.001	0.0005	0.1
Runoff	L2495466-19	WRP-20-15	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	0.13	0.0001	0.0001	0.0157	0.0001	0.00005	0.067
Runoff	L2496722-9	WRP-20-15	2020-08-31	2020-08-31	2020-08-31	-	-	-	-	-	0.143	0.001	0.001	0.017	0.001	0.0005	0.1
Runoff	L2488602-8	WRP-20-15	2020-08-12	2020-08-12	2020-08-12	-	-	-	-	-	1.24	0.0002	0.0002	0.027	0.0002	0.0001	0.063
Runoff	L2485429-4	WRP-20-1501	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	0.144	0.001	0.001	0.187	0.001	0.0005	0.1
Runoff	PAG WRP (75th)	WRP-20-17	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	0.0282	0.0002	0.0002	0.187	0.0002	0.0001	0.053
Runoff	L2485429-5	WRP-20-17	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	0.219	0.001	0.001	0.0254	0.001	0.0005	0.1
Runoff	L2496722-4	WRP-20-17	2020-08-31	2020-08-31	2020-08-31	-	-	-	-	-	0.572	0.001	0.001	0.0231	0.001	0.0005	0.1
Runoff	L2478363-14	WRP-20-17	2020-07-22	2020-07-22	2020-07-22	-	-	-	-	-	0.759	0.001	0.001	0.0391	0.001	0.0005	0.1
Runoff	L2485429-6	WRP-20-1702	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	0.009	0.0001	0.0001	0.0001	0.0001	0.00005	0.01
Runoff	L2485429-7	WRP-20-18	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	1.13	0.001	0.001	0.283	0.001	0.0005	0.1
Runoff	L2479665-1	WRP-20-18	2020-07-24	2020-07-24	2020-07-24	-	-	-	-	-	0.131	0.0002	0.0002	0.026	0.0002	0.0001	0.061
Runoff	L2485466-14	WRP-20-18	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	0.236	0.0002	0.0002	0.196	0.0002	0.0001	0.051
Runoff	L2486722-3	WRP-20-18	2020-08-31	2020-08-31	2020-08-31	-	-	-	-	-	2.4	0.001	0.001	0.0309	0.001	0.0005	0.1
Runoff	L2488602-9	WRP-20-18	2020-08-12	2020-08-12	2020-08-12	-	-	-	-	-	4.19	0.0002	0.0002	0.0059	0.00045	0.0001	0.057
Runoff	L2479665-2	WRP-20-1801	2020-07-24	2020-07-24	2020-07-24	-	-	-	-	-	0.0723	0.0002	0.0002	0.0255	0.0002	0.0001	0.06
Runoff	L2485429-8	WRP-20-19	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	0.54	0.001	0.001	0.0259	0.001	0.0005	0.1
Runoff	L2488602-10	WRP-20-19	2020-08-12	2020-08-12	2020-08-12	-	-	-	-	-	0.269	0.0002	0.0002	0.0222	0.0002	0.0001	0.046
Runoff	L2479665-3	WRP-20-19	2020-07-24	2020-07-24	2020-07-24	-	-	-	-	-	0.488	0.0002	0.0002	0.0332	0.0002	0.0001	0.052
Runoff	L2495466-15	WRP-20-19	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	9.12	0.0001	0.0001	0.0156	0.0004	0.000143	0.035
Runoff	L2496722-1	WRP-20-19	2020-08-31	2020-08-31	2020-08-31	-	-	-	-	-	0.058	0.001	0.001	0.0245	0.001	0.0005	0.1
Runoff	L2479665-4	WRP-20-1901	2020-07-24	2020-07-24	2020-07-24	-	-	-	-	-	0.447	0.0002	0.0002	0.0316	0.0002	0.0001	0.05
Runoff	L2485429-9	WRP-20-20	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	0.407	0.001	0.001	0.026	0.001	0.0005	0.1
Runoff	L2479665-5	WRP-20-20	2020-07-24	2020-07-24	2020-07-24	-	-	-	-	-	1.71	0.0002	0.0002	0.0398	0.0002	0.0001	0.047
Runoff	L2496722-2	WRP-20-20	2020-08-31	2020-08-31	2020-08-31	-	-	-	-	-	0.462	0.001	0.001	0.0261	0.0001	0.0005	0.1
Runoff	L2495466-17	WRP-20-20	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	12.6	0.00013	0.00013	0.00205	0.00058	0.000201	0.034
Runoff	L2495466-9	WRP-20-20A	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	10.6	0.00012	0.00012	0.00173	0.0005	0.000163	0.037
Runoff	L2485429-10	WRP-20-20A	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	2.87	0.001	0.001	0.0532	0.001	0.0005	0.1
Runoff	L2479665-6	WRP-20-21	2020-07-24	2020-07-24	2020-07-24	-	-	-	-	-	11.3	0.0002	0.0002	0.0232	0.00055	0.00016	0.063
Runoff	L2479665-7	WRP-20-22	2020-08-22	2020-08-22	2020-08-22	-	-	-	-	-	10.6	0.0002	0.0002	0.0733	0.0004	0.00011	0.056
Runoff	L2495466-18	WRP-20-22	2020-08-12	2020-08-12	2020-08-12	-	-	-	-	-	1.49	0.0001	0.0001	0.0299	0.0001	0.00005	0.058
Runoff	L2479665-8	WRP-20-2201	2020-07-24	2020-07-24	2020-07-24	-	-	-	-	-	7.45	0.0002	0.0002	0.00112	0.0003	0.00005	0.053
Runoff	L2485429-11	WRP-20-23	2020-08-04	2020-08-04	2020-08-04	-	-	-	-	-	0.75	0.001	0.001	0.0379	0.001	0.0005	0.1
Runoff	L2479665-9	WRP-20-23	2020-07-24	2020-07-24	2020-07-24	-	-	-	-	-	0.962	0.0001	0.0001	0.0			

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units>	Phosphorus, Total	Sulfate (SO4)	Cyanide, Total	Dissolved Organic Carbon	Total Organic Carbon	Aluminum (Al)-Total	Antimony (Sb)-Total	Arsenic (As)-Total	Barium (Ba)-Total	Beryllium (Be)-Total	Bismuth (Bi)-Total	Boron (B)-Total
Runoff	L2610912-9	WRP-21-01 2021-07-05 1410	2021-07-05	µg/L	-	-	-	-	-	6.84	0.001	0.0016	0.0548	0.001	0.0005	0.1
Runoff	L2612335-5	WRP-21-01 2021-07-11 0910	2021-07-11	2021-07-11	-	-	-	-	-	0.575	0.001	0.001	0.0582	0.001	0.0005	0.1
Runoff	L2627496-25	WRP-21-02 16-08-2021 1345	2021-08-16	2021-08-16	-	-	-	-	-	0.05	0.001	0.001	0.0315	0.001	0.0005	0.1
Runoff	L2610912-8	WRP-21-02 2021-07-05 1350	2021-07-05	2021-07-05	-	-	-	-	-	19.8	0.001	0.0044	0.142	0.001	0.0005	0.1
Runoff	L2612335-2	WRP-21-02 2021-07-11 0930	2021-07-11	2021-07-11	-	-	-	-	-	3.78	0.001	0.001	0.0697	0.001	0.0005	0.1
Runoff	L2612335-3	WRP-21-02 2021-07-11 0945	2021-07-11	2021-07-11	-	-	-	-	-	1.98	0.001	0.0016	0.0709	0.001	0.0005	0.1
Runoff	L2618284-11	WRP-21-02A 2021-07-23	2021-07-23	2021-07-23	-	-	-	-	-	0.224	0.0001	0.00016	0.1	0.0001	0.00005	0.029
Runoff	L2627496-24	WRP-21-03 16-08-2021 1320	2021-08-16	2021-08-16	-	-	-	-	-	0.05	0.001	0.0001	0.0424	0.001	0.0005	0.1
Runoff	L2610912-7	WRP-21-03 2021-07-05 1340	2021-07-05	2021-07-05	-	-	-	-	-	6.55	0.001	0.0012	0.0958	0.001	0.0005	0.1
Runoff	L2610912-6	WRP-21-04 2021-07-05 1320	2021-07-05	2021-07-05	-	-	-	-	-	68.4	0.001	0.0143	0.26	0.0028	0.00072	0.1
Runoff	L2627498-17	WRP-21-04A 16-08-2021 1240	2021-08-16	2021-08-16	-	-	-	-	-	0.63	0.01	0.01	0.024	0.01	0.005	1
Runoff	L2612335-4	WRP-21-04A 2021-07-11 1005	2021-07-11	2021-07-11	-	-	-	-	-	1.98	0.001	0.001	0.0218	0.001	0.0005	0.1
Runoff	L2627498-18	WRP-21-04B 16-08-2021 1300	2021-08-16	2021-08-16	-	-	-	-	-	0.513	0.001	0.001	0.0252	0.001	0.0005	0.1
Runoff	L2627498-19	WRP-21-04B 16-08-2021 1205	2021-08-16	2021-08-16	-	-	-	-	-	0.072	0.001	0.001	0.0175	0.001	0.0005	0.1
Runoff	L2610912-5	WRP-21-05 2021-07-05 1300	2021-07-05	2021-07-05	-	-	-	-	-	7.81	0.001	0.002	0.0929	0.001	0.0005	0.1
Runoff	L2612335-5	WRP-21-05 2021-07-11 1025	2021-07-11	2021-07-11	-	-	-	-	-	0.281	0.001	0.001	0.0147	0.001	0.0005	0.1
Runoff	L2610912-4	WRP-21-06 2021-07-05 1245	2021-07-05	2021-07-05	-	-	-	-	-	5.95	0.001	0.0011	0.0573	0.001	0.0005	0.1
Runoff	L2612335-7	WRP-21-06 2021-07-11 1040	2021-07-11	2021-07-11	-	-	-	-	-	2.62	0.001	0.001	0.0335	0.001	0.0005	0.1
Runoff	L2627498-21	WRP-21-07 16-08-2021 1140	2021-08-16	2021-08-16	-	-	-	-	-	1.07	0.001	0.001	0.012	0.001	0.0005	0.1
Runoff	L2610912-3	WRP-21-07 2021-07-05 1155	2021-07-05	2021-07-05	-	-	-	-	-	3.14	0.001	0.001	0.0359	0.001	0.0005	0.1
Runoff	L2612335-8	WRP-21-07A 2021-07-11 1110	2021-07-11	2021-07-11	-	-	-	-	-	3.73	0.001	0.001	0.0153	0.001	0.0005	0.1
Runoff	L2627498-22	WRP-21-07B 16-08-2021 1130	2021-08-16	2021-08-16	-	-	-	-	-	0.07	0.001	0.001	0.0404	0.001	0.0005	0.1
Runoff	L2612335-9	WRP-21-07B 2021-07-11 1125	2021-07-11	2021-07-11	-	-	-	-	-	2.79	0.001	0.001	0.0203	0.001	0.0005	0.1
Runoff	L2627498-23	WRP-21-08 16-08-2021 1115	2021-08-16	2021-08-16	-	-	-	-	-	2.33	0.001	0.001	0.024	0.001	0.0005	0.1
Runoff	L2610912-2	WRP-21-08 2021-07-05 1125	2021-07-05	2021-07-05	-	-	-	-	-	1.48	0.001	0.001	0.0215	0.001	0.0005	0.1
Runoff	L2612335-10	WRP-21-08 2021-07-11 1140	2021-07-11	2021-07-11	-	-	-	-	-	0.865	0.001	0.001	0.0084	0.001	0.0005	0.1
Runoff	L2618284-10	WRP-21-09 2021-07-23	2021-07-23	2021-07-23	-	-	-	-	-	0.812	0.0001	0.00024	0.0173	0.0001	0.00005	0.027
Runoff	L2627498-20	WRP-21-09 2021-07-05 1110	2021-07-05	2021-07-05	-	-	-	-	-	0.598	0.001	0.001	0.0188	0.001	0.0005	0.1
Runoff	L2610912-1	WRP-21-09 2021-07-11 1200	2021-07-11	2021-07-11	-	-	-	-	-	9.11	0.001	0.0031	0.0386	0.001	0.0005	0.1
Runoff	L2612335-11	WRP-21-09 2021-07-23	2021-07-23	2021-07-23	-	-	-	-	-	11.2	0.001	0.0038	0.0531	0.001	0.0005	0.1
Runoff	L2618284-9	WRP-21-10A 2021-07-23	2021-07-23	2021-07-23	-	-	-	-	-	1.56	0.0005	0.0005	0.0237	0.00092	0.00025	0.088
Runoff	L2627498-9	WRP-21-10 15-08-2021 1500	2021-08-15	2021-08-15	-	-	-	-	-	0.328	0.001	0.001	0.0141	0.001	0.0005	0.1
Runoff	L2610912-14	WRP-21-10 2021-07-05 1550	2021-07-05	2021-07-05	-	-	-	-	-	4.76	0.001	0.001	0.0461	0.001	0.0005	0.1
Runoff	L2612335-12	WRP-21-10 2021-07-11 1240	2021-07-11	2021-07-11	-	-	-	-	-	3.02	0.001	0.001	0.0506	0.001	0.0005	0.1
Runoff	L2618284-7	WRP-21-10 2021-07-23	2021-07-23	2021-07-23	-	-	-	-	-	0.0546	0.0002	0.0002	0.0169	0.0002	0.0001	0.044
Runoff	L2627498-11	WRP-21-10A 15-08-2021 1435	2021-08-15	2021-08-15	-	-	-	-	-	0.206	0.0001	0.0001	0.00849	0.0001	0.00005	0.042
Runoff	L2612335-13	WRP-21-10A 2021-07-11 1255	2021-07-11	2021-07-11	-	-	-	-	-	1.15	0.001	0.001	0.0124	0.001	0.0005	0.1
Runoff	L2627498-8	WRP-21-11 15-08-2021 1415	2021-08-15	2021-08-15	-	-	-	-	-	0.235	0.001	0.001	0.0119	0.001	0.0005	0.1
Runoff	L2610912-13	WRP-21-11 2021-07-05 1530	2021-07-05	2021-07-05	-	-	-	-	-	12.7	0.001	0.0026	0.103	0.0012	0.0005	0.1
Runoff	L2612335-14	WRP-21-11 2021-07-11 1310	2021-07-11	2021-07-11	-	-	-	-	-	0.769	0.001	0.001	0.0096	0.001	0.0005	0.1
Runoff	L2618284-6	WRP-21-11 2021-07-23	2021-07-23	2021-07-23	-	-	-	-	-	1.43	0.0001	0.00022	0.0242	0.0001	0.00005	0.052
Runoff	L2610912-11	WRP-21-12 2021-07-05 1520	2021-07-05	2021-07-05	-	-	-	-	-	10.4	0.001	0.0019	0.0876	0.0012	0.0005	0.1
Runoff	L2627498-10	WRP-21-13 15-08-2021 1400	2021-08-15	2021-08-15	-	-	-	-	-	0.258	0.001	0.001	0.0268	0.001	0.0005	0.1
Runoff	L2610912-10	WRP-21-13 2021-07-05 1505	2021-07-05	2021-07-05	-	-	-	-	-	1.61	0.001	0.001	0.0354	0.001	0.0005	0.1
Runoff	L2612335-15	WRP-21-13 2021-07-11 1320	2021-07-11	2021-07-11	-	-	-	-	-	4.26	0.001	0.001	0.0487	0.001	0.0005	0.1
Runoff	L2618284-5	WRP-21-13 2021-07-23	2021-07-23	2021-07-23	-	-	-	-	-	0.515	0.0005	0.0008	0.0282	0.0005	0.00025	0.05
Runoff	L2627498-12	WRP-21-14 15-08-2021 1255	2021-08-15	2021-08-15	-	-	-	-	-	8.25	0.001	0.0015	0.0407	0.001	0.0005	0.1
Runoff	L2612842-1	WRP-21-14 2021-07-12 1300	2021-07-12	2021-07-12	-	-	-	-	-	5.39	0.001	0.001	0.0385	0.001	0.0005	0.1
Runoff	L2618284-4	WRP-21-14 2021-07-22	2021-07-22	2021-07-22	-	-	-	-	-	1.78	0.0001	0.00018	0.0263	0.001	0.00005	0.043
Runoff	L2627498-1	WRP-21-14A 15-08-2021 1150	2021-08-15	2021-08-15	-	-	-	-	-	0.732	0.001	0.001	0.0285	0.001	0.0005	0.1
Runoff	L2627498-13	WRP-21-14B 15-08-2021 1225	2021-08-15	2021-08-15	-	-	-	-	-	0.565	0.001	0.001	0.04	0.001	0.0005	0.1
Runoff	L2627498-14	WRP-21-14C 15-08-2021 1240	2021-08-15	2021-08-15	-	-	-	-	-	0.696	0.001	0.001	0.0387	0.001	0.0005	0.1
Runoff	L2627498-3	WRP-21-15 15-08-2021 1125	2021-08-15	2021-08-15	-	-	-	-	-	1.42	0.001	0.001	0.0138	0.001	0.0005	0.1
Runoff	L2612842-2	WRP-21-15 2021-07-12 1325	2021-07-12	2021-07-12	-	-	-	-	-	2.27	0.001	0.001	0.0146	0.001	0.0005	0.1
Runoff	L2612842-3	WRP-21-16 2021-07-12 1340	2021-07-12	2021-07-12	-	-	-	-	-	4.27	0.001	0.001	0.0331	0.001	0.0005	0.1
Runoff	L2618284-3	WRP-21-16 2021-07-22	2021-07-22	2021-07-22	-	-	-	-	-	2.24	0.0001	0.00037	0.0208	0.0001	0.00005	0.042
Runoff	L2627498-2	WRP-21-17 15-08-2021 1105	2021-08-15	2021-08-15	-	-	-	-	-	0.168	0.001	0.001	0.0131	0.001	0.0005	0.1
Runoff	L2612842-4	WRP-21-17 2021-07-12 1350	2021-07-12	2021-07-12	-	-	-	-	-	1.63	0.001	0.001	0.0162	0.001	0.0005	0.1
Runoff	L2627498-4	WRP-21-18 15-08-2021 1055	2021-08-15	2021-08-15	-	-	-	-	-	0.22	0.001	0.001	0.0343	0.001	0.0005	0.1
Runoff	L2612842-5	WRP-21-18 2021-07-12 1435	2021-07-12	2021-07-12	-	-	-	-	-	4.67	0.001	0.001	0.0341	0.001	0.0005	0.1
Runoff	L2627498-7	WRP-21-19 15-08-2021 1435	2021-08-15	2021-08-15	-	-	-	-	-	1.41	0.0001	0.00041	0.0217	0.00015	0.00005	0.06
Runoff	L2618284-2	WRP-21-19 2021-07-22	2021-07-22	2021-07-22	-	-	-	-	-	1.45	0.001	0.001	0.021	0.001	0.0005	0.1
Runoff	L2612842-6	WRP-21-19 2021-07-22	2021-07-22	2021-07-22	-	-	-	-	-	0.288	0.0001	0.00019	0.0287	0.0001	0.00005	0.066
Runoff	L2627498-5	WRP-21-19A 15-08-2021 1020	2021-08-15	2021-08-15	-	-	-	-	-	0.344	0.0001	0.00016	0.0111	0.0001	0.00005	0.01
Runoff	L2627498-6	WRP-21-20 15-08-2021 1005	2021-08-15	2021-08-15	-	-	-	-	-	0.173	0.0001	0.0001	0.0005	0.001	0.00005	0.01
Runoff	L2612842-7	WRP-21-20 2021-07-12 1510	2021-07-12	2021-07-12	-	-	-	-	-	1.27	0.001	0.001	0.0107	0.001	0.0005	0.1
Runoff	L2618284-1	WRP-21-20 2021-07-22	2021-07-22	2021-07-22	-	-	-	-	-	0.357	0.0001	0.00013	0.00903	0.0001	0.00005	0.01
Runoff	L2725732-1	WRP-22-01 2022-07-28	2022-07-28	2022-07-												

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units>	Phosphorus, Total	Sulfate (SO4)	Cyanide, Total	Dissolved Organic Carbon	Total Organic Carbon	Aluminum (Al)-Total	Antimony (Sb)-Total	Arsenic (As)-Total	Barium (Ba)-Total	Beryllium (Be)-Total	Bismuth (Bi)-Total	Boron (B)-Total
Runoff	L2125732-7	WRP-22-07	2022-07-28	2022-07-28	-	-	-	-	-	1.04	0.001	0.001	0.0068	0.001	0.0005	0.1
Runoff	L2125732-8	WRP-22-06	2022-07-28	2022-07-28	-	-	-	-	-	2.06	0.001	0.001	0.0195	0.001	0.0005	0.1
Runoff	L2125732-9	WRP-22-05	2022-07-28	2022-07-28	-	-	-	-	-	0.48	0.001	0.001	0.0147	0.001	0.0005	0.1
Runoff	L2125732-10	WRP-22-10	2022-07-28	2022-07-28	-	-	-	-	-	0.754	0.001	0.001	0.0105	0.001	0.0005	0.1
Runoff	L2125732-11	WRP-22-11	2022-07-28	2022-07-28	-	-	-	-	-	10.9	0.001	0.0015	0.0625	0.001	0.0005	0.1
Runoff	L2125732-12	WRP-22-12	2022-07-28	2022-07-28	-	-	-	-	-	0.213	0.001	0.001	0.0133	0.001	0.0005	0.1
Runoff	L2125732-13	WRP-22-13	2022-07-29	2022-07-29	-	-	-	-	-	0.122	0.001	0.001	0.0147	0.001	0.0005	0.1
Runoff	L2125732-14	WRP-22-14	2022-07-29	2022-07-29	-	-	-	-	-	0.302	0.001	0.001	0.0122	0.001	0.0005	0.036
Runoff	L2125732-15	WRP-22-15	2022-07-29	2022-07-29	-	-	-	-	-	1.12	0.001	0.002	0.0165	0.001	0.0005	0.024
Runoff	L2125732-16	WRP-22-16	2022-07-29	2022-07-29	-	-	-	-	-	0.0244	0.001	0.001	0.00729	0.001	0.0005	0.035
Runoff	L2125732-17	WRP-22-17	2022-07-29	2022-07-29	-	-	-	-	-	0.125	0.001	0.001	0.0112	0.001	0.0005	0.1
Runoff	L2125732-18	WRP-22-18	2022-07-29	2022-07-29	-	-	-	-	-	3.41	0.001	0.00029	0.0422	0.00028	0.0005	0.041
Runoff	L2157407-6	WRP-DD-E1	2018-09-01	2018-09-01	-	-	-	-	-	0.284	0.001	0.001	0.0267	0.001	0.0005	0.1
Runoff	L2158115-4	WRPP	2018-09-04	2018-09-04	-	-	-	-	-	43.5	0.01	0.013	0.041	0.001	0.005	1
Runoff	L2306749-1	WRP-S10	2019-07-09	2019-07-09	-	-	-	-	-	21.1	0.001	0.0034	0.0392	0.0126	0.0005	0.14
Runoff	L2158115-3	WRP-S10	2018-09-04	2018-09-04	-	-	-	-	-	55.2	0.01	0.015	0.033	0.001	0.005	1
Runoff	L2298517-5	WRP-S10	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2320849-1	WRP-S10	2019-07-30	2019-07-30	-	-	-	-	-	20.3	0.001	0.0032	0.069	0.0015	0.00053	0.1
Runoff	L2290620-2	WRP-S11	2019-06-12	2019-06-12	-	-	-	-	-	4.08	0.001	0.001	0.0143	0.0056	0.0005	0.1
Runoff	L2290620-3	WRP-S11	2019-06-12	2019-06-12	-	-	-	-	-	31.3	0.001	0.0042	0.122	0.0022	0.00061	0.1
Runoff	L2298517-7	WRP-S11	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-2	WRP-S12	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2303565-4	WRP-S12	2019-07-02	2019-07-02	-	-	-	-	-	0.13	0.001	0.001	0.017	0.001	0.0005	0.1
Runoff	L2298517-6	WRP-S12	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2290620-4	WRP-S12	2019-06-12	2019-06-12	-	-	-	-	-	11.1	0.001	0.0015	0.0585	0.001	0.0005	0.1
Runoff	L2320849-2	WRP-S12	2019-07-30	2019-07-30	-	-	-	-	-	0.219	0.001	0.001	0.0163	0.001	0.0005	0.1
Runoff	L2157407-16	WRP-S14	2018-09-01	2018-09-01	-	-	-	-	-	0.05	0.001	0.001	0.0268	0.001	0.0005	0.1
Runoff	L2303565-3	WRP-S15	2019-07-02	2019-07-02	-	-	-	-	-	2.99	0.001	0.001	0.0243	0.0013	0.0005	0.1
Runoff	L2337954-2	WRP-S15	2019-08-27	2019-08-27	-	-	-	-	-	1.95	0.01	0.01	0.022	0.01	0.005	1
Runoff	L2323304-1	WRP-S15	2019-08-06	2019-08-06	-	-	-	-	-	5.24	0.01	0.01	0.028	0.01	0.005	1
Runoff	L2306749-2	WRP-S15	2019-07-09	2019-07-09	-	-	-	-	-	0.777	0.001	0.001	0.0269	0.001	0.0005	0.1
Runoff	L2298517-3	WRP-S15	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L22941294-8	WRP-S15	2019-06-18	2019-06-18	-	-	-	-	-	6.57	0.001	0.0011	0.0351	0.001	0.0005	0.1
Runoff	L2158115-7	WRP-S15NEW	2018-09-04	2018-09-04	-	-	-	-	-	0.991	0.001	0.001	0.0178	0.001	0.0005	0.1
Runoff	L2312012-4	WRP-S16	2019-07-17	2019-07-17	-	-	-	-	-	11.1	0.01	0.01	0.035	0.01	0.005	1
Runoff	L2333401-3	WRP-S16	2019-08-20	2019-08-20	-	-	-	-	-	4.3	0.01	0.01	0.025	0.01	0.005	1
Runoff	L2328009-4	WRP-S16	2019-08-13	2019-08-13	-	-	-	-	-	4.31	0.001	0.001	0.0202	0.0023	0.0005	0.1
Runoff	L233304-2	WRP-S16	2019-08-06	2019-08-06	-	-	-	-	-	5.82	0.001	0.001	0.021	0.01	0.005	1
Runoff	L2290620-6	WRP-S16	2019-06-12	2019-06-12	-	-	-	-	-	5.84	0.001	0.001	0.0232	0.001	0.0005	0.1
Runoff	L2298517-4	WRP-S16	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2158115-8	WRP-S16NEW	2018-09-04	2018-09-04	-	-	-	-	-	14	0.01	0.01	0.021	0.01	0.005	1
Runoff	L2290620-7	WRP-S17	2019-06-12	2019-06-12	-	-	-	-	-	12.3	0.001	0.0015	0.0604	0.001	0.0005	0.1
Runoff	L2303565-1	WRP-S17	2019-07-02	2019-07-02	-	-	-	-	-	7.57	0.001	0.001	0.0305	0.001	0.0005	0.1
Runoff	L2306749-5	WRP-S17	2019-07-09	2019-07-09	-	-	-	-	-	0.31	0.0001	0.0001	0.0119	0.0001	0.0005	0.01
Runoff	L2306749-4	WRP-S18	2019-07-09	2019-07-09	-	-	-	-	-	2.55	0.01	0.01	0.046	0.01	0.005	1
Runoff	L2312012-2	WRP-S18	2019-07-17	2019-07-17	-	-	-	-	-	12.8	0.001	0.0026	0.0522	0.0038	0.0005	0.1
Runoff	L2303565-5	WRP-S18	2019-07-02	2019-07-02	-	-	-	-	-	1.37	0.001	0.001	0.0279	0.001	0.0005	0.1
Runoff	L2298517-10	WRP-S18	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2303565-2	WRP-S4	2019-07-02	2019-07-02	-	-	-	-	-	9.53	0.001	0.0017	0.0578	0.001	0.0005	0.1
Runoff	L2298517-2	WRP-S4	2019-06-24	2019-06-24	-	-	-	-	-	0.0764	0.0001	0.00014	0.0353	0.0001	0.0005	0.036
Runoff	L2328009-3	WRP-S5	2019-08-13	2019-08-13	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2333401-2	WRP-S5	2019-08-20	2019-08-20	-	-	-	-	-	0.802	0.001	0.001	0.0446	0.001	0.0005	0.1
Runoff	L2290620-1	WRP-S5	2019-06-12	2019-06-12	-	-	-	-	-	0.433	0.001	0.001	0.0256	0.001	0.0005	0.1
Runoff	L2158115-5	WRP-S5	2018-09-04	2018-09-04	-	-	-	-	-	8.57	0.001	0.0014	0.0515	0.001	0.0005	0.1
Runoff	L2298517-1	WRP-S5	2019-06-24	2019-06-24	-	-	-	-	-	3.49	0.001	0.001	0.0354	0.001	0.0005	0.1
Runoff	L2157407-10	WRP-S6	2018-09-01	2018-09-01	-	-	-	-	-	0.554	0.001	0.001	0.0254	0.001	0.0005	0.1
West Ditch	L2727249-4	MS-08-EXPLORE-WESTDITCH	2022-07-10	2022-07-10	-	-	-	-	-	2.58	0.0001	0.00039	0.0206	0.00011	0.00172	0.019
West Ditch	L215212-3	MS-08-INFLOW-WEST	2018-06-20	2018-06-20	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L215893-3	MS-08-INFLOW-WEST	2018-06-20	2018-06-20	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2114971-3	MS-08-INFLOW-WEST	2018-06-19	2018-06-19	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L213672-2	MS-08-INFLOW-WEST	2018-06-17	2018-06-17	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L213576-3	MS-08-INFLOW-WEST	2018-06-15	2018-06-15	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2114098-3	MS-08-INFLOW-WEST	2018-06-18	2018-06-18	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2160094-1	MS-08-INFLOW-WEST	2018-09-06	2018-09-06	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2110885-3	MS-08-INFLOW-WEST	2018-06-12	2018-06-12	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2113626-3	MS-08-INFLOW-WEST	2018-06-16	2018-06-16	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2110060-3	MS-08-INFLOW-WEST	2018-06-10	2018-06-10	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2112194-3	MS-08-INFLOW-WEST	2018-06-14	2018-06-14	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2111853-3	MS-08-INFLOW-WEST	2018-06-13	2018-06-13	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2108641-2	MS-08-INFLOW-WEST	2018-06-07	2018-06-07	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2288069-4	MS-08-WEST INFLOW	2019-06-09	2019-06-09	-	-	-	-	-	11.3	0.001	0.0021	0.0649	0.001	0.0005	0.1
West Ditch	L2301632-4	MS-08-WEST-DITCH	2019-07-01	2019-07-01	-	-	-	-	-	-	-	-	-	-	-	-



Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units>	Phosphorus, Total	Sulfate (SO4)	Cyanide, Total	Dissolved Organic Carbon	Total Organic Carbon	Aluminum (Al)-Total	Antimony (Sb)-Total	Arsenic (As)-Total	Barium (Ba)-Total	Beryllium (Be)-Total	Bismuth (Bi)-Total	Boron (B)-Total
West Ditch	L2335451-5	MS-08-WEST-INFLOW	2019-08-23	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2316396-5	MS-08-WEST-INFLOW	2018-07-28	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2336761-4	MS-08-WEST-INFLOW	2019-07-09	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2318249-5	MS-08-WEST-INFLOW	2019-07-25	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2313936-5	MS-08-WEST-INFLOW	2019-07-20	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2312016-4	MS-08-WEST-INFLOW	2019-07-17	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2320850-4	MS-08-WEST-INFLOW	2019-07-31	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2340461-4	MS-08-WEST-INFLOW	2019-09-03	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2306806-4	MS-08-WEST-INFLOW	2019-07-08	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2322481-5	MS-08-WEST-INFLOW	2019-08-02	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2305072-5	MS-08-WEST-INFLOW	2019-07-05	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2290598-4	MS-08-WEST-INFLOW	2019-06-12	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2342313-4	MS-08-WEST-INFLOW	2019-09-05	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2291173-4	MS-08-WEST-INFLOW	2019-06-13	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2330906-2	MS-08-WEST-INFLOW	2019-08-18	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2327989-3	MS-08-WEST-INFLOW	2019-08-13	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2295991-4	MS-08-WEST-INFLOW	2019-06-20	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2343354-1	MS-08-WEST-INFLOW	2019-09-08	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2305224-5	MS-08-WEST-INFLOW	2019-07-06	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2326464-3	MS-08-WEST-INFLOW	2019-08-11	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2309409-5	MS-08-WEST-INFLOW	2019-07-12	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2325446-3	MS-08-WEST-INFLOW	2019-08-08	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2298617-4	MS-08-WEST-INFLOW	2019-06-25	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2301467-4	MS-08-WEST-INFLOW	2019-06-28	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2307801-4	MS-08-WEST-INFLOW	2019-07-10	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2315508-5	MS-08-WEST-INFLOW	2019-07-23	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2295156-4	MS-08-WEST-INFLOW	2019-06-19	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2301572-4	MS-08-WEST-INFLOW	2019-06-29	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2308636-4	MS-08-WEST-INFLOW	2019-07-11	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2301607-4	MS-08-WEST-INFLOW	2019-06-30	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2292454-4	MS-08-WEST-INFLOW	2019-06-15	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2303578-4	MS-08-WEST-INFLOW	2019-07-02	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2292234-4	MS-08-WEST-INFLOW	2019-06-14	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2306549-4	MS-08-WEST-INFLOW	2019-07-14	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2305269-5	MS-08-WEST-INFLOW	2019-07-07	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2306534-4	MS-08-WEST-INFLOW	2019-06-27	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2337960-4	MS-08-WEST-INFLOW	2019-08-27	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2296973-4	MS-08-WEST-INFLOW	2019-06-23	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2309510-5	MS-08-WEST-INFLOW	2019-07-13	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2393024-4	MS-08-WEST-INFLOW	2019-06-17	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2294118-4	MS-08-WEST-INFLOW	2019-06-18	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2304339-4	MS-08-WEST-INFLOW	2019-07-03	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2297032-4	MS-08-WEST-INFLOW	2019-06-07	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2355516-2	MS-08-WEST-INFLOW	2019-06-27	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2296841-4	MS-08-WEST-INFLOW	2019-08-21	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2297626-4	MS-08-WEST-INFLOW	2019-06-24	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2296968-4	MS-08-WEST-INFLOW	2019-06-22	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2300513-4	MS-08-WEST-INFLOW	2019-06-26	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2357363-3	MS-08-WEST-INFLOW	2019-10-01	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2298447-4	MS-08-WEST-INFLOW	2019-06-10	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2339733-6	MS-08-WEST-INFLOW	2019-08-31	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2287151-4	MS-08-WEST-INFLOW	2019-06-06	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2304338-5	MS-08-WEST-INFLOW	2019-07-04	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2468307-1	MS-08-WEST-INFLOW	2020-06-30	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2330756-2	MS-08-WEST-INFLOW	2019-08-16	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2358842-2	MS-08-WEST-INFLOW	2019-10-02	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2467060-3	MS-08-WEST-INFLOW	2020-06-25	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2346689-1	MS-08-WEST-INFLOW	2019-09-12	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2346723-2	MS-08-WEST-INFLOW	2019-09-11	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2288035-4	MS-08-WEST-INFLOW	2019-06-08	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2477770-6	MS-08-WEST-INFLOW	2020-07-21	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2488568-3	MS-08-WEST-INFLOW	2020-08-12	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2482854-5	MS-08-WEST-INFLOW	2020-08-03	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2348201-2	MS-08-WEST-INFLOW	2019-09-16	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2481535-1	MS-08-WEST-INFLOW	2020-07-29	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2496104-4	MS-08-WEST-INFLOW	2020-08-26	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2496103-1	MS-08-WEST-INFLOW	2020-08-26	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2496140-1	MS-08-WEST-INFLOW	2020-08-30	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2496120-1	MS-08-WEST-INFLOW	2020-08-29	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2496049-1	MS-08-WEST-INFLOW	2020-08-28	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2496047-1	MS-08-WEST-INFLOW	2020-08-27	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2496706-1	MS-08-WEST-INFLOW	2020-08-31	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units>	Phosphorus, Total	Sulfate (SO4)	Cyanide, Total	Dissolved Organic Carbon	Total Organic Carbon	Aluminum (Al)-Total	Antimony (Sb)-Total	Arsenic (As)-Total	Barium (Ba)-Total	Beryllium (Be)-Total	Bismuth (Bi)-Total	Boron (B)-Total
West Ditch	L2497358-1	MS-08-WEST-INFLOW	2020-09-01	-	-	-	-	-	-	0.104	0.001	0.001	0.0353	0.001	0.0005	0.1
West Ditch	L2332396-5	MS-08-WEST-INFLOW	2019-08-06	2019-08-06	-	-	-	-	-	1.21	0.001	0.001	0.0283	0.001	0.0005	0.1
West Ditch	L2303974-4	MS-08-WEST-INFLOW 2021-06-21	1225	2021-06-21	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2306859-5	MS-08-WEST-INFLOW 2021-06-26	1130	2021-06-26	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2306871-5	MS-08-WEST-INFLOW 2021-06-27	0920	2021-06-27	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309262-5	MS-08-WEST-INFLOW 2021-07-01	1035	2021-07-01	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2310945-3	MS-08-WEST-INFLOW 2021-07-05	1030	2021-07-05	-	-	-	-	-	0.347	0.001	0.001	0.0497	0.001	0.0005	0.1
West Ditch	L2312337-6	MS-08-WEST-INFLOW 2021-07-11	1520	2021-07-11	-	-	-	-	-	6.32	0.001	0.0015	0.0608	0.001	0.0005	0.1
West Ditch	L2318286-7	MS-08-WEST-INFLOW 2021-07-24	0915	2021-07-24	-	-	-	-	-	3.87	0.0002	0.00077	0.0696	0.0002	0.0001	0.036
West Ditch	L2355846-3	MS-08-WEST-INFLOW 2021-09-05	1615	2021-09-05	-	-	-	-	-	0.091	0.001	0.001	0.0311	0.001	0.0005	0.1
West Ditch	L2725730-1	MS-08-WEST-INFLOW 2022-07-28		2022-07-28	-	-	-	-	-	0.126	0.001	0.001	0.0366	0.001	0.0005	0.1
West Ditch	L2391173-5	MS-08-WEST-INFLOW01		2019-06-13	-	-	-	-	-	0.417	0.001	0.001	0.025	0.001	0.0005	0.1
West Ditch	L2332396-2	MS-08-WEST-INFLOW01		2019-06-13	-	-	-	-	-	0.797	0.001	0.001	0.0281	0.001	0.0005	0.1
West Ditch	L2307801-5	MS-08-WEST-INFLOW01		2019-07-10	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2392454-5	MS-08-WEST-INFLOW01		2019-06-15	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2339733-7	MS-08-WEST-INFLOW01		2019-08-31	-	-	-	-	-	0.096	0.001	0.001	0.0362	0.001	0.0005	0.1
West Ditch	L2323788-3	MS-08-WEST-INFLOW 2021-08-06	1015	2021-08-06	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2335475-4	MS-08-WEST-INFLOW		2019-08-25	-	-	-	-	-	31.4	0.01	0.01	0.035	0.013	0.005	1
West Ditch	L2157407-14	WRP-B7		2018-09-01	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2157407-9	WRP-T-2		2018-09-01	-	-	-	-	-	0.05	0.001	0.001	0.0326	0.001	0.0005	0.1

Notes: Based on data supplied by BIM, April 2023. Certificates of Analysis available upon request from BIM.
Highlighted values are presented at detection limit values

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample date	Cadmium (Cd)- Total	Calcium (Ca)- Total	Cesium (Cs)- Total	Chromium (Cr)- Total	Copper (Cu)- Total	Iron (Fe)- Total	Lead (Pb)- Total	Lithium (Li)- Total	Magnesium (Mg)- Total	Manganese (Mn)- Total	Mercury (Hg)- Total
East Ditch	L2603974-2	MS-08-EAST-2021-08-21_1110	2021-06-21	Units>	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2201632-1	MS-08-EAST-DITCH	2019-07-01	2021-06-21	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2312016-1	MS-08-EAST-INFLOW	2019-07-17	2019-07-01	-	86.3	0.0046	0.0157	0.029	48.1	0.00538	0.036	394	17	-
East Ditch	L2303949-3	MS-08-EAST-INFLOW	2019-07-14	2019-07-14	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2307071-1	MS-08-EAST-INFLOW	2019-07-09	2019-07-09	0.00296	77.7	0.0001	0.005	0.013	12.1	0.00118	0.027	325	14.5	-
East Ditch	L2303224-1	MS-08-EAST-INFLOW	2019-07-06	2019-07-06	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2303409-1	MS-08-EAST-INFLOW	2019-07-13	2019-07-13	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2303072-1	MS-08-EAST-INFLOW	2019-07-05	2019-07-05	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2296973-3	MS-08-EAST-INFLOW	2019-06-23	2019-06-23	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2296973-3	MS-08-EAST-INFLOW	2019-06-23	2019-06-23	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2300534-3	MS-08-EAST-INFLOW	2019-06-27	2019-06-27	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2303805-1	MS-08-EAST-INFLOW	2019-07-08	2019-07-08	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2308636-1	MS-08-EAST-INFLOW	2019-07-11	2019-07-11	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2302689-1	MS-08-EAST-INFLOW	2019-07-07	2019-07-07	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2300057-3	MS-08-EAST-INFLOW	2019-06-26	2019-06-26	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2307801-1	MS-08-EAST-INFLOW	2019-07-10	2019-07-10	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301572-3	MS-08-EAST-INFLOW	2019-06-29	2019-06-29	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2313935-4	MS-08-EAST-INFLOW	2019-07-20	2019-07-20	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2308409-1	MS-08-EAST-INFLOW	2019-07-12	2019-07-12	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2315508-4	MS-08-EAST-INFLOW	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2296991-3	MS-08-EAST-INFLOW	2019-06-20	2019-06-20	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2304339-1	MS-08-EAST-INFLOW	2019-07-03	2019-07-03	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2296969-3	MS-08-EAST-INFLOW	2019-06-22	2019-06-22	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301607-3	MS-08-EAST-INFLOW	2019-06-30	2019-06-30	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2304338-1	MS-08-EAST-INFLOW	2019-07-04	2019-07-04	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301467-3	MS-08-EAST-INFLOW	2019-06-28	2019-06-28	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2318395-4	MS-08-EAST-INFLOW	2019-07-28	2019-07-28	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2482854-4	MS-08-EAST-INFLOW	2020-08-03	2020-08-03	0.000066	87.5	0.0001	0.005	0.005	3.86	0.0005	0.01	277	5.71	-
East Ditch	L2297625-3	MS-08-EAST-INFLOW	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2486588-1	MS-08-EAST-INFLOW	2020-08-12	2020-08-12	0.000086	105	0.00005	0.0005	0.0025	4.41	0.00025	0.0164	318	6.55	-
East Ditch	L2481535-2	MS-08-EAST-INFLOW	2020-07-29	2020-07-29	0.000121	89.8	0.00036	0.00041	0.007	2.74	0.000349	0.0162	283	5.26	-
East Ditch	L2303578-3	MS-08-EAST-INFLOW	2019-07-02	2019-07-02	0.000285	60.2	0.00033	0.0135	0.014	12.8	0.00502	0.024	254	12.8	-
East Ditch	L2295155-3	MS-08-EAST-INFLOW	2019-06-19	2019-06-19	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2322461-1	MS-08-EAST-INFLOW	2019-08-02	2019-08-02	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2291173-3	MS-08-EAST-INFLOW	2019-06-13	2019-06-13	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2477770-3	MS-08-EAST-INFLOW	2020-07-21	2020-07-21	0.000084	83.6	0.0001	0.005	0.0059	3.28	0.0005	0.01	214	3.65	-
East Ditch	L2294118-3	MS-08-EAST-INFLOW	2019-06-18	2019-06-18	0.000119	25.1	0.00023	0.0065	0.01	5.12	0.00363	0.01	83.5	4.36	-
East Ditch	L2290598-3	MS-08-EAST-INFLOW	2019-06-12	2019-06-12	0.00005	11.4	0.00048	0.0212	0.015	10.9	0.00355	0.01	32.8	0.026	-
East Ditch	L2296841-3	MS-08-EAST-INFLOW	2019-06-21	2019-06-21	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2318249-4	MS-08-EAST-INFLOW	2019-07-25	2019-07-25	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2330905-5	MS-08-EAST-INFLOW	2019-08-18	2019-08-18	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2325445-7	MS-08-EAST-INFLOW	2019-08-08	2019-08-08	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2322396-1	MS-08-EAST-INFLOW	2019-08-06	2019-08-06	0.000153	67.2	0.0001	0.005	0.01	5.4	0.0005	0.013	216	8.68	-
East Ditch	L2320850-1	MS-08-EAST-INFLOW	2019-07-31	2019-07-31	0.000115	36.3	0.0016	0.0405	0.029	23.6	0.0113	0.03	86.8	3.06	-
East Ditch	L2326464-5	MS-08-EAST-INFLOW	2019-08-13	2019-08-13	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2227694-6	MS-08-EAST-INFLOW	2019-08-16	2019-08-16	0.000263	89.4	0.0001	0.005	0.011	5.43	0.00138	0.018	300	11.7	-
East Ditch	L2303756-5	MS-08-EAST-INFLOW	2019-08-01	2019-08-01	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L235738-6	MS-08-EAST-INFLOW	2019-10-01	2019-10-01	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2286447-3	MS-08-EAST-INFLOW	2019-06-10	2019-06-10	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2392344-3	MS-08-EAST-INFLOW	2019-06-14	2019-06-14	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2392454-3	MS-08-EAST-INFLOW	2019-06-15	2019-06-15	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L246507-2	MS-08-EAST-INFLOW	2020-06-30	2020-06-30	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2292466-3	MS-08-EAST-INFLOW	2019-06-16	2019-06-16	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2287932-3	MS-08-EAST-INFLOW	2019-06-07	2019-06-07	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2490104-1	MS-08-EAST-INFLOW	2020-08-26	2020-08-26	0.0000395	110	0.000028	0.00036	0.00234	0.877	0.000109	0.0114	198	3.07	-
East Ditch	L2490103-2	MS-08-EAST-INFLOW	2020-08-26	2020-08-26	0.0000442	109	0.000026	0.00037	0.00234	1.09	0.000104	0.0117	198	3.24	-
East Ditch	L2339733-5	MS-08-EAST-INFLOW	2019-08-31	2019-08-31	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2467060-4	MS-08-EAST-INFLOW	2020-06-25	2020-06-25	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2496705-2	MS-08-EAST-INFLOW	2020-08-31	2020-08-31	0.00005	80.6	0.0001	0.005	0.005	2.87	0.0005	0.01	143	1.54	-
East Ditch	L2496140-2	MS-08-EAST-INFLOW	2020-08-30	2020-08-30	0.000005	124	0.0001	0.005	0.005	1.09	0.0005	0.01	223	2.47	-
East Ditch	L2358842-5	MS-08-EAST-INFLOW	2019-10-02	2019-10-02	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2304661-5	MS-08-EAST-INFLOW	2019-09-03	2019-09-03	0.00016	76.5	0.0001	0.005	0.01	1.85	0.0005	0.01	230	8.66	-
East Ditch	L2496047-3	MS-08-EAST-INFLOW	2020-08-27	2020-08-27	0.000005	115	0.0001	0.005	0.005	0.59	0.0005	0.01	167	1.88	-
East Ditch	L2496120-2	MS-08-EAST-INFLOW	2020-08-29	2020-08-29	0.0000322	124	0.000012	0.00017	0.0032	0.316	0.000005	0.0084	185	1.97	-
East Ditch	L2342313-5	MS-08-EAST-INFLOW	2019-09-05	2019-09-05	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2335475-3	MS-08-EAST-INFLOW	2019-08-25	2019-08-25	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2293024-3	MS-08-EAST-INFLOW	2019-06-17	2019-06-17	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2497356-2	MS-08-EAST-INFLOW	2020-09-01	2020-09-01	0.00005	87.6	0.0001	0.005	0.005	0.43	0.0005	0.01	157	1.65	-
East Ditch	L2335451-4	MS-08-EAST-INFLOW	2019-08-23	2019-08-23	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L237960-3	MS-08-EAST-INFLOW	2019-08-27	2019-08-27	0.000082	64	0.0001	0.005	0.01	0.93	0.0005	0.01	162	4.83	-
East Ditch	L2496049-2	MS-08-EAST-INFLOW	2020-08-28	2020-08-28	0.000005	120	0.0001	0.005	0.005	0.1	0.0005	0.01	84.1	0.316	-
East Ditch	L235091-4-2	MS-08-EAST-INFLOW	2019-09-19	2019-09-19	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L234669-2	MS-08-EAST-INFLOW	2019-09-12	2019-09-12	-	-	-	-	-	-	-	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample date	Cadmium (Cd)-Total	Calcium (Ca)-Total	Cesium (Cs)-Total	Chromium (Cr)-Total	Cobalt (Co)-Total	Copper (Cu)-Total	Iron (Fe)-Total	Lead (Pb)-Total	Lithium (Li)-Total	Magnesium (Mg)-Total	Manganese (Mn)-Total	Mercury (Hg)-Total
East Ditch	L2348201-1	MS-08-EAST-INFLOW	2019-09-16	2019-09-16	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2348723-3	MS-08-EAST-INFLOW	2019-09-11	2019-09-11	0.00059	71.3	0.0011	0.005	0.0382	0.01	1.52	0.00088	0.01	156	4.04	-
East Ditch	L2280069-3	MS-08-EAST-INFLOW	2019-06-09	2019-06-09	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2280035-3	MS-08-EAST-INFLOW	2019-06-08	2019-06-08	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2472902-3	MS-08-EAST-INFLOW	2020-07-10	2020-07-10	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2603651-3	MS-08-EAST-INFLOW	2021-06-23	2021-06-23	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2600659-2	MS-08-EAST-INFLOW	2021-06-26	2021-06-26	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2600871-2	MS-08-EAST-INFLOW	2021-06-26	2021-06-26	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2603282-2	MS-08-EAST-INFLOW	2021-07-01	2021-07-01	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2610945-4	MS-08-EAST-INFLOW	2021-07-05	2021-07-05	0.000119	22.2	0.00048	0.0114	0.0194	0.0366	9.45	0.00393	0.01	71.9	1.69	-
East Ditch	L2612337-1	MS-08-EAST-INFLOW	2021-07-11	2021-07-11	0.000072	17.1	0.00137	0.0294	0.0163	0.0391	15.6	0.00947	0.015	45.4	1.08	-
East Ditch	L2618285-2	MS-08-EAST-INFLOW	2021-07-24	2021-07-24	0.000551	63.4	0.00129	0.00246	0.0884	0.292	21.2	0.00131	0.0177	252	7.15	-
East Ditch	L2623788-4	MS-08-EAST-INFLOW	2021-08-06	2021-08-06	0.000387	75.8	0.0001	0.005	0.0781	0.115	11.5	0.0005	0.017	270	7.39	-
East Ditch	L2623991-2	MS-08-EAST-INFLOW	2021-08-06	2021-08-06	0.000606	90.6	0.0001	0.005	0.08	0.305	15.8	0.0005	0.016	308	7.39	-
East Ditch	L2635846-2	MS-08-EAST-INFLOW	2021-09-05	2021-09-05	0.000265	86	0.0001	0.005	0.0538	0.0642	4.5	0.0005	0.01	193	4.3	-
East Ditch	L2725730-5	MS-08-EAST-INFLOW	2022-07-28	2022-07-28	0.00037	35.2	0.00059	0.016	0.189	0.0365	89	0.00297	0.031	296	9.97	-
East Ditch	L2322461-2	MS-08-EAST-INFLOW01	2019-08-02	2019-08-02	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2477770-4	MS-08-EAST-INFLOW01	2020-07-21	2020-07-21	0.00007	84.5	0.0001	0.005	0.046	0.006	3.28	0.0005	0.01	218	3.68	-
East Ditch	L2496140-3	MS-08-EAST-INFLOW01	2020-08-30	2020-08-30	0.00005	124	0.0001	0.005	0.0245	0.005	1.02	0.0005	0.011	221	2.45	-
East Ditch	L2343354-4	MS-08-EAST-INFLOW	2019-09-08	2019-09-08	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2722749-1	MS-08-EXPLORE-EASTDITCH	2022-07-10	2022-07-10	0.00005	5.55	0.00048	0.0147	0.0046	0.0132	11.6	0.00369	0.01	11.6	0.161	-
East Ditch	L2113626-4	MS-08-INFLOW-EAST	2018-06-16	2018-06-16	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2160094-4	MS-08-INFLOW-EAST	2018-09-06	2018-09-06	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-1	CENTRAL-KEY-IN	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2312012-3	CENTRAL-KEY-IN	2019-07-17	2019-07-17	0.000122	38.6	0.00168	0.0217	0.0344	0.022	24.8	0.0136	0.045	220	4.92	-
Runoff	L2328009-6	INFLEUNT-CENTRAL-KEYIN	2019-08-13	2019-08-13	0.000217	79	0.0001	0.0067	0.0802	0.01	1.89	0.00272	0.026	391	11.1	-
Runoff	L2287151-3	MS-08-EMERGENCY-DITCH	2019-06-06	2019-06-06	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2340467-1	MS-SP-02	2019-09-03	2019-09-03	0.0272	388	0.01	0.5	18.1	1	1800	0.05	1	16100	753	-
Runoff	PAG WFR (max)	MS-SP-02	2018-09-01	2018-09-01	0.0205	444	0.01	0.5	29.7	1	6870	0.05	1	18800	919	-
Runoff	L2303565-5	MS-SP-02	2019-07-02	2019-07-02	0.000668	42.4	0.0001	0.005	0.542	0.069	36.8	0.0005	0.076	444	-	-
Runoff	L2337654-1	MS-SP-02	2019-08-27	2019-08-27	0.00373	243	0.001	0.05	3.87	0.1	385	0.005	0.1	4420	195	-
Runoff	L2320849-3	MS-SP-02	2019-07-30	2019-07-30	0.00297	199	0.0022	0.05	3.22	0.1	477	0.0126	0.12	3280	143	-
Runoff	L2298517-8	MS-SP-02	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-3	MS-SP-02	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2328009-2	MS-SP-02	2019-08-13	2019-08-13	0.00163	236	0.001	0.05	1.32	0.1	66.7	0.005	0.1	2110	88.2	-
Runoff	L2290620-5	MS-SP-02	2019-06-12	2019-06-12	0.0005	26.2	0.0001	0.005	0.0323	0.029	11	0.0005	0.025	85.6	2.87	-
Runoff	L2323304-3	MS-SP-04	2019-08-06	2019-08-06	0.0015	223	0.001	0.05	1.11	0.1	65.7	0.005	0.1	1940	82.6	-
Runoff	L2306749-3	MS-SP-04	2019-07-09	2019-07-09	0.000599	53.3	0.0001	0.0005	0.673	0.083	50.4	0.0005	0.115	511	-	-
Runoff	L2323009-1	MS-SP-04	2019-08-13	2019-08-13	0.00275	110	0.001	0.05	1.65	0.2	165	0.005	0.17	1240	68.8	-
Runoff	L2333401-1	MS-SP-04	2019-08-20	2019-08-20	0.0038	128	0.001	0.05	1.87	0.23	189	0.005	0.16	1450	75.6	-
Runoff	L2312012-1	MS-SP-04	2019-07-17	2019-07-17	0.00108	69.5	0.00012	0.005	0.867	0.112	62.3	0.0005	0.143	696	39.1	-
Runoff	L2320849-4	MS-SP-04	2019-07-30	2019-07-30	0.00182	98.5	0.00016	0.005	1.3	0.164	119	0.0005	0.209	973	53.2	-
Runoff	L2290620-6	MS-SP-04	2019-06-12	2019-06-12	0.000538	34.1	0.0001	0.005	0.413	0.048	43.3	0.0005	0.032	365	17.1	-
Runoff	L2315510-4	MS-SP-04	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2323304-4	MS-SP-04	2019-08-06	2019-08-06	0.0021	102	0.001	0.05	1.41	0.18	143	0.005	0.16	1130	66.3	-
Runoff	L2396517-9	MS-SP-04	2019-06-24	2019-06-24	0.0023	310	0.001	0.05	1.65	0.1	36	0.005	0.1	1780	115	-
Runoff	L2294129-9	MS-SP-0401	2019-06-18	2019-06-18	0.000552	33.9	0.0001	0.005	0.422	0.051	39.6	0.00058	0.036	348	-	-
Runoff	L2730435-1	MS-WRF-22-01	2022-08-28	2022-08-28	0.000005	49.3	0.00001	0.0063	0.0064	0.00054	0.231	0.00005	0.0012	71.8	0.00005	-
Runoff	L2730435-2	MS-WRF-22-02	2022-08-28	2022-08-28	0.000005	49.1	0.00001	0.0063	0.0064	0.00054	0.231	0.00005	0.0012	71.8	0.00005	-
Runoff	L2730426-1	MS-WRF-22-05A	2022-08-27	2022-08-27	0.0000132	62.9	0.00013	0.00513	0.00202	0.001	0.911	0.000181	0.0016	66.4	0.02	-
Runoff	L2730426-2	MS-WRF-22-05B	2022-08-27	2022-08-27	0.0000071	61.3	0.000049	0.00212	0.00229	0.0018	1.68	0.000107	0.0031	94.4	0.0407	-
Runoff	L2730426-3	MS-WRF-22-05B	2022-08-27	2022-08-27	0.0000116	61.2	0.000063	0.00212	0.00229	0.0018	1.68	0.000107	0.0031	94.4	0.0407	-
Runoff	L2730426-4	MS-WRF-22-06A	2022-08-27	2022-08-27	0.000005	67.1	0.0001	0.0125	0.0047	0.00706	3.73	0.000894	0.0033	86.6	0.0316	-
Runoff	L2730426-5	MS-WRF-22-06A	2022-08-27	2022-08-27	0.000005	67.1	0.0001	0.0125	0.0047	0.00706	3.73	0.000894	0.0033	86.6	0.0316	-
Runoff	L2730426-6	MS-WRF-22-09A	2022-08-27	2022-08-27	0.000005	62.6	0.00021	0.015	0.0123	0.005	2.74	0.0005	0.011	513	0.717	-
Runoff	L2730426-7	MS-WRF-22-09A	2022-08-27	2022-08-27	0.000005	58.2	0.00023	0.0193	0.0135	0.0149	8.19	0.00153	0.011	268	0.814	-
Runoff	L2730426-8	MS-WRF-22-10	2022-08-27	2022-08-27	0.000005	61	0.0001	0.005	0.0125	0.005	0.6	0.00033	0.012	361	0.71	-
Runoff	L2730426-9	MS-WRF-22-12A	2022-08-27	2022-08-27	0.0000401	104	0.00015	0.005	0.115	0.0129	6.68	0.00067	0.037	623	13.6	-
Runoff	L2730426-10	MS-WRF-22-12A	2022-08-27	2022-08-27	0.0000401	75	0.00001	0.005	0.00228	0.0012	0.01	0.00005	0.0144	178	0.69	-
Runoff	L2730426-11	MS-WRF-22-18A	2022-08-27	2022-08-27	0.000113	44.3	0.000197	0.00184	0.00704	0.00695	3.58	0.00119	0.0141	107	1.9	-
Runoff	WRP-20-01	WRP-20-01	2020-08-12	2020-08-12	0.0000548	36.6	0.00011	0.00153	0.00557	0.00447	2.23	0.00119	0.0099	115	1.2	-
Runoff	L2478363-1	WRP-20-01	2020-07-22	2020-07-22	0.000005	50.9	0.0001	0.005	0.0026	0.005	0.26	0.0005	0.01	189	0.777	-
Runoff	L2488602-1	WRP-20-01	2020-08-12	2020-08-12	0.000003	61.3	0.000573	0.0931	0.0231	0.005	36.5	0.00469	0.02	164	0.022	-
Runoff	L2482855-1	WRP-20-01	2020-08-03	2020-08-03	0.00005	41.7	0.0001	0.0066	0.003	0.005	2.74	0.00057	0.01	114	0.173	-
Runoff	L2482855-2	WRP-20-01A	2020-08-03	2020-08-03	0.00005	55.9	0.00094	0.0504	0.0234	0.005	28.7	0.0078	0.015	172	0.684	-
Runoff	L2488602-2	WRP-20-01A	2020-08-12	2020-08-12	0.000069	66.1	0.000945	0.0733	0.0214	0.0221	33.1	0.00768	0.0225	185	0.616	-
Runoff	L2478363-2	WRP-20-02	2020-07-22	2020-07-22	0.00005	64.4	0.00016	0.0067	0.016	0.005	3.36	0.0107	0.01	333	0.697	-
Runoff	L2494664-4	WRP-20-03	2020-08-21	2020-08-21	0.000005	53.7	0.000023	0.00162	0.00507	0.00122	0.0048	0.00022	0.0024	40	0.0121	-
Runoff	L2478363-3	WRP-20-04	2020-07-22	2020-07-22	0.000005	87.5	0.00041	0.0085	0.0084	0.0057	5.92	0.00208	0.01	339	0.454	-
Runoff	L2496722-5	WRP-20-04	2020-08-31	2020-08-31	0.000005	56	0.0001	0.005	0.015	0.005	0.73	0.0005	0.01	151	0.0666	-
Runoff	L2488602-3	WRP-20-04	2020-08-12	2020-08-12	0.000024	82.2	0.00024	0.0113	0.00346	0.0036	4.37					

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units	Sample date	Cadmium (Cd)- Total	Calcium (Ca)- Total	Cesium (Cs)- Total	Chromium (Cr)- Total	Cobalt (Co)- Total	Copper (Cu)- Total	Iron (Fe)- Total	Lead (Pb)- Total	Lithium (Li)- Total	Magnesium (Mg)- Total	Manganese (Mn)- Total	Mercury (Hg)- Total
Runoff	L2495466-1	WRP-20-04A	2020-08-21		2020-08-21	0.000006	71.6	0.00001	0.00027	0.00328	0.0005	0.03	0.00005	0.004	206	0.179	-
Runoff	L2476363-4	WRP-20-06	2020-07-22		2020-07-22	0.000116	89.9	0.00001	0.005	0.04	0.005	1.84	0.00071	0.014	848	4.13	-
Runoff	L2482855-4	WRP-20-06	2020-08-03		2020-08-03	0.000078	96.1	0.00015	0.005	0.027	0.005	2.56	0.0012	0.01	675	3.32	-
Runoff	L2495466-3	WRP-20-06	2020-08-21		2020-08-21	0.000055	89.1	0.00003	0.00107	0.00229	0.00088	0.415	0.000165	0.0047	235	0.128	-
Runoff	L2488602-4	WRP-20-06A	2020-08-12		2020-08-12	0.000178	210	0.00109	0.0685	0.0798	0.0263	27	0.00044	0.0229	841	1.66	-
Runoff	L2490722-6	WRP-20-06A	2020-08-31		2020-08-31	0.000179	139	0.00057	0.0192	0.0332	0.0127	9.03	0.000434	0.013	836	5.52	-
Runoff	L2482855-5	WRP-20-06A	2020-08-03		2020-08-03	0.000015	116	0.00001	0.005	0.0231	0.005	1.71	0.00062	0.01	539	4.24	-
Runoff	L2476363-5	WRP-20-07	2020-07-22		2020-07-22	0.0000246	131	0.00068	0.0463	0.0422	0.025	20.7	0.00599	0.027	703	8.41	-
Runoff	L2488602-5	WRP-20-07	2020-08-12		2020-08-12	0.000287	120	0.00169	0.086	0.0317	0.0515	43.9	0.0144	0.0383	979	8.24	-
Runoff	L2495466-7	WRP-20-07	2020-08-03		2020-08-03	0.000269	109	0.00044	0.0206	0.0317	0.0515	10.5	0.0134	0.0316	657	6.33	-
Runoff	L2490722-7	WRP-20-07	2020-08-21		2020-08-21	0.000162	111	0.00006	0.00242	0.0315	0.0025	1.07	0.0055	0.0132	648	6.31	-
Runoff	L2495466-8	WRP-20-0702	2020-08-31		2020-08-31	0.000093	142	0.00024	0.0148	0.0315	0.0079	6.36	0.00263	0.012	683	6.89	-
Runoff	L2490722-8	WRP-20-07A	2020-08-21		2020-08-21	0.000005	0.05	0.00001	0.0001	0.0001	0.0005	0.01	0.00005	0.001	0.005	0.0001	-
Runoff	L2476363-6	WRP-20-08	2020-07-22		2020-07-22	0.000127	74.4	0.00016	0.0147	0.0212	0.0059	7.97	0.00115	0.011	513	4.68	-
Runoff	L2476363-7	WRP-20-08	2020-08-21		2020-08-21	0.0000325	204	0.00011	0.0103	0.0677	0.007	9.1	0.00068	0.03	1020	12.3	-
Runoff	L2495466-6	WRP-20-08	2020-08-21		2020-08-21	0.0000325	148	0.00013	0.0257	0.0521	0.0066	8.9	0.00067	0.02	734	11.1	-
Runoff	L2476363-7	WRP-20-09	2020-07-22		2020-07-22	0.000209	141	0.00001	0.005	0.0543	0.005	1.91	0.0005	0.01	662	6.73	-
Runoff	L2495466-5	WRP-20-10	2020-08-21		2020-08-21	0.000344	156	0.0002	0.002	1.71	0.096	90.5	0.001	0.154	1610	86.6	-
Runoff	L2476363-8	WRP-20-10	2020-07-22		2020-07-22	0.000139	204	0.0001	0.005	0.0487	0.005	2.04	0.00081	0.012	664	13.9	-
Runoff	L2482855-7	WRP-20-11	2020-08-03		2020-08-03	0.00191	126	0.00044	0.0531	0.63	0.131	59.5	0.0032	0.106	934	34.9	-
Runoff	L2476363-9	WRP-20-11	2020-07-22		2020-07-22	0.0005	152	0.00032	0.0147	0.0886	0.0081	9.78	0.00217	0.039	562	14.8	-
Runoff	L2476363-10	WRP-20-12	2020-07-22		2020-07-22	0.0007	138	0.00016	0.0091	0.188	0.0287	8.3	0.0008	0.067	662	15.9	-
Runoff	L2495466-16	WRP-20-12	2020-08-22		2020-08-22	0.0000356	38.5	0.00044	0.0519	0.0247	0.0242	19	0.00335	0.0293	153	0.866	-
Runoff	L2495466-20	WRP-20-1203	2020-08-22		2020-08-22	0.000005	0.05	0.00001	0.0001	0.0001	0.0005	0.01	0.00005	0.001	0.005	0.0001	-
Runoff	L2476363-11	WRP-20-13	2020-07-22		2020-07-22	0.00056	126	0.0001	0.005	0.0133	0.0133	7.66	0.0005	0.043	625	11.3	-
Runoff	L2495466-12	WRP-20-13	2020-08-22		2020-08-22	0.000544	55.4	0.000284	0.0289	0.025	0.0113	14.3	0.00199	0.0276	249	1.45	-
Runoff	L2485429-1	WRP-20-14	2020-08-04		2020-08-04	0.000768	147	0.0001	0.005	0.074	0.0108	8.1	0.0005	0.067	730	15.9	-
Runoff	L2488602-6	WRP-20-14	2020-08-12		2020-08-12	0.000396	161	0.00003	0.00474	0.232	0.0074	7.93	0.00029	0.0446	827	15	-
Runoff	L2476363-12	WRP-20-14	2020-08-22		2020-08-22	0.000514	122	0.00039	0.0203	0.193	0.0262	20.8	0.00208	0.051	586	10.4	-
Runoff	L2495466-21	WRP-20-14	2020-08-22		2020-08-22	0.000135	55	0.000203	0.0203	0.0804	0.00802	12.4	0.00149	0.0296	284	4.22	-
Runoff	L2488602-7	WRP-20-1401	2020-08-12		2020-08-12	0.000396	165	0.000084	0.00442	0.235	0.0075	8.02	0.00028	0.0443	820	14.8	-
Runoff	L2485429-2	WRP-20-15	2020-08-04		2020-08-04	0.00001	0.05	0.00001	0.0005	0.0001	0.0005	0.01	0.00005	0.001	0.006	0.0005	-
Runoff	L2476363-13	WRP-20-15	2020-07-22		2020-07-22	0.000213	88.5	0.0001	0.005	0.063	0.0157	5.97	0.0005	0.027	263	7.14	-
Runoff	L2495466-19	WRP-20-15	2020-08-04		2020-08-04	0.000185	85.6	0.0001	0.005	0.0595	0.0054	1.75	0.0005	0.027	295	7.16	-
Runoff	L2485429-3	WRP-20-15	2020-08-22		2020-08-22	0.000185	95.5	0.00031	0.0032	0.0591	0.00381	0.403	0.00013	0.0232	260	7.59	-
Runoff	L2490722-9	WRP-20-15	2020-08-31		2020-08-31	0.000135	101	0.0001	0.005	0.0416	0.005	0.25	0.00003	0.024	323	6.92	-
Runoff	L2488602-8	WRP-20-15	2020-08-12		2020-08-12	0.000174	112	0.000131	0.00258	0.044	0.0043	2.4	0.00063	0.0241	372	7.31	-
Runoff	L2485429-4	WRP-20-1601	2020-08-04		2020-08-04	0.000166	85.6	0.0001	0.005	0.0592	0.005	0.73	0.0005	0.025	292	7.3	-
Runoff	PAG WIR (75th)	WRP-20-17	2020-08-22		2020-08-22	0.000349	82.2	0.00031	0.0042	0.0972	0.014	0.857	0.0002	0.0352	403	8.96	-
Runoff	L2485429-5	WRP-20-17	2020-08-04		2020-08-04	0.000322	93.5	0.0001	0.005	0.0967	0.005	0.83	0.0005	0.039	477	9.42	-
Runoff	L2490722-4	WRP-20-17	2020-08-31		2020-08-31	0.000251	96.8	0.0001	0.005	0.0747	0.005	1.11	0.0009	0.032	481	8.22	-
Runoff	L2476363-14	WRP-20-17	2020-07-22		2020-07-22	0.000224	91.2	0.0001	0.005	0.0744	0.005	1.4	0.00131	0.028	447	8.16	-
Runoff	L2485429-6	WRP-20-1702	2020-08-04		2020-08-04	0.000005	0.05	0.00001	0.0005	0.0001	0.0005	0.01	0.00005	0.001	0.006	0.0005	-
Runoff	L2485429-7	WRP-20-18	2020-08-04		2020-08-04	0.000382	97.4	0.0001	0.005	0.131	0.0085	3.22	0.00136	0.045	535	10.9	-
Runoff	L2476363-15	WRP-20-18	2020-07-24		2020-07-24	0.00027	91.7	0.00027	0.0002	0.12	0.0038	0.09	0.00023	0.0399	511	10	-
Runoff	L2495466-14	WRP-20-18	2020-08-22		2020-08-22	0.000224	80.2	0.00037	0.00044	0.0806	0.0028	0.336	0.00034	0.036	408	8.43	-
Runoff	L2490722-3	WRP-20-18	2020-08-31		2020-08-31	0.000232	96.2	0.00019	0.005	0.0609	0.0099	3.91	0.00218	0.032	501	8.22	-
Runoff	L2488602-9	WRP-20-18	2020-08-12		2020-08-12	0.000296	112	0.000323	0.00785	0.0723	0.0141	7.65	0.00428	0.034	563	9.43	-
Runoff	L2476363-5	WRP-20-1801	2020-07-24		2020-07-24	0.000321	93.8	0.00022	0.0002	0.113	0.0037	1.01	0.00016	0.041	519	9.97	-
Runoff	L2485429-8	WRP-20-19	2020-08-04		2020-08-04	0.000091	73.5	0.0001	0.005	0.083	0.005	9.92	0.0005	0.019	347	6.53	-
Runoff	L2488602-10	WRP-20-19	2020-08-12		2020-08-12	0.000084	83	0.00045	0.00061	0.0952	0.0032	13.5	0.00024	0.0206	396	7.26	-
Runoff	L2476363-16	WRP-20-19	2020-07-24		2020-07-24	0.000131	89.1	0.00056	0.00127	0.0679	0.0061	8.67	0.00025	0.0209	363	7.37	-
Runoff	L2495466-15	WRP-20-19	2020-08-22		2020-08-22	0.0000477	32.5	0.000474	0.0275	0.0204	0.014	16.1	0.00462	0.0269	149	2.06	-
Runoff	L2490722-1	WRP-20-19	2020-08-31		2020-08-31	0.00005	75.4	0.00001	0.005	0.027	0.005	0.47	0.0005	0.017	347	3.69	-
Runoff	L2476363-17	WRP-20-1901	2020-07-24		2020-07-24	0.000114	90.5	0.00062	0.00133	0.0667	0.0059	8.32	0.00023	0.0192	353	7.12	-
Runoff	L2485429-9	WRP-20-20	2020-08-04		2020-08-04	0.000131	78	0.0001	0.005	0.143	0.005	25.2	0.0005	0.021	370	9.28	-
Runoff	L2488602-11	WRP-20-20	2020-07-24		2020-07-24	0.000126	87.9	0.00011	0.00495	0.0885	0.0083	13.8	0.0007	0.0188	348	7.69	-
Runoff	L2495466-5	WRP-20-20	2020-08-31		2020-08-31	0.000079	95.8	0.0001	0.005	0.0993	0.005	10.5	0.0005	0.022	444	8.18	-
Runoff	L2490722-2	WRP-20-20	2020-08-22		2020-08-22	0.000045	26.3	0.00063	0.0395	0.0993	0.0187	22.7	0.0005	0.022	103	1.74	-
Runoff	L2495466-17	WRP-20-20	2020-08-22		2020-08-22	0.0000609	32.8	0.00057	0.0329	0.0436	0.0161	22.9	0.00527	0.0261	148	3.35	-
Runoff	L2485429-10	WRP-20-20A	2020-08-04		2020-08-04	0.000096	122	0.00016	0.0097	0.103	0.0067	22.6	0.00078	0.023	484	6.77	-
Runoff	L2476363-6	WRP-20-21	2020-07-24		2020-07-24	0.000093	87.3	0.00069	0.0334	0.0369	0.0209	25.1	0.00455	0.029	307	3.43	-
Runoff	L2476363-18	WRP-20-22	2020-07-24		2020-07-24	0.000082	97.7	0.000505	0.038	0.0337	0.0175	20.2	0.00214	0.0268	344	3.38	-
Runoff	L																

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units	Sample date	Cadmium (Cd)- Total	Calcium (Ca)- Total	Cesium (Cs)- Total	Chromium (Cr)- Total	Cobalt (Co)- Total	Copper (Cu)- Total	Iron (Fe)- Total	Lead (Pb)- Total	Lithium (Li)- Total	Magnesium (Mg)- Total	Manganese (Mn)- Total	Mercury (Hg)- Total
Runoff	L2610912-9	WRP-21-01 2021-07-05 1410	2021-07-05		2021-07-05	0.00005	48.1	0.0059	0.0239	0.0085	0.0113	10.9	0.0382	0.01	72.5	0.28	-
Runoff	L2612335-1	WRP-21-01 2021-07-11 0910	2021-07-11		2021-07-11	0.00005	82.8	0.0001	0.005	0.0087	0.005	1.14	0.0005	0.01	44.7	0.447	-
Runoff	L2627498-25	WRP-21-02 16-08-2021 1345	2021-08-16		2021-08-16	0.00005	55.3	0.0001	0.005	0.0075	0.005	0.1	0.0005	0.01	122	0.0128	-
Runoff	L2610912-8	WRP-21-02 2021-07-05 1350	2021-07-05		2021-07-05	0.000076	66	0.00204	0.0035	0.0025	0.0042	29.5	0.0158	0.027	93.4	0.937	-
Runoff	L2612335-3	WRP-21-02 2021-07-11 0930	2021-07-11		2021-07-11	0.00005	83.9	0.00037	0.0173	0.0085	0.0059	6.07	0.00229	0.01	124	0.123	-
Runoff	L2612335-5	WRP-21-02A 2021-07-11 0945	2021-07-11		2021-07-11	0.00005	103	0.0001	0.005	0.011	0.005	0.61	0.0005	0.01	402	1.01	-
Runoff	L2612844-11	WRP-21-02A 2021-07-23	2021-07-23		2021-07-23	0.0000164	104	0.00032	0.0075	0.0065	0.0104	0.533	0.00085	0.0046	199	0.12	-
Runoff	L2627498-24	WRP-21-03 16-08-2021 1320	2021-08-16		2021-08-16	0.00005	50.7	0.0001	0.005	0.0043	0.005	0.1	0.0005	0.01	139	0.0871	-
Runoff	L2610912-7	WRP-21-03 2021-07-05 1320	2021-07-05		2021-07-05	0.00005	104	0.00041	0.0333	0.0154	0.0132	11.5	0.00225	0.01	292	0.566	-
Runoff	L2610912-6	WRP-21-04 2021-07-05 1340	2021-07-05		2021-07-05	0.000024	106	0.0049	0.208	0.0719	0.124	100	0.0367	0.01	393	2.21	-
Runoff	L2627498-17	WRP-21-04 16-08-2021 1205	2021-08-16		2021-08-16	0.00005	140	0.0001	0.005	0.238	0.05	35.9	0.005	0.1	1420	12.8	-
Runoff	L2612335-4	WRP-21-04A 2021-07-11 1040	2021-07-11		2021-07-11	0.000117	87.7	0.0001	0.0097	0.1	0.008	17.5	0.0005	0.01	663	5.99	-
Runoff	L2627498-18	WRP-21-04B 16-08-2021 1300	2021-08-16		2021-08-16	0.00005	53.3	0.0001	0.005	0.0107	0.005	1.16	0.0005	0.01	237	0.355	-
Runoff	L2627498-9	WRP-21-05 16-08-2021 1205	2021-08-16		2021-08-16	0.00005	45	0.0001	0.005	0.0093	0.005	0.18	0.0005	0.012	277	0.924	-
Runoff	L2610912-5	WRP-21-05 2021-07-05 1300	2021-07-05		2021-07-05	0.000079	61.7	0.00129	0.025	0.0145	0.0139	11.7	0.00755	0.026	171	0.91	-
Runoff	L2612335-5	WRP-21-05 2021-07-11 1025	2021-07-11		2021-07-11	0.00005	27.6	0.0001	0.0005	0.0051	0.005	0.49	0.0005	0.01	100	0.565	-
Runoff	L2610912-4	WRP-21-06 2021-07-05 1245	2021-07-05		2021-07-05	0.000062	40.9	0.0068	0.0184	0.0114	0.0081	9.1	0.00407	0.02	197	1.07	-
Runoff	L2612335-7	WRP-21-06 2021-07-11 1040	2021-07-11		2021-07-11	0.00005	33.5	0.0011	0.0069	0.0068	0.0068	4.3	0.0006	0.01	103	0.453	-
Runoff	L2627498-21	WRP-21-07 16-08-2021 1140	2021-08-16		2021-08-16	0.000093	73.2	0.00012	0.005	0.0433	0.005	2.16	0.0005	0.017	467	4.93	-
Runoff	L2610912-3	WRP-21-07 2021-07-05 1155	2021-07-05		2021-07-05	0.000098	82.3	0.00017	0.0096	0.016	0.0069	5.6	0.00131	0.013	442	2.63	-
Runoff	L2612335-8	WRP-21-07A 2021-07-11 1110	2021-07-11		2021-07-11	0.00005	30.3	0.00011	0.0126	0.015	0.0057	7.27	0.00091	0.01	144	1.36	-
Runoff	L2627498-22	WRP-21-07B 16-08-2021 1130	2021-08-16		2021-08-16	0.000134	82	0.0001	0.005	0.0236	0.005	0.19	0.0005	0.01	264	3.34	-
Runoff	L2612335-9	WRP-21-07B 2021-07-11 1125	2021-07-11		2021-07-11	0.00005	10.6	0.00019	0.0072	0.0463	0.0062	4.56	0.00222	0.01	27.2	0.321	-
Runoff	L2627498-23	WRP-21-08 16-08-2021 1115	2021-08-16		2021-08-16	0.000323	142	0.00017	0.016	0.0035	0.0087	4.13	0.00094	0.017	420	6.44	-
Runoff	L2610912-2	WRP-21-08 2021-07-05 1125	2021-07-05		2021-07-05	0.000184	59.7	0.0001	0.0076	0.0183	0.005	2.87	0.00061	0.01	210	3.83	-
Runoff	L2612335-10	WRP-21-08 2021-07-11 1140	2021-07-11		2021-07-11	0.00005	14.9	0.0001	0.005	0.0055	0.005	1.47	0.0005	0.01	45.7	1.11	-
Runoff	L2618284-10	WRP-21-08 2021-07-23	2021-07-23		2021-07-23	0.000143	38.9	0.00058	0.0187	0.0145	0.00408	1.3	0.000656	0.0102	180	2.88	-
Runoff	L2627498-20	WRP-21-09 16-08-2021 1050	2021-08-16		2021-08-16	0.000076	73.4	0.0001	0.005	0.195	0.005	1.33	0.0005	0.015	627	13.6	-
Runoff	L2610912-1	WRP-21-09 2021-07-05 1110	2021-07-05		2021-07-05	0.000921	69.3	0.00028	0.0404	0.0382	0.005	16.4	0.00729	0.024	381	14.5	-
Runoff	L2612335-11	WRP-21-09 2021-07-11 1200	2021-07-11		2021-07-11	0.000486	40.4	0.00044	0.0492	0.171	0.0391	20.9	0.0398	0.033	188	6.95	-
Runoff	L2618284-9	WRP-21-10 15-08-2021 1300	2021-07-23		2021-07-23	0.000057	108	0.00057	0.0064	0.323	0.0064	11.8	0.00225	0.0503	793	18.1	-
Runoff	L2627498-9	WRP-21-10 15-08-2021 1500	2021-08-15		2021-08-15	0.000145	39.5	0.0001	0.005	0.0393	0.0086	0.59	0.0005	0.019	113	3.18	-
Runoff	L2610912-14	WRP-21-10 2021-07-11 1540	2021-07-05		2021-07-05	0.000115	39.1	0.00042	0.0112	0.0262	0.007	7.47	0.00312	0.014	86.2	2.03	-
Runoff	L2612335-12	WRP-21-10 2021-07-11 1240	2021-07-11		2021-07-11	0.000555	37.2	0.00028	0.0063	0.135	0.007	4.51	0.00286	0.01	76	1.36	-
Runoff	L2618284-7	WRP-21-10 2021-07-23	2021-07-23		2021-07-23	0.000131	77.5	0.00002	0.0002	0.0322	0.0034	0.101	0.0001	0.0158	174	3.63	-
Runoff	L2627498-11	WRP-21-10A 15-08-2021 1435	2021-08-15		2021-08-15	0.000122	23.9	0.00027	0.0005	0.0181	0.00079	0.313	0.000186	0.0072	62	0.467	-
Runoff	L2612335-13	WRP-21-10A 2021-07-11 1255	2021-07-11		2021-07-11	0.00005	7.98	0.0001	0.005	0.063	0.005	1.84	0.00091	0.01	18.3	0.461	-
Runoff	L2627498-8	WRP-21-11 15-08-2021 1415	2021-08-15		2021-08-15	0.00005	81.3	0.0001	0.005	0.0059	0.005	0.32	0.0005	0.01	137	1.6	-
Runoff	L2610912-13	WRP-21-11 2021-07-05 1530	2021-07-05		2021-07-05	0.000072	61.1	0.00093	0.0142	0.016	0.0378	18.6	0.0128	0.023	92.3	1.37	-
Runoff	L2612335-14	WRP-21-11 2021-07-11 1310	2021-07-11		2021-07-11	0.00005	13.5	0.0001	0.005	0.0017	0.0052	1.4	0.00065	0.01	20.5	0.367	-
Runoff	L2618284-6	WRP-21-11 2021-07-23	2021-07-23		2021-07-23	0.000605	71.9	0.000104	0.0154	0.0542	0.0314	1.95	0.00738	0.0109	118	1.25	-
Runoff	L2610912-11	WRP-21-12 2021-07-05 1520	2021-07-05		2021-07-05	0.00056	74.2	0.00076	0.0132	0.190	0.0249	18	0.0144	0.02	104	1.53	-
Runoff	L2627498-10	WRP-21-13 15-08-2021 1400	2021-08-15		2021-08-15	0.000292	76.9	0.0001	0.005	0.058	0.0079	48	0.009	0.014	298	5.95	-
Runoff	L2610912-10	WRP-21-13 2021-07-05 1505	2021-07-05		2021-07-05	0.000462	86.3	0.00015	0.005	0.0714	0.024	18.6	0.0147	0.012	218	6.17	-
Runoff	L2612335-15	WRP-21-13 2021-07-23	2021-07-23		2021-07-23	0.000574	86.2	0.00037	0.005	0.0433	0.023	16.9	0.0402	0.012	217	4.19	-
Runoff	L2618284-5	WRP-21-14 2021-07-12 1350	2021-08-15		2021-08-15	0.000494	85.3	0.00005	0.0005	0.0386	0.0297	14.5	0.0029	0.0207	361	8.13	-
Runoff	L2627498-12	WRP-21-14 15-08-2021 1255	2021-08-15		2021-08-15	0.000339	84.7	0.00027	0.0467	0.116	0.0517	28.9	0.00178	0.026	484	8.6	-
Runoff	L2618284-1	WRP-21-14 2021-07-12 1300	2021-07-12		2021-07-12	0.000339	43.5	0.00032	0.0097	0.069	0.0341	32.2	0.0018	0.035	261	6.92	-
Runoff	L2618284-4	WRP-21-14 2021-07-12 1300	2021-07-22		2021-07-22	0.000491	79.6	0.000061	0.00152	0.125	0.0313	24.2	0.000263	0.0253	391	9.14	-
Runoff	L2627498-1	WRP-21-14A 15-08-2021 1150	2021-08-15		2021-08-15	0.000341	67.2	0.0001	0.005	0.0968	0.0233	9.17	0.0005	0.021	282	7.99	-
Runoff	L2627498-13	WRP-21-14B 15-08-2021 1225	2021-08-15		2021-08-15	0.000335	75.4	0.0001	0.005	0.0927	0.0168	8.91	0.0005	0.018	310	8.25	-
Runoff	L2627498-14	WRP-21-14C 15-08-2021 1240	2021-08-15		2021-08-15	0.000298	73.5	0.0001	0.005	0.0907	0.013	8.34	0.0005	0.016	309	6.99	-
Runoff	L2627498-3	WRP-21-15 15-08-2021 1125	2021-08-15		2021-08-15	0.000286	71.8	0.00011	0.005	0.0698	0.0507	13.5	0.0005	0.028	471	4.35	-
Runoff	L261284-2	WRP-21-15 2021-07-12 1325	2021-07-12		2021-07-12	0.000056	30.2	0.00011	0.0072	0.0197	0.0056	4.76	0.0052	0.012	201	2.27	-
Runoff	L261284-3	WRP-21-16 2021-07-12 1340	2021-07-12		2021-07-12	0.000061	28.5	0.0003	0.0136	0.0222	0.0056	8.19	0.00154	0.013	154	2.25	-
Runoff	L2618284-2	WRP-21-17 15-08-2021 1105	2021-07-22		2021-07-22	0.0000213	26.9	0.000228	0.00929	0.0074	0.00525	3.48	0.0013	0.0144	135	0.592	-
Runoff	L2627498-2	WRP-21-17 15-08-2021 1105	2021-08-15		2021-08-15	0.00005	26.4	0.0001	0.005	0.0074	0.005	0.35	0.0005	0.01	139	0.681	-
Runoff	L2627498-4	WRP-21-17 2021-07-12 1350	2021-07-12		2021-07-12	0.00006	25.2	0.0001	0.0005	0.0184	0.0068	4.21	0.0005	0.01	147	2.02	-
Runoff	L2627498-4	WRP-21-18 15-08-2021 1055	2021-08-15		2021-08-15	0.00005	54.2	0.0001	0.005	0.005	0.00						

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample date	Cadmium (Cd)- Total mg/L	Calcium (Ca)- Total mg/L	Cesium (Cs)- Total mg/L	Chromium (Cr)- Total mg/L	Cobalt (Co)- Total mg/L	Copper (Cu)- Total mg/L	Iron (Fe)- Total mg/L	Lead (Pb)- Total mg/L	Lithium (Li)- Total mg/L	Magnesium (Mg)- Total mg/L	Manganese (Mn)- Total mg/L	Mercury (Hg)- Total mg/L
Runoff	L2725732-7	WRP-22-07	2022-07-28	2022-07-28	0.00035	29.7	0.0001	0.0003	0.0072	0.005	2.16	0.0005	0.01	219	0.316	-
Runoff	L2725732-8	WRP-22-08	2022-07-28	2022-07-28	0.00005	56.8	0.0001	0.0079	0.0041	0.005	3.47	0.00089	0.01	179	0.682	-
Runoff	L2725732-9	WRP-22-09	2022-07-28	2022-07-28	0.00005	18.4	0.0001	0.0005	0.0055	0.005	0.005	0.0005	0.01	112	0.486	-
Runoff	L2725732-10	WRP-22-10	2022-07-28	2022-07-28	0.00005	21.2	0.0001	0.0005	0.004	0.005	0.24	0.0005	0.01	149	0.489	-
Runoff	L2725732-11	WRP-22-11	2022-07-28	2022-07-28	0.00005	32.3	0.00037	0.0298	0.0111	0.005	18.7	0.00244	0.028	160	0.744	-
Runoff	L2725732-12	WRP-22-12	2022-07-28	2022-07-28	0.000074	45.7	0.0001	0.0005	0.0322	0.005	0.9	0.0005	0.013	248	4.18	-
Runoff	L2725732-13	WRP-22-13	2022-07-29	2022-07-29	0.00005	46	0.0001	0.0005	0.0074	0.005	0.17	0.0005	0.01	96.3	1.62	-
Runoff	L2725732-14	WRP-22-14	2022-07-29	2022-07-29	0.000276	27.4	0.00032	0.00051	0.00144	0.00123	0.474	0.000181	0.0086	69.1	0.667	-
Runoff	L2725732-15	WRP-22-15	2022-07-29	2022-07-29	0.000181	16.2	0.000104	0.00138	0.00143	0.00319	1.62	0.00147	0.0061	42.5	0.11	-
Runoff	L2725732-16	WRP-22-16	2022-07-29	2022-07-29	0.0000189	27.2	0.000101	0.0005	0.0042	0.0005	0.03	0.00147	0.0056	37	0.0989	-
Runoff	L2725732-17	WRP-22-17	2022-07-29	2022-07-29	0.00004	51.5	0.0001	0.0005	0.0033	0.005	0.18	0.0005	0.01	83.6	0.949	-
Runoff	L2725732-18	WRP-22-18	2022-07-29	2022-07-29	0.0000422	26	0.000448	0.00217	0.00414	0.00652	5.8	0.00163	0.0117	52.8	0.653	-
Runoff	L2157407-6	WRP-DD-E1	2018-09-01	2018-09-01	0.000166	126	0.0001	0.0005	0.159	0.013	9.03	0.0005	0.018	381	11.6	-
Runoff	L2158115-4	WRP-S10	2018-09-04	2018-09-04	0.000248	162	0.001	0.05	3.04	0.6	366	0.005	0.2	3500	152	-
Runoff	L2306749-1	WRP-S10	2018-09-04	2018-09-04	0.000617	122	0.00034	0.0146	1.4	0.344	124	0.00229	0.257	1150	-	-
Runoff	L2158115-3	WRP-S10	2018-09-04	2018-09-04	0.00627	288	0.001	0.05	5.76	0.48	1190	0.005	0.33	5770	250	-
Runoff	L2298517-5	WRP-S10	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2320849-1	WRP-S12	2019-07-30	2019-07-30	0.000362	30.2	0.00126	0.042	0.728	0.057	115	0.00733	0.077	325	24.8	-
Runoff	L2290620-2	WRP-S10	2019-06-12	2019-06-12	0.000364	37.3	0.0001	0.005	0.276	0.066	17.9	0.0005	0.077	226	10.8	-
Runoff	L2290620-3	WRP-S11	2019-06-12	2019-06-12	0.000072	8.63	0.00331	0.0996	0.0291	0.08	74.7	0.0188	0.051	28.9	0.643	-
Runoff	L2298517-7	WRP-S11	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-2	WRP-S12	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2303565-4	WRP-S12	2019-07-02	2019-07-02	0.000069	53.9	0.0001	0.005	0.0483	0.01	0.52	0.0005	0.012	167	-	-
Runoff	L2298517-6	WRP-S12	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2290620-4	WRP-S12	2019-06-12	2019-06-12	0.00005	12.7	0.00168	0.0379	0.0088	0.019	14.2	0.00735	0.02	32	0.296	-
Runoff	L2320849-2	WRP-S12	2019-07-30	2019-07-30	0.000051	86.7	0.0001	0.005	0.0205	0.01	0.26	0.0005	0.019	214	3.73	-
Runoff	L2157407-16	WRP-S14	2019-07-01	2019-07-01	0.00005	78.1	0.0001	0.005	0.0675	0.01	0.37	0.0005	0.014	285	5.75	-
Runoff	L2303565-3	WRP-S15	2019-07-02	2019-07-02	0.000818	95	0.00013	0.0096	0.606	0.038	26.9	0.00076	0.062	489	-	-
Runoff	L2323954-2	WRP-S15	2019-08-27	2019-08-27	0.00152	179	0.001	0.05	1.05	0.1	47.9	0.005	0.1	1070	57.9	-
Runoff	L2323304-1	WRP-S15	2019-08-06	2019-08-06	0.00109	161	0.001	0.0109	1.12	0.11	107	0.005	0.1	999	62.9	-
Runoff	L2306749-2	WRP-S15	2019-07-09	2019-07-09	0.000454	101	0.0001	0.0005	0.412	0.021	17.9	0.0005	0.039	356	-	-
Runoff	L2298517-3	WRP-S15	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2294129-8	WRP-S15	2019-06-18	2019-06-18	0.000126	23.5	0.00064	0.0237	0.0788	0.012	11.6	0.00418	0.011	65.8	-	-
Runoff	L2158115-7	WRP-S15NEW	2019-09-04	2019-09-04	0.00005	23	0.00011	0.005	0.001	0.01	1.25	0.00178	0.01	18.2	0.0344	-
Runoff	L2312012-4	WRP-S16	2019-07-17	2019-07-17	0.00143	146	0.001	0.05	1.52	0.22	302	0.005	0.1	1070	64.3	-
Runoff	L233401-3	WRP-S16	2019-08-20	2019-08-20	0.00153	173	0.001	0.05	1.13	0.1	87.1	0.005	0.1	1040	56.9	-
Runoff	L2328009-4	WRP-S16	2019-08-13	2019-08-13	0.0014	156	0.00011	0.0014	0.099	0.099	85.6	0.0005	0.074	893	52.5	-
Runoff	L2323304-2	WRP-S16	2019-08-06	2019-08-06	0.0014	152	0.001	0.05	1.21	0.14	122	0.005	0.1	962	63.2	-
Runoff	L2290620-5	WRP-S16	2019-06-12	2019-06-12	0.000132	46.7	0.00017	0.0344	0.0819	0.01	17.1	0.00177	0.023	222	4.52	-
Runoff	L2298517-4	WRP-S16	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2158115-9	WRP-S16NEW	2019-09-04	2019-09-04	0.00259	159	0.001	0.05	1.55	0.25	158	0.005	0.1	1750	80.9	-
Runoff	L2290620-7	WRP-S17	2019-06-12	2019-06-12	0.00095	929	0.00117	0.034	0.0195	0.019	18.6	0.00726	0.015	37.6	1.08	-
Runoff	L2303565-1	WRP-S17	2019-07-02	2019-07-02	0.00005	897	0.00048	0.022	0.0841	0.012	11.9	0.00431	0.011	12.1	-	-
Runoff	L2306748-5	WRP-S17	2019-07-09	2019-07-09	0.00005	22.1	0.00028	0.00082	0.0033	0.001	0.466	0.000272	0.0021	17.4	-	-
Runoff	L230748-4	WRP-S18	2019-07-09	2019-07-09	0.00073	147	0.0001	0.05	0.17	0.1	789	0.005	0.1	1500	-	-
Runoff	L2312012-2	WRP-S18	2019-07-17	2019-07-17	0.00112	104	0.00071	0.0423	0.364	0.08	467	0.004	0.13	869	60.5	-
Runoff	L2303565-6	WRP-S18	2019-07-02	2019-07-02	0.00005	37.8	0.00014	0.005	0.0058	0.01	2.26	0.00095	0.01	63.9	-	-
Runoff	L2298517-10	WRP-S18	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2303565-2	WRP-S4	2019-07-02	2019-07-02	0.000051	95	0.00072	0.0074	0.076	0.033	13.9	0.0288	0.014	14.1	-	-
Runoff	L2290620-9	WRP-S4	2019-08-13	2019-08-13	0.0000868	95.5	0.000017	0.0005	0.00454	0.0032	0.105	0.000198	0.0052	74.1	2.26	-
Runoff	L2298517-2	WRP-S5	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L232009-3	WRP-S5	2019-08-13	2019-08-13	0.00005	102	0.0001	0.005	0.0205	0.011	2.9	0.00076	0.01	131	3.08	-
Runoff	L233401-2	WRP-S5	2019-08-20	2019-08-20	0.000065	47.7	0.0001	0.005	0.0199	0.01	0.95	0.00012	0.01	165	2.41	-
Runoff	L2290620-1	WRP-S5	2019-06-12	2019-06-12	0.00005	5.76	0.00127	0.0285	0.0048	0.016	10.4	0.00918	0.011	8.52	0.13	-
Runoff	L2158115-5	WRP-S5	2018-09-04	2018-09-04	0.00005	21.8	0.00058	0.011	0.0023	0.01	4.44	0.00401	0.01	15.9	0.0523	-
Runoff	L2298517-1	WRP-S6	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2157407-10	WRP-S6	2018-09-01	2018-09-01	0.000137	126	0.0001	0.005	0.119	0.012	7.85	0.0005	0.016	309	8.6	-
West Ditch	L272749-4	MS-08-EXPLORE-WESTDITCH	2022-07-10	2022-07-10	0.0000314	25.3	0.000125	0.00766	0.00481	0.00769	4.06	0.000115	0.0073	71.3	0.557	-
West Ditch	L2118219-3	MS-08-INFLOW-WEST	2018-06-20	2018-06-20	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2118893-3	MS-08-INFLOW-WEST	2018-06-20	2018-06-20	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2114971-3	MS-08-INFLOW-WEST	2018-06-19	2018-06-19	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2113872-2	MS-08-INFLOW-WEST	2018-06-17	2018-06-17	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2113576-3	MS-08-INFLOW-WEST	2018-06-15	2018-06-15	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2114088-3	MS-08-INFLOW-WEST	2018-06-18	2018-06-18	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2160094-1	MS-08-INFLOW-WEST	2018-09-06	2018-09-06	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2110865-3	MS-08-INFLOW-WEST	2018-06-12	2018-06-12	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2113826-3	MS-08-INFLOW-WEST	2018-06-16	2018-06-16	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2110060-3	MS-08-INFLOW-WEST	2018-06-10	2018-06-10	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2112194-3	MS-08-INFLOW-WEST	2018-06-14	2018-06-14	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2111853-3	MS-08-INFLOW-WEST	2018-06-13	2018-06-13	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2108641-2	MS-08-INFLOW-WEST	2018-06-07	2018-06-07	0.000112	22.9	0.0014	0.0399	0.031	0.039	20.8	0.00917	0.021	46.1	1.78	-
West Ditch	L2280069-4	MS-08-WEST INFLOW	2019-06-09	2019-06-09	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301632-4	MS-08-WEST-DITCH	2019-07-01	2019-07-01	-	-	-	-	-	-	-	-	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample date	Cadmium (Cd)-Total	Calcium (Ca)-Total	Cesium (Cs)-Total	Chromium (Cr)-Total	Cobalt (Co)-Total	Copper (Cu)-Total	Iron (Fe)-Total	Lead (Pb)-Total	Lithium (Li)-Total	Magnesium (Mg)-Total	Manganese (Mn)-Total	Mercury (Hg)-Total
West Ditch	L2335451-5	MS-08-WEST-INFLOW	2019-08-23	2019-08-23	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2316395-5	MS-08-WEST-INFLOW	2018-07-28	2018-07-28	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L23007611-4	MS-08-WEST-INFLOW	2019-07-09	2019-07-09	-	178	0.001	0.05	0.858	0.1	480	0.005	0.1	1270	37.3	-
West Ditch	L2318249-5	MS-08-WEST-INFLOW	2019-07-25	2019-07-25	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2319355-5	MS-08-WEST-INFLOW	2019-07-20	2019-07-20	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2312016-4	MS-08-WEST-INFLOW	2019-07-17	2019-07-17	-	107	0.00098	0.0358	0.861	0.077	435	0.00648	0.117	846	55.6	-
West Ditch	L2320850-4	MS-08-WEST-INFLOW	2019-07-31	2019-07-31	-	130	0.00023	0.0104	0.433	0.02	265	0.00199	0.049	647	25.6	-
West Ditch	L2304611-4	MS-08-WEST-INFLOW	2019-09-03	2019-09-03	-	208	0.0011	0.077	1.75	0.1	1080	0.0068	0.1	2990	102	-
West Ditch	L2303805-4	MS-08-WEST-INFLOW	2019-07-08	2019-07-08	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L23224611-5	MS-08-WEST-INFLOW	2019-08-02	2019-08-02	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2303072-5	MS-08-WEST-INFLOW	2019-07-05	2019-07-05	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2300598-4	MS-08-WEST-INFLOW	2019-06-12	2019-06-12	-	15.6	0.00012	0.005	0.108	0.031	28.2	0.00262	0.018	82.6	4.9	-
West Ditch	L2342313-4	MS-08-WEST-INFLOW	2019-09-05	2019-09-05	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2291173-4	MS-08-WEST-INFLOW	2019-06-13	2019-06-13	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2330905-2	MS-08-WEST-INFLOW	2019-06-13	2019-06-13	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2327989-3	MS-08-WEST-INFLOW	2019-08-18	2019-08-18	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2343354-1	MS-08-WEST-INFLOW	2019-06-20	2019-06-20	-	223	0.0001	0.005	0.344	0.01	111	0.0005	0.033	838	32.4	-
West Ditch	L2295991-4	MS-08-WEST-INFLOW	2019-09-08	2019-09-08	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2308224-5	MS-08-WEST-INFLOW	2019-07-06	2019-07-06	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2328464-3	MS-08-WEST-INFLOW	2019-08-11	2019-08-11	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309409-5	MS-08-WEST-INFLOW	2019-07-12	2019-07-12	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2325445-3	MS-08-WEST-INFLOW	2019-08-08	2019-08-08	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2298617-4	MS-08-WEST-INFLOW	2019-06-25	2019-06-25	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301467-4	MS-08-WEST-INFLOW	2019-06-28	2019-06-28	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2307801-4	MS-08-WEST-INFLOW	2019-07-10	2019-07-10	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2315508-5	MS-08-WEST-INFLOW	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2295155-4	MS-08-WEST-INFLOW	2019-06-19	2019-06-19	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301572-4	MS-08-WEST-INFLOW	2019-06-29	2019-06-29	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301607-4	MS-08-WEST-INFLOW	2019-07-11	2019-07-11	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2308636-4	MS-08-WEST-INFLOW	2019-06-30	2019-06-30	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292454-4	MS-08-WEST-INFLOW	2019-06-15	2019-06-15	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2303578-4	MS-08-WEST-INFLOW	2019-07-02	2019-07-02	-	101	0.00017	0.005	0.308	0.018	15.9	0.00188	0.039	532	21.7	-
West Ditch	L2292234-4	MS-08-WEST-INFLOW	2019-06-14	2019-06-14	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309549-4	MS-08-WEST-INFLOW	2019-07-14	2019-07-14	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305269-5	MS-08-WEST-INFLOW	2019-07-07	2019-07-07	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2300534-4	MS-08-WEST-INFLOW	2019-06-27	2019-06-27	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2337960-4	MS-08-WEST-INFLOW	2019-08-27	2019-08-27	-	200	0.00014	0.0054	0.177	0.01	27.8	0.00133	0.011	564	20.9	-
West Ditch	L2296873-4	MS-08-WEST-INFLOW	2019-06-23	2019-06-23	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309510-5	MS-08-WEST-INFLOW	2019-07-13	2019-07-13	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2293024-4	MS-08-WEST-INFLOW	2019-06-17	2019-06-17	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2294118-4	MS-08-WEST-INFLOW	2019-06-18	2019-06-18	-	53.7	0.00046	0.0131	0.165	0.027	22.5	0.004	0.029	275	10.2	-
West Ditch	L2294139-4	MS-08-WEST-INFLOW	2019-07-03	2019-07-03	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2297932-4	MS-08-WEST-INFLOW	2019-06-07	2019-06-07	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2355516-2	MS-08-WEST-INFLOW	2019-09-27	2019-09-27	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2296841-4	MS-08-WEST-INFLOW	2019-06-21	2019-06-21	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2297623-4	MS-08-WEST-INFLOW	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2298669-4	MS-08-WEST-INFLOW	2019-06-22	2019-06-22	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2300513-4	MS-08-WEST-INFLOW	2019-06-26	2019-06-26	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2357363-3	MS-08-WEST-INFLOW	2019-10-01	2019-10-01	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2289447-4	MS-08-WEST-INFLOW	2019-06-10	2019-06-10	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L233773346	MS-08-WEST-INFLOW	2019-08-31	2019-08-31	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L22871511-4	MS-08-WEST-INFLOW	2019-06-06	2019-06-06	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2304338-5	MS-08-WEST-INFLOW	2019-07-04	2019-07-04	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2469307-1	MS-08-WEST-INFLOW	2020-06-30	2020-06-30	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2330756-2	MS-08-WEST-INFLOW	2019-08-16	2019-08-16	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2358842-2	MS-08-WEST-INFLOW	2019-10-02	2019-10-02	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2467090-3	MS-08-WEST-INFLOW	2020-06-25	2020-06-25	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2346689-1	MS-08-WEST-INFLOW	2019-09-12	2019-09-12	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2345723-2	MS-08-WEST-INFLOW	2019-09-11	2019-09-11	-	249	0.0001	0.005	0.177	0.01	11.5	0.0009	0.01	621	24.7	-
West Ditch	L2289035-4	MS-08-WEST-INFLOW	2019-06-08	2019-06-08	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2477770-6	MS-08-WEST-INFLOW	2020-07-21	2020-07-21	-	201	0.0001	0.005	0.0235	0.005	0.36	0.0005	0.01	478	3.26	-
West Ditch	L2486588-3	MS-08-WEST-INFLOW	2020-08-12	2020-08-12	-	306	0.00002	0.0002	0.0126	0.002	0.161	0.0001	0.0102	631	2.72	-
West Ditch	L2482854-5	MS-08-WEST-INFLOW	2020-08-03	2020-08-03	-	179	0.0001	0.005	0.0201	0.005	0.32	0.0005	0.01	372	2.82	-
West Ditch	L2348201-2	MS-08-WEST-INFLOW	2019-06-16	2019-06-16	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292486-4	MS-08-WEST-INFLOW	2019-06-16	2019-06-16	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2481535-1	MS-08-WEST-INFLOW	2020-07-29	2020-07-29	-	214	0.00022	0.00029	0.0151	0.0024	0.212	0.0001	0.0095	461	2.87	-
West Ditch	L24961104-4	MS-08-WEST-INFLOW	2020-08-26	2020-08-26	-	225	0.00002	0.00079	0.00977	0.0017	0.34	0.0001	0.0074	362	2.15	-
West Ditch	L2496103-1	MS-08-WEST-INFLOW	2020-08-26	2020-08-26	-	214	0.00002	0.00038	0.00964	0.0015	0.31	0.0001	0.0073	350	2.15	-
West Ditch	L2496104-1	MS-08-WEST-INFLOW	2020-08-26	2020-08-26	-	229	0.0001	0.005	0.0085	0.005	0.31	0.0005	0.01	440	2.07	-
West Ditch	L2496140-1	MS-08-WEST-INFLOW	2020-08-30	2020-08-30	-	233	0.00002	0.00027	0.00828	0.0013	0.114	0.0001	0.0063	405	1.82	-
West Ditch	L2496120-1	MS-08-WEST-INFLOW	2020-08-29	2020-08-29	-	212	0.0001	0.005	0.0089	0.005	0.1	0.0005	0.01	421	1.87	-
West Ditch	L2496049-1	MS-08-WEST-INFLOW	2020-08-28	2020-08-28	-	207	0.0001	0.005	0.0077	0.005	0.14	0.0005	0.01	345	1.57	-
West Ditch	L2496047-1	MS-08-WEST-INFLOW	2020-08-27	2020-08-27	-	129	0.0001	0.005	0.0045	0.005	0.47	0.0005	0.01	241	1.14	-
West Ditch	L2496705-1	MS-08-WEST-INFLOW	2020-08-31	2020-08-31	-	-	-	-	-	-	-	-	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample date	Cadmium (Cd)-Total	Calcium (Ca)-Total	Cesium (Cs)-Total	Chromium (Cr)-Total	Cobalt (Co)-Total	Copper (Cu)-Total	Iron (Fe)-Total	Lead (Pb)-Total	Lithium (Li)-Total	Magnesium (Mg)-Total	Manganese (Mn)-Total	Mercury (Hg)-Total
			Units>		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
West Ditch	L2497356-1	MS-08-WEST-INFLOW	2020-09-01	2020-09-01	0.000069	190	0.0001	0.005	0.0106	0.005	0.19	0.0005	0.01	471	2.49	-
West Ditch	L2323296-5	MS-08-WEST-INFLOW	2019-08-06	2019-08-06	0.000351	175	0.00013	0.005	0.267	0.01	98.7	0.00071	0.026	636	24.2	-
West Ditch	L2603974-4	MS-08-WEST-INFLOW	2021-06-21	2021-06-21	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2606859-5	MS-08-WEST-INFLOW	2021-06-26	2021-06-26	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2606871-5	MS-08-WEST-INFLOW	2021-06-27	2021-06-27	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2602622-5	MS-08-WEST-INFLOW	2021-07-01	2021-07-01	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2610945-3	MS-08-WEST-INFLOW	2021-07-05	2021-07-05	0.000055	94.5	0.0001	0.005	0.0236	0.005	0.78	0.0005	0.01	200	1.82	-
West Ditch	L2612337-6	MS-08-WEST-INFLOW	2021-07-11	2021-07-11	0.000059	65.5	0.00079	0.0191	0.0247	0.0127	11.8	0.0051	0.015	171	1.69	-
West Ditch	L2616285-7	MS-08-WEST-INFLOW	2021-07-24	2021-07-24	0.000079	126	0.00047	0.012	0.0303	0.0095	6.74	0.00395	0.0169	324	2.42	-
West Ditch	L2629919-4	MS-08-WEST-INFLOW	2021-08-22	2021-08-22	0.0000661	118	0.0001	0.005	0.0395	0.005	0.47	0.0005	0.015	462	2.85	-
West Ditch	L2635846-3	MS-08-WEST-INFLOW	2021-09-05	2021-09-05	0.000066	165	0.0001	0.005	0.0481	0.0061	0.48	0.0005	0.01	529	3.66	-
West Ditch	L2725730-1	MS-08-WEST-INFLOW	2022-07-28	2022-07-28	0.000005	67.4	0.0001	0.005	0.0057	0.0005	0.64	0.0005	0.01	155	0.668	-
West Ditch	L2291173-5	MS-08-WEST-INFLOW	2019-06-13	2019-06-13	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2323296-2	MS-08-WEST-INFLOW	2019-08-06	2019-08-06	0.000366	178	0.0001	0.005	0.27	0.01	96.6	0.00052	0.028	660	24.8	-
West Ditch	L2307801-5	MS-08-WEST-INFLOW	2019-07-10	2019-07-10	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2294545-5	MS-08-WEST-INFLOW	2019-06-15	2019-06-15	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2339733-7	MS-08-WEST-INFLOW	2019-08-31	2019-08-31	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2623768-3	MS-08-WEST-INFLOW	2021-08-06	2021-08-06	0.000066	102	0.0001	0.005	0.0306	0.005	0.4	0.0005	0.015	400	2.16	-
West Ditch	L2335475-4	MS-08-WEST-INFLOW	2019-08-25	2019-08-25	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2157407-14	WRP-B7	2018-09-01	2018-09-01	0.004	314	0.001	0.05	3.61	0.28	712	0.005	0.21	4050	168	-
West Ditch	L2157407-9	WRPT-2	2018-09-01	2018-09-01	0.000005	356	0.0001	0.005	0.0022	0.01	0.1	0.0005	0.01	250	0.0781	-

Notes: Based on data supplied by BIM, April 2023. Certificates of Analysis available upon request from BIM.

Highlighted values are presented at detection limit values

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Date	Molybdenum (Mo)- Total mg/L	Nickel (Ni)- Total mg/L	Phosphorus (P)- Total mg/L	Potassium (K)- Total mg/L	Rubidium (Rb)- Total mg/L	Selenium (Se)- Total mg/L	Silicon (Si)- Total mg/L	Silver (Ag)- Total mg/L	Sodium (Na)- Total mg/L	Strontium (Sr)- Total mg/L	Sulfur (S)- Total mg/L	Sulphate - calculated mg/L
East Ditch	L2348201-1	MS-08-EAST-INFLOW	2019-09-16	2019-09-16	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2345723-3	MS-08-EAST-INFLOW	2019-09-11	2019-09-11	0.00213	0.0393	0.5	4.75	0.0063	0.00155	4.2	0.0005	5.67	0.081	220	658.6620926
East Ditch	L2288069-3	MS-08-EAST-INFLOW	2019-06-09	2019-06-09	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2288035-3	MS-08-EAST-INFLOW	2019-06-08	2019-06-08	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2472902-3	MS-08-EAST-INFLOW	2020-07-10	2020-07-10	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2605951-3	MS-08-EAST-INFLOW	2021-06-23	2021-06-23	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2606859-2	MS-08-EAST-INFLOW	2021-06-26	2021-06-26	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2606871-2	MS-08-EAST-INFLOW	2021-06-27	2021-06-27	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2610945-4	MS-08-EAST-INFLOW	2021-07-01	2021-07-01	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2610945-2	MS-08-EAST-INFLOW	2021-07-01	2021-07-01	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2612337-1	MS-08-EAST-INFLOW	2021-07-11	2021-07-05	0.00109	0.0728	0.5	4.88	0.0143	0.00173	8.8	0.0005	1.4	0.029	102	305.3796975
East Ditch	L2612337-1	MS-08-EAST-INFLOW	2021-07-11	2021-07-11	0.00137	0.031	0.5	6.39	0.0352	0.00111	18.6	0.0005	1	0.026	54.1	161.9703964
East Ditch	L2612855-2	MS-08-EAST-INFLOW	2021-07-24	2021-07-24	0.00063	0.0905	0.1	6.86	0.0083	0.00657	4.19	0.00002	3.19	0.0703	392	1173.616092
East Ditch	L2623788-4	MS-08-EAST-INFLOW	2021-08-06	2021-08-06	0.00124	0.0892	0.5	7.44	0.0066	0.00826	2.9	0.0005	4	0.089	426	1275.4605325
East Ditch	L2625919-2	MS-08-EAST-INFLOW	2021-08-22	2021-08-22	0.00133	0.0854	0.5	7.44	0.0062	0.00886	3.5	0.0005	4.77	0.088	473	1416.123499
East Ditch	L2635846-2	MS-08-EAST-INFLOW	2021-09-05	2021-09-05	0.00179	0.0406	0.5	6.75	0.0055	0.00559	2.9	0.0005	3.86	0.084	293	877.2181506
East Ditch	L2725730-5	MS-08-EAST-INFLOW	2022-07-29	2022-07-28	0.00108	0.239	0.5	6.99	0.0211	0.00457	14.1	0.0005	2.28	0.066	473	1416.123499
East Ditch	L2322461-2	MS-08-EAST-INFLOW01	2019-08-02	2019-08-02	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2477770-4	MS-08-EAST-INFLOW01	2020-07-21	2020-07-21	0.00266	0.0491	0.5	9.43	0.0082	0.00436	2.6	0.0005	6.73	0.116	312	934.1026041
East Ditch	L2486140-3	MS-08-EAST-INFLOW01	2020-08-30	2020-08-30	0.00283	0.0247	0.5	8.06	0.0065	0.00467	2.7	0.0005	7.2	0.143	339	1014.938406
East Ditch	L2343354-4	MS-08-EAST-INFLOW	2019-09-08	2019-09-08	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2722749-1	MS-08-EXPLORE-EASTDITCH	2022-07-10	2022-07-10	0.00124	0.0134	0.5	3.02	0.0137	0.0005	10.7	0.0005	0.5	0.01	5	14.96959301
East Ditch	L2113626-4	MS-08-INFLOW-EAST	2018-06-16	2018-06-16	-	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2160094-4	MS-08-INFLOW-EAST	2018-09-06	2018-09-06	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-1	CENTRAL-KEY-IN	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2312012-3	CENTRAL-KEY-IN	2019-07-17	2019-07-17	0.014	0.0648	0.5	13.2	0.0589	0.00289	26.3	0.0005	6.13	0.064	286	856.2607204
Runoff	L2328009-6	INFLUENT-CENTRAL-KEY-IN	2019-08-13	2019-08-13	0.00452	0.108	0.5	5.83	0.009	0.00443	2.9	0.0005	7.73	0.084	594	1778.38765
Runoff	L2287151-3	MS-08-EMERGENCY-DITCH	2019-06-06	2019-06-06	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2340467-1	MS-SF-02	2019-09-03	2019-09-03	0.05	25.9	50	50	0.2	0.1	100	0.05	50	1	24.100	721.5343933
Runoff	PAG WR (max)	MS-SF-02	2019-09-01	2019-09-01	0.05	34.6	50	50	0.2	0.1	100	0.05	50	1	31.100	931.108655
Runoff	L2303565-5	MS-SF-02	2019-07-02	2019-07-02	0.0005	0.725	0.5	2.4	0.0064	0.00471	2.6	0.0005	1.99	0.059	71.3	2134.663964
Runoff	L2337954-1	MS-SF-02	2019-08-27	2019-08-27	0.005	4.52	5	9.6	0.02	0.0285	10	0.005	13.4	0.25	6620	19819.74115
Runoff	L2320849-3	MS-SF-02	2019-07-30	2019-07-30	0.005	4.05	5	9.4	0.049	0.0192	28	0.005	8.9	0.19	50.00	14969.59301
Runoff	L2298517-8	MS-SF-02	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-3	MS-SF-02	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2328009-2	MS-SF-02	2019-08-13	2019-08-13	0.005	1.95	5	10.9	0.02	0.0233	10	0.005	8.6	0.2	3.190	9550.600343
Runoff	L2290620-5	MS-SF-02	2019-06-12	2019-06-12	0.005	0.0812	0.5	2.21	0.0053	0.00166	4.3	0.005	1.2	0.022	1.30	389.2094184
Runoff	L2323304-3	MS-SF-04	2019-08-06	2019-08-06	0.005	1.6	5	9	0.02	0.0155	10	0.005	7.9	0.16	2810	8412.911274
Runoff	L2306749-3	MS-SF-04	2019-07-09	2019-07-09	0.005	0.896	0.5	2.74	0.0073	0.00563	3.3	0.0005	2.25	0.073	853	2553.812568
Runoff	L2328009-1	MS-SF-04	2019-08-13	2019-08-13	0.005	2.22	5	6.3	0.02	0.0154	10	0.005	5	0.14	1930	5779.262903
Runoff	L2333401-1	MS-SF-04	2019-08-20	2019-08-20	0.005	2.49	5	6.3	0.02	0.0152	10	0.005	5.6	0.15	2320	6945.891159
Runoff	L2312012-1	MS-SF-04	2019-07-17	2019-07-17	0.005	1.2	0.5	3.91	0.0085	0.0092	4.6	0.0005	2.86	0.097	1080	3233.432091
Runoff	L2320949-4	MS-SF-04	2019-07-30	2019-07-30	0.005	1.74	0.5	4.45	0.0107	0.0103	6.9	0.0005	3.86	0.126	1560	4670.51392
Runoff	L2200920-6	MS-SF-04	2019-06-12	2019-06-12	0.0005	0.493	0.5	1.31	0.0034	0.00393	1.7	0.0005	1.72	0.033	564	1685.57092
Runoff	L2315510-4	MS-SF-04	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2323304-4	MS-SF-04	2019-08-06	2019-08-06	0.005	1.89	5	5	0.02	0.0103	10	0.005	5	0.13	1750	5239.357555
Runoff	L2288177-9	MS-SF-04	2018-06-24	2018-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L228478-9	MS-SF-0401	2019-06-04	2019-06-04	0.005	1.59	5	7.7	0.023	0.0181	10	0.005	9.2	0.2	2900	8682.363948
Runoff	L2730435-1	MS-WRF-22-01	2022-08-28	2022-08-18	0.0005	0.521	0.5	1.56	0.0039	0.0038	1.9	0.0005	1.71	0.037	552	1652.643069
Runoff	MS-WRF-22-02	2022-08-28	2022-08-28	2022-08-28	0.00611	0.00666	0.05	2.02	0.00275	0.00242	1.21	0.0005	1.05	0.039	105	314.3614533
Runoff	L2730426-1	MS-WRF-22-06	2022-08-27	2022-08-27	0.00415	0.00383	0.058	3.45	0.00315	0.00253	1.7	0.0005	1.68	0.0296	105	279.6319975
Runoff	L2730426-2	MS-WRF-22-08A	2022-08-27	2022-08-27	0.00411	0.00197	0.05	3.1	0.00679	0.00397	2.72	0.00005	2.76	0.0463	135	404.1790114
Runoff	L2730426-3	MS-WRF-22-08A	2022-08-27	2022-08-27	0.00469	0.00395	0.103	3.47	0.00518	0.00408	1.9	0.00005	2.64	0.0462	135	404.1790114
Runoff	L2730426-4	MS-WRF-22-08A	2022-08-27	2022-08-27	0.00237	0.0085	0.5	4.91	0.0067	0.0123	3.8	0.0005	4.76	0.083	637	1907.12615
Runoff	L2730426-5	MS-WRF-22-08A	2022-08-27	2022-08-27	0.0188	0.0035	0.5	10.3	0.0126	0.0145	8.4	0.0005	11	0.186	332	993.9809761
Runoff	L2730426-6	MS-WRF-22-08A	2022-08-27	2022-08-27	0.00786	0.0206	0.5	7.17	0.0122	0.0166	10.8	0.0005	7.44	0.133	455	1362.232964
Runoff	L2730426-7	MS-WRF-22-10	2022-08-27	2022-08-27	0.0192	0.0161	0.5	9.61	0.0089	0.0144	2.6	0.0005	6.2	0.209	440	1317.324185
Runoff	L2730426-8	MS-WRF-22-12	2022-08-27	2022-08-27	0.00336	0.096	0.5	9.08	0.0118	0.0164	4.8	0.0005	14.8	0.22	806	2413.088394
Runoff	L2730426-9	MS-WRF-22-18	2022-08-27	2022-08-27	0.00873	0.0241	0.05	12.6	0.00413	0.00778	2.91	0.00005	8.41	0.0508	283	847.2789646
Runoff	L2730426-10	MS-WRF-22-18A	2022-08-27	2022-08-27	0.00233	0.0108	0.05	12.7	0.012	0.00485	6.14	0.00005	2.71	0.0508	160	479.0269765
Runoff	L2730426-11	MS-WRF-22-18A	2022-08-27	2022-08-27	0.00384	0.0081	0.05	9.56	0.0073	0.00552	3.77	0.00005	4.44	0.0612	164	491.0026509
Runoff	L2478363-1	WRP-20-01	2020-07-22	2020-07-22	0.0005	0.005	0.5	2.78	0.0037	0.00076	1.2	0.0005	1.09	0.032	268	822.3701856
Runoff	L2488602-1	WRP-20-01	2020-08-12	2020-08-12	0.00125	0.0022	0.28	4.51	0.0188	0.00093	28.1	0.000122	1.22	0.0375	208	602.7350694
Runoff	L2482855-1	WRP-20-01	2020-08-03	2020-08-03	0.0005	0.0069	0.5	6.01	0.0027	0.00062	3.2	0.0005	0.99	0.027	156	467.051302
Runoff	L2482855-2	WRP-20-01A	2020-08-03	2020-08-03	0.00116	0.0534	0.5	6.42	0.0082	0.00109	22.4	0.0005	1.33	0.038	228	682.6134414
Runoff	L2488602-2	WRP-20-01A	2020-08-12	2020-08-12	0.00131	0.0599	0.42	6.67	0.0304	0.00148	27.1	0.00088	1.41	0.0409	241	721.5343833
Runoff	L2478363-2	WRP-20-02	2020-07-22	2020-07-22	0.0005	0.0218	0.5	3.31	0.0085	0.00148	3.9	0.0005	1.41	0.044	482	1443.088767
Runoff	WRP-20-03	2020-08-21	2020-08-21	2020-08-21	0.000379	0.00135	0.05	2.5	0.00304	0.000548	2.09	0.00001	1.04	0.0307	84.7	193.7065336
Runoff	L2495406-4	WRP-20-03	2020-08-21	2020-08-21	0.00062	0.0143	0.5	4.29	0.0146	0.00177	6.8	0.0005	2.33	0.059	489	1493.965363
Runoff	L2478363-3	WRP-20-04	2020-07-22	2020-07-22	0.00073	0.0095	0.5</									

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample date	Molybdenum (Mo)- Total	Nickel (Ni)- Total	Phosphorus (P)- Total	Potassium (K)- Total	Rubidium (Rb)- Total	Selenium (Se)- Total	Silicon (Si)- Total	Silver (Ag)- Total	Sodium (Na)- Total	Strontium (Sr)- Total	Sulfur (S)- Total	Sulphate - calculated
Runoff	L2495466-1	WRP-20-04A	2020-08-21	2020-08-21	0.00402	0.00432	0.05	2.84	0.00405	0.00133	1.45	0.00001	1.55	0.0492	335	1002.962732
Runoff	L2478363-4	WRP-20-05	2020-07-22	2020-07-22	0.0068	0.0467	0.5	5.16	0.0073	0.00588	3	0.0005	6.5	0.087	1150	3443.006393
Runoff	L2482555-4	WRP-20-05	2020-08-03	2020-08-03	0.0076	0.0325	0.05	3.28	0.0094	0.00183	4.7	0.0005	10.3	0.092	950	2844.222673
Runoff	L2495466-3	WRP-20-05	2020-08-21	2020-08-21	0.00631	0.00305	0.05	5.36	0.00453	0.00183	1.76	0.00001	2.5	0.093	388	1161.640418
Runoff	L2488602-4	WRP-20-05A	2020-08-12	2020-08-12	0.00204	0.00463	0.57	11.19	0.0356	0.00782	23.6	0.00012	16	0.16	1370	4101.668486
Runoff	L2496722-4	WRP-20-05A	2020-08-31	2020-08-31	0.00169	0.0429	0.5	9.09	0.0156	0.00785	8.9	0.0005	9.48	0.127	1190	3562.763137
Runoff	L2482555-5	WRP-20-05A	2020-08-03	2020-08-03	0.00146	0.00275	0.5	6.09	0.0065	0.00508	2.9	0.0005	12.3	0.097	798	2389.147045
Runoff	L2478363-5	WRP-20-07	2020-07-22	2020-07-22	0.00223	0.067	0.5	8.7	0.0163	0.0082	15.7	0.0005	13.4	0.115	1010	3023.857789
Runoff	L2488602-5	WRP-20-07	2020-08-12	2020-08-12	0.0033	0.104	0.97	10.8	0.0373	0.00925	33.5	0.00208	12.1	0.126	1490	4601.938718
Runoff	L2482555-6	WRP-20-07	2020-08-03	2020-08-03	0.0017	0.0436	0.5	7	0.0143	0.00584	9.4	0.0005	9.76	0.1	979	2831.046312
Runoff	L2495466-7	WRP-20-07	2020-08-21	2020-08-21	0.00108	0.0253	0.25	7.12	0.0058	0.00605	3.38	0.0005	7.27	0.104	1010	3023.857789
Runoff	L2486722-7	WRP-20-07	2020-08-31	2020-08-31	0.00219	0.0389	0.5	7.19	0.0093	0.00703	6.4	0.0005	8.77	0.124	1250	3742.398254
Runoff	L2495466-8	WRP-20-0702	2020-08-21	2020-08-21	0.00005	0.0005	0.05	0.05	0.0002	0.00005	0.1	0.00001	0.05	0.0002	0.5	1.496959301
Runoff	L2495466-9	WRP-20-0702	2020-08-31	2020-08-31	0.00151	0.0307	0.5	6.01	0.0071	0.00518	7.2	0.0005	6.69	0.083	719	2152.627475
Runoff	L2478363-6	WRP-20-08	2020-07-22	2020-07-22	0.00135	0.0643	0.5	10.6	0.0129	0.0129	7.4	0.0005	13.7	0.23	1500	4490.877904
Runoff	L2495466-6	WRP-20-08	2020-08-21	2020-08-21	0.00176	0.0782	0.25	9.04	0.0106	0.00877	9.16	0.0005	9.06	0.158	1160	3472.945579
Runoff	L2478363-7	WRP-20-09	2020-07-22	2020-07-22	0.00194	0.0992	0.5	17.35	0.0086	0.0104	7.35	0.0005	8.35	0.158	947	2835.240917
Runoff	L2495466-5	WRP-20-10	2020-08-21	2020-08-21	0.003	2.12	1	17.4	0.0206	0.0278	9.6	0.0002	12.2	0.315	2490	7454.857321
Runoff	L2478363-8	WRP-20-10	2020-07-22	2020-07-22	0.00249	0.0314	0.5	9.13	0.0176	0.0139	3.4	0.0005	10.4	0.23	1040	3113.675347
Runoff	L2482555-7	WRP-20-11	2020-08-03	2020-08-03	0.00845	1.01	0.5	14.6	0.0226	0.0211	21.4	0.0005	8.98	0.232	1390	4161.546858
Runoff	L2478363-9	WRP-20-11	2020-07-22	2020-07-22	0.00069	0.183	0.5	15.7	0.0267	0.0145	9.2	0.0005	9.64	0.238	810	2425.074068
Runoff	L2478363-10	WRP-20-12	2020-07-22	2020-07-22	0.0043	0.374	0.5	14.1	0.0213	0.0169	7.6	0.0005	10.2	0.222	922	2760.392952
Runoff	L2495466-16	WRP-20-12	2020-08-22	2020-08-22	0.00153	0.0531	0.218	5.5	0.014	0.00517	19	0.00004	6.76	0.0673	145	434.1181974
Runoff	L2495466-20	WRP-20-1203	2020-08-22	2020-08-22	0.00005	0.0005	0.05	0.05	0.0002	0.00005	0.1	0.00001	0.05	0.0002	0.5	1.496959301
Runoff	L2478363-11	WRP-20-13	2020-07-22	2020-07-22	0.00128	0.291	0.5	9.48	0.0096	0.0119	4.3	0.0005	9.33	0.206	778	2329.266673
Runoff	L2495466-12	WRP-20-13	2020-08-22	2020-08-22	0.00141	0.0456	0.143	10.4	0.0097	0.00423	11.5	0.00047	7.29	0.099	265	793.3884298
Runoff	L2485429-1	WRP-20-14	2020-08-04	2020-08-04	0.00211	0.396	0.5	10.6	0.0096	0.0191	5.6	0.0005	10.6	0.249	999	2990.924684
Runoff	L2488602-6	WRP-20-14	2020-08-12	2020-08-12	0.0032	0.313	0.25	12	0.0099	0.0184	5.04	0.0005	11.7	0.298	1070	3203.492905
Runoff	L2478363-12	WRP-20-14	2020-07-22	2020-07-22	0.00423	0.274	0.5	11.9	0.021	0.0121	13.6	0.0005	9.44	0.216	745	2230.469359
Runoff	L2495466-21	WRP-20-14	2020-08-22	2020-08-22	0.00227	0.113	0.103	7.86	0.00997	0.00597	8.57	0.00041	7.01	0.111	352	1053.859348
Runoff	L2485429-2	WRP-20-1401	2020-08-12	2020-08-12	0.00322	0.314	0.25	12	0.0102	0.0189	4.99	0.00005	11.6	0.292	1080	3233.432091
Runoff	L2485429-2	WRP-20-1403	2020-08-04	2020-08-04	0.00005	0.0005	0.05	0.05	0.0002	0.00005	0.1	0.00005	0.05	0.0001	0.5	1.496959301
Runoff	L2478363-13	WRP-20-15	2020-07-22	2020-07-22	0.00443	0.0996	0.5	14.8	0.0115	0.00629	3.6	0.0005	14.3	0.103	444	1329.29896
Runoff	L2485429-3	WRP-20-15	2020-08-04	2020-08-04	0.0085	0.0747	0.5	14.3	0.0107	0.00689	3.8	0.0005	10.9	0.13	460	1372.202557
Runoff	L2495466-19	WRP-20-15	2020-08-22	2020-08-22	0.00725	0.074	0.05	15.4	0.00851	0.00755	3.51	0.00001	12.9	0.11	447	1338.281615
Runoff	L2496722-9	WRP-20-15	2020-08-31	2020-08-31	0.00759	0.0698	0.5	12.8	0.0084	0.00843	3.3	0.0005	11.9	0.108	506	1514.922813
Runoff	L2488602-8	WRP-20-15	2020-08-12	2020-08-12	0.0087	0.0614	0.1	17	0.0115	0.0078	4.53	0.00002	10.4	0.133	610	1826.290348
Runoff	L2485429-4	WRP-20-1501	2020-08-04	2020-08-04	0.00832	0.0753	0.5	14.6	0.0106	0.00629	2.9	0.0005	11	0.107	465	1392.172115
Runoff	PAG.WR (75th)	WRP-20-17	2020-08-22	2020-08-22	0.00255	0.144	0.1	9.05	0.0088	0.0105	8.25	0.00002	5.16	0.0937	637	1907.12615
Runoff	L2485429-5	WRP-20-17	2020-08-04	2020-08-04	0.00255	0.159	0.5	9.69	0.0104	0.00975	3.6	0.0005	4.84	0.097	750	2245.438952
Runoff	L2496722-4	WRP-20-17	2020-09-31	2020-09-31	0.00309	0.126	0.5	8.15	0.0099	0.0102	8.15	0.0005	6.37	0.093	701	2093.796941
Runoff	L2478363-14	WRP-20-17	2020-07-22	2020-07-22	0.00385	0.126	0.5	10.8	0.011	0.00836	4.1	0.0005	5.08	0.104	680	2035.85465
Runoff	L2495429-6	WRP-20-1702	2020-08-04	2020-08-04	0.00005	0.0005	0.05	0.05	0.0002	0.00005	0.1	0.00005	0.05	0.0001	0.5	1.496959301
Runoff	L2485429-7	WRP-20-18	2020-08-04	2020-08-04	0.0012	0.21	0.5	6.93	0.0092	0.0114	4.8	0.0005	4.72	0.083	859	2571.77688
Runoff	L2478665-1	WRP-20-18	2020-07-24	2020-07-24	0.00151	0.181	0.1	8.15	0.00866	0.00937	3.41	0.00002	5.19	0.0961	739	2215.03947
Runoff	L2495466-14	WRP-20-18	2020-08-22	2020-08-22	0.002	0.143	0.1	7.24	0.00856	0.0104	7.24	0.00002	3.65	0.0774	835	1901.138313
Runoff	L2486722-3	WRP-20-18	2020-08-31	2020-08-31	0.00208	0.135	0.5	8.28	0.0132	0.00998	6.3	0.0005	6.89	0.093	895	2680.773429
Runoff	L2488602-9	WRP-20-18	2020-08-12	2020-08-12	0.00268	0.122	0.1	12	0.018	0.0117	8.89	0.00002	6.12	0.11	877	2623.666615
Runoff	L2478665-2	WRP-20-1801	2020-07-24	2020-07-24	0.0015	0.182	0.1	8.14	0.00863	0.0105	8.14	0.00002	5.07	0.098	756	2263.402464
Runoff	L2485429-8	WRP-20-19	2020-08-04	2020-08-04	0.002	0.0948	0.5	9.3	0.0099	0.00585	2.7	0.0005	6.8	0.118	500	1496.959301
Runoff	L2488602-10	WRP-20-19	2020-08-12	2020-08-12	0.00293	0.0936	0.1	9.56	0.00899	0.00649	2.28	0.00002	7.86	0.137	544	1628.69172
Runoff	L2478665-3	WRP-20-19	2020-07-24	2020-07-24	0.00252	0.0979	0.1	12.2	0.0106	0.00757	2.85	0.00002	8.25	0.132	572	1712.521441
Runoff	L2495466-15	WRP-20-19	2020-08-22	2020-08-22	0.00348	0.0963	0.169	11.6	0.0177	0.00323	14.7	0.00002	3.63	0.067	216	646.6864182
Runoff	L2496722-1	WRP-20-19	2020-08-31	2020-08-31	0.00612	0.0295	0.5	10.7	0.0083	0.00703	2.1	0.0005	6.69	0.144	469	1404.147825
Runoff	L2478665-4	WRP-20-1901	2020-07-24	2020-07-24	0.00244	0.0668	0.1	12.5	0.0103	0.00794	2.88	0.00002	7.77	0.131	561	1679.588336
Runoff	L2485429-9	WRP-20-20	2020-08-04	2020-08-04	0.00209	0.139	0.5	9.05	0.0086	0.00614	2.3	0.0005	6.75	0.123	567	1697.551848
Runoff	L2478665-5	WRP-20-20	2020-07-24	2020-07-24	0.00238	0.0987	0.1	11.5	0.0118	0.00738	4.39	0.00002	7.48	0.128	554	1658.630906
Runoff	L2486722-2	WRP-20-20	2020-08-31	2020-08-31	0.00345	0.1	0.5	12.1	0.0107	0.0103	2.7	0.00005	8.99	0.161	622	1862.217371
Runoff	L2495466-17	WRP-20-20	2020-08-22	2020-08-22	0.00276	0.0445	0.203	12	0.022	0.00242	19.4	0.00002	2.98	0.0517	144	431.1242768
Runoff	L2495466-9	WRP-20-20A	2020-08-22	2020-08-22	0.00293	0.0614	0.179	12.3	0.0196	0.00335	16.8	0.00042	3.88	0.0607	220	658.6620926
Runoff	L2485429-10	WRP-20-20A	2020-08-04	2020-08-04	0.00418	0.0967	0.5	12.6	0.013	0.0103	5.7	0.0005	10.8	0.177	896	2083.767348
Runoff	L2478665-6	WRP-20-21	2020-07-24	2020-07-24	0.00671	0.053	0.23	14.8	0.023	0.00767	19.3	0.00089	10.6	0.164	448	1341.275534
Runoff	L2495466-7	WRP-20-21	2020-07-24	2												

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Date	Molybdenum (Mo)- Total	Nickel (Ni)- Total	Phosphorus (P)- Total	Potassium (K)- Total	Rubidium (Rb)- Total	Selenium (Se)- Total	Silicon (Si)- Total	Silver (Ag)- Total	Sodium (Na)- Total	Strontium (Sr)- Total	Sulfur (S)- Total	Sulphate - calculated
Runoff	L2610912-9	WRP-21-01 2021-07-05 1410	2021-07-05	2021-07-05	0.00686	0.0228	0.5	3.18	0.0186	0.00116	10.7	0.0005	1.89	0.034	82.3	246.395501
Runoff	L2612335-1	WRP-21-01 2021-07-11 0910	2021-07-11	2021-07-11	0.00668	0.0091	0.5	2.75	0.0062	0.00362	1.9	0.0005	2.02	0.075	365	1052.18029
Runoff	L2610912-8	WRP-21-02 16-08-2021 1345	2021-08-16	2021-08-16	0.00261	0.0085	0.5	0.0261	0.0047	0.00432	1.1	0.0005	1.96	0.043	172	514.953997
Runoff	L2612335-2	WRP-21-02 2021-07-05 1350	2021-07-05	2021-07-05	0.00175	0.0039	0.74	6.99	0.0585	0.00234	30.6	0.0005	2.31	0.054	100	299.391603
Runoff	L2612335-3	WRP-21-02 2021-07-11 0930	2021-07-11	2021-07-11	0.00286	0.0132	0.5	3.61	0.0161	0.00481	7	0.0005	1.96	0.063	157	470.045206
Runoff	L2612335-4	WRP-21-02 2021-07-11 0945	2021-07-11	2021-07-11	0.0149	0.0083	0.5	8.98	0.013	0.00802	2.2	0.0005	5.51	0.166	531	1589.770778
Runoff	L2612684-1	WRP-21-02A 2021-07-23	2021-07-23	2021-07-23	0.00967	0.00148	0.05	7.72	0.0064	0.00725	1.91	0.0001	5.15	0.127	188	856.2607204
Runoff	L2612684-2	WRP-21-03 16-08-2021 1320	2021-08-16	2021-08-16	0.0126	0.0005	0.5	5.8	0.0064	0.00559	1.8	0.0005	3.94	0.076	188	562.8566973
Runoff	L2610912-7	WRP-21-03 2021-07-05 1340	2021-07-05	2021-07-05	0.00778	0.0259	0.5	7.85	0.0193	0.00792	11.3	0.0005	4.65	0.119	367	1091.768127
Runoff	L2610912-6	WRP-21-04 2021-07-05 1320	2021-07-05	2021-07-05	0.00708	0.0208	1.69	16	0.125	0.00805	63.7	0.0005	6.28	0.163	428	1281.397162
Runoff	L26127498-17	WRP-21-04A 16-08-2021 1240	2021-08-16	2021-08-16	0.0095	0.235	5	8.8	0.02	0.0232	10	0.005	10.7	0.23	1900	5883.445345
Runoff	L26127498-18	WRP-21-04B 2021-07-11 1005	2021-07-11	2021-07-11	0.00995	0.082	0.5	5.37	0.0101	0.00644	4.5	0.0005	4.01	0.118	888	2658.599719
Runoff	L26127498-19	WRP-21-04B 16-08-2021 1300	2021-08-16	2021-08-16	0.00461	0.0051	0.5	4.61	0.0071	0.00635	2.3	0.0005	4.14	0.068	298	892.1877436
Runoff	L2610912-5	WRP-21-05 16-08-2021 1205	2021-08-16	2021-08-16	0.0155	0.01	0.5	11.3	0.0089	0.00662	2.1	0.0005	4.52	0.137	379	1134.69515
Runoff	L2612335-5	WRP-21-05 2021-07-05 1300	2021-07-05	2021-07-05	0.0138	0.0275	0.5	16.3	0.0421	0.00515	14.8	0.0005	7.08	0.154	211	631.7168252
Runoff	L2610912-4	WRP-21-05 2021-07-11 1025	2021-07-11	2021-07-11	0.00828	0.0064	0.5	7.92	0.0079	0.00264	1.8	0.0005	2.59	0.076	139	416.1546858
Runoff	L2612335-7	WRP-21-06 2021-07-05 1245	2021-07-05	2021-07-05	0.00933	0.0198	0.5	12.2	0.024	0.00427	10.5	0.0005	4.67	0.107	254	760.453251
Runoff	L2612335-7	WRP-21-06 2021-07-11 1040	2021-07-11	2021-07-11	0.0136	0.0084	0.5	10.7	0.0115	0.00389	5.1	0.0005	3.66	0.101	131	392.203337
Runoff	L26127498-21	WRP-21-07 16-08-2021 1140	2021-08-16	2021-08-16	0.00193	0.0346	0.5	7.44	0.0078	0.0145	3.5	0.0005	5.98	0.125	645	1931.077499
Runoff	L2610912-3	WRP-21-07 2021-07-05 1155	2021-07-05	2021-07-05	0.00183	0.0215	0.5	8.3	0.0083	0.00477	6	0.0005	4.55	0.106	642	1922.095743
Runoff	L2612335-8	WRP-21-07A 2021-07-11 1110	2021-07-11	2021-07-11	0.00079	0.0168	0.5	2.89	0.0046	0.00284	6	0.0005	1.31	0.028	212	634.7107438
Runoff	L26127498-22	WRP-21-08 16-08-2021 1130	2021-08-16	2021-08-16	0.0082	0.0186	0.5	9.96	0.0078	0.0136	2.6	0.0005	6.35	0.127	391	1170.622174
Runoff	L2612335-9	WRP-21-07B 2021-07-11 1125	2021-07-11	2021-07-11	0.00452	0.0071	0.5	3.32	0.0059	0.00123	4.32	0.0005	1.38	0.022	63.8	101.1944488
Runoff	L26127498-23	WRP-21-08 16-08-2021 1115	2021-08-16	2021-08-16	0.0047	0.0452	0.5	14.6	0.0127	0.0148	5.9	0.0005	8.06	0.203	647	1937.065336
Runoff	L2610912-2	WRP-21-08 2021-07-05 1125	2021-07-05	2021-07-05	0.00168	0.0221	0.5	6.41	0.0062	0.00516	3.4	0.0005	3.5	0.082	318	952.0661157
Runoff	L2612335-10	WRP-21-08 2021-07-11 1140	2021-07-11	2021-07-11	0.00098	0.0084	0.5	2.43	0.0031	0.00127	2.1	0.0005	0.84	0.024	69.5	208.0773429
Runoff	L2618284-10	WRP-21-08 2021-07-23	2021-07-23	2021-07-23	0.00372	0.0176	0.05	6.34	0.0091	0.00711	3.71	0.0001	3.77	0.0928	285	853.2686018
Runoff	L26127498-20	WRP-21-09 16-08-2021 1050	2021-08-16	2021-08-16	0.0108	0.2	0.5	11.7	0.0108	0.00721	2.1	0.0005	8.04	0.209	839	2511.897708
Runoff	L2610912-1	WRP-21-09 2021-07-05 1110	2021-07-05	2021-07-05	0.00181	0.256	0.5	8.13	0.0134	0.00833	14	0.0005	3.47	0.13	561	1679.588336
Runoff	L2612335-11	WRP-21-09 2021-07-11 1200	2021-07-11	2021-07-11	0.00257	0.148	0.5	6.57	0.0168	0.00481	6.57	0.0005	1.78	0.068	278	832.3093716
Runoff	L2618284-9	WRP-21-09A 2021-07-23	2021-07-23	2021-07-23	0.00117	0.539	0.25	10.6	0.0104	0.0202	5.67	0.0005	5.86	0.147	1240	3712.459068
Runoff	L26127498-9	WRP-21-10 15-08-2021 1500	2021-08-15	2021-08-15	0.00404	0.0691	0.5	7.14	0.0056	0.00456	3.6	0.0005	8.41	0.042	177	529.9235927
Runoff	L2610912-14	WRP-21-10 2021-07-05 1550	2021-07-05	2021-07-05	0.00181	0.0486	0.5	6.22	0.0046	0.00345	2.9	0.0005	2.95	0.04	139	416.1546858
Runoff	L2612335-12	WRP-21-10 2021-07-11 1240	2021-07-11	2021-07-11	0.00278	0.0232	0.5	7.13	0.01	0.00347	6.1	0.0005	2.17	0.049	124	371.2459068
Runoff	L2618284-7	WRP-21-10 2021-07-23	2021-07-23	2021-07-23	0.00385	0.0551	0.1	9.28	0.00423	0.00779	1.99	0.0002	5.87	0.0747	307	919.1330111
Runoff	L26127498-11	WRP-21-10A 15-08-2021 1435	2021-08-15	2021-08-15	0.00323	0.00254	0.05	5.71	0.00387	0.00236	1.99	0.0005	3.45	0.0284	92	275.4405115
Runoff	L2612335-13	WRP-21-10A 2021-07-11 1255	2021-07-11	2021-07-11	0.00131	0.0133	0.5	2.89	0.0038	0.00709	2.8	0.0005	1.37	0.012	27.4	82.03336972
Runoff	L26127498-8	WRP-21-11 15-08-2021 1415	2021-08-15	2021-08-15	0.00481	0.1013	0.5	11.2	0.0059	0.00399	2.9	0.0005	4	0.063	239	715.5465461
Runoff	L2610912-13	WRP-21-11 2021-07-05 1530	2021-07-05	2021-07-05	0.00349	0.0257	0.76	12.2	0.033	0.00381	17.6	0.0005	3.15	0.047	153	458.0695462
Runoff	L2612335-14	WRP-21-11 2021-07-11 1310	2021-07-11	2021-07-11	0.00115	0.0321	0.5	3	0.0038	0.00778	1.7	0.0005	0.59	0.01	37.1	111.0743902
Runoff	L2618284-6	WRP-21-11 2021-07-23 1520	2021-07-23	2021-07-23	0.00402	0.0294	0.051	10.6	0.00873	0.00448	4.19	0.0001	3.67	0.0605	233	697.5803245
Runoff	L2610912-12	WRP-21-12 2021-07-05 1520	2021-07-05	2021-07-05	0.00405	0.0234	0.66	11.8	0.0236	0.0043	14.9	0.0005	3.61	0.055	188	556.868901
Runoff	L26127498-10	WRP-21-13 15-08-2021 1505	2021-08-15	2021-08-15	0.00376	0.0574	0.5	8.48	0.0053	0.00788	3.3	0.0005	4.13	0.082	446	1332.297597
Runoff	L2610912-10	WRP-21-13 2021-07-05 1505	2021-07-05	2021-07-05	0.0014	0.0726	0.5	6.88	0.006	0.00788	4.6	0.0005	3.38	0.091	319	955.020343
Runoff	L2612335-15	WRP-21-13 2021-07-11 1320	2021-07-11	2021-07-11	0.00154	0.05	0.5	9.92	0.0171	0.00695	7.92	0.0005	2.79	0.091	323	973.0235459
Runoff	L2618284-5	WRP-21-13 2021-07-23 1350	2021-07-23	2021-07-23	0.00394	0.121	0.25	7.75	0.0061	0.0107	3.48	0.0005	3.91	0.116	586	1784.375467
Runoff	L26127498-12	WRP-21-14 15-08-2021 1255	2021-08-15	2021-08-15	0.00164	0.134	0.5	8	0.0121	0.0122	12.6	0.0005	4.08	0.112	850	1946.047052
Runoff	L2612842-1	WRP-21-14 2021-07-12 1300	2021-07-12	2021-07-12	0.00103	0.156	0.5	6.59	0.0146	0.00773	9.8	0.0005	2.34	0.056	375	1122.719476
Runoff	L2618284-4	WRP-21-14A 2021-07-22 1150	2021-07-22	2021-07-22	0.00445	0.186	0.05	6.76	0.0065	0.0127	4.25	0.0001	3.81	0.097	644	1928.06358
Runoff	L26127498-13	WRP-21-14B 15-08-2021 1225	2021-08-15	2021-08-15	0.00555	0.071	0.5	9.68	0.0085	0.00728	3.3	0.0005	4.76	0.101	438	1311.336348
Runoff	L26127498-13	WRP-21-14B 15-08-2021 1225	2021-08-15	2021-08-15	0.00078	0.0721	0.5	10.3	0.0081	0.00779	3.4	0.0005	5.01	0.11	457	1368.220801
Runoff	L26127498-14	WRP-21-14C 15-08-2021 1240	2021-08-15	2021-08-15	0.00133	0.0724	0.5	9.34	0.0072	0.00815	3.7	0.0005	4.58	0.106	446	1335.287697
Runoff	L26127498-3	WRP-21-15 15-08-2021 1125	2021-08-15	2021-08-15	0.00142	0.0466	0.5	6.77	0.0085	0.0126	3.2	0.0005	6.18	0.098	658	1961.998441
Runoff	L2612842-2	WRP-21-15 2021-07-12 1325	2021-07-12	2021-07-12	0.00101	0.0719	0.1	4.55	0.0061	0.00594	5.4	0.0005	2.85	0.055	270	808.3580228
Runoff	L2612842-3	WRP-21-16 2021-07-12 1340	2021-07-12	2021-07-12	0.00128	0.0211	0.5	4.53	0.0108	0.0059	8	0.0005	2.48	0.051	204	610.759395
Runoff	L2618284-3	WRP-21-16 2021-07-22 1105	2021-07-22	2021-07-22	0.00922	0.00741	0.085	7.74	0.0105	0.00914	5.05	0.00015	3.66	0.0642	178	532.9175113
Runoff	L26127498-2	WRP-21-17 15-08-2021 1105	2021-08-15	2021-08-15	0.00146	0.0005	0.5	3.18	0.004	0.00897	3.18	0.0005	2.16	0.042	176	526.9296741
Runoff	L2612842-4	WRP-21-17 2021-07-12 1350	2021-07-12	2021-07-12	0.00119	0.0145	0.5	5.89	0.0046	0.00544	4.2					

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Date	Molybdenum (Mo)- Total	Nickel (Ni)- Total	Phosphorus (P)- Total	Potassium (K)- Total	Rubidium (Rb)- Total	Selenium (Se)- Total	Silicon (Si)- Total	Silver (Ag)- Total	Sodium (Na)- Total	Strontium (Sr)- Total	Sulfur (S)- Total	Sulphate - calculated
Runoff	L2725732-7	WRP-22-07	2022-07-28	2022-07-28	0.0021	0.0073	0.5	3.26	0.004	0.00928	3.1	0.0005	2.84	0.047	286	856.2607204
Runoff	L2725732-8	WRP-22-08	2022-07-28	2022-07-28	0.0056	0.0079	0.5	8.27	0.0076	0.00587	4.1	0.0005	10.4	0.113	269	805.3641042
Runoff	L2725732-9	WRP-22-09	2022-07-28	2022-07-28	0.0032	0.005	0.5	5.09	0.0048	0.00787	2.3	0.0005	3.29	0.067	132	395.1972556
Runoff	L2725732-10	WRP-22-10	2022-07-28	2022-07-28	0.0112	0.0079	0.5	6.26	0.0058	0.00738	1.9	0.0005	3.41	0.088	171	511.9600811
Runoff	L2725732-11	WRP-22-11	2022-07-28	2022-07-28	0.00571	0.0299	0.5	8.49	0.0169	0.00898	16.8	0.0005	3.79	0.1	185	553.8749415
Runoff	L2725732-12	WRP-22-12	2022-07-28	2022-07-28	0.00228	0.0286	0.5	5.16	0.0089	0.00826	1.9	0.0005	8.48	0.091	307	919.1330111
Runoff	L2725732-13	WRP-22-13	2022-07-29	2022-07-29	0.00393	0.0148	0.5	7.82	0.0037	0.00431	2.21	0.0005	4.39	0.044	158	473.0391392
Runoff	L2725732-14	WRP-22-14	2022-07-29	2022-07-29	0.00259	0.00234	0.05	7.88	0.00441	0.00255	2.5	0.0005	3.81	0.0427	117	350.2884765
Runoff	L2725732-15	WRP-22-15	2022-07-29	2022-07-29	0.00799	0.00245	0.05	6.1	0.0077	0.00188	2.81	0.0005	2.14	0.0218	61.5	184.1259941
Runoff	L2725732-16	WRP-22-16	2022-07-29	2022-07-29	0.00782	0.00245	0.05	8.45	0.00436	0.00188	1.9	0.0005	2.04	0.0245	72.3	216.460315
Runoff	L2725732-17	WRP-22-17	2022-07-29	2022-07-29	0.00342	0.0088	0.5	9.32	0.0046	0.00267	2.3	0.0005	2.81	0.0347	144	431.1242788
Runoff	L2725732-18	WRP-22-18	2022-07-29	2022-07-29	0.00436	0.00596	0.371	9.76	0.0051	0.00251	6.98	0.0005	2.09	0.0347	89	266.4587557
Runoff	L2157407-6	WRPP	2018-09-01	2018-09-01	0.0061	0.166	0.5	3.82	0.004	0.00389	1.9	0.0005	3.26	0.103	600	1796.351162
Runoff	L2158115-4	WRP-S10	2018-09-04	2018-09-04	0.007	3.46	5	10.1	0.023	0.0315	10	0.005	12.4	0.28	5500	16466.55232
Runoff	L2158115-3	WRP-S10	2018-09-04	2018-09-04	1.45	6.39	0.5	8.52	0.0187	0.0162	13.5	0.0005	4.66	0.177	1880	5626.566973
Runoff	L2158115-5	WRP-S10	2018-09-04	2018-09-04	0.005	6.39	5	12.5	0.031	0.0497	13	0.005	13.5	0.31	9710	29070.94963
Runoff	L2320849-1	WRP-S10	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2320849-5	WRP-S10	2019-07-30	2019-07-30	0.00174	0.682	0.5	6.65	0.0321	0.00223	27.3	0.0005	1.79	0.045	517	1547.855918
Runoff	L2280620-2	WRP-S10	2019-06-12	2019-06-12	0.00077	0.421	0.5	4.51	0.0051	0.00445	5.9	0.0005	1.57	0.051	353	1056.853267
Runoff	L2280620-3	WRP-S11	2019-06-12	2019-06-12	0.00096	0.0861	0.75	7.28	0.0778	0.0005	35.7	0.0005	0.82	0.017	7	20.95743022
Runoff	L2286517-7	WRP-S11	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-2	WRP-S12	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2303565-4	WRP-S12	2019-07-02	2019-07-02	0.0005	0.0652	0.5	3.77	0.0065	0.00217	1.8	0.0005	1.47	0.045	273	817.339786
Runoff	L2286517-6	WRP-S12	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2280620-4	WRP-S12	2019-06-12	2019-06-12	0.00057	0.0279	0.5	5.13	0.0406	0.00083	20.5	0.0005	0.77	0.016	28.6	86.62607204
Runoff	L2320849-2	WRP-S12	2019-07-30	2019-07-30	0.0005	0.033	0.5	3.92	0.0074	0.00255	1.9	0.0005	1.72	0.055	344	1029.907999
Runoff	L2157407-16	WRP-S14	2018-09-01	2018-09-01	0.00325	0.0405	0.5	6.15	0.0046	0.00237	1	0.0005	6.56	0.116	445	1332.293778
Runoff	L2303565-3	WRP-S15	2019-07-02	2019-07-02	0.0005	0.378	0.5	5.95	0.0113	0.0108	5.7	0.0005	3.53	0.065	811	2428.067987
Runoff	L2337964-2	WRP-S15	2019-08-27	2019-08-27	0.0005	0.75	5	5	0.02	0.0155	10	0.005	6.8	0.12	1630	4880.087323
Runoff	L2323304-1	WRP-S15	2019-08-06	2019-08-06	0.005	0.801	5	5	0.02	0.0163	10	0.005	5	0.1	1570	4700.452206
Runoff	L2306749-2	WRP-S15	2019-07-09	2019-07-09	0.00067	0.242	0.5	4.36	0.0068	0.00662	2.7	0.0005	2.71	0.071	601	1799.34508
Runoff	L2286517-3	WRP-S15	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2294129-8	WRP-S15	2019-06-18	2019-06-18	0.00084	0.0515	0.5	3.22	0.0168	0.00165	11.2	0.0005	0.9	0.017	96	287.4161959
Runoff	L2158115-7	WRP-S15NEW	2018-09-04	2018-09-04	0.00332	0.005	0.5	3.32	0.004	0.0005	3.32	0.0005	1.14	0.021	14.3	42.8130602
Runoff	L2320124-4	WRP-S16	2019-07-17	2019-07-17	0.005	1.19	5	8.9	0.02	0.0143	10	0.005	5	0.11	1730	5179.4791602
Runoff	L2333401-3	WRP-S16	2019-08-20	2019-08-20	0.005	0.846	5	7.2	0.02	0.0162	10	0.005	6.7	0.12	1630	4880.087323
Runoff	L2328009-4	WRP-S16	2019-08-13	2019-08-13	0.0005	0.755	0.5	6.39	0.0103	0.0147	4.6	0.0005	5.42	0.106	1430	4281.303602
Runoff	L2323304-2	WRP-S16	2019-08-06	2019-08-06	0.005	0.847	5	6.1	0.02	0.0125	10	0.005	5.1	0.1	1480	4460.938718
Runoff	L2296920-8	WRP-S16	2019-06-12	2019-06-12	0.00073	0.114	0.5	3.69	0.0091	0.00413	9.4	0.0005	1.34	0.031	340	1017.932325
Runoff	L2296517-24	WRP-S16	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2158115-8	WRP-S16NEW	2018-09-04	2018-09-04	0.005	1.45	5	7.3	0.02	0.026	10	0.005	10.7	0.12	2730	8173.397766
Runoff	L2290920-7	WRP-S17	2019-06-12	2019-06-12	0.00072	0.0348	0.5	4.87	0.0294	0.0005	19.3	0.0005	0.79	0.012	2730	8173.397766
Runoff	L2303565-1	WRP-S17	2019-07-02	2019-07-02	0.0007	0.0195	0.5	2.63	0.0131	0.0005	10.9	0.0005	0.5	0.01	55	14.96959301
Runoff	L2306749-5	WRP-S17	2019-07-09	2019-07-09	0.0012	0.0092	0.05	1.88	0.0225	0.000483	1.45	0.0005	0.661	0.154	20.1	60.1776392
Runoff	L2306749-4	WRP-S18	2019-07-09	2019-07-09	0.005	1.13	5	8	0.02	0.0118	10	0.005	7.8	0.14	2680	8023.701956
Runoff	L2312012-2	WRP-S18	2019-07-17	2019-07-17	0.0009	0.829	0.5	9.53	0.0284	0.0102	16.9	0.0005	6.79	0.114	1640	4910.026569
Runoff	L2303565-6	WRP-S18	2019-07-02	2019-07-02	0.0062	0.082	0.5	2.77	0.0067	0.00096	3.3	0.0005	1.12	0.029	95	284.422873
Runoff	L2296517-10	WRP-S18	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2303565-2	WRP-S4	2019-07-02	2019-07-02	0.00649	0.0097	0.5	4.94	0.021	0.0005	14.1	0.0005	1.78	0.016	5	14.96959301
Runoff	L2328009-5	WRP-S4	2019-08-13	2019-08-13	0.00603	0.0051	0.05	8.9	0.00544	0.00128	3.06	0.0005	12.4	0.0875	149	446.0938718
Runoff	L2296517-2	WRP-S4	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2328009-3	WRP-S5	2019-08-13	2019-08-13	0.00615	0.0202	0.5	11.7	0.0071	0.00203	4.9	0.0005	16	0.108	188	562.8566973
Runoff	L233401-2	WRP-S5	2019-08-20	2019-08-20	0.00538	0.0259	0.5	5.14	0.0042	0.00151	2.6	0.0005	5.93	0.073	226	676.6256042
Runoff	L2290620-1	WRP-S5	2019-06-12	2019-06-12	0.00075	0.0195	0.5	3.75	0.0313	0.0005	15.3	0.0005	0.57	0.01	5	14.96959301
Runoff	L2158115-5	WRP-S5	2018-08-04	2018-09-04	0.00218	0.009	0.5	3.52	0.0151	0.0005	7	0.0005	1.67	0.018	5	14.96959301
Runoff	L2296517-1	WRP-S5	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2157407-10	WRP-S6	2018-08-01	2018-09-01	0.00078	0.127	0.5	3.51	0.0037	0.00288	2	0.0005	2.92	0.104	495	1481.989708
West Ditch	L272749-4	MS-08-INFLOW-WESTDITCH	2022-07-10	2022-07-10	0.00078	0.00836	0.05	4.2	0.00685	0.00284	4.57	0.0005	1.64	0.0332	105	314.3614533
West Ditch	L2115219-3	MS-08-INFLOW-WEST	2018-06-20	2018-06-20	0.00511	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2115693-3	MS-08-INFLOW-WEST	2018-06-20	2018-06-20	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2114971-3	MS-08-INFLOW-WEST	2018-06-19	2018-06-19	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2113672-2	MS-08-INFLOW-WEST	2018-06-17	2018-06-17	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2113576-3	MS-08-INFLOW-WEST	2018-06-15	2018-06-15	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2114098-3	MS-08-INFLOW-WEST	2018-06-18	2018-06-18	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2160094-1	MS-08-INFLOW-WEST	2018-09-06	2018-09-06	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2110885-3	MS-08-INFLOW-WEST	2018-06-12	2018-06-12	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2113626-3	MS-08-INFLOW-WEST	2018-06-16	2018-06-16	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2110060-3	MS-08-INFLOW-WEST	2018-06-10	2018-06-10	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2112194-3	MS-08-INFLOW-WEST	2018-06-14	2018-06-14	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2111853-3	MS-08-INFLOW-WEST	2018-06-13	2018-06-13	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2108641-2	MS-08-INFLOW-WEST	2018-06-07	2018-06-07	0.00062	0.067	0.5	3.29	0.0347	0.00133	18.5	0.0005	0.83	0.018	1370	

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Date	Molybdenum (Mo)- Total mg/L	Nickel (Ni)- Total mg/L	Phosphorus (P)- Total mg/L	Potassium (K)- Total mg/L	Rubidium (Rb)- Total mg/L	Selenium (Se)- Total mg/L	Silicon (Si)- Total mg/L	Silver (Ag)- Total mg/L	Sodium (Na)- Total mg/L	Strontium (Sr)- Total mg/L	Sulfur (S)- Total mg/L	Sulphate - calculated mg/L
West Ditch	L2335451-5	MS-08-WEST-INFLOW	2019-08-23	2019-08-23	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2310395-5	MS-08-WEST-INFLOW	2018-07-28	2018-07-28	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2306761-4	MS-08-WEST-INFLOW	2019-07-09	2019-07-09	0.005	0.853	5	8.1	0.025	0.018	10	0.005	6.3	0.14	2120	6347.107438
West Ditch	L2310249-5	MS-08-WEST-INFLOW	2019-07-25	2019-07-25	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2313935-5	MS-08-WEST-INFLOW	2019-07-20	2019-07-20	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2312016-4	MS-08-WEST-INFLOW	2019-07-17	2019-07-17	0.0007	0.784	0.5	10	0.0333	0.00985	18.2	0.0005	6.46	0.109	1580	4730.391392
West Ditch	L2320850-4	MS-08-WEST-INFLOW	2019-07-31	2019-07-31	0.0005	0.502	0.5	5.55	0.0123	0.00845	7.2	0.0005	3.49	0.092	1130	3383.128021
West Ditch	L2320461-4	MS-08-WEST-INFLOW	2019-08-03	2019-09-03	0.005	1.77	5	12.1	0.045	0.0214	25	0.005	12.2	0.15	4770	14280.99174
West Ditch	L2305805-4	MS-08-WEST-INFLOW	2019-07-08	2019-07-08	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2322461-5	MS-08-WEST-INFLOW	2019-08-02	2019-08-02	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305072-5	MS-08-WEST-INFLOW	2019-07-05	2019-07-05	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305098-4	MS-08-WEST-INFLOW	2019-06-12	2019-06-12	0.00077	0.0975	0.5	2.72	0.0055	0.00209	3.7	0.0005	0.9	0.013	135	404.1790114
West Ditch	L2342313-4	MS-08-WEST-INFLOW	2019-09-05	2019-09-05	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2291173-4	MS-08-WEST-INFLOW	2019-06-13	2019-06-13	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2330905-2	MS-08-WEST-INFLOW	2019-08-18	2019-08-18	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2327989-3	MS-08-WEST-INFLOW	2019-08-13	2019-08-13	0.00071	0.346	0.5	5.99	0.0084	0.00761	3.5	0.0005	5.52	0.178	1390	4161.546858
West Ditch	L2295991-4	MS-08-WEST-INFLOW	2019-06-20	2019-06-20	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2343354-1	MS-08-WEST-INFLOW	2019-09-08	2019-09-08	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305224-5	MS-08-WEST-INFLOW	2019-07-06	2019-07-06	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2326464-3	MS-08-WEST-INFLOW	2019-08-11	2019-08-11	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309409-5	MS-08-WEST-INFLOW	2019-07-12	2019-07-12	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2325445-3	MS-08-WEST-INFLOW	2019-08-08	2019-08-08	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2298617-4	MS-08-WEST-INFLOW	2019-06-25	2019-06-25	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301467-4	MS-08-WEST-INFLOW	2019-06-28	2019-06-28	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2307801-4	MS-08-WEST-INFLOW	2019-07-10	2019-07-10	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2315508-5	MS-08-WEST-INFLOW	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2295155-4	MS-08-WEST-INFLOW	2019-06-19	2019-06-19	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301572-4	MS-08-WEST-INFLOW	2019-06-29	2019-06-29	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2308636-4	MS-08-WEST-INFLOW	2019-07-11	2019-07-11	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301607-4	MS-08-WEST-INFLOW	2019-06-30	2019-06-30	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292454-4	MS-08-WEST-INFLOW	2019-06-15	2019-06-15	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2303578-4	MS-08-WEST-INFLOW	2019-07-02	2019-07-02	0.00099	0.351	0.5	5.97	0.0103	0.00628	5.1	0.0005	3.03	0.078	810	2425.074068
West Ditch	L2292234-4	MS-08-WEST-INFLOW	2019-06-14	2019-06-14	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309549-4	MS-08-WEST-INFLOW	2019-07-14	2019-07-14	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305269-5	MS-08-WEST-INFLOW	2019-07-07	2019-07-07	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2300534-4	MS-08-WEST-INFLOW	2019-06-27	2019-06-27	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2337960-4	MS-08-WEST-INFLOW	2019-08-27	2019-08-27	0.00082	0.188	0.5	5.44	0.0085	0.00534	5.5	0.0005	5.52	0.16	995	2978.94901
West Ditch	L2296973-4	MS-08-WEST-INFLOW	2019-06-23	2019-06-23	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309510-5	MS-08-WEST-INFLOW	2019-07-13	2019-07-13	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2293024-4	MS-08-WEST-INFLOW	2019-06-17	2019-06-17	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2294118-4	MS-08-WEST-INFLOW	2019-06-18	2019-06-18	0.00064	0.203	0.5	4.1	0.0161	0.00362	9.2	0.0005	1.49	0.041	427	1278.403243
West Ditch	L2304399-4	MS-08-WEST-INFLOW	2019-07-03	2019-07-03	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2297193-4	MS-08-WEST-INFLOW	2019-06-07	2019-06-07	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2355516-2	MS-08-WEST-INFLOW	2019-09-27	2019-09-27	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2396041-4	MS-08-WEST-INFLOW	2019-06-21	2019-06-21	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2297023-4	MS-08-WEST-INFLOW	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2298699-4	MS-08-WEST-INFLOW	2019-06-22	2019-06-22	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2300513-4	MS-08-WEST-INFLOW	2019-06-26	2019-06-26	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2357383-3	MS-08-WEST-INFLOW	2019-10-01	2019-10-01	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2289447-4	MS-08-WEST-INFLOW	2019-06-10	2019-06-10	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2399733-6	MS-08-WEST-INFLOW	2019-08-31	2019-08-31	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2287151-4	MS-08-WEST-INFLOW	2019-06-06	2019-06-06	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2304338-5	MS-08-WEST-INFLOW	2019-07-04	2019-07-04	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2468307-1	MS-08-WEST-INFLOW	2020-06-30	2020-06-30	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2330766-2	MS-08-WEST-INFLOW	2019-08-16	2019-08-16	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2336842-2	MS-08-WEST-INFLOW	2019-10-02	2019-10-02	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2467060-3	MS-08-WEST-INFLOW	2020-06-25	2020-06-25	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2346689-1	MS-08-WEST-INFLOW	2019-09-12	2019-09-12	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2345723-2	MS-08-WEST-INFLOW	2019-09-11	2019-09-11	0.00089	0.167	0.5	5.44	0.0068	0.00552	4.7	0.0005	7.04	0.213	1070	3203.492905
West Ditch	L2288035-4	MS-08-WEST-INFLOW	2019-06-08	2019-06-08	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L247770-6	MS-08-WEST-INFLOW	2020-07-21	2020-07-21	0.00066	0.0285	0.5	6.44	0.0067	0.00606	2.3	0.0005	7.3	0.158	757	2266.396382
West Ditch	L2489588-3	MS-08-WEST-INFLOW	2020-08-12	2020-08-12	0.00081	0.012	0.1	7.49	0.00652	0.00887	2.34	0.00002	9.8	0.231	1070	3203.492905
West Ditch	L248254-5	MS-08-WEST-INFLOW	2020-06-03	2020-06-03	0.00071	0.0236	0.5	5.22	0.0051	0.00481	1.9	0.0005	6.14	0.136	599	1793.357243
West Ditch	L2348201-2	MS-08-WEST-INFLOW	2019-06-16	2019-06-16	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292486-4	MS-08-WEST-INFLOW	2019-06-16	2019-06-16	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2481535-1	MS-08-WEST-INFLOW	2020-07-29	2020-07-29	0.00091	0.0156	0.1	6.47	0.00656	0.006	2.08	0.00002	7.71	0.156	711	2128.676127
West Ditch	L2496104-4	MS-08-WEST-INFLOW	2020-08-26	2020-08-26	0.0007	0.0095	0.1	5.63	0.00527	0.00715	2.25	0.00002	6.82	0.17	727	2197.578824
West Ditch	L2496103-1	MS-08-WEST-INFLOW	2020-06-26	2020-06-26	0.00075	0.0089	0.1	5.43	0.00491	0.00667	2.06	0.00002	6.5	0.163	732	2197.548417
West Ditch	L2496140-1	MS-08-WEST-INFLOW	2020-08-30	2020-08-30	0.00067	0.007	0.5	5.75	0.0062	0.0066	2.2	0.0005	6.64	0.157	710	2125.682208
West Ditch	L2496120-1	MS-08-WEST-INFLOW	2020-06-29	2020-06-29	0.00062	0.0075	0.1	5.37	0.00604	0.00651	1.98	0.00002	6.13	0.158	693	2074.785592
West Ditch	L2496049-1	MS-08-WEST-INFLOW	2020-06-28	2020-06-28	0.00065	0.0087	0.5	5.33	0.00616	0.00616	1.9	0.0005	6.01	0.14	691	2068.797755
West Ditch	L2496047-1	MS-08-WEST-INFLOW	2020-06-27	2020-06-27	0.00062	0.0074	0.5	4.95	0.005	0.00536	1.9	0.0005	5.55	0.134	575	1721.503197
West Ditch	L2496705-1	MS-08-WEST-INFLOW	2020-08-31	2020-08-31	0.00073	0.005	0.5	4.04	0.0042	0.00309	1.8	0.0005	3.98	0.082	377	1128.707313

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units>	Sample Date	Molybdenum (Mo)- Total	Nickel (Ni)- Total	Phosphorus (P)- Total	Potassium (K)- Total	Rubidium (Rb)- Total	Selenium (Se)- Total	Silicon (Si)- Total	Silver (Ag)- Total	Sodium (Na)- Total	Strontium (Sr)- Total	Sulfur (S)- Total	Sulphate - calculated
West Ditch	L24937366-1	MS-08-WEST-INFLOW	2020-09-01	mg/L	0.0093	0.0095	0.5	5.12	5.12	0.0056	0.0054	1.9	0.0005	6.35	0.139	717	2146.639638
West Ditch	L2332396-5	MS-08-WEST-INFLOW	2019-08-06	mg/L	0.0061	0.283	0.5	5.15	5.15	0.0102	0.00573	5	0.0005	3.91	0.126	1070	3203.492905
West Ditch	L2603974-4	MS-08-WEST-INFLOW	2021-06-21	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2606595-5	MS-08-WEST-INFLOW	2021-06-26	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2606871-5	MS-08-WEST-INFLOW	2021-06-27	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2609262-5	MS-08-WEST-INFLOW	2021-07-01	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2610945-3	MS-08-WEST-INFLOW	2021-07-05	mg/L	0.00305	0.0225	0.5	5.97	5.97	0.0075	0.00417	2.2	0.0005	3.54	0.091	309	925.1208483
West Ditch	L2612337-6	MS-08-WEST-INFLOW	2021-07-11	mg/L	0.00358	0.0381	0.5	7.5	7.5	0.0251	0.00364	12.8	0.0005	2.92	0.075	259	775.4249181
West Ditch	L2618265-7	MS-08-WEST-INFLOW	2021-07-24	mg/L	0.00603	0.0377	0.13	11.4	11.4	0.0198	0.00833	9.08	0.00027	6.17	0.154	515	1541.868808
West Ditch	L2635846-3	MS-08-WEST-INFLOW	2021-08-22	mg/L	0.0108	0.0395	0.5	8.75	8.75	0.0076	0.0113	2.3	0.0005	6.3	0.174	671	2008.919383
West Ditch	L2678919-4	MS-08-WEST-INFLOW	2021-09-05	mg/L	0.00701	0.0459	0.5	8.28	8.28	0.0072	0.0116	2.4	0.0005	6.55	0.196	742	2221.487603
West Ditch	L2725730-1	MS-08-WEST-INFLOW	2021-09-05	mg/L	0.00556	0.0064	0.5	5.25	5.25	0.006	0.00651	2.2	0.0005	3.76	0.076	217	649.6803368
West Ditch	L2281173-5	MS-08-WEST-INFLOW	2022-07-28	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2332396-2	MS-08-WEST-INFLOW	2019-06-13	mg/L	0.00054	0.284	0.5	5.04	5.04	0.0082	0.00617	3.7	0.0005	3.93	0.128	1070	3203.492905
West Ditch	L2307601-5	MS-08-WEST-INFLOW	2019-08-06	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292454-5	MS-08-WEST-INFLOW	2019-07-10	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2339733-7	MS-08-WEST-INFLOW	2019-06-15	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2623788-3	MS-08-WEST-INFLOW	2019-08-31	mg/L	0.00965	0.0327	0.5	9.31	9.31	0.0085	0.01	2.2	0.0005	5.67	0.15	562	1682.582255
West Ditch	L2335475-4	MS-08-WEST-INFLOW	2021-08-06	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
West Ditch	L2157407-14	WRP-B7	2019-08-25	mg/L	0.005	4.08	5	10.5	10.5	0.026	0.0312	10	0.005	10.3	0.25	6440	19280.8356
West Ditch	L2157407-9	WRPT-2	2018-09-01	mg/L	0.00068	0.005	0.5	8.46	8.46	0.0041	0.00421	3	0.0005	3.68	0.201	574	1718.509278

Notes: Based on data supplied by BIM, April 2023. Certificates of Analysis available upon request from BIM.

Highlighted values are presented at detection limit values

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample datetime	Sample date	Tellurium (Te)- Total	Thallium (Tl)- Total	Thorium (Th)- Total	Tin (Sn)- Total	Titanium (Ti)- Total	Tungsten (W)- Total	Uranium (U)- Total	Vanadium (V)- Total	Zinc (Zn)- Total	Zirconium (Zr)- Total
East Ditch	L2603974-2	MS-08-EAST-2021-06-21_1110	2021-06-21	2021-06-21	-	-	-	-	-	-	-	-	-	-
East Ditch	L2016324-1	MS-08-EAST-DITCH	2019-07-01	2019-07-01	-	-	-	-	-	-	-	-	-	-
East Ditch	L2112016-1	MS-08-EAST-INFLOW	2019-07-17	2019-07-17	0.002	0.00014	0.0029	0.001	0.243	0.001	0.0127	0.0077	0.046	0.0056
East Ditch	L2309549-3	MS-08-EAST-INFLOW	2019-07-14	2019-07-14	-	-	-	-	-	-	-	-	-	-
East Ditch	L2306701-1	MS-08-EAST-INFLOW	2019-07-09	2019-07-09	0.002	0.0001	0.001	0.001	0.0456	0.001	0.00701	0.005	0.03	0.002
East Ditch	L2306224-1	MS-08-EAST-INFLOW	2019-07-06	2019-07-06	-	-	-	-	-	-	-	-	-	-
East Ditch	L2309409-1	MS-08-EAST-INFLOW	2019-07-13	2019-07-13	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305072-1	MS-08-EAST-INFLOW	2019-07-05	2019-07-05	-	-	-	-	-	-	-	-	-	-
East Ditch	L2396973-3	MS-08-EAST-INFLOW	2019-06-23	2019-06-23	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305343-3	MS-08-EAST-INFLOW	2019-06-25	2019-06-25	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305805-1	MS-08-EAST-INFLOW	2019-06-27	2019-06-27	-	-	-	-	-	-	-	-	-	-
East Ditch	L2308636-1	MS-08-EAST-INFLOW	2019-07-08	2019-07-08	-	-	-	-	-	-	-	-	-	-
East Ditch	L2305269-1	MS-08-EAST-INFLOW	2019-07-11	2019-07-11	-	-	-	-	-	-	-	-	-	-
East Ditch	L2300513-3	MS-08-EAST-INFLOW	2019-07-07	2019-07-07	-	-	-	-	-	-	-	-	-	-
East Ditch	L2307801-1	MS-08-EAST-INFLOW	2019-06-26	2019-06-26	-	-	-	-	-	-	-	-	-	-
East Ditch	L2307801-1	MS-08-EAST-INFLOW	2019-07-10	2019-07-10	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301572-3	MS-08-EAST-INFLOW	2019-06-29	2019-06-29	-	-	-	-	-	-	-	-	-	-
East Ditch	L2313935-4	MS-08-EAST-INFLOW	2019-07-20	2019-07-20	-	-	-	-	-	-	-	-	-	-
East Ditch	L2309409-1	MS-08-EAST-INFLOW	2019-07-12	2019-07-12	-	-	-	-	-	-	-	-	-	-
East Ditch	L2315508-4	MS-08-EAST-INFLOW	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-
East Ditch	L2295991-3	MS-08-EAST-INFLOW	2019-06-20	2019-06-20	-	-	-	-	-	-	-	-	-	-
East Ditch	L2304339-1	MS-08-EAST-INFLOW	2019-07-03	2019-07-03	-	-	-	-	-	-	-	-	-	-
East Ditch	L2296969-3	MS-08-EAST-INFLOW	2019-06-22	2019-06-22	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301607-3	MS-08-EAST-INFLOW	2019-06-30	2019-06-30	-	-	-	-	-	-	-	-	-	-
East Ditch	L2304338-1	MS-08-EAST-INFLOW	2019-07-04	2019-07-04	-	-	-	-	-	-	-	-	-	-
East Ditch	L2301467-3	MS-08-EAST-INFLOW	2019-06-28	2019-06-28	-	-	-	-	-	-	-	-	-	-
East Ditch	L2318395-4	MS-08-EAST-INFLOW	2019-07-28	2019-07-28	-	-	-	-	-	-	-	-	-	-
East Ditch	L2482854-4	MS-08-EAST-INFLOW	2020-08-03	2020-08-03	0.002	0.0001	0.001	0.001	0.003	0.001	0.00518	0.005	0.051	0.002
East Ditch	L2297625-3	MS-08-EAST-INFLOW	2020-08-12	2020-08-12	-	-	-	-	-	-	-	-	-	-
East Ditch	L2485588-1	MS-08-EAST-INFLOW	2020-08-24	2019-08-24	0.001	0.00005	0.0005	0.0005	0.0035	0.0005	0.00639	0.0025	0.138	0.001
East Ditch	L2481535-2	MS-08-EAST-INFLOW	2020-07-29	2020-07-29	0.0002	0.000066	0.0001	0.00042	0.00667	0.0001	0.00528	0.00178	0.107	0.00027
East Ditch	L2303578-3	MS-08-EAST-INFLOW	2019-07-02	2019-07-02	0.002	0.00012	0.0022	0.001	0.173	0.001	0.00903	0.0064	0.03	0.0061
East Ditch	L2295155-3	MS-08-EAST-INFLOW	2019-06-19	2019-06-19	-	-	-	-	-	-	-	-	-	-
East Ditch	L2322461-1	MS-08-EAST-INFLOW	2019-08-02	2019-08-02	-	-	-	-	-	-	-	-	-	-
East Ditch	L2291173-3	MS-08-EAST-INFLOW	2019-06-13	2019-06-13	-	-	-	-	-	-	-	-	-	-
East Ditch	L2477770-3	MS-08-EAST-INFLOW	2020-07-21	2020-07-21	0.002	0.0001	0.001	0.001	0.0069	0.001	0.0061	0.005	0.03	0.002
East Ditch	L2294118-3	MS-08-EAST-INFLOW	2019-06-18	2019-06-18	0.002	0.0001	0.0017	0.001	0.0099	0.001	0.00283	0.005	0.03	0.002
East Ditch	L2290598-3	MS-08-EAST-INFLOW	2019-06-12	2019-06-12	-	-	-	-	-	-	-	-	-	-
East Ditch	L2296841-3	MS-08-EAST-INFLOW	2019-06-21	2019-06-21	0.002	0.0001	0.0032	0.001	0.233	0.001	0.00376	0.0091	0.03	0.002
East Ditch	L2318249-4	MS-08-EAST-INFLOW	2019-07-25	2019-07-25	-	-	-	-	-	-	-	-	-	-
East Ditch	L2330905-5	MS-08-EAST-INFLOW	2019-08-18	2019-08-18	-	-	-	-	-	-	-	-	-	-
East Ditch	L2335445-5	MS-08-EAST-INFLOW	2019-08-08	2019-08-08	-	-	-	-	-	-	-	-	-	-
East Ditch	L2332961-1	MS-08-EAST-INFLOW	2019-08-06	2019-08-06	0.002	0.0001	0.001	0.001	0.0102	0.001	0.00745	0.005	0.03	0.002
East Ditch	L2330850-1	MS-08-EAST-INFLOW	2019-07-31	2019-07-31	0.002	0.00029	0.0102	0.001	0.799	0.001	0.00501	0.0267	0.044	0.004
East Ditch	L2336484-5	MS-08-EAST-INFLOW	2019-08-11	2019-08-11	-	-	-	-	-	-	-	-	-	-
East Ditch	L2330756-5	MS-08-EAST-INFLOW	2019-08-13	2019-08-13	0.002	0.0001	0.001	0.001	0.03	0.001	0.00581	0.005	0.072	0.002
East Ditch	L2367383-6	MS-08-EAST-INFLOW	2019-08-16	2019-08-16	-	-	-	-	-	-	-	-	-	-
East Ditch	L2367383-6	MS-08-EAST-INFLOW	2019-10-01	2019-10-01	-	-	-	-	-	-	-	-	-	-
East Ditch	L2369447-3	MS-08-EAST-INFLOW	2019-06-10	2019-06-10	-	-	-	-	-	-	-	-	-	-
East Ditch	L2392234-3	MS-08-EAST-INFLOW	2019-06-14	2019-06-14	-	-	-	-	-	-	-	-	-	-
East Ditch	L2392494-3	MS-08-EAST-INFLOW	2019-06-15	2019-06-15	-	-	-	-	-	-	-	-	-	-
East Ditch	L2465307-2	MS-08-EAST-INFLOW	2020-06-30	2020-06-30	-	-	-	-	-	-	-	-	-	-
East Ditch	L2392486-3	MS-08-EAST-INFLOW	2019-06-16	2019-06-16	-	-	-	-	-	-	-	-	-	-
East Ditch	L2287932-3	MS-08-EAST-INFLOW	2019-06-07	2019-06-07	-	-	-	-	-	-	-	-	-	-
East Ditch	L2496104-1	MS-08-EAST-INFLOW	2020-08-26	2020-08-26	0.0002	0.00033	0.0001	0.0001	0.006	0.0001	0.0122	0.0005	0.003	0.0002
East Ditch	L2496103-2	MS-08-EAST-INFLOW	2020-08-26	2020-08-26	0.0002	0.00034	0.0001	0.0001	0.0062	0.0001	0.0111	0.0005	0.003	0.0002
East Ditch	L2339733-5	MS-08-EAST-INFLOW	2019-08-31	2019-08-31	-	-	-	-	-	-	-	-	-	-
East Ditch	L2467060-4	MS-08-EAST-INFLOW	2020-06-25	2020-06-25	-	-	-	-	-	-	-	-	-	-
East Ditch	L2496705-2	MS-08-EAST-INFLOW	2020-08-30	2020-08-30	0.002	0.0001	0.001	0.001	0.03	0.001	0.00626	0.005	0.03	0.002
East Ditch	L2496140-2	MS-08-EAST-INFLOW	2020-10-02	2019-10-02	-	-	-	-	-	-	-	-	-	-
East Ditch	L2358842-5	MS-08-EAST-INFLOW	2019-09-03	2019-09-03	0.002	0.0001	0.001	0.001	0.0063	0.001	0.0101	0.005	0.03	0.002
East Ditch	L2340461-5	MS-08-EAST-INFLOW	2020-08-27	2020-08-27	0.002	0.0001	0.001	0.001	0.0032	0.001	0.0136	0.005	0.03	0.002
East Ditch	L2496047-3	MS-08-EAST-INFLOW	2020-08-29	2020-08-29	0.0002	0.000022	0.0001	0.0001	0.00295	0.0001	0.0144	0.0005	0.003	0.0002
East Ditch	L2496120-2	MS-08-EAST-INFLOW	2019-09-05	2019-09-05	-	-	-	-	-	-	-	-	-	-
East Ditch	L2342313-5	MS-08-EAST-INFLOW	2019-08-25	2019-08-25	-	-	-	-	-	-	-	-	-	-
East Ditch	L2335475-3	MS-08-EAST-INFLOW	2019-06-17	2019-06-17	-	-	-	-	-	-	-	-	-	-
East Ditch	L2293024-3	MS-08-EAST-INFLOW	2020-09-01	2020-09-01	0.002	0.0001	0.001	0.001	0.003	0.001	0.00693	0.005	0.03	0.002
East Ditch	L2497356-2	MS-08-EAST-INFLOW	2019-08-23	2019-08-23	-	-	-	-	-	-	-	-	-	-
East Ditch	L2335451-4	MS-08-EAST-INFLOW	2019-08-27	2019-08-27	0.002	0.0001	0.001	0.001	0.0232	0.001	0.0104	0.005	0.03	0.002
East Ditch	L2337980-3	MS-08-EAST-INFLOW	2020-08-28	2020-08-28	0.002	0.0001	0.001	0.001	0.003	0.001	0.0149	0.005	0.03	0.002
East Ditch	L2498049-2	MS-08-EAST-INFLOW	2019-09-19	2019-09-19	-	-	-	-	-	-	-	-	-	-
East Ditch	L2350914-2	MS-08-EAST-INFLOW	2019-09-12	2019-09-12	-	-	-	-	-	-	-	-	-	-
East Ditch	L2346689-2	MS-08-EAST-INFLOW	-	-	-	-	-	-	-	-	-	-	-	-

22572570

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample Units	Sample Date	Tellurium (Te)- Total	Thallium (Tl)- Total	Thorium (Th)- Total	Tin (Sn)- Total	Titanium (Ti)- Total	Tungsten (W)- Total	Uranium (U)- Total	Vanadium (V)- Total	Zinc (Zn)- Total	Zirconium (Zr)- Total
East Ditch	L2348201-1	MS-08-EAST-INFLOW	2019-09-16	2019-09-16	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2345723-3	MS-08-EAST-INFLOW	2019-09-11	2019-09-11	0.002	0.0001	0.0001	0.001	0.001	0.053	0.001	0.0148	0.005	0.03	0.002
East Ditch	L2788006-3	MS-08-EAST-INFLOW	2019-06-09	2019-06-09	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2788003-5	MS-08-EAST-INFLOW	2019-06-08	2019-06-08	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2472902-3	MS-08-EAST-INFLOW	2020-07-10	2020-07-10	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2605651-3	MS-08-EAST-INFLOW	2021-06-23	2021-06-23	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2606859-2	MS-08-EAST-INFLOW	2021-06-26	2021-06-26	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2606887-2	MS-08-EAST-INFLOW	2021-06-27	2021-06-27	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2606882-2	MS-08-EAST-INFLOW	2021-07-01	2021-07-01	0.002	0.0001	0.0001	0.0028	0.001	0.225	0.001	0.00171	0.0072	0.03	0.002
East Ditch	L2610945-4	MS-08-EAST-INFLOW	2021-07-05	2021-07-05	0.002	0.0001	0.0001	0.0028	0.001	0.225	0.001	0.00171	0.0072	0.03	0.002
East Ditch	L2612337-1	MS-08-EAST-INFLOW	2021-07-11	2021-07-11	0.002	0.00022	0.00084	0.0084	0.001	0.571	0.001	0.00246	0.0189	0.03	0.0057
East Ditch	L2621285-2	MS-08-EAST-INFLOW	2021-07-24	2021-07-24	0.0004	0.00009	0.00065	0.0002	0.0002	0.0584	0.0002	0.00261	0.0019	0.025	0.00101
East Ditch	L2623768-4	MS-08-EAST-INFLOW	2021-08-06	2021-08-06	0.002	0.0001	0.0001	0.0001	0.001	0.003	0.001	0.00244	0.005	0.03	0.002
East Ditch	L2629891-2	MS-08-EAST-INFLOW	2021-08-22	2021-08-22	0.002	0.0001	0.0001	0.0001	0.001	0.0128	0.001	0.00494	0.005	0.03	0.002
East Ditch	L2635846-2	MS-08-EAST-INFLOW	2021-08-05	2021-08-05	0.002	0.0001	0.0001	0.0001	0.001	0.0231	0.001	0.00359	0.005	0.03	0.002
East Ditch	L2725730-5	MS-08-EAST-INFLOW	2022-07-28	2022-07-28	0.002	0.0003	0.00025	0.0025	0.001	0.291	0.001	0.00793	0.0097	0.048	0.0029
East Ditch	L2322461-2	MS-08-EAST-INFLOW01	2019-08-02	2019-08-02	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2477770-4	MS-08-EAST-INFLOW01	2020-07-21	2020-07-21	0.002	0.0001	0.0001	0.0001	0.001	0.007	0.001	0.00816	0.005	0.03	0.002
East Ditch	L2486140-3	MS-08-EAST-INFLOW01	2020-08-30	2020-08-30	0.002	0.0001	0.0001	0.0001	0.001	0.0097	0.001	0.0136	0.005	0.03	0.002
East Ditch	L2343354-4	MS-08-EAST-INFLOW	2019-09-08	2019-09-08	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2722749-1	MS-08-EXPLORE-EASTDITCH	2022-07-10	2022-07-10	0.002	0.0001	0.0001	0.002	0.001	0.238	0.001	0.00139	0.0086	0.03	0.002
East Ditch	L2113626-4	MS-08-INFLOW-EAST	2018-06-16	2018-06-16	-	-	-	-	-	-	-	-	-	-	-
East Ditch	L2160094-4	MS-08-INFLOW-EAST	2018-09-06	2018-09-06	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-1	CENTRAL-KEY-IN	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2312012-3	CENTRAL-KEY-IN	2019-07-17	2019-07-17	0.002	0.0004	0.0001	0.0069	0.001	1.3	0.001	0.056	0.0248	0.049	0.0065
Runoff	L2328009-6	INF LUECENTRAL-KEYIN	2019-08-13	2019-08-13	0.002	0.00014	0.0001	0.001	0.001	0.0312	0.001	0.0183	0.005	0.03	0.0021
Runoff	L2287151-3	MS-08-EMERGENCY-DITCH	2019-06-06	2019-06-06	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2340467-1	MS-SP-02	2019-09-03	2019-09-03	0.2	0.01	0.1	0.1	0.1	0.3	0.1	0.388	0.5	3.3	0.2
Runoff	PAG WIR (max)	MS-SP-02	2018-09-01	2018-09-01	0.2	0.01	0.1	0.1	0.1	0.3	0.1	0.106	0.5	3.5	0.3
Runoff	L2303565-5	MS-SP-02	2019-07-02	2019-07-02	0.002	0.00028	0.0001	0.001	0.001	0.003	0.001	0.00892	0.005	0.072	0.002
Runoff	L2337954-1	MS-SP-02	2019-08-27	2019-08-27	0.02	0.0001	0.01	0.01	0.01	0.03	0.01	0.0173	0.05	0.44	0.02
Runoff	L2320849-3	MS-SP-02	2019-07-30	2019-07-30	0.02	0.001	0.016	0.016	0.01	0.887	0.01	0.0118	0.05	0.43	0.024
Runoff	L2298517-8	MS-SP-02	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2315510-3	MS-SP-02	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-
Runoff	L228009-2	MS-SP-02	2019-08-13	2019-08-13	0.02	0.001	0.01	0.01	0.01	0.133	0.01	0.0115	0.05	0.3	0.02
Runoff	L2290620-5	MS-SP-02	2019-06-12	2019-06-12	0.0001	0.0001	0.001	0.001	0.001	0.0337	0.001	0.00092	0.005	0.03	0.002
Runoff	L2323304-3	MS-SP-02	2019-08-06	2019-08-06	0.02	0.001	0.01	0.01	0.01	0.095	0.01	0.0087	0.05	0.3	0.02
Runoff	L2306749-3	MS-SP-04	2019-07-09	2019-07-09	0.00038	0.00038	0.0001	0.001	0.003	0.003	0.001	0.0108	0.005	0.091	0.002
Runoff	L2328009-1	MS-SP-04	2019-08-13	2019-08-13	0.02	0.001	0.01	0.01	0.01	0.03	0.01	0.0284	0.05	0.3	0.02
Runoff	L2333401-1	MS-SP-04	2019-08-20	2019-08-20	0.02	0.001	0.01	0.01	0.01	0.03	0.01	0.0345	0.05	0.3	0.02
Runoff	L2312012-1	MS-SP-04	2019-07-17	2019-07-17	0.00047	0.00047	0.001	0.001	0.001	0.0035	0.001	0.0138	0.005	0.118	0.002
Runoff	L2320849-4	MS-SP-04	2019-07-30	2019-07-30	0.001	0.00056	0.001	0.001	0.001	0.003	0.001	0.0226	0.005	0.165	0.002
Runoff	L2290620-6	MS-SP-04	2019-06-12	2019-06-12	0.002	0.0002	0.001	0.001	0.001	0.004	0.001	0.0064	0.005	0.059	0.002
Runoff	L2315510-4	MS-SP-04	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2323304-4	MS-SP-04	2019-08-06	2019-08-06	0.02	0.001	0.01	0.01	0.01	0.03	0.01	0.0216	0.05	0.3	0.02
Runoff	L2298517-9	MS-SP-04	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-	-
Runoff	L2158115-6	MS-SP-04	2018-09-04	2018-09-04	0.02	0.001	0.01	0.01	0.01	0.03	0.01	0.001	0.05	0.3	0.03
Runoff	L2294129-9	MS-SP-0401	2019-06-18	2019-06-18	0.00015	0.00015	0.001	0.001	0.001	0.007	0.001	0.00676	0.005	0.062	0.002
Runoff	L2730435-1	MS-WRF-22-01	2022-08-28	2022-08-28	0.0002	0.0001	0.0001	0.0001	0.001	0.00346	0.0001	0.00191	0.0005	0.003	0.0002
Runoff	L2730435-2	MS-WRF-22-02	2022-08-28	2022-08-28	0.0002	0.0001	0.0001	0.0001	0.001	0.0166	0.0001	0.00086	0.0002	0.003	0.0001
Runoff	L2730436-1	MS-WRF-22-05	2022-08-27	2022-08-27	0.0002	0.00031	0.00048	0.0001	0.001	0.0638	0.0001	0.00273	0.00044	0.0085	0.0001
Runoff	L2730436-2	MS-WRF-22-06A	2022-08-27	2022-08-27	0.0002	0.000044	0.00019	0.0001	0.001	0.0284	0.0001	0.00271	0.0013	0.03	0.00025
Runoff	L2730436-3	MS-WRF-22-06B	2022-08-27	2022-08-27	0.0002	0.000037	0.00036	0.00012	0.0001	0.0807	0.00028	0.00242	0.00378	0.0068	0.00037
Runoff	L2730436-4	MS-WRF-22-06A	2022-08-27	2022-08-27	0.0002	0.0001	0.001	0.001	0.001	0.218	0.001	0.0024	0.005	0.03	0.002
Runoff	L2730436-5	MS-WRF-22-09	2022-08-27	2022-08-27	0.002	0.0001	0.001	0.001	0.001	0.147	0.001	0.00392	0.0061	0.03	0.002
Runoff	L2730426-6	MS-WRF-22-09A	2022-08-27	2022-08-27	0.002	0.0001	0.001	0.001	0.001	0.158	0.001	0.0075	0.005	0.03	0.002
Runoff	L2730426-7	MS-WRF-22-10	2022-08-27	2022-08-27	0.002	0.0001	0.001	0.001	0.001	0.093	0.001	0.00947	0.005	0.03	0.002
Runoff	L2730426-8	MS-WRF-22-11	2022-08-27	2022-08-27	0.002	0.0001	0.001	0.001	0.001	0.0415	0.001	0.00335	0.005	0.03	0.002
Runoff	L2730426-9	MS-WRF-22-12	2022-08-27	2022-08-27	0.002	0.00016	0.0001	0.0001	0.001	0.003	0.0001	0.00335	0.0005	0.03	0.002
Runoff	L2730426-10	MS-WRF-22-12A	2022-08-27	2022-08-27	0.002	0.00005	0.00013	0.0001	0.001	0.104	0.0001	0.00193	0.00289	0.0054	0.00139
Runoff	L2730426-11	MS-WRF-22-18	2022-08-27	2022-08-27	0.0002	0.000037	0.00066	0.0001	0.001	0.0607	0.0001	0.0064	0.00187	0.003	0.00116
Runoff	L2730426-12	MS-WRF-22-18A	2022-08-27	2022-08-27	0.0002	0.0001	0.001	0.001	0.001	0.057	0.001	0.0121	0.005	0.03	0.002
Runoff	WRP-20-01	WRP-20-01	2020-07-22	2020-07-22	0.0004	0.0001	0.001	0.00335	0.0001	0.372	0.0002	0.00379	0.0246	0.0434	0.00292
Runoff	L2478363-1	WRP-20-01	2020-08-12	2020-08-12	0.0004	0.0001	0.001	0.00335	0.0001	0.372	0.0002	0.00379	0.0246	0.0434	0.00292
Runoff	L2488602-1	WRP-20-01	2020-08-03	2020-08-03	0.002	0.0001	0.001	0.001	0.001	0.0554	0.001	0.00171	0.005	0.03	0.002
Runoff	L2482855-1	WRP-20-01	2020-08-03	2020-08-03	0.002	0.0002	0.0038	0.001	0.001	0.555	0.001	0.00485	0.0202	0.32	0.0029
Runoff	L2482855-2	WRP-20-01A	2020-08-03	2020-08-03	0.002	0.000197	0.000376	0.00033	0.001	0.576	0.0002	0.00478	0.0249	0.335	0.003
Runoff	L2488602-2	WRP-20-01A	2020-08-12	2020-08-12	0.0004	0.0001	0.001	0.001	0.001	0.921	0.001	0.00175	0.005	0.03	0.002
Runoff	L2478363-2	WRP-20-02	2020-07-22	2020-07-22	0.002	0.0001	0.001	0.001	0.001	0.0119	0.0001	0.00246	0.00079	0.003	0.00026
Runoff	L2495466-4	WRP-20-03	2020-08-21	2020-08-21	0.0002	0.00001	0.0001	0.0001	0.001	0.277	0.001	0.00231	0.0076	0.03	0.0021
Runoff	L2478363-3	WRP-20-04	2020-07-22	2020-07-22	0.002	0.0001	0.001	0.001	0.001	0.0119	0.0001	0.00246	0.00079	0.003	0.00026
Runoff	L2478363-4	WRP-20-04	2020-08-31	2020-08-31	0.0004	0.0001	0.001	0.001	0.001	0.277	0.001	0.00231	0.0076	0.03	0.0021
Runoff	L2496772-5	WRP-20-04	2020-08-31	2020-08-31	0.0004	0.000047	0.00099	0.00099	0.001	0.0277					

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample date/time	Sample date	Tellurium (Te)- Total	Thallium (Tl)- Total	Thorium (Th)- Total	Tin (Sn)- Total	Titanium (Ti)- Total	Tungsten (W)- Total	Uranium (U)- Total	Vanadium (V)- Total	Zinc (Zn)- Total	Zirconium (Zr)- Total
Runoff	L2495466-1	WRP-20-04A	2020-08-21	2020-08-21	0.0002	0.000017	0.0001	0.0001	0.0015	0.0001	0.00206	0.0005	0.003	0.0002
Runoff	L2475363-4	WRP-20-06	2020-07-22	2020-07-22	0.002	0.0001	0.001	0.001	0.0034	0.001	0.00235	0.005	0.03	0.002
Runoff	L2482855-4	WRP-20-05	2020-08-03	2020-08-03	0.002	0.0001	0.001	0.001	0.0055	0.001	0.00394	0.005	0.03	0.0028
Runoff	L2495466-3	WRP-20-06	2020-08-21	2020-08-21	0.0002	0.000019	0.0001	0.0001	0.0145	0.0001	0.00235	0.0007	0.003	0.00036
Runoff	L2486602-4	WRP-20-05A	2020-08-12	2020-08-12	0.001	0.000204	0.00613	0.0005	0.0059	0.0005	0.00574	0.0255	0.045	0.0071
Runoff	L2496722-6	WRP-20-05A	2020-08-31	2020-08-31	0.002	0.00012	0.0028	0.001	0.227	0.001	0.00813	0.01	0.03	0.002
Runoff	L2482855-5	WRP-20-05A	2020-08-03	2020-08-03	0.002	0.0001	0.0001	0.001	0.0314	0.001	0.00679	0.005	0.03	0.002
Runoff	L2478363-5	WRP-20-07	2020-07-22	2020-07-22	0.002	0.00016	0.0029	0.001	0.327	0.001	0.00642	0.0168	0.03	0.0043
Runoff	L2486602-5	WRP-20-07	2020-08-12	2020-08-12	0.001	0.00031	0.0093	0.0005	0.777	0.00059	0.00649	0.0364	0.057	0.0125
Runoff	L2482855-6	WRP-20-07	2020-08-03	2020-08-03	0.002	0.00011	0.0093	0.001	0.205	0.001	0.00688	0.03	0.03	0.003
Runoff	L2495466-7	WRP-20-07	2020-08-21	2020-08-21	0.001	0.00005	0.0005	0.0005	0.0229	0.0005	0.0032	0.0025	0.015	0.001
Runoff	L2496722-7	WRP-20-07	2020-08-31	2020-08-31	0.002	0.0001	0.0013	0.001	0.106	0.001	0.00652	0.0055	0.03	0.0026
Runoff	L2495466-8	WRP-20-0702	2020-08-21	2020-08-21	0.0002	0.00001	0.0001	0.0001	0.0003	0.0001	0.00001	0.0005	0.003	0.0002
Runoff	L2496722-8	WRP-20-07A	2020-08-31	2020-08-31	0.002	0.0001	0.0001	0.001	0.073	0.001	0.00116	0.0005	0.03	0.002
Runoff	L2478363-6	WRP-20-08	2020-07-22	2020-07-22	0.002	0.00012	0.001	0.001	0.071	0.001	0.00098	0.005	0.03	0.002
Runoff	L2495466-6	WRP-20-08	2020-08-21	2020-08-21	0.001	0.000084	0.0005	0.0005	0.106	0.0005	0.00069	0.005	0.03	0.0016
Runoff	L2478363-7	WRP-20-09	2020-07-22	2020-07-22	0.004	0.0001	0.001	0.001	0.0228	0.001	0.00171	0.005	0.03	0.002
Runoff	L2495466-5	WRP-20-10	2020-08-21	2020-08-21	0.002	0.0003	0.002	0.002	0.0116	0.002	0.00228	0.01	0.207	0.004
Runoff	L2478363-8	WRP-20-10	2020-07-22	2020-07-22	0.002	0.0001	0.001	0.001	0.0382	0.001	0.00281	0.005	0.03	0.002
Runoff	L2482855-7	WRP-20-11	2020-08-03	2020-08-03	0.002	0.00029	0.0019	0.001	0.199	0.001	0.00242	0.0144	0.102	0.0047
Runoff	L2478363-9	WRP-20-11	2020-07-22	2020-07-22	0.002	0.0002	0.001	0.001	0.152	0.001	0.00155	0.0065	0.03	0.002
Runoff	L2478363-10	WRP-20-12	2020-07-22	2020-07-22	0.002	0.00022	0.001	0.001	0.0459	0.001	0.00617	0.005	0.03	0.002
Runoff	L2495466-16	WRP-20-12	2020-08-22	2020-08-22	0.0002	0.000088	0.00015	0.00021	0.215	0.0001	0.00102	0.0147	0.021	0.00441
Runoff	L2495466-20	WRP-20-1203	2020-08-22	2020-08-22	0.0002	0.00001	0.0001	0.0001	0.0003	0.0001	0.00001	0.0005	0.003	0.0002
Runoff	L2478363-11	WRP-20-13	2020-07-22	2020-07-22	0.002	0.00011	0.001	0.001	0.0143	0.001	0.00159	0.005	0.03	0.002
Runoff	L2495466-12	WRP-20-13	2020-08-22	2020-08-22	0.0002	0.000073	0.00017	0.00014	0.126	0.0001	0.000846	0.00865	0.0116	0.00299
Runoff	L2485429-1	WRP-20-14	2020-08-04	2020-08-04	0.002	0.0001	0.001	0.001	0.029	0.001	0.00262	0.005	0.03	0.002
Runoff	L2486602-6	WRP-20-14	2020-08-12	2020-08-12	0.001	0.00009	0.0005	0.0005	0.0349	0.0005	0.00115	0.0025	0.03	0.001
Runoff	L2478363-12	WRP-20-14	2020-07-22	2020-07-22	0.002	0.00017	0.0013	0.001	0.287	0.001	0.00391	0.0093	0.03	0.0028
Runoff	L2495466-21	WRP-20-14	2020-08-22	2020-08-22	0.0002	0.000073	0.00013	0.0001	0.0978	0.0001	0.000913	0.00632	0.0134	0.00226
Runoff	L2486602-7	WRP-20-1401	2020-08-12	2020-08-12	0.001	0.000085	0.0005	0.0005	0.0355	0.0005	0.00118	0.0025	0.022	0.001
Runoff	L2485429-2	WRP-20-1403	2020-08-04	2020-08-04	0.0002	0.00001	0.0001	0.0001	0.0003	0.0001	0.00001	0.0005	0.003	0.0002
Runoff	L2478363-13	WRP-20-15	2020-07-22	2020-07-22	0.002	0.0001	0.001	0.001	0.0219	0.001	0.00663	0.005	0.03	0.002
Runoff	L2485429-3	WRP-20-15	2020-08-04	2020-08-04	0.002	0.0001	0.001	0.001	0.0337	0.001	0.0125	0.005	0.03	0.002
Runoff	L2495466-19	WRP-20-15	2020-08-22	2020-08-22	0.0002	0.000034	0.0001	0.0001	0.0584	0.0001	0.00528	0.0005	0.034	0.00037
Runoff	L2496722-9	WRP-20-15	2020-08-31	2020-08-31	0.002	0.0001	0.001	0.001	0.0666	0.001	0.00567	0.005	0.03	0.002
Runoff	L2486602-8	WRP-20-1501	2020-08-12	2020-08-12	0.0004	0.000055	0.00047	0.0002	0.0703	0.0002	0.0116	0.0023	0.006	0.00097
Runoff	L2485429-4	WRP-20-1601	2020-08-04	2020-08-04	0.002	0.0001	0.001	0.001	0.0129	0.001	0.0115	0.005	0.03	0.002
Runoff	PAG WIR (75th)	WRP-20-17	2020-08-22	2020-08-22	0.0004	0.000053	0.0002	0.0002	0.0066	0.0002	0.00395	0.001	0.006	0.0004
Runoff	L2485429-5	WRP-20-17	2020-08-04	2020-08-04	0.002	0.0001	0.001	0.001	0.0129	0.001	0.00468	0.005	0.03	0.002
Runoff	L2496722-4	WRP-20-17	2020-08-31	2020-08-31	0.002	0.0001	0.001	0.001	0.298	0.001	0.00681	0.005	0.03	0.002
Runoff	L2478363-14	WRP-20-17	2020-07-22	2020-07-22	0.002	0.0001	0.001	0.001	0.0344	0.001	0.00769	0.005	0.03	0.002
Runoff	L2485429-6	WRP-20-1702	2020-08-04	2020-08-04	0.002	0.00001	0.0001	0.0001	0.0003	0.0001	0.00001	0.0005	0.03	0.002
Runoff	L2485429-7	WRP-20-18	2020-08-04	2020-08-04	0.002	0.0001	0.001	0.001	0.0578	0.001	0.00611	0.005	0.03	0.002
Runoff	L2478363-1	WRP-20-18	2020-07-24	2020-07-24	0.0004	0.000074	0.0002	0.0002	0.0446	0.0002	0.00345	0.001	0.0092	0.0004
Runoff	L2495466-14	WRP-20-18	2020-08-22	2020-08-22	0.0004	0.00084	0.0002	0.0002	0.101	0.0002	0.00689	0.001	0.0071	0.00041
Runoff	L2496722-3	WRP-20-18	2020-08-31	2020-08-31	0.002	0.00012	0.0012	0.001	0.0963	0.001	0.00965	0.005	0.03	0.003
Runoff	L2486602-9	WRP-20-1801	2020-08-12	2020-08-12	0.0004	0.000114	0.00181	0.0002	0.187	0.0002	0.00971	0.058	0.078	0.00553
Runoff	L2478363-2	WRP-20-19	2020-07-24	2020-07-24	0.0004	0.000074	0.0002	0.0002	0.0243	0.0002	0.00368	0.001	0.0096	0.00034
Runoff	L2485429-8	WRP-20-19	2020-08-04	2020-08-04	0.002	0.0001	0.001	0.001	0.0616	0.001	0.00713	0.005	0.03	0.002
Runoff	L2486602-10	WRP-20-19	2020-08-12	2020-08-12	0.0004	0.00008	0.00025	0.0002	0.106	0.0005	0.00739	0.001	0.0155	0.00046
Runoff	L2478363-3	WRP-20-19	2020-07-24	2020-07-24	0.0004	0.00008	0.0002	0.0002	0.186	0.0002	0.00747	0.001	0.0083	0.0004
Runoff	L2495466-15	WRP-20-19	2020-08-22	2020-08-22	0.0002	0.000114	0.00272	0.00019	0.289	0.00022	0.00228	0.0119	0.0188	0.00361
Runoff	L2496722-1	WRP-20-19	2020-08-31	2020-08-31	0.002	0.0001	0.001	0.001	0.003	0.001	0.00408	0.005	0.03	0.002
Runoff	L2478363-4	WRP-20-1901	2020-07-24	2020-07-24	0.0004	0.000073	0.0002	0.0002	0.0174	0.0002	0.00141	0.001	0.0079	0.0004
Runoff	L2485429-9	WRP-20-20	2020-08-04	2020-08-04	0.002	0.0001	0.001	0.001	0.008	0.001	0.00142	0.005	0.03	0.002
Runoff	L2478363-5	WRP-20-20	2020-07-24	2020-07-24	0.0004	0.000083	0.00049	0.0002	0.0564	0.0002	0.00196	0.0022	0.0124	0.00103
Runoff	L2496722-2	WRP-20-20	2020-08-31	2020-08-31	0.002	0.0001	0.001	0.001	0.103	0.001	0.00165	0.005	0.03	0.002
Runoff	L2495466-17	WRP-20-20	2020-08-22	2020-08-22	0.0002	0.000136	0.00375	0.00027	0.396	0.00023	0.00247	0.0161	0.0257	0.00365
Runoff	L2485466-9	WRP-20-20A	2020-08-22	2020-08-22	0.0002	0.000123	0.0031	0.00021	0.328	0.00025	0.00222	0.015	0.0235	0.00439
Runoff	L2485429-10	WRP-20-20A	2020-08-04	2020-08-04	0.002	0.00011	0.001	0.001	0.0596	0.001	0.00285	0.005	0.03	0.002
Runoff	L2478363-5	WRP-20-21	2020-07-24	2020-07-24	0.0004	0.000148	0.00398	0.00031	0.359	0.0002	0.00554	0.0165	0.0242	0.00716
Runoff	L2479665-6	WRP-20-21	2020-07-24	2020-07-24	0.0004	0.000118	0.0017	0.00023	0.296	0.00024	0.00366	0.015	0.0207	0.00265
Runoff	L2495466-18	WRP-20-22	2020-08-22	2020-08-22	0.0002	0.000051	0.00023	0.0001	0.0447	0.0001	0.0035	0.00213	0.003	0.00085
Runoff	L2478363-6	WRP-20-22	2020-07-24	2020-07-24	0.0004	0.0001	0.00141	0.0002	0.209	0.0002	0.00312	0.0106	0.0156	0.00288
Runoff	L2485429-11	WRP-20-23	2020-08-04	2020-08-04	0.002	0.0001	0.001	0.001	0.0393	0.0002	0.00052	0.005	0.03	0.002
Runoff	L2478363-9	WRP-20-23	2020-07-24	2020-07-24	0.0002	0.00005	0.00032	0.0001	0.0428	0.0001	0.00076	0.00163	0.0043	0.00046
Runoff	L2479665-10	WRP-20-24	2020-07-24	2020-07-24	0.0002	0.00004	0.							

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample datetime	Sample date	Tellurium (Te)- Total	Thallium (Tl)- Total	Thorium (Th)- Total	Tin (Sn)- Total	Titanium (Ti)- Total	Tungsten (W)- Total	Uranium (U)- Total	Vanadium (V)- Total	Zinc (Zn)- Total	Zirconium (Zr)- Total
Runoff	L2610912-9	WRP-21-01 2021-07-05 1410	2021-07-05	2021-07-05	0.002	0.00012	0.0019	0.001	0.288	0.001	0.00301	0.011	0.03	0.002
Runoff	L2612335-1	WRP-21-01 2021-07-11 0910	2021-07-11	2021-07-11	0.002	0.0001	0.001	0.001	0.0212	0.001	0.00238	0.005	0.03	0.002
Runoff	L2627498-25	WRP-21-02 16-08-2021 1345	2021-08-16	2021-08-16	0.002	0.0001	0.001	0.001	0.003	0.001	0.00144	0.005	0.03	0.002
Runoff	L2610912-8	WRP-21-02 2021-07-05 1350	2021-07-05	2021-07-05	0.002	0.0004	0.0106	0.001	1.07	0.001	0.00395	0.0424	0.051	0.0025
Runoff	L2612335-2	WRP-21-02 2021-07-11 0930	2021-07-11	2021-07-11	0.002	0.0001	0.0015	0.001	0.183	0.001	0.00231	0.0075	0.03	0.002
Runoff	L2612335-3	WRP-21-02A 2021-07-11 0945	2021-07-11	2021-07-11	0.002	0.0001	0.001	0.001	0.003	0.001	0.00474	0.005	0.03	0.002
Runoff	L2612624-11	WRP-21-02A 2021-07-23	2021-07-23	2021-07-23	0.0002	0.00044	0.0001	0.0001	0.00835	0.0001	0.00126	0.0006	0.003	0.0002
Runoff	L2627498-24	WRP-21-03 16-08-2021 1320	2021-08-16	2021-08-16	0.002	0.0001	0.001	0.001	0.003	0.001	0.001	0.005	0.03	0.002
Runoff	L2610912-7	WRP-21-03 2021-07-05 1320	2021-07-05	2021-07-05	0.002	0.0001	0.0015	0.001	0.209	0.001	0.00344	0.0106	0.03	0.002
Runoff	L2610912-6	WRP-21-04 2021-07-05 1340	2021-07-05	2021-07-05	0.002	0.0001	0.001	0.001	2.18	0.001	0.00344	0.0106	0.03	0.002
Runoff	L2627498-17	WRP-21-04A 16-08-2021 1240	2021-08-16	2021-08-16	0.002	0.0001	0.001	0.001	0.003	0.001	0.0013	0.05	0.3	0.002
Runoff	L2612335-4	WRP-21-04A 2021-07-11 1005	2021-07-11	2021-07-11	0.002	0.00011	0.001	0.001	0.0355	0.001	0.00031	0.005	0.03	0.002
Runoff	L2627498-18	WRP-21-04B 16-08-2021 1300	2021-08-16	2021-08-16	0.002	0.0001	0.001	0.001	0.0087	0.001	0.00073	0.005	0.03	0.002
Runoff	L2627498-19	WRP-21-05 16-08-2021 1205	2021-08-16	2021-08-16	0.002	0.0001	0.001	0.001	0.003	0.001	0.00084	0.005	0.03	0.002
Runoff	L2610912-5	WRP-21-05 2021-07-05 1300	2021-07-05	2021-07-05	0.002	0.00025	0.0024	0.001	0.519	0.001	0.00922	0.0183	0.03	0.002
Runoff	L2612335-5	WRP-21-05 2021-07-11 1025	2021-07-11	2021-07-11	0.002	0.0001	0.001	0.001	0.0083	0.001	0.00358	0.005	0.03	0.002
Runoff	L2610912-4	WRP-21-06 2021-07-05 1245	2021-07-05	2021-07-05	0.002	0.00012	0.0015	0.001	0.247	0.001	0.00365	0.0105	0.03	0.002
Runoff	L2612335-7	WRP-21-06 2021-07-11 1040	2021-07-11	2021-07-11	0.002	0.0001	0.001	0.001	0.0631	0.001	0.00416	0.005	0.03	0.002
Runoff	L2627498-21	WRP-21-07 16-08-2021 1140	2021-08-16	2021-08-16	0.002	0.0001	0.001	0.001	0.0192	0.001	0.00074	0.005	0.03	0.002
Runoff	L2610912-3	WRP-21-07 2021-07-05 1155	2021-07-05	2021-07-05	0.002	0.0001	0.001	0.001	0.0738	0.001	0.00072	0.005	0.03	0.002
Runoff	L2612335-8	WRP-21-07A 2021-07-11 1110	2021-07-11	2021-07-11	0.002	0.0001	0.001	0.001	0.0676	0.001	0.00033	0.005	0.03	0.002
Runoff	L2627498-22	WRP-21-07B 16-08-2021 1130	2021-08-16	2021-08-16	0.002	0.0001	0.001	0.001	0.003	0.001	0.00188	0.005	0.03	0.002
Runoff	L2612335-9	WRP-21-07B 2021-07-11 1125	2021-07-11	2021-07-11	0.002	0.0001	0.001	0.001	0.0938	0.001	0.00212	0.005	0.03	0.002
Runoff	L2627498-23	WRP-21-08 16-08-2021 1115	2021-08-16	2021-08-16	0.002	0.00011	0.001	0.001	0.0806	0.001	0.00673	0.005	0.03	0.002
Runoff	L2610912-2	WRP-21-08 2021-07-05 1125	2021-07-05	2021-07-05	0.002	0.0001	0.001	0.001	0.0401	0.001	0.00148	0.005	0.03	0.002
Runoff	L2612335-10	WRP-21-08 2021-07-11 1140	2021-07-11	2021-07-11	0.002	0.0001	0.001	0.001	0.0409	0.001	0.00122	0.005	0.03	0.002
Runoff	L2612624-10	WRP-21-08 2021-07-23	2021-07-23	2021-07-23	0.0002	0.00046	0.0003	0.0001	0.0375	0.0001	0.00411	0.00139	0.0042	0.00035
Runoff	L2610912-1	WRP-21-09 16-08-2021 1050	2021-08-16	2021-08-16	0.002	0.0001	0.001	0.001	0.0115	0.001	0.00234	0.005	0.03	0.002
Runoff	L2612335-11	WRP-21-09 2021-07-05 1110	2021-07-05	2021-07-05	0.002	0.00015	0.0013	0.001	0.15	0.001	0.00299	0.0101	0.032	0.0022
Runoff	L2612335-12	WRP-21-09 2021-07-11 1200	2021-07-11	2021-07-11	0.002	0.00019	0.0014	0.001	0.24	0.001	0.00234	0.014	0.04	0.002
Runoff	L2612624-9	WRP-21-09A 2021-07-23	2021-07-23	2021-07-23	0.001	0.000145	0.0005	0.0005	0.003	0.0005	0.0014	0.0025	0.028	0.001
Runoff	L2627498-9	WRP-21-10 15-08-2021 1500	2021-08-15	2021-08-15	0.002	0.0001	0.001	0.001	0.0143	0.001	0.00389	0.005	0.03	0.002
Runoff	L2610912-14	WRP-21-10 2021-07-05 1550	2021-07-05	2021-07-05	0.002	0.0001	0.0022	0.001	0.223	0.001	0.00145	0.008	0.03	0.0024
Runoff	L2612335-12	WRP-21-10 2021-07-11 1240	2021-07-11	2021-07-11	0.002	0.0001	0.0018	0.001	0.135	0.001	0.00179	0.0053	0.03	0.0023
Runoff	L2612624-7	WRP-21-10A 2021-07-23	2021-07-23	2021-07-23	0.0004	0.00027	0.0002	0.0002	0.0025	0.0002	0.00152	0.001	0.006	0.0004
Runoff	L2627498-11	WRP-21-10A 15-08-2021 1435	2021-08-15	2021-08-15	0.002	0.00019	0.0001	0.0001	0.00874	0.0001	0.00627	0.0005	0.003	0.0002
Runoff	L2612335-13	WRP-21-11 2021-07-11 1255	2021-07-11	2021-07-11	0.002	0.0001	0.001	0.001	0.0408	0.001	0.00085	0.005	0.03	0.002
Runoff	L2627498-8	WRP-21-11 15-08-2021 1415	2021-08-15	2021-08-15	0.002	0.0001	0.001	0.001	0.0141	0.001	0.00097	0.005	0.03	0.002
Runoff	L2610912-13	WRP-21-11 2021-07-05 1330	2021-07-05	2021-07-05	0.002	0.00021	0.0061	0.001	0.489	0.001	0.0115	0.0177	0.03	0.0037
Runoff	L2612335-14	WRP-21-11 2021-07-11 1310	2021-07-11	2021-07-11	0.002	0.0001	0.001	0.001	0.332	0.001	0.00102	0.005	0.03	0.002
Runoff	L2612624-6	WRP-21-12 2021-07-23	2021-07-23	2021-07-23	0.0002	0.00052	0.00053	0.0001	0.0666	0.0001	0.00344	0.00216	0.0031	0.00096
Runoff	L2610912-11	WRP-21-12 2021-07-05 1520	2021-07-05	2021-07-05	0.002	0.00015	0.0038	0.001	0.341	0.001	0.00648	0.0135	0.03	0.0038
Runoff	L2627498-10	WRP-21-13 15-08-2021 1400	2021-08-15	2021-08-15	0.002	0.0001	0.001	0.001	0.063	0.001	0.0123	0.005	0.03	0.002
Runoff	L2610912-10	WRP-21-13 2021-07-05 1505	2021-07-05	2021-07-05	0.002	0.00011	0.002	0.001	0.948	0.001	0.0104	0.005	0.03	0.002
Runoff	L2612335-15	WRP-21-13 2021-07-11 1320	2021-07-11	2021-07-11	0.002	0.00011	0.002	0.001	0.21	0.001	0.0102	0.0055	0.03	0.0024
Runoff	L2612624-5	WRP-21-14 2021-07-23	2021-07-23	2021-07-23	0.001	0.00065	0.0005	0.0005	0.069	0.0005	0.00342	0.0025	0.017	0.001
Runoff	L2627498-12	WRP-21-14 15-06-2021 1255	2021-08-15	2021-08-15	0.002	0.00011	0.0011	0.001	0.147	0.001	0.0075	0.0101	0.038	0.002
Runoff	L2612624-1	WRP-21-14 2021-07-12 1300	2021-07-12	2021-07-12	0.002	0.00012	0.0014	0.001	0.203	0.001	0.00262	0.0057	0.03	0.002
Runoff	L2612624-4	WRP-21-14 2021-07-22	2021-07-22	2021-07-22	0.0002	0.00009	0.00015	0.0001	0.021	0.0001	0.00192	0.0088	0.0219	0.00026
Runoff	L2627498-1	WRP-21-14A 15-08-2021 1150	2021-08-15	2021-08-15	0.002	0.0001	0.001	0.001	0.065	0.001	0.00082	0.005	0.03	0.002
Runoff	L2627498-13	WRP-21-14B 15-08-2021 1225	2021-08-15	2021-08-15	0.002	0.0001	0.001	0.001	0.089	0.001	0.00076	0.005	0.03	0.002
Runoff	L2627498-14	WRP-21-14C 15-08-2021 1240	2021-08-15	2021-08-15	0.002	0.0001	0.001	0.001	0.081	0.001	0.00139	0.005	0.03	0.002
Runoff	L2627498-15	WRP-21-15 15-08-2021 1125	2021-08-15	2021-08-15	0.002	0.0001	0.001	0.001	0.322	0.001	0.00112	0.005	0.03	0.002
Runoff	L2612624-2	WRP-21-15 2021-07-12 1325	2021-07-12	2021-07-12	0.002	0.0001	0.001	0.001	0.542	0.001	0.00041	0.005	0.03	0.002
Runoff	L2612624-3	WRP-21-16 2021-07-12 1340	2021-07-12	2021-07-12	0.002	0.0001	0.0012	0.001	0.145	0.001	0.0007	0.0058	0.03	0.002
Runoff	L2612624-3	WRP-21-16 2021-07-22	2021-07-22	2021-07-22	0.0002	0.000055	0.000125	0.0001	0.11	0.0001	0.00126	0.00441	0.0062	0.00087
Runoff	L2627498-2	WRP-21-17 15-08-2021 1105	2021-08-15	2021-08-15	0.002	0.0001	0.001	0.001	0.054	0.001	0.00044	0.005	0.03	0.002
Runoff	L2612624-2	WRP-21-17 2021-07-12 1350	2021-07-12	2021-07-12	0.002	0.0001	0.001	0.001	0.359	0.001	0.00036	0.005	0.03	0.002
Runoff	L2627498-4	WRP-21-18 15-08-2021 1055	2021-08-15	2021-08-15	0.002	0.0001	0.001	0.001	0.097	0.001	0.00021	0.005	0.03	0.002
Runoff	L2612624-5	WRP-21-18 2021-07-12 1435	2021-07-12	2021-07-12	0.002	0.0001	0.0011	0.001	0.103	0.001	0.00138	0.007	0.03	0.002
Runoff	L2627498-7	WRP-21-19 15-08-2021 1030	2021-08-15	2021-08-15	0.0002	0.000036	0.000129	0.0001	0.0574	0.0001	0.0151	0.00152	0.0055	0.00099
Runoff	L2612624-6	WRP-21-19 2021-07-12 1450	2021-07-12	2021-07-12	0.002	0.0001	0.001	0.001	0.0707	0.001	0.0179	0.005	0.03	0.002
Runoff	L2612624-2	WRP-21-19 2021-07-22	2021-07-22	2021-07-22	0.0002	0.00006	0.00032	0.0001	0.0142	0.0001	0.0187	0.0068	0.004	0.00033
Runoff	L2627498-5	WRP-21-19A 15-08-2021 1020	2021-08-15	2021-08-15	0.0002	0.000011	0.0001	0.0001	0.0117	0.0001	0.00116	0.0062</		

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample datetime	Sample Date	Tellurium (Te) Total	Thallium (Tl) Total	Thorium (Th) Total	Tin (Sn) Total	Titanium (Ti) Total	Tungsten (W) Total	Uranium (U) Total	Vanadium (V) Total	Zinc (Zn) Total	Zincium (Zn) Total
Runoff	L2725732-7	WRP-22-07_2022-07-28	2022-07-28	2022-07-28	0.002	0.0001	0.0001	0.0001	0.006	0.001	0.00015	0.005	0.03	0.002
Runoff	L2725732-8	WRP-22-08_2022-07-28	2022-07-28	2022-07-28	0.002	0.0001	0.0001	0.001	0.0495	0.001	0.00017	0.005	0.03	0.002
Runoff	L2725732-9	WRP-22-09_2022-07-28	2022-07-28	2022-07-28	0.002	0.0001	0.0001	0.001	0.012	0.001	0.00029	0.005	0.03	0.002
Runoff	L2725732-10	WRP-22-10_2022-07-28	2022-07-28	2022-07-28	0.002	0.0001	0.0001	0.001	0.004	0.001	0.00039	0.005	0.03	0.002
Runoff	L2725732-11	WRP-22-11_2022-07-28	2022-07-28	2022-07-28	0.002	0.0001	0.0001	0.001	0.26	0.001	0.00333	0.0112	0.03	0.002
Runoff	L2725732-12	WRP-22-12_2022-07-28	2022-07-28	2022-07-28	0.002	0.0001	0.0001	0.001	0.003	0.001	0.00169	0.005	0.03	0.002
Runoff	L2725732-13	WRP-22-13_2022-07-29	2022-07-29	2022-07-29	0.002	0.0001	0.0001	0.001	0.0081	0.001	0.00184	0.005	0.03	0.002
Runoff	L2725732-14	WRP-22-14_2022-07-29	2022-07-29	2022-07-29	0.0002	0.000014	0.000014	0.0001	0.0145	0.00013	0.00144	0.00058	0.003	0.00025
Runoff	L2725732-15	WRP-22-15_2022-07-29	2022-07-29	2022-07-29	0.0002	0.000032	0.000032	0.0001	0.0506	0.0001	0.00108	0.00161	0.003	0.00069
Runoff	L2725732-16	WRP-22-16_2022-07-29	2022-07-29	2022-07-29	0.0002	0.000011	0.000011	0.0001	0.00101	0.0001	0.000825	0.0005	0.003	0.0002
Runoff	L2725732-17	WRP-22-17_2022-07-29	2022-07-29	2022-07-29	0.0002	0.000092	0.000092	0.0001	0.0085	0.0001	0.00079	0.0005	0.03	0.002
Runoff	L2725732-18	WRP-DD-E1	2022-07-29	2022-07-29	0.0002	0.000092	0.00011	0.0001	0.21	0.0001	0.0085	0.00481	0.0071	0.00148
Runoff	L2157407-6	WRP-DD-E1	2018-09-01	2018-09-01	0.0002	0.0001	0.0001	0.001	0.003	0.0001	0.0111	0.005	0.03	0.003
Runoff	L2158115-4	WRP-S10	2018-09-04	2018-09-04	0.02	0.0011	0.01	0.01	0.06	0.01	0.2	0.46	0.03	0.03
Runoff	L2306749-1	WRP-S10	2019-07-09	2019-07-09	0.00042	0.00042	0.0023	0.001	0.153	0.001	0.0353	0.0062	0.172	0.0037
Runoff	L2158115-5	WRP-S10	2019-06-24	2019-06-24	0.02	0.0013	0.01	0.01	0.03	0.01	0.114	0.05	0.8	0.03
Runoff	L2298517-5	WRP-S10	2019-07-30	2019-07-30	0.002	0.00023	0.0123	0.001	0.648	0.001	0.00761	0.0243	0.117	0.0095
Runoff	L2320849-1	WRP-S10	2019-06-12	2019-06-12	0.002	0.00013	0.0001	0.001	0.0124	0.001	0.0096	0.005	0.039	0.002
Runoff	L2290620-2	WRP-S11	2019-06-12	2019-06-12	0.002	0.00057	0.0252	0.001	1.4	0.001	0.092	0.0503	0.079	0.0041
Runoff	L2298517-7	WRP-S11	2019-06-24	2019-06-24	0.002	-	-	-	-	-	-	-	-	-
Runoff	L2315510-2	WRP-S12	2019-07-23	2019-07-23	0.002	0.0001	0.0001	0.001	0.005	0.0001	0.00016	0.005	0.03	0.002
Runoff	L2303565-4	WRP-S12	2019-07-02	2019-07-02	0.002	-	-	-	-	-	-	-	-	-
Runoff	L2298517-6	WRP-S12	2019-06-24	2019-06-24	0.002	0.00023	0.0119	0.001	0.654	0.001	0.0012	0.0229	0.035	0.0035
Runoff	L2290620-7	WRP-S12	2019-06-12	2019-06-12	0.002	0.0001	0.0001	0.001	0.0127	0.001	0.00053	0.005	0.03	0.003
Runoff	L2320849-2	WRP-S12	2019-07-30	2019-07-30	0.002	0.0001	0.0001	0.001	0.003	0.001	0.00652	0.005	0.03	0.003
Runoff	L2157407-16	WRP-S14	2018-09-01	2018-09-01	0.002	0.0001	0.0001	0.001	0.0384	0.001	0.00253	0.0068	0.056	0.002
Runoff	L2303565-3	WRP-S15	2019-07-02	2019-07-02	0.002	0.00017	0.0001	0.001	0.03	0.01	0.0027	0.05	0.3	0.02
Runoff	L2337854-2	WRP-S15	2019-08-27	2019-08-27	0.02	0.001	0.01	0.01	0.03	0.01	0.0056	0.05	0.3	0.02
Runoff	L2323304-1	WRP-S15	2019-08-06	2019-08-06	0.02	0.001	0.01	0.01	0.03	0.01	0.0056	0.05	0.3	0.02
Runoff	L2306749-2	WRP-S15	2019-07-09	2019-07-09	0.0001	0.0001	0.0001	0.001	0.0127	0.0001	0.00628	0.005	0.033	0.002
Runoff	L2298517-3	WRP-S15	2019-06-24	2019-06-24	0.002	0.00012	0.0044	0.001	0.286	0.001	0.00137	0.0113	0.03	0.002
Runoff	L2294129-8	WRP-S15	2019-06-18	2019-06-18	0.002	0.0001	0.0001	0.001	0.0528	0.001	0.0166	0.005	0.03	0.003
Runoff	L2158115-7	WRP-S15NEW	2018-09-04	2018-09-04	0.002	0.0001	0.0001	0.001	0.03	0.01	0.042	0.05	0.3	0.02
Runoff	L2312012-4	WRP-S16	2019-07-17	2019-07-17	0.02	0.001	0.01	0.01	0.034	0.01	0.0045	0.05	0.3	0.02
Runoff	L2333401-3	WRP-S16	2019-08-20	2019-08-20	0.02	0.001	0.01	0.01	0.03	0.01	0.0056	0.005	0.11	0.002
Runoff	L2328009-4	WRP-S16	2019-08-13	2019-08-13	0.002	0.00019	0.0001	0.001	0.02	0.001	0.0056	0.005	0.3	0.02
Runoff	L2323304-2	WRP-S16	2019-08-06	2019-08-06	0.02	0.0001	0.01	0.01	0.03	0.01	0.007	0.05	0.3	0.02
Runoff	L2290620-8	WRP-S16	2019-06-12	2019-06-12	0.02	0.0001	0.0011	0.001	0.109	0.0001	0.00176	0.0072	0.03	0.0021
Runoff	L2298517-4	WRP-S16	2019-06-24	2019-06-24	0.002	0.0001	0.0001	0.001	0.03	0.01	0.0191	0.05	0.3	0.03
Runoff	L2158115-8	WRP-S16NEW	2018-09-04	2018-09-04	0.02	0.001	0.01	0.01	0.03	0.01	0.0154	0.0206	0.03	0.002
Runoff	L2290620-7	WRP-S17	2019-06-12	2019-06-12	0.002	0.0003	0.0064	0.001	0.549	0.001	0.00172	0.01	0.03	0.002
Runoff	L2303565-1	WRP-S17	2019-07-02	2019-07-02	0.002	0.0001	0.0026	0.001	0.248	0.001	0.00232	0.00068	0.003	0.00044
Runoff	L2306749-5	WRP-S17	2019-07-09	2019-07-09	0.0002	0.000011	0.00014	0.0001	0.0133	0.0001	0.0038	0.05	0.3	0.02
Runoff	L2306749-4	WRP-S18	2019-07-09	2019-07-09	0.02	0.001	0.01	0.01	0.058	0.01	0.0038	0.05	0.3	0.02
Runoff	L2312012-2	WRP-S18	2019-07-17	2019-07-17	0.002	0.00081	0.0044	0.001	0.325	0.001	0.00827	0.0139	0.168	0.0064
Runoff	L2303565-6	WRP-S18	2019-07-02	2019-07-02	0.002	0.0001	0.0001	0.001	0.0706	0.0001	0.00094	0.005	0.03	0.002
Runoff	L2298517-10	WRP-S18	2019-06-24	2019-06-24	0.002	0.0001	0.0001	0.001	0.047	0.001	0.012	0.0112	0.03	0.0035
Runoff	L2303565-2	WRP-S4	2019-07-02	2019-07-02	0.0002	0.000024	0.0001	0.0001	0.00447	0.0001	0.0339	0.0005	0.003	0.00028
Runoff	L2328009-5	WRP-S4	2019-08-13	2019-08-13	0.0002	0.000024	0.0001	0.0001	0.00447	0.0001	0.0339	0.0005	0.003	0.00028
Runoff	L2298517-2	WRP-S4	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-
Runoff	L2328009-3	WRP-S5	2019-08-13	2019-08-13	0.002	0.0001	0.0001	0.001	0.366	0.001	0.0122	0.005	0.03	0.0024
Runoff	L2333401-2	WRP-S5	2019-08-20	2019-08-20	0.002	0.0001	0.0001	0.001	0.0188	0.001	0.0337	0.005	0.03	0.002
Runoff	L2290620-1	WRP-S5	2019-06-12	2019-06-12	0.002	0.0002	0.0097	0.001	0.499	0.001	0.00188	0.0179	0.03	0.0027
Runoff	L2158115-5	WRP-S5	2018-09-04	2018-09-04	0.0001	0.0001	0.0043	0.001	0.205	0.001	0.00558	0.0076	0.03	0.003
Runoff	L2298517-1	WRP-S5	2019-06-24	2019-06-24	0.002	0.0001	0.0001	0.001	-	-	-	-	-	-
Runoff	L2157407-10	WRP-S6	2018-09-01	2018-09-01	0.002	0.0001	0.0001	0.001	0.008	0.001	0.0115	0.005	0.03	0.003
West Ditch	L2722749-4	NS-08-EXPLORE-WESTDITCH	2022-07-10	2022-07-10	0.002	0.0001	0.00069	0.0001	0.0707	0.0001	0.00157	0.00335	0.0066	0.00064
West Ditch	L215219-3	NS-08-INFLOW-WEST	2018-06-20	2018-06-20	0.0002	0.00004	-	-	-	-	-	-	-	-
West Ditch	L215893-3	NS-08-INFLOW-WEST	2018-06-20	2018-06-20	-	-	-	-	-	-	-	-	-	-
West Ditch	L214971-3	NS-08-INFLOW-WEST	2018-06-19	2018-06-19	-	-	-	-	-	-	-	-	-	-
West Ditch	L213672-2	NS-08-INFLOW-WEST	2018-06-17	2018-06-17	-	-	-	-	-	-	-	-	-	-
West Ditch	L213576-3	NS-08-INFLOW-WEST	2018-06-15	2018-06-15	-	-	-	-	-	-	-	-	-	-
West Ditch	L214098-3	NS-08-INFLOW-WEST	2018-06-18	2018-06-18	-	-	-	-	-	-	-	-	-	-
West Ditch	L2160094-1	NS-08-INFLOW-WEST	2018-09-06	2018-09-06	-	-	-	-	-	-	-	-	-	-
West Ditch	L210885-3	NS-08-INFLOW-WEST	2018-06-12	2018-06-12	-	-	-	-	-	-	-	-	-	-
West Ditch	L213626-3	NS-08-INFLOW-WEST	2018-06-16	2018-06-16	-	-	-	-	-	-	-	-	-	-
West Ditch	L2110060-3	NS-08-INFLOW-WEST	2018-06-10	2018-06-10	-	-	-	-	-	-	-	-	-	-
West Ditch	L212194-3	NS-08-INFLOW-WEST	2018-06-14	2018-06-14	-	-	-	-	-	-	-	-	-	-
West Ditch	L211853-3	NS-08-INFLOW-WEST	2018-06-13	2018-06-13	-	-	-	-	-	-	-	-	-	-
West Ditch	L2108641-2	NS-08-INFLOW-WEST	2018-06-07	2018-06-07	0.002	0.0029	0.012	0.001	0.714	0.001	0.00223	0.0242	0.043	0.0096
West Ditch	L228069-4	NS-08-WEST INFLOW	2019-06-09	2019-06-09	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301632-4	NS-08-WESTDITCH	2019-07-01	2019-07-01	-	-	-	-	-	-	-	-	-	-

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample datetime	Sample date	Tellurium (Te)- Total mg/L	Thallium (Tl)- Total mg/L	Thorium (Th)- Total mg/L	Tin (Sn)- Total mg/L	Titanium (Ti)- Total mg/L	Tungsten (W)- Total mg/L	Uranium (U)- Total mg/L	Vanadium (V)- Total mg/L	Zinc (Zn)- Total mg/L	Zirconium (Zr)- Total mg/L
West Ditch	L2335451-5	MS-08-WEST-INFLOW	2019-08-23	2019-08-23	-	-	-	-	-	-	-	-	-	-
West Ditch	L2316395-5	MS-08-WEST-INFLOW	2018-07-28	2018-07-28	-	-	-	-	-	-	-	-	-	-
West Ditch	L2306701-4	MS-08-WEST-INFLOW	2019-07-09	2019-07-09	0.02	0.001	0.01	0.01	0.155	0.01	0.0037	0.05	0.3	0.02
West Ditch	L2316249-5	MS-08-WEST-INFLOW	2019-07-25	2019-07-25	-	-	-	-	-	-	-	-	-	-
West Ditch	L2313935-5	MS-08-WEST-INFLOW	2019-07-20	2019-07-20	-	-	-	-	-	-	-	-	-	-
West Ditch	L2312018-4	MS-08-WEST-INFLOW	2019-07-17	2019-07-17	0.002	0.00081	0.0078	0.001	0.522	0.001	0.00826	0.0174	0.157	0.0084
West Ditch	L2320850-4	MS-08-WEST-INFLOW	2019-07-31	2019-07-31	0.002	0.00023	0.0024	0.001	0.18	0.001	0.00363	0.0055	0.077	0.002
West Ditch	L2340461-4	MS-08-WEST-INFLOW	2019-08-03	2019-08-03	0.02	0.001	0.01	0.01	0.553	0.01	0.0106	0.05	0.3	0.02
West Ditch	L2305805-4	MS-08-WEST-INFLOW	2019-07-08	2019-07-08	-	-	-	-	-	-	-	-	-	-
West Ditch	L2322461-5	MS-08-WEST-INFLOW	2019-08-02	2019-08-02	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305072-5	MS-08-WEST-INFLOW	2019-07-05	2019-07-05	-	-	-	-	-	-	-	-	-	-
West Ditch	L2290598-4	MS-08-WEST-INFLOW	2019-06-12	2019-06-12	0.002	0.0001	0.001	0.001	0.0555	0.001	0.00799	0.005	0.15	0.002
West Ditch	L2342313-4	MS-08-WEST-INFLOW	2019-09-05	2019-09-05	-	-	-	-	-	-	-	-	-	-
West Ditch	L2291173-4	MS-08-WEST-INFLOW	2019-06-13	2019-06-13	-	-	-	-	-	-	-	-	-	-
West Ditch	L2330905-2	MS-08-WEST-INFLOW	2019-08-18	2019-08-18	-	-	-	-	-	-	-	-	-	-
West Ditch	L2327989-3	MS-08-WEST-INFLOW	2019-08-13	2019-08-13	0.002	0.00017	0.001	0.001	0.005	0.001	0.0102	0.005	0.04	0.002
West Ditch	L2343354-1	MS-08-WEST-INFLOW	2019-06-20	2019-06-20	-	-	-	-	-	-	-	-	-	-
West Ditch	L2343354-1	MS-08-WEST-INFLOW	2019-09-08	2019-09-08	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305224-5	MS-08-WEST-INFLOW	2019-07-06	2019-07-06	-	-	-	-	-	-	-	-	-	-
West Ditch	L2326464-3	MS-08-WEST-INFLOW	2019-08-11	2019-08-11	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309409-5	MS-08-WEST-INFLOW	2019-07-12	2019-07-12	-	-	-	-	-	-	-	-	-	-
West Ditch	L2325445-3	MS-08-WEST-INFLOW	2019-08-08	2019-08-08	-	-	-	-	-	-	-	-	-	-
West Ditch	L2298617-4	MS-08-WEST-INFLOW	2019-06-25	2019-06-25	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301467-4	MS-08-WEST-INFLOW	2019-06-28	2019-06-28	-	-	-	-	-	-	-	-	-	-
West Ditch	L2307801-4	MS-08-WEST-INFLOW	2019-07-10	2019-07-10	-	-	-	-	-	-	-	-	-	-
West Ditch	L2315508-5	MS-08-WEST-INFLOW	2019-07-23	2019-07-23	-	-	-	-	-	-	-	-	-	-
West Ditch	L2295155-4	MS-08-WEST-INFLOW	2019-06-19	2019-06-19	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301572-4	MS-08-WEST-INFLOW	2019-06-29	2019-06-29	-	-	-	-	-	-	-	-	-	-
West Ditch	L2308636-4	MS-08-WEST-INFLOW	2019-07-11	2019-07-11	-	-	-	-	-	-	-	-	-	-
West Ditch	L2301607-4	MS-08-WEST-INFLOW	2019-06-30	2019-06-30	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292454-4	MS-08-WEST-INFLOW	2019-06-15	2019-06-15	-	-	-	-	-	-	-	-	-	-
West Ditch	L2303578-4	MS-08-WEST-INFLOW	2019-07-02	2019-07-02	0.002	0.00011	0.001	0.001	0.08	0.001	0.00433	0.005	0.061	0.0023
West Ditch	L2292234-4	MS-08-WEST-INFLOW	2019-06-14	2019-06-14	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309549-4	MS-08-WEST-INFLOW	2019-07-14	2019-07-14	-	-	-	-	-	-	-	-	-	-
West Ditch	L2305289-5	MS-08-WEST-INFLOW	2019-07-07	2019-07-07	-	-	-	-	-	-	-	-	-	-
West Ditch	L2300534-4	MS-08-WEST-INFLOW	2019-06-27	2019-06-27	-	-	-	-	-	-	-	-	-	-
West Ditch	L2337960-4	MS-08-WEST-INFLOW	2019-08-27	2019-08-27	0.002	0.0001	0.0013	0.001	0.16	0.001	0.00443	0.005	0.03	0.002
West Ditch	L2296973-4	MS-08-WEST-INFLOW	2019-06-23	2019-06-23	-	-	-	-	-	-	-	-	-	-
West Ditch	L2309510-5	MS-08-WEST-INFLOW	2019-07-13	2019-07-13	-	-	-	-	-	-	-	-	-	-
West Ditch	L2293024-4	MS-08-WEST-INFLOW	2019-06-17	2019-06-17	-	-	-	-	-	-	-	-	-	-
West Ditch	L2294118-4	MS-08-WEST-INFLOW	2019-06-18	2019-06-18	-	-	-	-	-	-	-	-	-	-
West Ditch	L2304399-4	MS-08-WEST-INFLOW	2019-07-03	2019-07-03	0.002	0.00014	0.0037	0.001	0.248	0.001	0.00329	0.0088	0.034	0.0036
West Ditch	L2307932-4	MS-08-WEST-INFLOW	2019-08-07	2019-08-07	-	-	-	-	-	-	-	-	-	-
West Ditch	L2355516-2	MS-08-WEST-INFLOW	2019-09-27	2019-09-27	-	-	-	-	-	-	-	-	-	-
West Ditch	L2368541-4	MS-08-WEST-INFLOW	2019-06-21	2019-06-21	-	-	-	-	-	-	-	-	-	-
West Ditch	L2297623-4	MS-08-WEST-INFLOW	2019-06-24	2019-06-24	-	-	-	-	-	-	-	-	-	-
West Ditch	L2369699-4	MS-08-WEST-INFLOW	2019-06-22	2019-06-22	-	-	-	-	-	-	-	-	-	-
West Ditch	L2300513-4	MS-08-WEST-INFLOW	2019-06-26	2019-06-26	-	-	-	-	-	-	-	-	-	-
West Ditch	L2357363-3	MS-08-WEST-INFLOW	2019-10-01	2019-10-01	-	-	-	-	-	-	-	-	-	-
West Ditch	L2286447-4	MS-08-WEST-INFLOW	2019-06-10	2019-06-10	-	-	-	-	-	-	-	-	-	-
West Ditch	L2339733-6	MS-08-WEST-INFLOW	2019-08-31	2019-08-31	-	-	-	-	-	-	-	-	-	-
West Ditch	L2287151-4	MS-08-WEST-INFLOW	2019-06-06	2019-06-06	-	-	-	-	-	-	-	-	-	-
West Ditch	L2304338-5	MS-08-WEST-INFLOW	2019-07-04	2019-07-04	-	-	-	-	-	-	-	-	-	-
West Ditch	L2468307-1	MS-08-WEST-INFLOW	2020-06-30	2020-06-30	-	-	-	-	-	-	-	-	-	-
West Ditch	L2330756-2	MS-08-WEST-INFLOW	2019-08-16	2019-08-16	-	-	-	-	-	-	-	-	-	-
West Ditch	L2358842-2	MS-08-WEST-INFLOW	2019-10-02	2019-10-02	-	-	-	-	-	-	-	-	-	-
West Ditch	L2467060-3	MS-08-WEST-INFLOW	2020-06-25	2020-06-25	-	-	-	-	-	-	-	-	-	-
West Ditch	L2346689-1	MS-08-WEST-INFLOW	2019-09-12	2019-09-12	-	-	-	-	-	-	-	-	-	-
West Ditch	L2345723-2	MS-08-WEST-INFLOW	2019-09-11	2019-09-11	0.002	0.0001	0.001	0.001	0.0607	0.001	0.0138	0.005	0.03	0.002
West Ditch	L2289035-4	MS-08-WEST-INFLOW	2019-06-08	2019-06-08	-	-	-	-	-	-	-	-	-	-
West Ditch	L2477770-6	MS-08-WEST-INFLOW	2020-07-21	2020-07-21	0.002	0.0001	0.001	0.001	0.003	0.001	0.00842	0.005	0.03	0.002
West Ditch	L2488588-3	MS-08-WEST-INFLOW	2020-08-12	2020-08-12	0.0004	0.000026	0.0002	0.0002	0.00177	0.0002	0.0111	0.001	0.006	0.0004
West Ditch	L2482854-5	MS-08-WEST-INFLOW	2020-08-03	2020-08-03	0.002	0.0001	0.001	0.001	0.005	0.001	0.00752	0.005	0.033	0.002
West Ditch	L2348201-2	MS-08-WEST-INFLOW	2019-09-16	2019-09-16	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292486-4	MS-08-WEST-INFLOW	2019-06-16	2019-06-16	-	-	-	-	-	-	-	-	-	-
West Ditch	L2481535-1	MS-08-WEST-INFLOW	2020-07-29	2020-07-29	0.0004	0.000034	0.0002	0.0002	0.0035	0.0002	0.00937	0.001	0.006	0.0004
West Ditch	L2496104-4	MS-08-WEST-INFLOW	2020-08-26	2020-08-26	0.0004	0.00002	0.0002	0.0002	0.0039	0.0002	0.00636	0.001	0.006	0.0004
West Ditch	L2496103-1	MS-08-WEST-INFLOW	2020-08-26	2020-08-26	0.0004	0.000025	0.0002	0.0002	0.0018	0.0002	0.0082	0.001	0.006	0.0004
West Ditch	L2496140-1	MS-08-WEST-INFLOW	2020-08-30	2020-08-30	0.002	0.0001	0.001	0.001	0.0038	0.001	0.00829	0.005	0.03	0.002
West Ditch	L2496120-1	MS-08-WEST-INFLOW	2020-08-29	2020-08-29	0.0004	0.00002	0.0002	0.0002	0.0015	0.0002	0.00755	0.001	0.006	0.0004
West Ditch	L2496049-1	MS-08-WEST-INFLOW	2020-08-28	2020-08-28	0.002	0.0001	0.001	0.001	0.003	0.001	0.00755	0.005	0.03	0.002
West Ditch	L2496047-1	MS-08-WEST-INFLOW	2020-08-27	2020-08-27	0.002	0.0001	0.001	0.001	0.003	0.001	0.00737	0.005	0.03	0.002
West Ditch	L2496705-1	MS-08-WEST-INFLOW	2020-08-31	2020-08-31	0.002	0.0001	0.001	0.001	0.007	0.001	0.00631	0.005	0.03	0.002

Appendix C: Water Quality Data

General Location	Laboratory Sample ID	Location ID	Sample datetime	Sample date	Tellurium (Te)- Total mg/L	Thallium (Tl)- Total mg/L	Thorium (Th)- Total mg/L	Tin (Sn)- Total mg/L	Titanium (Ti)- Total mg/L	Tungsten (W)- Total mg/L	Uranium (U)- Total mg/L	Vanadium (V)- Total mg/L	Zinc (Zn)- Total mg/L	Zirconium (Zr)- Total mg/L
West Ditch	L2497356-1	MS-08-WEST-INFLOW	2020-09-01	2020-09-01	0.002	0.0001	0.001	0.001	0.003	0.001	0.00701	0.005	0.03	0.002
West Ditch	L232296-5	MS-08-WEST-INFLOW	2019-08-06	2019-08-06	0.002	0.0016	0.001	0.001	0.0636	0.001	0.00714	0.005	0.043	0.002
West Ditch	L260397-4-4	MS-08-WEST-INFLOW 2021-06-21 1225	2021-06-21	2021-06-21	-	-	-	-	-	-	-	-	-	-
West Ditch	L2606859-5	MS-08-WEST-INFLOW 2021-06-26 1130	2021-06-26	2021-06-26	-	-	-	-	-	-	-	-	-	-
West Ditch	L2606871-5	MS-08-WEST-INFLOW 2021-06-27 0920	2021-06-27	2021-06-27	-	-	-	-	-	-	-	-	-	-
West Ditch	L2606262-5	MS-08-WEST-INFLOW 2021-07-01 1035	2021-07-01	2021-07-01	-	-	-	-	-	-	-	-	-	-
West Ditch	L2610945-3	MS-08-WEST-INFLOW 2021-07-05 1030	2021-07-05	2021-07-05	-	-	-	-	-	-	-	-	-	-
West Ditch	L2612337-6	MS-08-WEST-INFLOW 2021-07-11 1520	2021-07-11	2021-07-05	0.002	0.0001	0.001	0.001	0.0228	0.001	0.00343	0.005	0.03	0.002
West Ditch	L2616285-7	MS-08-WEST-INFLOW 2021-07-24 0915	2021-07-24	2021-07-11	0.002	0.00017	0.0047	0.001	0.351	0.001	0.0039	0.0126	0.03	0.0024
West Ditch	L2629919-4	MS-08-WEST-INFLOW 2021-08-22 0815	2021-08-22	2021-07-24	0.0004	0.000113	0.0037	0.0002	0.252	0.0002	0.00928	0.0097	0.0118	0.00246
West Ditch	L2635946-3	MS-08-WEST-INFLOW 2021-09-05 1615	2021-09-05	2021-08-22	0.002	0.0001	0.001	0.001	0.004	0.001	0.00877	0.005	0.03	0.002
West Ditch	L2725730-1	MS-08-WEST-INFLOW 2022-07-28	2022-07-28	2021-09-05	0.002	0.0001	0.001	0.001	0.0068	0.001	0.0102	0.005	0.03	0.002
West Ditch	L2291173-5	MS-08-WEST-INFLOW01	2019-06-13	2022-07-28	-	-	0.001	0.001	0.0139	0.001	0.00397	0.005	0.03	0.002
West Ditch	L232296-2	MS-08-WEST-INFLOW01	2019-08-06	2019-06-13	0.002	0.00016	0.001	0.001	0.0315	0.001	0.00725	0.005	0.039	0.002
West Ditch	L2307801-5	MS-08-WEST-INFLOW01	2019-07-10	2019-08-06	-	-	-	-	-	-	-	-	-	-
West Ditch	L2292454-5	MS-08-WEST-INFLOW01	2019-06-15	2019-07-10	-	-	-	-	-	-	-	-	-	-
West Ditch	L2339733-7	MS-08-WEST-INFLOW01	2019-08-31	2019-06-15	-	-	-	-	-	-	-	-	-	-
West Ditch	L2623788-3	MS-08-WEST-INFLOW 2021-08-06 1015	2021-08-06	2019-08-31	0.002	0.0001	0.001	0.001	0.005	0.001	0.00664	0.005	0.03	0.002
West Ditch	L2335475-4	WRP-B7	2019-08-25	2019-08-06	-	-	-	-	-	-	-	-	-	-
West Ditch	L2157407-14	MS-08-WEST-INFLOW	2018-09-01	2019-08-25	0.02	0.001	0.01	0.01	0.03	0.01	0.0613	0.05	0.53	0.03
West Ditch	L2157407-9	WRPT-2	2018-09-01	2018-09-01	0.002	0.0001	0.001	0.001	0.003	0.001	0.0201	0.005	0.03	0.003

Notes: Based on data supplied by BIM. April 2023. Certificates of Analysis available upon request from BIM.

Highlighted values are presented at detection limit values

APPENDIX D

**Laboratory Certificates of Analyses for Off
Site Analyses of Split Samples
(2020 through 2022)**



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 1
Total # Pages: 2 (A)
Plus Appendix Pages
Finalized Date: 21-AUG-2020
Account: BIMCIO

CERTIFICATE BF20142082

Project: Pulp for ABA

This report is for 31 Drill Chip samples submitted to our lab in Baffinland, NU, Canada on 6-JUL-2020.

The following have access to data associated with this certificate:

TREVOR BRISCO
SIMON FLEURY
FRANK PILECKI
WARRICK WILLIAMS

PAUL DAWE
ELEANOR GRANT
JACOB PRINCE

JASON DUFF
JORDON MARSH
MATTHEW TRACEY

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight

ANALYTICAL PROCEDURES	
ALS CODE	DESCRIPTION INSTRUMENT
S-GRA06a	Sulfate Sulfur (HCl leachable) WST-SEQ
OA-VOL08	Basic Acid Base Accounting
S-IR08	Total Sulphur (IR Spectroscopy) LECO
OA-ELE07	Paste pH
S-CAL06	Sulfide Sulfur (calculated) LECO
S-GRA06	Sulfate Sulfur-carbonate leach WST-SEQ
C-GAS05	Inorganic Carbon (CO2)

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver



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2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 2 - A
Total # Pages: 2 (A)
Plus Appendix Pages
Finalized Date: 21-AUG-2020
Account: BIMC10

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS BF20142082

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	OA-VOL08 MPA tCaCO3/1kt 0.3	OA-VOL08 FIZZ RAT Unity 1	OA-VOL08 NNP tCaCO3/1kt 1	OA-VOL08 NP tCaCO3/1kt 1	OA-ELE07 pH Unity 0.1	OA-VOL08 Ratio (N) Unity 0.01	S-IR08 S % 0.01	S-GR06 S % 0.01	S-GR06a S % 0.01	S-CAL06 S % 0.01	C-GAS05 C % 0.05	C-GAS05 CO2 % 0.2
S113810 + S113784		0.31	4.7	1	2	7	6.4	1.49	0.15	0.06	0.12	0.09	<0.05	<0.2
S113836 + S113783		0.27	0.3	1	9	9	7.6	28.80	0.01	<0.01	<0.01	0.01	<0.05	<0.2
S112288 + S112259		0.27	1.3	1	7	8	6.9	6.40	0.04	<0.01	0.01	0.04	<0.05	<0.2
S112908 + S112011		0.28	1.6	1	16	18	7.3	11.52	0.05	<0.01	0.02	0.05	<0.05	<0.2
S109272 + S109295		0.30	0.9	1	16	17	7.7	18.13	0.03	<0.01	0.02	0.03	<0.05	<0.2
S109266 + S109325		0.32	2.2	1	14	16	7.7	7.31	0.07	<0.01	<0.01	0.07	<0.05	<0.2
S110286 + S110293		0.29	1.6	1	14	16	7.6	10.24	0.05	<0.01	0.02	0.05	<0.05	<0.2
S110078 + S110013		0.32	<0.3	1	17	17	7.8	108.80	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
R797693 + R797740		0.34	0.9	1	6	7	6.8	7.47	0.03	<0.01	0.02	0.03	<0.05	<0.2
S112537 + S112538		0.31	<0.3	1	8	8	7.0	51.20	<0.01	<0.01	0.01	<0.01	<0.05	<0.2
S111789 + S111739		0.26	1.3	1	11	12	7.7	9.60	0.04	<0.01	<0.01	0.04	<0.05	<0.2
S109161 + S109204		0.29	0.9	1	13	14	8.5	14.93	0.03	<0.01	0.01	0.03	<0.05	<0.2
S109071 + S109185		0.31	0.6	1	15	16	8.8	25.60	0.02	<0.01	<0.01	0.02	<0.05	<0.2
S113294 + S109197		0.31	0.6	1	13	14	8.6	22.40	0.02	<0.01	<0.01	0.02	<0.05	<0.2
S109138 + S109163		0.29	0.6	1	16	17	8.3	27.20	0.02	<0.01	<0.01	0.02	<0.05	<0.2
S113233 + S113268		0.31	0.6	1	14	15	8.4	24.00	0.02	<0.01	0.01	0.02	<0.05	<0.2
S109415 + S109423		0.29	0.9	1	13	14	8.8	14.93	0.03	<0.01	<0.01	0.03	<0.05	<0.2
R797578 + R797470		0.31	0.3	1	14	14	8.6	44.80	0.01	<0.01	<0.01	0.01	<0.05	<0.2
R797472 + R797508		0.31	0.3	1	13	13	7.5	41.60	0.01	<0.01	0.01	0.01	<0.05	<0.2
R797878 + R797990		0.27	<0.3	1	14	14	7.6	89.60	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
S112280 + S112286		0.31	1.3	1	12	13	7.8	10.40	0.04	<0.01	<0.01	0.04	<0.05	<0.2
S112540 + S112545		0.24	<0.3	1	10	10	7.9	64.00	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
S112539 + S112546		0.21	1.9	1	12	14	8.0	7.47	0.06	<0.01	<0.01	0.06	<0.05	<0.2
S112798 + S112794		0.27	<0.3	1	12	12	8.7	76.80	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
S112816 + S112809		0.31	0.9	1	13	14	9.1	14.93	0.03	<0.01	<0.01	0.03	<0.05	<0.2
S112790 + S112840		0.31	1.9	1	14	16	8.5	8.53	0.06	<0.01	<0.01	0.06	<0.05	<0.2
S111556 + S111776		0.20	38.8	1	-26	13	6.8	0.34	1.24	0.15	0.16	1.09	<0.05	<0.2
S111761 + S113462		0.29	0.9	1	13	14	8.1	14.93	0.03	<0.01	<0.01	0.03	<0.05	<0.2
S111773 + S111762		0.27	14.1	1	0	14	7.3	1.00	0.45	0.01	0.03	0.44	<0.05	<0.2
S113100 + S113466		0.27	1.3	1	14	15	8.7	12.00	0.04	<0.01	<0.01	0.04	<0.05	<0.2
R797684 + R797644		0.31	0.6	1	16	17	8.0	27.20	0.02	<0.01	<0.01	0.02	0.07	0.3



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SUITE 300
OAKVILLE ON L6H 0C3

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 21-AUG-2020
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS BF20142082

CERTIFICATE COMMENTS	
Applies to Method: Applies to Method:	<p>LABORATORY ADDRESSES</p> <p>Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. C-GAS05 S-GRA06</p> <p>Processed at ALS Baffinland, Mary River, Baffin Island, Nunavut, Canada WEI-21</p> <p>OA-ELE07 S-GRA06a</p> <p>OA-VOL08 S-IR08</p> <p>S-CAL06</p>



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Page: 1
Total # Pages: 3 (A)
Plus Appendix Pages
Finalized Date: 24-FEB-2021
Account: BIMCIO

CERTIFICATE BF20289941

Project: Pulp for ABA
P.O. No.: 4500073289

This report is for 60 samples of Pulp submitted to our lab in Baffinland, NU, Canada on 9-DEC-2020.

The following have access to data associated with this certificate:

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WARRICK WILLIAMS

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JORDON MARSH
JACOB PRINCE
PAUL DAWE
ELEANOR GRANT
FRANK PILECKI
MATTHEW TRACEY

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CMP-23	Pulp Login - Composite Sample
BAG-01	Bulk Master for Storage

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
S-GRA06a	Sulfate Sulfur (HCl leachable)	WST-SEQ
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (IR Spectroscopy)	LECO
OA-ELE07	Paste pH	
S-CAL06	Sulfide Sulfur (calculated)	LECO
S-GRA06	Sulfate Sulfur-carbonate leach	WST-SEQ
C-GAS05	Inorganic Carbon (CO2)	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.
***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver



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Total # Pages: 3 (A)
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Finalized Date: 24-FEB-2021
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS BF20289941

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	OA-VOL08 MPA tCaCO ₃ /1kt 0.3	OA-VOL08 FIZZ RAT Unity 1	OA-VOL08 NNP tCaCO ₃ /1kt 1	OA-VOL08 NP tCaCO ₃ /1kt 1	OA-ELE07 pH Unity 0.1	OA-VOL08 Ratio (N Unity 0.01	S-IR08 S % 0.01	S-GRA06 S % 0.01	S-GRA06a S % 0.01	S-CAL06 S % 0.01	C-GAS05 C % 0.05	C-GAS05 CO ₂ % 0.2
S666640+S666641		0.49	4.7	1	0	5	6.1	1.07	0.15	0.06	0.04	0.09	<0.05	<0.2
S666613+S666610		0.46	3.1	1	9	12	7.1	3.84	0.10	0.04	0.02	0.06	<0.05	<0.2
S667367+S667371		0.32	1.6	1	9	11	7.7	7.04	0.05	<0.01	0.02	0.05	<0.05	<0.2
S667379+S667378		0.35	1.9	1	10	12	7.7	6.40	0.06	<0.01	0.02	0.06	<0.05	<0.2
S667404+S667429		0.38	3.1	1	9	12	7.8	3.84	0.10	<0.01	0.02	0.10	<0.05	<0.2
S667408+S667411		0.30	0.6	1	15	16	7.9	25.60	0.02	<0.01	0.02	0.02	<0.05	<0.2
S667453+S667451		0.44	0.6	1	17	18	7.8	28.80	0.02	<0.01	0.01	0.02	<0.05	<0.2
S667446+S667445		0.50	3.8	1	15	19	7.9	5.07	0.12	0.01	0.01	0.11	<0.05	<0.2
S667442+S667495		0.41	5.6	1	8	14	7.9	2.49	0.08	<0.01	0.04	0.18	<0.05	<0.2
S667470+S667498		0.45	2.8	1	7	10	7.6	3.56	0.09	<0.01	<0.01	0.09	<0.05	<0.2
S667483+S667488		0.40	0.6	1	15	16	8.0	25.60	0.02	<0.01	0.01	0.02	<0.05	<0.2
S667485+S667494		0.36	3.8	1	14	18	8.0	4.80	0.12	<0.01	0.01	0.12	<0.05	<0.2
S667491+S667487		0.32	2.5	1	15	17	8.0	6.80	0.08	<0.01	0.01	0.08	<0.05	<0.2
S667555+S667554		0.32	3.4	1	11	14	7.9	4.07	0.11	<0.01	0.02	0.11	<0.05	<0.2
S667557+S667497		0.35	1.3	1	17	18	7.8	14.40	0.04	<0.01	0.02	0.04	<0.05	<0.2
S667496+S667500		0.34	3.4	1	13	16	7.8	4.65	0.11	0.01	0.02	0.10	<0.05	<0.2
S667928+S667908		0.34	0.6	1	12	13	7.9	20.80	0.02	0.01	0.02	0.01	<0.05	<0.2
S667963+S667907		0.32	0.6	1	10	11	8.0	17.60	0.02	<0.01	0.04	0.02	<0.05	<0.2
S667905+S667977		0.36	7.5	1	1	8	7.6	1.07	0.24	0.01	0.01	0.23	<0.05	<0.2
S667902+S667900		0.39	9.1	1	3	12	7.6	1.32	0.29	0.01	0.01	0.28	<0.05	<0.2
S667949+S667933		0.34	41.9	1	-32	10	7.2	0.24	1.34	0.02	0.01	1.32	<0.05	<0.2
S667922+S667950		0.38	15.0	1	-3	12	7.2	0.80	0.48	0.01	0.03	0.47	<0.05	<0.2
S668211+S668212		0.35	0.3	1	11	11	8.0	35.20	0.01	<0.01	0.01	0.01	<0.05	<0.2
S667772+S667770		0.47	0.3	1	3	3	8.0	9.60	0.01	<0.01	0.02	0.01	<0.05	<0.2
S668186+S667869		0.36	0.3	1	13	13	7.7	41.60	0.01	<0.01	0.03	0.01	<0.05	<0.2
S668222+S668223		0.43	<0.3	1	7	7	7.5	44.80	<0.01	<0.01	0.01	<0.01	<0.05	<0.2
S668169+S667791		0.40	1.9	1	12	14	7.3	7.47	0.06	0.03	0.08	0.03	<0.05	<0.2
S667892+S667898		0.40	<0.3	1	18	18	7.9	115.20	<0.01	<0.01	0.02	<0.01	<0.05	<0.2
S667765+S667790		0.42	2.5	1	4.21	13	7.1	5.20	0.08	<0.01	0.02	0.08	<0.05	<0.2
S668162+S668208		0.29	1.6	1	14	16	7.2	10.24	0.05	0.03	0.06	0.02	<0.05	<0.2
S667810+S667808		0.35	16.9	1	5	22	7.5	1.30	0.54	<0.01	0.05	0.54	<0.05	<0.2
S667864+S667825		0.39	27.8	1	-10	18	6.3	0.65	0.89	0.21	0.27	0.68	<0.05	<0.2
S668537+S668538		0.38	0.3	1	14	14	8.3	44.80	0.01	<0.01	<0.01	0.01	<0.05	<0.2
S668536+S668539		0.38	0.6	1	12	13	8.3	20.80	0.02	<0.01	<0.01	0.02	<0.05	<0.2
S666542+S666557		0.41	0.3	1	9	9	7.6	28.80	0.01	<0.01	<0.01	0.01	<0.05	<0.2
S108739+S108760		0.38	0.3	1	11	11	8.2	35.20	0.01	<0.01	<0.01	0.01	<0.05	<0.2
S108881+S108885		0.27	0.3	1	12	12	8.6	38.40	0.01	<0.01	0.01	0.01	<0.05	<0.2
S108886+S666176		0.27	0.3	1	11	11	8.5	35.20	0.01	<0.01	<0.01	0.01	<0.05	<0.2
S108960+S108965		0.41	4.4	1	10	14	8.1	3.20	0.14	<0.01	<0.01	0.14	<0.05	<0.2
S108977+S108979		0.30	1.6	1	10	12	8.5	7.68	0.05	<0.01	<0.01	0.05	<0.05	<0.2



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Page: 3 – A
Total # Pages: 3 (A)
Plus Appendix Pages
Finalized Date: 24-FEB-2021
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS BF20289941

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	OA-VOL08 MPA tCaCO ₃ /1kt 0.3	OA-VOL08 FIZZ RAT Unity 1	OA-VOL08 NNP tCaCO ₃ /1kt 1	OA-VOL08 NP tCaCO ₃ /1kt 1	OA-ELE07 pH Unity 0.1	OA-VOL08 Ratio (N Unity 0.01	S-IR08 S % 0.01	S-GRA06 S % 0.01	S-GRA06a S % 0.01	S-CAL06 S % 0.01	C-GAS05 C % 0.05	C-GAS05 CO ₂ % 0.2
S108991+S108995		0.26	<0.3	1	13	13	8.9	83.20	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
S666051+S666054		0.25	<0.3	1	11	11	9.1	70.40	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
S666084+S666089		0.27	0.3	1	12	12	8.7	38.40	0.01	<0.01	<0.01	<0.01	<0.05	<0.2
S666113+S666119		0.39	0.6	1	11	12	8.7	19.20	0.02	<0.01	<0.01	0.02	<0.05	<0.2
S666123+S666125		0.29	<0.3	1	11	11	8.5	70.40	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
S666131+S666132		0.30	0.3	1	11	11	8.2	35.20	0.01	<0.01	<0.01	0.01	<0.05	<0.2
S666144+S666146		0.27	0.3	1	12	12	8.4	38.40	0.01	<0.01	<0.01	0.01	<0.05	<0.2
S666147+S666148		0.27	0.3	1	9	9	8.6	28.80	0.01	<0.01	<0.01	0.01	<0.05	<0.2
S666151+S666153		0.27	<0.3	1	10	10	8.3	64.00	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
S666301+S666299		0.29	0.3	1	10	10	8.8	32.00	0.01	<0.01	<0.01	0.01	<0.05	<0.2
S666302+S666300		0.27	0.3	1	10	10	7.7	32.00	0.01	<0.01	<0.01	0.01	<0.05	<0.2
S666909+S666954		0.31	<0.3	1	10	10	8.5	64.00	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
S666939+S666964		0.33	0.3	1	12	12	8.4	38.40	0.01	<0.01	0.02	0.01	<0.05	<0.2
S666947+S666948		0.37	<0.3	1	10	10	8.5	64.00	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
S666974+S667165		0.44	0.9	1	3	4	6.6	4.27	0.03	<0.01	<0.01	0.03	<0.05	<0.2
S667190+S667145		0.39	1.3	1	13	14	7.3	11.20	0.04	<0.01	0.01	0.04	<0.05	<0.2
S667217+S667058		0.33	1.3	1	14	15	7.8	12.00	0.04	<0.01	<0.01	0.04	<0.05	<0.2
S667236+S667275		0.42	1.6	1	10	12	7.3	7.68	0.05	<0.01	<0.01	0.05	<0.05	<0.2
S668744+S668745		0.29	<0.3	1	10	10	8.2	64.00	<0.01	<0.01	0.01	<0.01	<0.05	<0.2
S666663+S666664		0.38	0.3	1	15	15	8.4	48.00	0.01	<0.01	<0.01	0.01	0.06	0.2



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Page: Appendix 1
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Finalized Date: 24-FEB-2021
Account: BIMCIO

CERTIFICATE OF ANALYSIS **BF20289941**

CERTIFICATE COMMENTS	
<p>Applies to Method:</p>	<p>Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. BAG-01 C-GAS05 OA-VOL08 S-CAL06 S-IR08</p> <p>Processed at ALS Baffinland, Mary River, Baffin Island, Nunavut, Canada WEI-21</p>
<p>Applies to Method:</p>	<p>LABORATORY ADDRESSES</p> <p>CMP-23 S-GRA06</p> <p>OA-ELE07 S-GRA06a</p>



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 1
Total # Pages: 2 (A - C)
Plus Appendix Pages
Finalized Date: 26-OCT-2020
Account: BIMC10

CERTIFICATE VA20227590

Project: Pulp for ABA

This report is for 31 Drill Chip samples submitted to our lab in Baffinland, NU,
Canada on 7-OCT-2020.

The following have access to data associated with this certificate:

TREVOR BRISCO
SIMON FLEURY
FRANK PILECKI
MATTHEW TRACEY

PAUL DAWE
ELEANOR GRANT
HAYLEY POTHIER
WARRICK WILLIAMS

JASON DUFF
JORDON MARSH
JACOB PRINCE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis
SND-01	Send samples to external laboratory

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
OA-SFE01	Shake Flask Analysis at ALSE
MST4L-ANPH	Anions by ion chromatography ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
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Page: 2 - A
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Account: BIMC10

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA20227590

Sample Description	Method Analyte Units LOD	OA-SFE01 Ag mg/L 0.00005	OA-SFE01 Al mg/L 0.005	OA-SFE01 As mg/L 0.001	OA-SFE01 B mg/L 0.01	OA-SFE01 Ba mg/L 0.001	OA-SFE01 Be mg/L 0.0005	OA-SFE01 Bi mg/L 0.0005	OA-SFE01 Ca mg/L 0.1	OA-SFE01 Cd mg/L 0.00005	OA-SFE01 Co mg/L 0.0001	OA-SFE01 Cr mg/L 0.0005	OA-SFE01 Cu mg/L 0.001	OA-SFE01 Fe mg/L 0.03	OA-SFE01 Hg mg/L 0.00005	OA-SFE01 K mg/L 0.05
S113810 + S113784		<0.00005	0.007	<0.001	0.07	0.002	<0.0005	<0.0005	2.6	<0.00005	0.0005	<0.0005	<0.001	<0.03	<0.00005	1.74
S113836 + S113783		<0.00005	0.087	<0.001	0.30	0.003	<0.0005	<0.0005	1.8	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	23.10
S112288 + S112259		<0.00005	0.022	<0.001	0.35	0.004	<0.0005	<0.0005	2.5	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	15.30
S112908 + S112011		<0.00005	0.027	<0.001	0.04	0.001	<0.0005	<0.0005	2.6	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	9.33
S109272 + S109295		<0.00005	0.112	<0.001	0.04	0.001	<0.0005	<0.0005	1.1	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	16.40
S109266 + S109325		<0.00005	0.096	<0.001	0.02	0.003	<0.0005	<0.0005	2.8	<0.00005	<0.0001	0.0006	<0.001	<0.03	<0.00005	9.06
S110286 + S110293		<0.00005	0.066	<0.001	0.03	<0.001	<0.0005	<0.0005	0.8	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	3.99
S110078 + S110013		<0.00005	0.097	<0.001	0.19	0.002	<0.0005	<0.0005	1.9	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	7.43
R797693 + R797740		<0.00005	0.015	<0.001	0.15	<0.001	<0.0005	<0.0005	0.9	<0.00005	0.0002	0.0037	<0.001	0.03	<0.00005	1.41
S112537 + S112538		<0.00005	0.027	<0.001	0.15	0.002	<0.0005	<0.0005	2.6	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	10.80
S111789 + S111739		<0.00005	0.152	<0.001	0.09	0.006	<0.0005	<0.0005	3.2	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	60.70
S109161 + S109204		<0.00005	3.640	<0.001	0.16	0.027	<0.0005	<0.0005	0.1	<0.00005	0.0004	<0.0005	0.001	2.03	<0.00005	39.50
S1109071 + S109185		<0.00005	3.740	<0.001	0.06	0.035	<0.0005	<0.0005	<0.1	<0.00005	0.0006	0.0008	<0.001	2.87	<0.00005	41.40
S113294 + S109197		<0.00005	3.820	<0.001	0.09	0.031	<0.0005	<0.0005	0.1	<0.00005	0.0010	0.0010	0.001	2.43	<0.00005	40.10
S109138 + S109163		<0.00005	1.350	<0.001	0.13	0.008	<0.0005	<0.0005	0.2	<0.00005	0.0002	0.0024	<0.001	0.50	<0.00005	39.60
S113233 + S113268		<0.00005	3.860	<0.001	0.09	0.036	<0.0005	<0.0005	0.1	<0.00005	0.0006	<0.0005	0.002	2.91	<0.00005	39.70
S109415 + S109423		<0.00005	7.480	<0.001	0.04	0.166	<0.0005	<0.0005	0.3	<0.00005	0.0018	0.0010	0.005	9.04	<0.00005	42.00
R797578 + R797470		<0.00005	4.360	<0.001	0.05	0.056	<0.0005	<0.0005	0.1	<0.00005	0.0008	<0.0005	0.003	4.03	<0.00005	33.70
R797472 + R797508		<0.00005	0.184	<0.001	0.08	0.002	<0.0005	<0.0005	0.5	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	20.80
R797878 + R797990		<0.00005	0.426	<0.001	0.13	0.010	<0.0005	<0.0005	0.8	<0.00005	<0.0001	<0.0005	<0.001	0.26	<0.00005	22.80
S112280 + S112286		<0.00005	4.690	<0.001	0.05	0.096	<0.0005	<0.0005	0.5	<0.00005	0.0016	0.0010	0.005	5.94	<0.00005	30.60
S112540 + S112545		<0.00005	1.910	<0.001	0.49	0.009	<0.0005	<0.0005	0.3	<0.00005	0.0003	<0.0005	0.001	0.66	<0.00005	24.20
S112539 + S112546		0.00005	8.150	<0.001	0.10	0.064	<0.0005	<0.0005	1.0	0.00012	0.0032	0.0009	0.008	7.35	<0.00005	34.40
S112798 + S112794		<0.00005	3.570	<0.001	0.25	0.029	<0.0005	<0.0005	0.2	<0.00005	0.0007	<0.0005	<0.001	1.55	<0.00005	29.80
S112816 + S112809		<0.00005	4.770	<0.001	0.02	0.048	<0.0005	<0.0005	1.9	<0.00005	0.0011	0.0011	0.002	3.52	<0.00005	52.90
S112790 + S112840		<0.00005	1.900	<0.001	0.11	0.021	<0.0005	<0.0005	1.5	<0.00005	0.0003	0.0005	0.002	0.94	<0.00005	40.60
S111556 + S111776		<0.00005	0.028	<0.001	0.06	0.028	<0.0005	<0.0005	42.9	<0.00005	0.0004	<0.0005	<0.001	<0.03	<0.00005	31.00
S111761 + S113462		<0.00005	0.268	<0.001	0.20	0.020	<0.0005	<0.0005	0.8	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	69.40
S111773 + S111762		<0.00005	0.059	<0.001	0.21	0.038	<0.0005	<0.0005	15.9	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	51.20
S113100 + S113466		<0.00005	3.890	<0.001	0.07	0.058	<0.0005	<0.0005	<0.1	<0.00005	0.0008	<0.0005	<0.001	2.60	<0.00005	40.80
R797684 + R797644		<0.00005	0.149	<0.001	0.05	0.010	<0.0005	<0.0005	10.3	<0.00005	<0.0001	<0.0005	0.001	<0.03	<0.00005	26.30



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

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Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA20227590

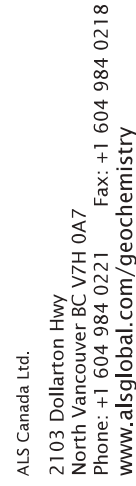
Sample Description	Method Analyte Units LOD	OA-SFE01 Li mg/L 0.005	OA-SFE01 Mg mg/L 0.05	OA-SFE01 Mn mg/L 0.0005	OA-SFE01 Mo mg/L 0.0001	OA-SFE01 Moisture % 0.3	OA-SFE01 Na mg/L 0.05	OA-SFE01 Ni mg/L 0.0005	OA-SFE01 Pb mg/L 0.0001	OA-SFE01 P mg/L 0.3	OA-SFE01 Sb mg/L 0.0001	OA-SFE01 Se mg/L 0.0005	OA-SFE01 Si mg/L 0.05	OA-SFE01 Sn mg/L 0.0005	OA-SFE01 Sr mg/L 0.0005	OA-SFE01 Ti mg/L 0.01
S113810 + S113784		0.018	210.00	0.1080	0.0001	1.4	0.38	0.0028	<0.0001	<0.3	<0.0001	0.0038	5.48	<0.0005	0.0067	<0.01
S113836 + S113783		0.018	16.00	0.0016	0.0011	0.6	4.27	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	3.35	<0.0005	0.0128	<0.01
S112288 + S112259		0.037	40.20	0.0188	0.0008	0.9	3.35	<0.0005	<0.0001	<0.3	<0.0001	0.0012	4.68	<0.0005	0.0112	<0.01
S112908 + S112011		<0.005	74.30	0.0231	0.0061	1.7	2.48	<0.0005	<0.0001	<0.3	<0.0001	0.0008	3.91	<0.0005	0.0054	<0.01
S109272 + S109295		<0.005	11.10	0.0026	0.0043	0.7	2.96	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	2.54	<0.0005	0.0032	<0.01
S109266 + S109325		<0.005	18.30	0.0065	0.0055	0.6	1.53	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	2.31	<0.0005	0.0040	<0.01
S110286 + S110293		<0.005	15.90	0.0049	0.0040	0.9	1.34	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	2.32	<0.0005	0.0043	<0.01
S110078 + S110013		0.105	14.90	0.0048	0.0005	1.0	5.83	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	2.70	<0.0005	0.0103	<0.01
R797693 + R797740		0.060	17.00	0.0126	0.0052	1.0	0.68	0.0007	<0.0001	<0.3	<0.0001	0.0014	6.70	<0.0005	0.0063	<0.01
S112537 + S112538		0.026	5.32	0.0140	0.0568	1.4	2.37	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	6.59	<0.0005	0.0090	<0.01
S111789 + S111739		0.023	10.70	0.0038	0.0090	0.3	6.40	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	3.01	<0.0005	0.0072	<0.01
S109161 + S109204		0.029	1.35	0.0093	0.0043	0.3	3.16	<0.0005	0.0004	<0.3	0.0002	<0.0005	6.24	<0.0005	0.0021	0.09
S1109071 + S109185		0.010	1.05	0.0081	0.0057	<0.3	3.70	0.0014	0.0005	0.4	<0.0001	<0.0005	5.62	<0.0005	0.0007	0.13
S113294 + S109197		0.015	1.38	0.0144	0.0080	<0.3	3.66	0.0011	0.0005	<0.3	<0.0001	<0.0005	6.39	<0.0005	0.0012	0.09
S109138 + S109163		0.018	1.25	0.0033	0.0047	0.3	3.16	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	3.38	<0.0005	0.0016	0.02
S113233 + S113268		0.012	1.60	0.0137	0.0361	<0.3	2.97	0.0009	0.0004	<0.3	<0.0001	<0.0005	5.88	<0.0005	0.0013	0.11
S109415 + S109423		0.008	2.83	0.0268	0.0112	<0.3	3.99	0.0023	0.0013	0.5	<0.0001	0.0013	11.80	<0.0005	0.0025	0.39
R797578 + R797470		0.008	1.57	0.0139	0.0246	<0.3	3.35	0.0008	0.0005	<0.3	<0.0001	0.0006	7.14	<0.0005	0.0015	0.17
R797472 + R797508		0.008	4.17	0.0007	0.0144	0.3	1.67	<0.0005	<0.0001	<0.3	<0.0001	0.0007	2.49	<0.0005	0.0034	<0.01
R797878 + R797990		0.014	3.43	0.0035	0.0134	0.5	3.10	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	2.98	<0.0005	0.0042	<0.01
S112280 + S112286		0.007	2.36	0.0302	0.0181	<0.3	3.50	0.0022	0.0009	<0.3	0.0001	0.0008	8.77	<0.0005	0.0029	0.24
S112540 + S112545		0.011	1.03	0.0142	0.0033	0.5	2.42	<0.0005	0.0001	<0.3	<0.0001	<0.0005	8.47	<0.0005	0.0011	0.03
S112539 + S112546		0.031	4.98	0.0240	0.0131	<0.3	3.71	0.0033	0.0140	<0.3	0.0001	<0.0005	12.10	<0.0005	0.0078	0.26
S112798 + S112794		0.013	1.13	0.0320	0.0027	<0.3	4.26	0.0010	0.0003	<0.3	<0.0001	<0.0005	7.97	<0.0005	0.0018	0.09
S112816 + S112809		0.017	1.57	0.0776	0.0221	<0.3	7.86	0.0014	0.0021	<0.3	0.0003	<0.0005	9.40	<0.0005	0.0050	0.27
S112790 + S112840		0.024	1.83	0.0259	0.0348	<0.3	5.76	<0.0005	0.0004	<0.3	0.0001	<0.0005	7.08	<0.0005	0.0062	0.05
S111556 + S111776		0.008	232.00	0.4070	0.0099	1.0	1.57	0.0005	<0.0001	<0.3	<0.0001	0.0025	3.34	<0.0005	0.0074	<0.01
S111761 + S113462		0.058	3.57	0.0025	0.0115	0.3	4.85	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	2.77	<0.0005	0.0057	<0.01
S111773 + S111762		0.080	49.80	0.0588	0.0078	0.5	3.34	<0.0005	<0.0001	<0.3	<0.0001	0.0016	3.56	<0.0005	0.0318	<0.01
S113100 + S113466		0.013	1.27	0.0260	0.0075	<0.3	3.70	0.0009	0.0004	<0.3	<0.0001	<0.0005	5.71	<0.0005	0.0007	0.12
R797684 + R797644		0.009	7.94	0.0044	0.0041	0.3	5.31	<0.0005	<0.0001	<0.3	<0.0001	0.0006	3.84	<0.0005	0.0121	<0.01



Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA20227590

Sample Description	Method Analyte Units LOD	OA-SFE01 Ti ppm 0.0001	OA-SFE01 U mg/L 0.00001	OA-SFE01 V mg/L 0.001	OA-SFE01 Zn mg/L 0.01	OA-SFE01 Hardness mg/L 0.6	OA-SFE01 Final pH Unity 0.1	MS14L-ANPH Br mg/L 0.05	MS14L-ANPH Cl mg/L 0.5	F mg/L 0.02	NO3 (as mg/L 0.005	SO4 mg/L 0.5	TDS mg/L 3	Conducti uS/cm 2	MS14L-ANPH Alkalini mg/L 1
S113810 + S113784		<0.0001	<0.00001	<0.001	<0.01	871	6.3	<0.05	1.1	0.03	0.129	156.0	391	1390	6
S113836 + S113783		<0.0001	0.00001	<0.001	<0.01	70.4	7.1	0.06	8.1	0.36	0.317	29.5	101	229	11
S112288 + S112259		<0.0001	<0.00001	<0.001	<0.01	172.0	6.6	0.05	4.6	0.14	0.307	149.0	232	396	5
S112908 + S112011		<0.0001	<0.00001	<0.001	<0.01	312	6.9	<0.05	1.5	0.33	0.254	259	367	603	9
S109272 + S109295		<0.0001	<0.00001	<0.001	<0.01	48.4	7.2	<0.05	2.3	0.31	0.202	0.9	52	149	14
S109266 + S109325		<0.0001	<0.00001	<0.001	<0.01	82.2	7.6	<0.05	2.4	0.30	0.300	2.7	60	187	24
S110286 + S110293		<0.0001	<0.00001	<0.001	<0.01	67.4	7.1	<0.05	2.4	0.24	0.148	1.3	42	144	14
S110078 + S110013		<0.0001	<0.00001	<0.001	<0.01	66.1	7.2	0.16	13.3	0.29	0.137	<0.5	61	174	14
R797693 + R797740		<0.0001	0.00003	<0.001	<0.01	72.1	6.7	<0.05	4.2	0.18	0.494	29.8	79	149	8
S112537 + S112538		<0.0001	<0.00001	<0.001	<0.01	28.5	6.9	<0.05	4.8	0.44	0.233	1.6	54	97	9
S111789 + S111739		<0.0001	0.00002	<0.001	<0.01	51.9	7.0	<0.05	3.1	0.52	0.474	79.7	181	321	11
S109161 + S109204		<0.0001	0.00021	0.006	<0.01	5.9	7.9	<0.05	1.6	0.62	0.275	1.2	82	127	17
S109071 + S109185		<0.0001	0.00013	0.010	<0.01	4.3	8.2	<0.05	1.7	0.75	0.385	2.2	87	134	20
S113294 + S109197		<0.0001	0.00022	0.007	<0.01	6.0	7.9	<0.05	2.4	0.75	0.304	1.6	88	134	21
S109138 + S109163		<0.0001	0.00004	0.004	<0.01	5.6	7.7	<0.05	2.1	0.60	0.320	<0.5	70	136	16
S113233 + S113268		<0.0001	0.00014	0.005	<0.01	6.8	7.9	<0.05	1.9	0.63	0.360	3.3	90	129	25
S109415 + S109423		0.0001	0.00066	0.012	<0.01	12.3	8.0	<0.05	1.1	0.79	0.327	10.3	125	134	23
R797578 + R797470		<0.0001	0.00028	0.007	<0.01	6.8	7.9	<0.05	1.2	0.63	0.544	1.9	86	106	22
R797472 + R797508		<0.0001	<0.00001	<0.001	<0.01	18.4	7.1	<0.05	2.9	0.33	0.413	0.8	50	99	17
R797878 + R797990		<0.0001	0.00002	<0.001	<0.01	16.1	7.2	<0.05	2.4	0.50	0.245	1.6	56	109	19
S112280 + S112286		<0.0001	0.00030	0.006	<0.01	10.9	7.4	<0.05	1.8	0.52	0.752	8.7	92	106	11
S112540 + S112545		<0.0001	0.00043	0.004	<0.01	5.0	7.3	<0.05	2.1	0.60	0.448	0.8	70	85	19
S112539 + S112546		<0.0001	0.00377	0.007	0.03	23.1	7.5	<0.05	2.6	0.54	0.244	4.4	115	119	23
S112798 + S112794		<0.0001	0.00057	0.014	<0.01	5.1	8.0	<0.05	2.1	0.51	0.400	1.0	82	100	24
S112816 + S112809		<0.0001	0.00212	0.015	<0.01	11.3	9.2	<0.05	2.4	0.56	0.396	3.3	143	187	60
S112790 + S112840		<0.0001	0.00053	0.004	<0.01	11.2	8.1	<0.05	3.5	0.60	0.271	3.4	105	157	41
S111556 + S111776		<0.0001	0.00003	<0.001	<0.01	1060	6.6	<0.5	6.3	0.70	0.420	996	1330	1670	20
S111761 + S113462		<0.0001	0.00004	0.001	<0.01	16.7	7.4	<0.05	3.7	0.63	0.312	58.2	162	278	20
S111773 + S111762		<0.0001	0.00004	<0.001	<0.01	245	6.8	<0.3	4.4	0.39	0.270	268	410	627	9
S113100 + S113466		<0.0001	0.00044	0.009	<0.01	5.2	7.9	<0.05	2.1	0.60	0.309	12.4	98	135	23
R797684 + R797644		<0.0001	0.00046	0.001	<0.01	58.4	7.9	<0.05	5.9	0.46	0.209	29.7	125	215	46



Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 26-OCT-2020
Account: BIMC10

CERTIFICATE OF ANALYSIS **VA20227590**

LABORATORY ADDRESSES

Applies to Method:

Applies to Method:



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 1
Total # Pages: 3 (A - C)
Plus Appendix Pages
Finalized Date: 25-MAR-2021
Account: BIMCIO

CERTIFICATE VA21044878

Project: Pulps for ABA

P.O. No.: 4500073289

This report is for 60 samples of Pulp submitted to our lab in Baffinland, NU, Canada on 24-FEB-2021.

The following have access to data associated with this certificate:

TREVOR BRISCO
JASON DUFF
DANIEL JANUSIAUSKAS
FRANK PILECKI
MATTHEW TRACEY

PAUL BRYDEN
SIMON FLEURY
FRED LAWRENCE
HAYLEY POTHIER
WARRICK WILLIAMS

PAUL DAWE
ELEANOR GRANT
JORDON MARSH
JACOB PRINCE

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis
SND-01	Send samples to external laboratory

ANALYTICAL PROCEDURES	
ALS CODE	DESCRIPTION
OA-SFE01	Shake Flask Analysis at ALSE
MST4L-ANPH	Anions by ion chromatography
	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.
***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 2 - A
Total # Pages: 3 (A - C)
Plus Appendix Pages
Finalized Date: 25-MAR-2021
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21044878

Sample Description	Method Analyte Units LOD	OA-SFE01 Ag mg/L 0.00005	OA-SFE01 Al mg/L 0.005	OA-SFE01 As mg/L 0.001	OA-SFE01 B mg/L 0.01	OA-SFE01 Ba mg/L 0.001	OA-SFE01 Be mg/L 0.0005	OA-SFE01 Bi mg/L 0.0005	OA-SFE01 Ca mg/L 0.1	OA-SFE01 Cd mg/L 0.00005	OA-SFE01 Co mg/L 0.0001	OA-SFE01 Cr mg/L 0.0005	OA-SFE01 Cu mg/L 0.001	OA-SFE01 Fe mg/L 0.03	OA-SFE01 Hg mg/L 0.00005	OA-SFE01 K mg/L 0.05
S666640+S666641		<0.00005	<0.005	<0.001	0.39	0.008	<0.0005	<0.0005	4.6	<0.00005	0.0152	<0.0005	<0.001	<0.03	<0.00005	6.28
S666613+S666610		<0.00005	0.024	<0.001	0.07	0.003	<0.0005	<0.0005	9.6	<0.00005	0.0002	<0.0005	<0.001	<0.03	<0.00005	16.10
S667367+S667371		<0.00005	0.136	<0.001	0.03	<0.001	<0.0005	<0.0005	0.5	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	5.33
S667379+S667378		<0.00005	0.109	<0.001	0.05	0.001	<0.0005	<0.0005	0.9	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	6.99
S667404+S667429		<0.00005	0.160	<0.001	0.03	0.001	<0.0005	<0.0005	0.9	<0.00005	<0.0001	0.0008	<0.001	<0.03	<0.00005	9.10
S667408+S667411		<0.00005	0.142	<0.001	0.03	0.002	<0.0005	<0.0005	1.2	<0.00005	<0.0001	0.0024	<0.001	<0.03	<0.00005	9.79
S667453+S667451		<0.00005	0.090	<0.001	0.02	0.002	<0.0005	<0.0005	1.6	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	8.09
S667446+S667445		<0.00005	0.042	<0.001	0.04	0.002	<0.0005	<0.0005	2.8	<0.00005	<0.0001	0.0029	<0.001	<0.03	<0.00005	7.12
S667442+S667495		<0.00005	0.114	<0.001	0.04	0.002	<0.0005	<0.0005	1.5	<0.00005	<0.0001	0.0017	<0.001	<0.03	<0.00005	7.91
S667470+S667498		<0.00005	0.032	<0.001	0.31	0.002	<0.0005	<0.0005	2.0	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	4.29
S667483+S667488		<0.00005	0.129	<0.001	0.04	0.002	<0.0005	<0.0005	1.2	<0.00005	<0.0001	0.0009	<0.001	<0.03	<0.00005	11.50
S667485+S667494		<0.00005	0.112	<0.001	0.09	0.003	<0.0005	<0.0005	1.4	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	10.80
S667491+S667487		<0.00005	0.089	<0.001	0.02	0.001	<0.0005	<0.0005	1.5	<0.00005	<0.0001	0.0012	<0.001	<0.03	<0.00005	6.91
S667555+S667554		<0.00005	0.118	<0.001	0.04	0.002	<0.0005	<0.0005	1.1	<0.00005	<0.0001	0.0019	<0.001	<0.03	<0.00005	6.28
S667557+S667497		<0.00005	0.048	<0.001	0.03	0.003	<0.0005	<0.0005	2.2	<0.00005	<0.0001	0.0030	<0.001	<0.03	<0.00005	5.62
S667496+S667500		<0.00005	0.051	<0.001	0.03	0.002	<0.0005	<0.0005	3.0	<0.00005	<0.0001	0.0033	<0.001	<0.03	<0.00005	6.18
S667928+S667908		<0.00005	0.118	0.002	0.24	0.001	<0.0005	<0.0005	1.1	<0.00005	<0.0001	0.0009	<0.001	<0.03	<0.00005	10.00
S667963+S667907		<0.00005	0.098	<0.001	0.24	<0.001	<0.0005	<0.0005	1.3	<0.00005	<0.0001	0.0007	<0.001	<0.03	<0.00005	9.04
S667905+S667977		<0.00005	0.060	<0.001	0.24	0.001	<0.0005	<0.0005	1.3	<0.00005	<0.0001	0.0005	<0.001	0.03	<0.00005	5.66
S667902+S667900		<0.00005	0.038	<0.001	0.09	<0.001	<0.0005	<0.0005	2.1	<0.00005	<0.0001	0.0007	<0.001	<0.03	<0.00005	2.03
S667949+S667933		<0.00005	0.009	<0.001	0.08	<0.001	<0.0005	<0.0005	1.7	<0.00005	0.0003	<0.0005	<0.001	<0.03	<0.00005	2.28
S667922+S667950		<0.00005	0.019	<0.001	0.07	<0.002	<0.0005	<0.0005	5.1	<0.00005	0.0001	<0.0005	<0.001	<0.03	<0.00005	4.89
S668211+S668212		<0.00005	0.079	<0.001	0.12	0.001	<0.0005	<0.0005	7.2	<0.00005	<0.0001	0.0021	<0.001	<0.03	<0.00005	2.47
S667772+S667770		<0.00005	0.151	<0.001	0.07	0.002	<0.0005	<0.0005	5.0	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	3.28
S668186+S667869		<0.00005	0.273	<0.001	<0.01	<0.001	<0.0005	<0.0005	0.5	<0.00005	<0.0001	0.0020	<0.001	<0.03	<0.00005	2.61
S668222+S668223		<0.00005	0.030	<0.001	0.04	<0.001	<0.0005	<0.0005	1.4	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	1.58
S668169+S667791		<0.00005	0.063	<0.001	0.03	0.002	<0.0005	<0.0005	4.2	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	11.60
S667892+S667898		<0.00005	0.123	<0.001	0.35	<0.001	<0.0005	<0.0005	2.3	<0.00005	<0.0001	0.0011	<0.001	0.13	<0.00005	2.23
S667765+S667790		<0.00005	0.045	<0.001	0.04	0.002	<0.0005	<0.0005	6.9	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	5.63
S668162+S668208		<0.00005	0.046	<0.001	0.05	0.001	<0.0005	<0.0005	3.0	<0.00005	<0.0001	0.0007	<0.001	<0.03	<0.00005	7.92
S667810+S667808		<0.00005	0.036	<0.001	0.05	0.003	<0.0005	<0.0005	4.7	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	5.64
S667864+S667825		<0.00005	<0.005	<0.001	0.09	0.004	<0.0005	<0.0005	16.8	<0.00005	0.0004	<0.0005	<0.001	<0.03	<0.00005	7.00
S668537+S668538		<0.00005	5.330	<0.001	0.07	0.059	<0.0005	<0.0005	0.2	<0.00005	0.0009	0.0009	0.002	4.47	<0.00005	47.90
S668536+S668539		<0.00005	4.350	<0.001	0.07	0.070	<0.0005	<0.0005	0.2	<0.00005	0.0008	0.0006	0.002	4.07	<0.00005	45.90
S666542+S666557		<0.00005	0.091	<0.001	0.06	0.002	<0.0005	<0.0005	3.0	<0.00005	<0.0001	<0.0005	<0.001	0.07	<0.00005	3.28
S108739+S108760		<0.00005	7.920	<0.001	0.07	0.076	<0.0005	<0.0005	0.2	<0.00005	0.0009	0.0007	0.004	4.52	<0.00005	36.80
S108881+S108885		<0.00005	15.500	0.002	0.16	0.348	<0.0005	<0.0005	0.3	<0.00005	0.0018	0.0015	0.008	8.27	<0.00005	27.60
S108886+S666176		<0.00005	15.900	<0.001	0.19	0.260	<0.0005	<0.0005	0.3	<0.00005	0.0029	0.0013	0.011	9.31	<0.00005	30.10
S108960+S108965		<0.00005	15.900	0.001	0.30	0.209	<0.0005	<0.0005	0.5	<0.00005	0.0048	0.0019	0.047	8.79	<0.00005	30.10
S108977+S108979		<0.00005	16.200	0.003	0.18	0.540	<0.0005	<0.0005	0.4	<0.00005	0.0032	0.0020	0.021	7.38	<0.00005	31.00



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 2 - B
Total # Pages: 3 (A - C)
Plus Appendix Pages
Finalized Date: 25-MAR-2021
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21044878

Sample Description	Method Analyte Units LOD	OA-SFE01 Li mg/L 0.005	OA-SFE01 Mg mg/L 0.05	OA-SFE01 Mn mg/L 0.0005	OA-SFE01 Mo mg/L 0.0001	OA-SFE01 Na mg/L 0.05	OA-SFE01 Ni mg/L 0.0005	OA-SFE01 Pb mg/L 0.0001	OA-SFE01 P mg/L 0.3	OA-SFE01 Sb mg/L 0.0001	OA-SFE01 Se mg/L 0.0005	OA-SFE01 Si mg/L 0.05	OA-SFE01 Sn mg/L 0.0005	OA-SFE01 Sr mg/L 0.0005	OA-SFE01 Ti mg/L 0.01
S666640+S666641		0.136	136.00	1.5600	<0.0001	1.4	1.02	<0.0001	<0.3	<0.0001	0.0024	9.98	<0.0005	0.0299	<0.01
S666613+S666610		0.006	86.80	0.0674	0.0029	1.1	2.75	<0.0001	<0.3	<0.0001	0.0022	3.78	<0.0005	0.0085	<0.01
S667367+S667371		<0.005	16.80	0.0040	0.0073	0.5	0.60	<0.0001	<0.3	<0.0001	<0.0005	1.66	<0.0005	0.0039	<0.01
S667379+S667378		<0.005	18.30	0.0037	0.0048	0.7	0.87	<0.0001	<0.3	<0.0001	<0.0005	2.08	<0.0005	0.0066	<0.01
S667404+S667429		<0.005	12.60	0.0028	0.0062	0.6	1.05	<0.0001	<0.3	0.0001	<0.0005	2.18	<0.0005	0.0057	<0.01
S667408+S667411		<0.005	14.70	0.0023	0.0065	0.8	0.99	<0.0001	<0.3	<0.0001	<0.0005	2.31	<0.0005	0.0042	<0.01
S667453+S667451		<0.005	10.90	0.0052	0.0072	0.9	2.27	<0.0001	<0.3	<0.0001	<0.0005	3.17	<0.0005	0.0029	<0.01
S667446+S667445		<0.005	15.70	0.0034	0.0112	1.4	1.63	<0.0001	<0.3	<0.0001	0.0008	4.85	<0.0005	0.0046	<0.01
S667442+S667495		<0.005	11.40	0.0038	0.0073	0.6	1.39	<0.0001	<0.3	<0.0001	0.0012	2.44	<0.0005	0.0044	<0.01
S667470+S667498		0.101	19.30	0.0075	0.0199	1.2	0.67	<0.0001	<0.3	<0.0001	0.0010	4.91	<0.0005	0.0101	<0.01
S667483+S667488		<0.005	7.66	0.0027	0.0073	0.8	2.05	<0.0001	<0.3	<0.0001	<0.0005	2.89	<0.0005	0.0045	<0.01
S667485+S667494		<0.005	9.01	0.0033	0.0044	1.0	1.80	<0.0001	<0.3	<0.0001	0.0006	2.82	<0.0005	0.0048	<0.01
S667491+S667487		<0.005	9.48	0.0024	0.0259	0.8	1.73	<0.0001	<0.3	<0.0001	0.0006	2.84	<0.0005	0.0029	<0.01
S667555+S667554		<0.005	10.40	0.0020	0.0081	0.6	1.02	<0.0001	<0.3	0.0002	0.0005	2.56	<0.0005	0.0030	<0.01
S667557+S667497		<0.005	17.20	0.0050	0.0061	1.1	1.02	<0.0001	<0.3	<0.0001	<0.0005	3.21	<0.0005	0.0046	<0.01
S667496+S667500		<0.005	19.00	0.0037	0.0205	0.8	0.96	<0.0001	<0.3	<0.0001	0.0018	3.14	<0.0005	0.0041	<0.01
S667928+S667908		0.029	12.90	0.0018	0.0030	0.8	2.85	<0.0001	<0.3	<0.0001	<0.0005	2.77	<0.0005	0.0068	<0.01
S667963+S667907		0.022	13.90	0.0016	0.0038	0.6	3.25	<0.0001	<0.3	<0.0001	<0.0005	2.90	<0.0005	0.0087	<0.01
S667905+S667977		0.033	18.50	0.0064	0.0027	0.8	1.33	<0.0001	<0.3	0.0001	0.0014	6.76	<0.0005	0.0065	<0.01
S667902+S667900		0.014	21.60	0.0172	0.0059	1.1	1.04	<0.0001	<0.3	<0.0001	0.0025	6.41	<0.0005	0.0062	<0.01
S667949+S667933		0.012	45.40	0.0481	0.0027	1.5	0.81	<0.0001	<0.3	<0.0001	0.0081	10.20	<0.0005	0.0068	<0.01
S667922+S667950		0.012	79.60	0.0392	0.0016	1.4	1.58	<0.0001	<0.3	<0.0001	0.0129	5.03	<0.0005	0.0368	<0.01
S668211+S668212		0.010	10.80	0.0021	0.0036	0.7	2.57	<0.0001	<0.3	<0.0001	<0.0005	3.45	<0.0005	0.0119	<0.01
S667772+S667770		0.007	8.75	0.0010	0.0061	<0.3	1.81	<0.0001	<0.3	<0.0001	0.0009	3.80	<0.0005	0.0197	<0.01
S668186+S667869		<0.005	15.90	0.0012	0.0015	0.4	0.49	<0.0001	<0.3	<0.0001	<0.0005	1.43	<0.0005	0.0030	<0.01
S668222+S668223		0.023	9.52	0.0008	0.0038	0.8	0.59	<0.0001	<0.3	<0.0001	0.0023	7.89	<0.0005	0.0077	<0.01
S668169+S667791		<0.005	40.00	0.0205	0.0095	1.0	3.23	<0.0001	<0.3	<0.0001	0.0012	3.55	<0.0005	0.0066	<0.01
S667892+S667898		0.027	11.00	0.0014	0.0004	1.4	2.34	<0.0001	<0.3	<0.0001	<0.0005	4.30	<0.0005	0.0058	<0.01
S667765+S667790		<0.005	61.80	0.0286	0.0050	1.1	3.37	<0.0001	<0.3	<0.0001	0.0010	3.70	<0.0005	0.0046	<0.01
S668162+S668208		0.007	56.30	0.0166	0.0037	1.1	1.90	<0.0001	<0.3	<0.0001	0.0010	3.82	<0.0005	0.0058	<0.01
S667810+S667808		0.010	36.40	0.0069	0.0181	2.2	2.04	<0.0001	<0.3	<0.0001	0.0058	4.45	<0.0005	0.0209	<0.01
S667864+S667825		0.040	240.00	0.3210	0.0001	3.4	1.48	<0.0001	<0.3	<0.0001	0.0058	6.82	<0.0005	0.0508	<0.01
S668537+S668538		0.006	3.32	0.0286	0.0500	0.3	3.29	0.0011	<0.3	0.0002	<0.0005	8.51	<0.0005	0.0040	0.17
S668536+S668539		0.006	3.17	0.0255	0.0438	0.3	3.91	0.0009	<0.3	<0.0001	<0.0005	7.26	<0.0005	0.0033	0.13
S666542+S666557		0.005	7.58	0.0024	0.0041	0.8	1.55	<0.0001	<0.3	<0.0001	0.0005	4.07	<0.0005	0.0070	<0.01
S108739+S108760		0.008	2.89	0.0234	0.0365	0.3	2.82	0.0010	<0.3	0.0002	<0.0005	12.90	<0.0005	0.0039	0.17
S108881+S108885		0.046	4.39	0.0511	0.0126	0.3	2.53	0.0020	<0.3	<0.0001	0.0058	19.90	<0.0005	0.0040	0.33
S108886+S666176		0.044	5.88	0.0899	0.0083	0.3	3.60	0.0043	<0.3	<0.0001	<0.0005	21.50	<0.0005	0.0065	0.25
S108960+S108965		0.106	6.36	0.0597	0.0140	0.5	2.79	0.0057	<0.3	0.0001	0.0011	20.20	<0.0005	0.0127	0.22
S108977+S108979		0.051	5.34	0.0566	0.0021	0.3	3.00	0.0029	<0.3	0.0001	<0.0005	20.50	<0.0005	0.0087	0.28



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 2 – C
Total # Pages: 3 (A – C)
Plus Appendix Pages
Finalized Date: 25-MAR-2021
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21044878

Sample Description	Method Analyte Units LOD	OA-SFE01 TI ppm 0.0001	OA-SFE01 U mg/L 0.00001	OA-SFE01 V mg/L 0.001	OA-SFE01 Zn mg/L 0.01	OA-SFE01 Hardness mg/L CaCO3e 0.6	OA-SFE01 Final pH Unity 0.1	MS14L-ANPH Br mg/L 0.05	MS14L-ANPH Cl mg/L 0.5	F mg/L 0.02	NO3 (as mg/L 0.005	SO4 mg/L 0.5	TDS mg/L 3	Conducti uS/cm 2	Alkalini mg/L CaCO3e 1
S666640+S666641		<0.0001	0.00001	<0.001	<0.01	572	5.9	<0.3	9.1	<0.1	0.309	537	725	1060	2
S666613+S666610		<0.0001	<0.00001	<0.001	<0.01	381	6.6	<0.3	2.9	0.22	1.140	346	484	770	8
S667367+S667371		<0.0001	<0.00001	<0.001	<0.01	70.5	7.4	<0.05	1.6	0.21	0.329	<0.5	47	162	24
S667379+S667378		<0.0001	<0.00001	<0.001	<0.01	77.6	7.2	<0.05	1.5	0.26	0.721	1.0	55	177	25
S667404+S667429		<0.0001	<0.00001	<0.001	<0.01	54.1	7.4	<0.05	1.7	0.32	0.758	2.0	52	141	22
S667408+S667411		<0.0001	<0.00001	<0.001	<0.01	63.4	7.4	<0.05	2.6	0.29	0.654	0.7	58	165	28
S667453+S667451		<0.0001	<0.00001	<0.001	<0.01	48.9	7.2	<0.05	2.0	0.34	1.370	2.9	56	136	20
S667446+S667445		<0.0001	<0.00001	<0.001	<0.01	71.5	7.4	<0.05	2.3	0.39	8.03	5.5	98	196	23
S667442+S667495		<0.0001	<0.00001	<0.001	<0.01	50.6	7.3	<0.05	2.2	0.36	0.713	4.5	53	134	21
S667470+S667498		<0.0001	0.00003	<0.001	<0.01	84.5	7.2	<0.06	4.7	0.23	0.290	40.4	94	202	11
S667483+S667488		<0.0001	<0.00001	<0.001	<0.01	34.6	7.4	<0.05	3.3	0.37	1.120	2.1	55	116	21
S667485+S667494		<0.0001	<0.00001	<0.001	<0.01	40.6	7.4	<0.05	2.7	0.37	1.120	4.5	58	124	22
S667491+S667487		<0.0001	<0.00001	<0.001	<0.01	42.8	7.4	<0.05	2.6	0.35	0.469	5.4	51	119	20
S667555+S667554		<0.0001	<0.00001	<0.001	<0.01	45.6	7.3	<0.05	2.0	0.47	0.643	3.2	48	121	20
S667557+S667497		<0.0001	<0.00001	<0.001	<0.01	76.2	7.3	<0.05	2.0	0.33	12.80	3.7	109	215	19
S667496+S667500		<0.0001	<0.00001	<0.001	<0.01	85.8	7.2	<0.05	2.0	0.51	1.150	43.3	101	212	19
S667928+S667908		<0.0001	<0.00001	<0.001	<0.01	55.9	7.3	<0.05	9.4	0.45	0.347	1.0	61	156	22
S667963+S667907		<0.0001	<0.00001	<0.001	<0.01	60.6	7.2	<0.05	13.6	0.29	0.370	4.5	69	168	21
S667905+S667977		<0.0001	<0.0002	<0.001	<0.01	79.5	7.1	<0.05	4.3	0.43	0.409	36.6	100	192	18
S667902+S667900		<0.0001	0.00002	<0.001	<0.01	94.2	7.2	<0.05	3.6	0.40	0.364	49.3	111	213	20
S667949+S667933		<0.0001	0.00001	<0.001	<0.01	191.0	6.9	<0.05	2.7	0.38	0.502	133.0	222	362	11
S667922+S667950		<0.0001	<0.00001	<0.001	<0.01	340	6.9	<0.05	3.1	0.15	0.432	289	404	628	8
S668211+S668212		<0.0001	<0.00001	<0.001	<0.01	62.4	7.9	<0.05	7.6	0.57	0.638	7.3	75	144	40
S667772+S667770		<0.0001	0.00003	<0.001	<0.01	48.5	7.7	<0.05	9.0	0.34	0.489	3.2	62	114	30
S668186+S667869		<0.0001	<0.00001	<0.001	<0.01	66.8	7.5	<0.05	1.1	0.32	1.300	1.7	49	136	24
S668222+S668223		<0.0001	<0.00001	<0.001	<0.01	42.6	7.2	<0.05	3.4	0.61	7.17	2.9	79	115	10
S668169+S667791		<0.0001	<0.00001	<0.001	<0.01	175.0	7.0	<0.05	1.6	0.60	2.80	141.0	230	388	9
S667892+S667898		<0.0001	<0.00001	<0.001	<0.01	51.1	7.6	<0.05	7.4	0.93	0.397	<0.5	57	117	26
S667765+S667790		<0.0001	0.00001	<0.001	<0.01	272	7.0	<0.05	2.2	0.43	0.226	239	337	524	9
S668162+S668208		<0.0001	0.00002	<0.001	<0.01	239	6.9	<0.05	1.4	0.38	2.21	202	298	476	8
S667810+S667808		<0.0001	0.00002	<0.001	<0.01	162.0	7.6	<0.05	3.5	0.60	1.790	110.0	199	335	26
S667864+S667825		<0.0001	<0.00001	<0.001	<0.01	1030	6.2	<0.05	6.4	<0.2	0.785	979	1280	1580	4
S668537+S668538		<0.0001	0.00022	0.006	<0.01	14.2	7.9	<0.05	2.2	0.84	0.374	3.4	113	159	27
S668536+S668539		<0.0001	0.00019	0.004	<0.01	13.6	7.8	<0.05	2.2	0.72	0.301	5.9	108	158	26
S666542+S666557		<0.0001	0.00001	<0.001	<0.01	38.8	7.4	<0.05	4.4	0.33	0.455	5.2	50	95	19
S108739+S108760		<0.0001	0.00027	0.006	<0.01	12.3	7.6	<0.05	2.0	0.56	0.598	8.7	117	121	20
S108881+S108885		0.0001	0.00096	0.011	<0.01	18.7	8.0	<0.05	2.0	0.60	0.347	2.0	134	80	23
S108886+S666176		0.0001	0.00134	0.013	<0.01	25.0	7.9	<0.05	2.0	0.73	1.690	1.6	154	102	30
S108960+S108965		<0.0001	0.00070	0.009	0.03	27.5	7.5	<0.05	1.6	0.62	0.403	4.6	143	99	23
S108977+S108979		0.0001	0.00161	0.013	0.03	22.9	8.0	<0.05	1.7	0.62	0.430	3.6	142	91	24



CERTIFICATE OF ANALYSIS **VA21044878**

Sample Description	Method Analyte Units LOD	Environmental Data Series 1 (mg/L)															Environmental Data Series 2 (mg/L)		
		Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K			
S108991+S108995		0.00005	13.000	<0.001	0.12	0.180	0.0006	<0.0005	0.3	<0.00005	0.0020	0.0031	0.005	5.83	<0.0003	45.00			
S666051+S666054		0.00010	12.900	<0.001	0.04	0.228	<0.0005	<0.0005	0.2	<0.00005	0.0016	0.0011	0.006	5.85	<0.0003	49.50			
S666084+S666089		<0.00005	10.300	<0.001	0.22	0.106	0.0006	<0.0005	0.3	<0.00005	0.0016	0.0010	0.005	4.57	<0.0003	31.50			
S666113+S666119		<0.00005	8.310	<0.001	0.11	0.109	0.0005	0.0008	0.3	<0.00005	0.0016	0.0024	0.010	4.87	<0.0003	31.50			
S666123+S666125		<0.00005	8.800	<0.001	0.20	0.083	0.0011	<0.0005	0.2	<0.00005	0.0014	0.0009	0.003	4.03	<0.0003	26.90			
S666131+S666132		<0.00005	10.300	<0.001	0.20	0.099	0.0013	<0.0005	0.3	<0.00005	0.0017	0.0010	0.004	5.13	<0.0003	28.40			
S666144+S666146		<0.00005	7.850	<0.001	0.08	0.115	0.0005	<0.0005	0.2	<0.00005	0.0013	0.0013	0.007	4.27	<0.0003	28.80			
S666147+S666148		<0.00005	8.780	<0.001	0.07	0.115	<0.0005	<0.0005	0.2	<0.00005	0.0014	0.0014	0.007	4.17	<0.0003	30.80			
S666151+S666153		<0.00005	7.490	<0.001	0.18	0.065	0.0010	<0.0005	0.2	<0.00005	0.0013	0.0011	0.004	3.66	<0.0003	24.00			
S666301+S666299		0.00010	8.960	0.001	0.03	0.094	<0.0005	<0.0005	0.2	<0.00005	0.0016	0.0011	0.013	6.20	<0.0003	39.50			
S666302+S666300		<0.00005	0.203	<0.001	0.06	0.002	<0.0005	<0.0005	0.4	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	27.40			
S666909+S666954		<0.00005	8.430	<0.001	0.12	0.074	0.0009	<0.0005	0.1	<0.00005	0.0012	0.0006	0.006	3.98	<0.0003	29.40			
S666939+S666964		<0.00005	7.540	<0.001	0.21	0.066	0.0010	<0.0005	0.4	<0.00005	0.0013	0.0020	0.003	3.71	<0.0003	32.10			
S666947+S666948		<0.00005	7.180	<0.001	0.14	0.067	0.0009	<0.0005	0.2	<0.00005	0.0011	0.0008	0.003	3.49	<0.0003	28.40			
S666974+S667165		<0.00005	0.007	<0.001	0.17	0.003	<0.0005	<0.0005	1.8	<0.00005	0.0003	<0.0005	<0.001	<0.03	<0.00005	1.72			
S667190+S667145		<0.00005	0.038	<0.001	0.23	0.010	<0.0005	<0.0005	1.2	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	18.60			
S667217+S667058		<0.00005	0.104	<0.001	0.07	0.003	<0.0005	<0.0005	0.7	<0.00005	<0.0001	0.0021	<0.001	<0.03	<0.00005	23.20			
S667236+S667275		<0.00005	0.040	<0.001	0.32	0.009	<0.0005	<0.0005	1.5	<0.00005	<0.0001	<0.0005	<0.001	<0.03	<0.00005	10.50			
S668744+S668745		0.00006	12.600	<0.001	0.16	0.040	0.0007	0.0025	0.6	0.00007	0.0010	0.0007	0.030	3.43	<0.0003	31.10			
S666663+S666664		<0.00005	0.841	<0.001	0.05	0.012	<0.0005	<0.0005	10.7	<0.00005	0.0001	0.0005	0.004	0.40	<0.0003	17.40			



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

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Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21044878

Sample Description	Method Analyte Units LOD	OA-SFE01 Li mg/L 0.005	OA-SFE01 Mg mg/L 0.05	OA-SFE01 Mn mg/L 0.0005	OA-SFE01 Mo mg/L 0.0001	OA-SFE01 Moisture % 0.3	OA-SFE01 Na mg/L 0.05	OA-SFE01 Ni mg/L 0.0005	OA-SFE01 Pb mg/L 0.0001	OA-SFE01 P mg/L 0.3	OA-SFE01 Sb mg/L 0.0001	OA-SFE01 Se mg/L 0.0005	OA-SFE01 Si mg/L 0.05	OA-SFE01 Sn mg/L 0.0005	OA-SFE01 Sr mg/L 0.0005	OA-SFE01 Ti mg/L 0.01
S108991+S108995		0.035	4.52	0.0544	0.0052	0.6	3.83	0.0040	0.0041	0.3	<0.0001	<0.0005	15.10	<0.0005	0.0062	0.28
S666051+S666054		0.010	3.71	0.0563	0.0081	0.4	3.46	0.0015	0.0070	0.5	<0.0001	<0.0005	16.10	<0.0005	0.0037	0.33
S666084+S666089		0.066	3.66	0.0447	0.0011	0.7	3.73	0.0019	0.0008	<0.3	<0.0001	<0.0005	13.50	<0.0005	0.0081	0.18
S666113+S666119		0.017	2.90	0.0397	0.0066	0.4	3.23	0.0020	0.0034	<0.3	<0.0001	<0.0005	12.60	<0.0005	0.0033	0.21
S666123+S666125		0.049	2.61	0.0268	0.0009	0.6	3.41	0.0024	0.0009	<0.3	<0.0001	<0.0005	12.90	<0.0005	0.0036	0.12
S666131+S666132		0.052	3.42	0.0354	0.0010	0.6	3.43	0.0022	0.0010	<0.3	<0.0001	<0.0005	13.80	<0.0005	0.0044	0.16
S666144+S666146		0.014	2.65	0.0320	0.0035	0.5	2.50	0.0017	0.0016	<0.3	<0.0001	<0.0005	11.60	<0.0005	0.0023	0.14
S666147+S666148		0.011	2.22	0.0266	0.0033	0.4	2.98	0.0019	0.0009	<0.3	0.0001	<0.0005	13.00	<0.0005	0.0024	0.17
S666151+S666153		0.043	2.83	0.0285	0.0014	0.6	2.84	0.0017	0.0015	<0.3	<0.0001	<0.0005	11.50	<0.0005	0.0037	0.08
S666301+S666299		0.009	3.10	0.0499	0.0088	0.4	3.23	0.0012	0.0039	0.3	0.0001	<0.0005	12.80	<0.0005	0.0059	0.24
S666302+S666300		0.006	3.98	0.0017	0.0128	0.7	2.18	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	2.42	<0.0005	0.0032	<0.01
S666909+S666954		0.026	2.47	0.0300	0.0055	0.5	3.43	0.0014	0.0013	<0.3	<0.0001	<0.0005	14.10	<0.0005	0.0034	0.11
S666939+S666964		0.034	3.53	0.0365	0.0025	0.6	4.10	0.0026	0.0023	<0.3	<0.0001	<0.0005	11.50	<0.0005	0.0056	0.12
S666947+S666948		0.025	2.21	0.0280	0.0012	0.4	3.38	0.0014	0.0013	<0.3	<0.0001	<0.0005	11.80	<0.0005	0.0031	0.12
S666974+S667165		0.112	29.70	0.1190	0.0046	<0.3	1.30	0.0015	<0.0001	<0.3	<0.0001	0.0021	6.21	<0.0005	0.0151	<0.01
S667190+S667145		0.036	41.40	0.0065	0.0369	1.5	2.53	<0.0005	<0.0001	<0.3	<0.0001	0.0008	3.04	<0.0005	0.0144	<0.01
S667217+S667058		0.008	9.69	0.0028	0.0258	0.9	3.90	<0.0005	<0.0001	<0.3	0.0002	0.0006	3.06	<0.0005	0.0042	<0.01
S667236+S667275		0.182	35.00	0.0108	0.0336	1.4	2.03	<0.0005	<0.0001	<0.3	<0.0001	0.0017	3.72	<0.0005	0.0119	<0.01
S668744+S668745		0.008	4.20	0.0224	0.0022	0.7	2.05	0.0014	0.0021	<0.3	<0.0001	<0.0005	16.70	<0.0005	0.0035	0.05
S666663+S666664		0.006	3.24	0.0115	0.0188	0.4	15.70	0.0006	0.0009	<0.3	0.0001	0.0009	5.37	<0.0005	0.0119	0.02



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
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Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21044878

Sample Description	Method Analyte Units LOD	OA-SFE01 TI ppm 0.0001	OA-SFE01 U mg/L 0.00001	OA-SFE01 V mg/L 0.001	OA-SFE01 Zn mg/L 0.01	OA-SFE01 Hardness mg/L CaCO3e 0.6	OA-SFE01 Final pH Unity 0.1	MS14L-ANPH Br mg/L 0.05	MS14L-ANPH Cl mg/L 0.5	F mg/L 0.02	NO3 (as mg/L 0.005	SO4 mg/L 0.5	TDS mg/L 3	Conducti uS/cm 2	Alkalini mg/L CaCO3e 1
S108991+S108995		<0.0001	0.00085	0.019	0.01	19.4	8.9	<0.05	1.3	0.87	1.650	1.9	143	131	28
S666051+S666054		0.0001	0.00126	0.019	0.02	15.9	9.1	<0.05	0.9	0.90	1.420	1.6	150	142	33
S666084+S666089		<0.0001	0.00048	0.012	<0.01	15.8	8.0	<0.05	1.3	0.61	0.210	<0.5	108	98	22
S666113+S666119		<0.0001	0.00053	0.015	0.01	12.6	8.0	<0.05	1.7	0.72	1.060	2.4	107	99	20
S666123+S666125		<0.0001	0.00066	0.008	<0.01	11.3	7.7	<0.05	1.7	0.67	0.252	<0.5	96	86	17
S666131+S666132		<0.0001	0.00084	0.008	<0.01	14.8	7.8	<0.05	1.9	0.66	0.577	0.6	105	90	17
S666144+S666146		<0.0001	0.00074	0.009	<0.01	11.4	7.7	<0.05	2.3	0.63	0.654	1.1	95	90	16
S666147+S666148		<0.0001	0.00058	0.016	<0.01	9.6	8.0	<0.05	2.8	0.73	1.060	1.5	106	96	18
S666151+S666153		<0.0001	0.00113	0.006	<0.01	12.2	7.6	<0.05	1.5	0.60	0.455	<0.5	87	78	16
S666301+S666299		0.0001	0.00172	0.013	<0.01	13.3	8.0	<0.05	1.4	0.69	0.847	10.9	126	122	21
S666302+S666300		<0.0001	0.00002	<0.001	<0.01	17.3	7.1	<0.05	4.0	0.45	0.273	1.7	57	120	14
S666909+S666954		<0.0001	0.00211	0.007	<0.01	10.5	7.5	<0.05	1.5	0.64	0.384	2.1	102	95	14
S666939+S666964		<0.0001	0.00079	0.007	<0.01	15.5	7.5	<0.05	1.9	0.73	0.382	1.8	100	108	17
S666947+S666948		<0.0001	0.00098	0.008	<0.01	9.6	7.7	<0.05	1.5	0.60	0.461	<0.5	91	88	16
S666974+S667165		<0.0001	<0.00001	<0.001	<0.01	127.0	6.6	0.11	11.1	0.08	0.239	95.6	163	270	5
S667190+S667145		<0.0001	0.00001	<0.001	<0.01	173.0	6.9	<0.05	4.4	0.32	0.485	123.0	209	384	11
S667217+S667058		<0.0001	0.00003	<0.001	<0.01	41.6	7.2	<0.05	3.9	0.40	0.430	27.7	87	168	11
S667236+S667275		<0.0001	0.00002	<0.001	<0.01	148.0	7.1	0.05	8.4	0.22	0.723	114.0	193	333	11
S668744+S668745		<0.0001	0.00161	0.004	<0.01	18.7	7.4	<0.05	4.4	0.65	0.376	0.5	115	98	13
S666663+S666664		<0.0001	0.00941	0.003	<0.01	40.1	8.2	<0.05	5.7	0.54	0.512	4.5	111	183	58



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To: **BAFFINLAND IRON MINES CORPORATION**
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Project: Pulps for ABA

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 25-MAR-2021
Account: BIMCIO

CERTIFICATE OF ANALYSIS	VA21044878
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CERTIFICATE COMMENTS	
LABORATORY ADDRESSES	
Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. FND-02	
Processed at ALSE Vancouver, Burnaby, BC, Canada. MS14L-ANPH	
Applies to Method:	
Applies to Method:	



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2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 1
Total # Pages: 2 (A)
Plus Appendix Pages
Finalized Date: 25-APR-2021
Account: BIMCIO

CERTIFICATE VA21075715

Project: Pulps for ABA

P.O. No.: 4500073289

This report is for 37 samples of Crushed Rock submitted to our lab in Vancouver, BC, Canada on 29-MAR-2021.

The following have access to data associated with this certificate:

TREVOR BRISCO
JASON DUFF
DANIEL JANUSKAS
FRANK PILECKI
MATTHEW TRACEY

PAUL BRYDEN
SIMON FLEURY
FRED LAWRENCE
HAYLEY POTHIER
WARRICK WILLIAMS

PAUL DAWE
ELEANOR GRANT
JORDON MARSH
JACOB PRINCE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
ROL-21	Manual Sheet Rolling
PUL-32p	Pulverize 400 g – 85% < 75um
SPL-34Z	Pulp (Z) Split – For send out
LOG-22	Sample login – Rcd w/o BarCode
PUL-QC	Pulverizing QC Test

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
S-GR06a	Sulfate Sulfur (HCl leachable)	WST-SEQ
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (IR Spectroscopy)	LECO
OA-ELE07	Paste pH	
S-CAL06	Sulfide Sulfur (calculated)	LECO
S-GR06	Sulfate Sulfur-carbonate leach	WST-SEQ
C-GAS05	Inorganic Carbon (CO2)	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 2 - A
Total # Pages: 2 (A)
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Finalized Date: 25-APR-2021
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21075715

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg	OA-VOL08 MPA tCaCO ₃ /1kt	OA-VOL08 FIZZ RAT Unity	OA-VOL08 NNP tCaCO ₃ /1kt	OA-VOL08 NP tCaCO ₃ /1kt	OA-ELE07 pH Unity	OA-VOL08 Ratio (N Unity)	S-IR08 S %	S-GRA06 S %	S-GRA06a S %	S-CAL06 S %	C-GAS05 C %	C-GAS05 CO ₂ %
S660109		0.42	9.4	1	5	14	8.4	1.49	0.30	<0.01	0.04	0.30	<0.05	<0.2
S660121		0.39	0.6	1	14	15	8.4	24.00	0.02	<0.01	0.01	0.02	<0.05	<0.2
S660208		0.42	<0.3	1	14	14	8.6	89.60	<0.01	<0.01	0.01	<0.01	<0.05	<0.2
S660269		0.43	<0.3	1	10	10	9.6	64.00	<0.01	<0.01	0.01	<0.01	<0.05	<0.2
S660377		0.25	6.9	1	4	11	6.8	1.60	0.22	0.15	0.22	0.07	<0.05	<0.2
S660389		0.32	0.3	1	20	20	8.6	64.00	0.01	<0.01	0.02	0.01	<0.05	<0.2
S660390		0.38	0.6	1	12	13	8.4	20.80	0.02	<0.01	0.01	0.02	<0.05	<0.2
S660658		0.45	2.8	1	18	21	8.4	7.47	0.09	<0.01	0.05	0.09	<0.05	<0.2
S660854		0.38	<0.3	1	20	20	8.2	128.00	<0.01	<0.01	0.01	<0.01	<0.05	<0.2
S660866		0.51	<0.3	1	16	16	8.3	102.40	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S670694		0.41	0.9	1	11	12	9.3	12.80	0.03	<0.01	0.04	0.03	<0.05	<0.2
S670709		0.41	1.6	1	10	12	9.1	7.68	0.05	0.01	0.05	0.04	<0.05	<0.2
S670764		0.35	0.6	1	11	12	9.4	19.20	0.02	<0.01	0.01	0.02	<0.05	<0.2
S670765		0.32	<0.3	1	14	14	9.3	89.60	<0.01	<0.01	0.02	<0.01	<0.05	<0.2
S670766		0.35	<0.3	1	11	11	9.3	70.40	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S670792		0.43	0.6	1	11	12	9.6	19.20	0.02	0.01	0.02	0.01	<0.05	<0.2
S670793		0.40	0.9	1	12	13	9.0	13.87	0.03	<0.01	0.05	0.03	<0.05	<0.2
S670794		0.40	<0.3	1	15	15	9.6	96.00	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S670795		0.39	0.6	1	13	14	8.4	22.40	0.02	<0.01	0.02	0.02	<0.05	<0.2
S670818		0.33	<0.3	1	9	9	7.6	57.60	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S670829		0.34	0.6	1	12	13	7.5	20.80	0.02	0.01	0.04	0.01	<0.05	<0.2
S670963		0.61	<0.3	1	15	15	8.0	96.00	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S670964		0.44	0.3	1	14	14	7.7	44.80	0.01	0.01	0.01	<0.01	<0.05	<0.2
S670965		0.52	<0.3	1	19	19	7.6	121.60	<0.01	0.01	0.01	<0.01	<0.05	<0.2
S670966		0.44	5.3	1	10	15	7.5	2.82	0.17	0.01	<0.01	0.16	<0.05	<0.2
S670967		0.38	0.9	1	19	20	7.4	21.33	0.03	0.01	0.03	0.02	<0.05	<0.2
S671194		0.37	<0.3	1	17	17	8.1	108.80	<0.01	0.01	0.03	<0.01	<0.05	<0.2
S671195		0.44	1.9	1	12	14	7.4	7.47	0.06	0.03	0.09	0.03	<0.05	<0.2
S671196		0.36	<0.3	1	14	14	8.1	89.60	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S671197		0.42	<0.3	1	13	13	7.8	83.20	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S671257		0.43	<0.3	1	10	10	7.7	64.00	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S671356		0.48	0.6	1	11	12	7.5	19.20	0.02	0.01	0.04	0.01	<0.05	<0.2
S671586		0.46	<0.3	1	11	11	9.1	70.40	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S671587		0.41	<0.3	1	11	11	9.4	70.40	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S671588		0.47	<0.3	1	10	10	9.3	64.00	<0.01	0.01	0.02	<0.01	<0.05	<0.2
S671725		0.40	<0.3	1	11	11	8.7	70.40	<0.01	<0.01	0.02	<0.01	<0.05	<0.2
S671961		0.33	2.2	1	9	11	7.9	5.03	0.07	<0.01	0.08	0.07	<0.05	<0.2



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 25-APR-2021
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21075715

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

C-GAS05	LOG-22	OA-ELE07	OA-VOL08
PUL-32p	PUL-QC	ROL-21	S-CAL06
S-GRA06	S-GRA06a	S-IR08	SPL-34Z
WEI-21			

Applies to Method:



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To: **BAFFINLAND IRON MINES CORPORATION**
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 1
Total # Pages: 2 (A - C)
Plus Appendix Pages
Finalized Date: 13-APR-2021
Account: BIMCIO

CERTIFICATE VA21076769

Project: Pulp for ABA
P.O. No.: 4500073289

This report is for 37 samples of Crushed Rock submitted to our lab in Vancouver, BC, Canada on 29-MAR-2021.

The following have access to data associated with this certificate:

TREVOR BRISCO
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HAYLEY POTHIER
WARRICK WILLIAMS

PAUL DAWE
ELEANOR GRANT
JORDON MARSH
JACOB PRINCE

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis
SND-01	Send samples to external laboratory

ANALYTICAL PROCEDURES	
ALS CODE	DESCRIPTION
OA-SFE01	Shake Flask Analysis at ALSE
MST4L-ANPH	Anions by ion chromatography
	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.
***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 2 – A
Total # Pages: 2 (A – C)
Plus Appendix Pages
Finalized Date: 13-APR-2021
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21076769

Sample Description	Method Analyte Units LOD	OA-SFE01 Ag mg/L 0.00005	OA-SFE01 Al mg/L 0.005	OA-SFE01 As mg/L 0.001	OA-SFE01 B mg/L 0.01	OA-SFE01 Ba mg/L 0.001	OA-SFE01 Be mg/L 0.0005	OA-SFE01 Bi mg/L 0.0005	OA-SFE01 Ca mg/L 0.1	OA-SFE01 Cd mg/L 0.00005	OA-SFE01 Co mg/L 0.0001	OA-SFE01 Cr mg/L 0.0005	OA-SFE01 Cu mg/L 0.001	OA-SFE01 Fe mg/L 0.03	OA-SFE01 Hg mg/L 0.00005	OA-SFE01 K mg/L 0.05
S660109		<0.00005	0.137	<0.001	0.03	<0.001	<0.0005	<0.0005	1.4	<0.00005	<0.0001	0.0065	<0.001	<0.03	<0.00005	0.64
S660121		<0.00005	0.207	<0.001	0.03	<0.001	<0.0005	<0.0005	0.7	<0.00005	<0.0001	0.0062	<0.001	<0.03	<0.00005	7.04
S660208		<0.00005	5.680	<0.001	0.37	0.037	<0.0005	<0.0005	0.5	<0.00005	0.0007	<0.0005	0.002	4.72	<0.00005	28.20
S660269		<0.0001	20.200	<0.002	0.17	0.257	<0.0005	<0.0005	0.2	<0.0001	0.0034	0.0038	0.003	15.30	<0.00005	55.20
S660377		<0.00005	0.006	<0.001	0.20	0.003	<0.0005	<0.0005	7.1	<0.00005	0.0006	<0.0005	<0.001	<0.03	<0.0005	9.81
S660389		<0.00005	0.164	<0.001	0.06	<0.001	<0.0005	<0.0005	0.4	<0.00005	<0.0001	0.0134	<0.001	<0.03	<0.00005	1.34
S660390		<0.00005	0.130	<0.001	0.12	<0.001	<0.0005	<0.0005	0.7	<0.00005	<0.0001	0.0031	<0.001	0.04	<0.00005	0.86
S660658		<0.00005	0.083	<0.001	0.03	0.002	<0.0005	<0.0005	1.5	<0.00005	<0.0001	0.0148	<0.001	0.03	<0.00005	10.10
S660854		<0.00005	0.059	<0.001	0.01	<0.001	<0.0005	<0.0005	1.9	<0.00005	<0.0001	0.0106	<0.001	0.10	<0.00005	2.04
S660866		<0.00005	0.118	<0.001	0.15	<0.001	<0.0005	<0.0005	2.6	<0.00005	<0.0001	0.0014	<0.001	0.12	<0.00005	3.53
S670694		0.00011	16.600	<0.002	0.11	0.156	<0.001	<0.001	0.3	<0.0001	0.0030	0.0018	0.058	12.80	<0.00005	43.70
S670709		0.00015	15.600	<0.002	0.27	0.128	0.0030	0.0027	0.5	<0.0001	0.0048	0.0075	0.185	11.30	<0.0005	34.30
S670764		<0.0001	21.600	<0.002	0.25	0.309	<0.001	<0.001	0.9	<0.0001	0.0045	0.0040	0.007	16.30	<0.0005	46.40
S670765		<0.0001	24.600	<0.002	0.33	0.456	0.0019	<0.001	1.1	<0.0001	0.0039	0.0015	0.059	16.00	<0.0005	54.90
S670766		<0.0001	15.200	<0.002	0.15	0.146	0.0011	<0.001	0.5	<0.0001	0.0028	0.0034	0.007	9.09	<0.0005	38.80
S670792		<0.0001	15.900	<0.002	0.24	0.194	<0.001	<0.001	0.5	0.00075	0.0031	0.0017	0.011	11.40	<0.0005	51.70
S670793		<0.0001	15.300	<0.002	0.34	0.116	0.0017	<0.001	0.6	<0.0001	0.0035	0.0061	0.006	12.10	<0.0005	35.00
S670794		0.00011	22.500	<0.002	0.23	0.468	<0.001	<0.001	0.9	<0.0001	0.0052	0.0034	0.067	21.60	<0.0005	64.90
S670795		<0.00005	35.400	<0.001	0.36	0.178	0.0021	<0.0005	0.5	<0.00005	0.0059	0.0110	0.008	20.40	<0.0005	37.50
S670818		<0.00005	5.160	0.002	0.93	0.009	<0.0005	<0.0005	0.3	<0.00005	0.0018	0.0085	0.002	2.58	<0.0005	26.70
S670829		<0.00005	3.120	<0.001	0.95	0.005	<0.0005	<0.0005	0.6	<0.00005	0.0008	0.0060	<0.001	2.19	<0.00005	18.70
S670963		<0.00005	2.230	<0.001	0.07	0.007	<0.0005	<0.0005	0.2	<0.0003	0.0011	0.0160	0.003	3.58	<0.00005	22.60
S670964		<0.00005	0.145	<0.001	0.03	<0.001	<0.0005	<0.0005	0.3	<0.001	<0.0001	0.0011	<0.001	0.07	<0.00005	5.92
S670965		<0.00005	0.119	<0.001	0.04	<0.001	<0.0005	<0.0005	0.2	<0.00005	<0.0001	0.0023	<0.001	0.23	<0.00005	0.59
S670966		<0.00005	0.074	<0.001	0.07	<0.001	<0.0005	<0.0005	0.3	<0.00005	<0.0001	<0.0005	<0.001	0.16	<0.0005	0.69
S670967		<0.00005	0.059	<0.001	0.16	0.003	<0.0005	<0.0005	1.2	<0.00005	<0.0001	0.0012	<0.001	<0.03	<0.00005	13.60
S671194		<0.00005	0.217	<0.001	0.03	<0.001	<0.0005	<0.0005	0.8	<0.00005	<0.0001	0.0028	<0.001	<0.03	<0.00005	2.94
S671195		<0.00005	0.085	<0.001	0.12	0.002	<0.0005	<0.0005	0.4	<0.00005	<0.0001	0.0009	<0.001	<0.03	<0.00005	0.60
S671196		<0.00005	0.173	<0.001	0.02	<0.001	<0.0005	<0.0005	0.1	<0.00005	<0.0001	0.0067	<0.001	<0.03	<0.00005	0.37
S671197		<0.00005	0.213	<0.001	0.20	<0.001	<0.0005	<0.0005	0.7	<0.00005	<0.0001	0.0065	<0.001	<0.03	<0.00005	9.50
S671257		<0.00005	0.225	<0.001	0.41	<0.001	<0.0005	<0.0005	0.4	<0.00005	<0.0001	0.0012	<0.001	<0.03	<0.00005	12.80
S671356		<0.00005	0.124	<0.001	0.19	0.002	<0.0005	<0.0005	0.2	<0.00005	<0.0001	0.0025	<0.001	<0.03	<0.00005	3.54
S671586		<0.0001	16.100	<0.002	0.26	0.209	<0.001	<0.001	0.6	<0.0001	0.0029	0.0016	<0.002	10.90	<0.0005	42.50
S671587		<0.0001	21.900	<0.002	0.12	0.386	0.0014	<0.001	0.6	<0.0001	0.0042	0.0015	0.006	17.80	<0.0005	64.30
S671588		<0.0001	18.300	<0.002	0.15	0.268	0.0013	<0.001	0.3	<0.0001	0.0036	<0.001	0.007	13.80	<0.0005	44.70
S671725		0.00010	54.300	0.001	0.21	0.265	0.0033	0.0008	0.4	<0.00005	0.0098	0.0075	0.037	37.00	<0.0005	54.30
S671961		<0.00005	0.192	<0.001	0.02	<0.001	<0.0005	<0.0005	0.3	<0.00005	<0.0001	0.0016	<0.001	<0.03	<0.00005	2.50



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 2 – B
Total # Pages: 2 (A – C)
Plus Appendix Pages
Finalized Date: 13-APR-2021
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21076769

Sample Description	Method Analyte Units LOD	OA-SFE01 Li mg/L 0.005	OA-SFE01 Mg mg/L 0.05	OA-SFE01 Mn mg/L 0.0005	OA-SFE01 Mo mg/L 0.0001	OA-SFE01 Na mg/L 0.05	OA-SFE01 Ni mg/L 0.0005	OA-SFE01 Pb mg/L 0.0001	OA-SFE01 P mg/L 0.3	OA-SFE01 Sb mg/L 0.0001	OA-SFE01 Se mg/L 0.0005	OA-SFE01 Si mg/L 0.05	OA-SFE01 Sn mg/L 0.0005	OA-SFE01 Sr mg/L 0.0005	OA-SFE01 Ti mg/L 0.01
S660109		<0.005	13.40	0.0022	0.0173	0.25	<0.0005	<0.0001	<0.3	<0.0001	0.0015	2.09	<0.0005	0.0013	<0.01
S660121		<0.005	11.10	0.0016	0.0067	0.61	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	1.58	<0.0005	0.0017	<0.01
S660208		0.039	4.26	0.0289	0.0402	2.99	0.0011	0.0007	<0.3	0.0001	<0.0005	9.44	<0.0005	0.0086	0.08
S660269		0.014	5.44	0.0645	0.0111	3.20	0.0037	0.0043	<0.6	<0.0002	<0.001	21.80	<0.001	0.0036	0.54
S660377		0.016	161.00	0.2990	0.0003	1.33	0.0020	<0.0001	<0.3	<0.0001	0.0039	6.98	<0.0005	0.0030	<0.01
S660389		<0.005	15.80	<0.0005	0.0083	0.30	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	1.78	<0.0005	0.0006	<0.01
S660390		<0.005	11.60	0.0017	0.0408	0.90	<0.0005	<0.0001	<0.3	0.0003	0.0018	1.99	<0.0005	0.0015	<0.01
S660658		<0.005	11.40	0.0026	0.0090	2.34	<0.0005	<0.0001	<0.3	<0.0001	0.0014	2.89	<0.0005	0.0040	<0.01
S660854		<0.005	13.10	0.0032	0.0024	0.49	<0.0005	<0.0001	<0.3	<0.0001	0.0006	4.54	<0.0005	0.0055	<0.01
S660866		<0.005	11.20	0.0014	0.0021	0.70	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	3.74	<0.0005	0.0047	<0.01
S670694		0.018	7.89	0.1160	0.0063	2.32	0.0028	0.0042	<0.6	0.0003	<0.001	22.90	0.0020	0.0064	0.45
S670709		0.033	7.39	0.1020	0.0138	4.40	0.0049	0.0034	<0.6	<0.0002	<0.001	16.00	<0.001	0.0061	0.44
S670764		0.056	10.70	0.1400	0.0034	3.59	0.0061	0.0067	<0.6	<0.0002	<0.001	21.10	<0.001	0.0210	0.69
S670765		0.076	12.30	0.1740	0.0044	3.56	0.0032	0.0078	<0.6	<0.0002	<0.001	25.50	<0.001	0.0289	0.59
S670766		0.016	6.08	0.0920	0.0025	2.14	0.0049	0.0026	<0.6	0.0002	<0.001	17.80	<0.001	0.0067	0.27
S670792		0.030	7.09	0.0985	0.0036	3.19	0.0026	0.0054	<0.6	<0.0002	<0.001	15.50	<0.001	0.0104	0.55
S670793		0.072	8.45	0.0963	0.0126	2.39	0.0069	0.0030	<0.6	<0.0002	<0.001	18.90	<0.001	0.0177	0.37
S670794		0.027	13.20	0.1840	0.0118	4.04	0.0048	0.0304	<0.6	<0.0002	<0.001	26.50	0.0016	0.0134	0.78
S670795		0.129	15.10	0.1590	0.0176	2.58	0.0126	0.0032	<0.3	0.0001	<0.0005	45.80	0.0009	0.0178	0.76
S670818		0.037	5.57	0.0309	0.0024	4.23	0.0047	<0.0001	<0.3	0.0001	<0.0005	9.53	<0.0005	0.0021	0.04
S670829		0.060	8.17	0.0080	0.0083	1.92	0.0042	0.0002	<0.3	<0.0001	0.0011	7.05	<0.0005	0.0047	0.02
S670963		<0.005	8.33	0.0387	0.4950	3.83	0.0051	0.0002	<0.3	<0.0001	<0.0005	4.95	<0.0005	0.0020	0.05
S670964		<0.005	10.10	0.0029	2.0800	1.53	<0.0005	<0.0001	<0.3	<0.0001	0.0011	1.71	<0.0005	0.0015	<0.01
S670965		<0.005	15.40	0.0074	0.0429	0.29	<0.0005	<0.0001	<0.3	<0.0001	0.0009	3.36	<0.0005	<0.0005	<0.01
S670966		0.006	18.80	0.0052	0.0138	0.21	<0.0005	<0.0001	<0.3	<0.0001	0.0011	5.26	<0.0005	0.0011	<0.01
S670967		<0.005	29.40	0.0068	0.0743	4.05	<0.0005	<0.0001	<0.3	<0.0001	0.0012	2.98	<0.0005	0.0066	<0.01
S671194		<0.005	12.50	0.0011	0.0007	2.24	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	1.36	<0.0005	0.0045	<0.01
S671195		<0.005	92.70	0.0070	0.0009	0.21	<0.0005	<0.0001	<0.3	<0.0001	0.0007	2.08	<0.0005	0.0057	<0.01
S671196		<0.005	13.20	0.0007	0.0005	0.15	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	1.86	<0.0005	0.0012	<0.01
S671197		<0.005	10.60	0.0015	0.0014	2.92	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	1.66	<0.0005	0.0046	<0.01
S671257		0.027	8.68	0.0012	0.0063	0.4	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	1.62	<0.0005	0.0041	<0.01
S671356		0.013	26.70	0.0022	0.0003	0.5	<0.0005	0.0002	<0.3	<0.0001	<0.0005	1.85	<0.0005	0.0028	<0.01
S671586		0.031	6.07	0.0992	0.0041	3.71	0.0034	0.0025	<0.6	<0.0002	<0.001	16.70	<0.001	0.0146	0.46
S671587		0.014	8.10	0.1040	0.0030	4.48	0.0029	0.0026	0.7	<0.0002	<0.001	21.20	<0.001	0.0077	0.71
S671588		0.019	7.40	0.0905	0.0018	3.39	0.0034	0.0017	<0.6	<0.0002	<0.001	19.10	<0.001	0.0080	0.49
S671725		0.078	22.20	0.1900	0.0521	3.64	0.0151	0.0046	<0.3	0.0003	0.0005	84.80	0.0016	0.0190	1.36
S671961		<0.005	9.95	0.0013	0.0079	0.37	<0.0005	<0.0001	<0.3	<0.0001	<0.0005	1.42	<0.0005	0.0014	<0.01



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

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Plus Appendix Pages
Finalized Date: 13-APR-2021
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Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21076769

Sample Description	Method Analyte Units LOD	OA-SFE01 TI ppm 0.0001	OA-SFE01 U mg/L 0.00001	OA-SFE01 V mg/L 0.001	OA-SFE01 Zn mg/L 0.01	OA-SFE01 Hardness mg/L CaCO3e 0.6	OA-SFE01 Final pH Unity 0.1	MS14L-ANPH Br mg/L 0.05	MS14L-ANPH Cl mg/L 0.5	F mg/L 0.02	NO3 (as mg/L 0.005	SO4 mg/L 0.5	TDS mg/L 3	Conducti uS/cm 2	Alkalini mg/L CaCO3e 1
S660109		<0.0001	<0.00001	<0.001	<0.01	58.6	7.8	<0.05	2.2	0.78	0.024	9.9	58	116	39
S660121		<0.0001	<0.00001	<0.001	<0.01	47.6	8.0	<0.05	1.7	0.42	0.016	<0.5	53	110	44
S660208		<0.0001	0.00008	0.004	<0.01	18.7	7.9	<0.05	2.3	0.74	0.025	4.3	99	113	33
S660269		0.0002	0.00163	0.046	<0.02	23.0	9.2	<0.05	1.9	1.34	0.085	0.6	204	157	68
S660377		<0.0001	<0.00001	<0.001	<0.01	681	6.1	<0.3	2.8	<0.1	0.093	705	908	1210	3
S660389		<0.0001	<0.00001	<0.001	<0.01	66.1	7.9	<0.05	2.0	0.66	0.051	1.3	58	130	52
S660390		<0.0001	<0.00001	<0.001	<0.01	49.4	7.8	<0.05	2.7	0.45	0.029	1.0	48	100	40
S660658		<0.0001	<0.00001	<0.001	<0.01	50.8	7.9	<0.05	3.2	0.61	0.198	3.6	70	134	47
S660854		<0.0001	<0.00001	<0.001	<0.01	58.8	7.8	<0.05	1.6	0.47	0.026	3.7	65	120	48
S660866		<0.0001	<0.00001	<0.001	<0.01	52.7	7.8	<0.05	3.6	1.20	0.082	1.0	59	115	41
S670694		<0.0002	0.00073	0.021	0.02	33.3	8.5	<0.05	1.5	0.99	0.030	1.6	178	122	46
S670709		<0.0002	0.00207	0.037	0.03	31.7	8.3	<0.05	1.6	2.73	0.123	2.2	149	104	41
S670764		0.0002	0.00118	0.033	0.04	46.3	8.8	<0.05	1.0	1.18	0.061	1.2	193	123	53
S670765		0.0003	0.00203	0.025	0.03	53.4	8.9	<0.05	1.4	1.30	0.031	0.7	226	144	68
S670766		<0.0002	0.00090	0.024	<0.02	26.2	8.5	<0.05	1.6	1.06	0.027	<0.5	149	106	44
S670792		<0.0002	0.00087	0.038	0.05	30.5	9.1	<0.05	1.1	1.42	0.066	1.3	174	148	63
S670793		<0.0002	0.00072	0.017	0.05	36.4	8.3	<0.05	1.2	0.93	0.032	0.9	156	108	46
S670794		0.0003	0.00147	0.036	0.05	56.6	9.0	<0.05	1.5	1.49	0.143	1.1	249	177	74
S670795		0.0002	0.00088	0.028	0.08	63.5	8.3	<0.05	1.2	0.92	0.030	0.9	265	106	43
S670818		<0.0001	0.00028	0.005	<0.01	23.6	7.7	0.11	9.3	1.41	0.060	3.6	103	122	31
S670829		<0.0001	0.00013	0.002	<0.01	35.0	7.6	0.07	6.8	0.66	0.035	4.5	82	121	27
S670963		<0.0001	0.00016	0.004	<0.01	34.8	7.8	<0.05	2.9	1.05	0.038	6.2	86	127	36
S670964		<0.0001	<0.00001	<0.001	<0.01	42.2	7.8	<0.05	2.1	0.45	0.055	2.6	49	103	34
S670965		<0.0001	<0.00001	<0.001	<0.01	64.0	7.8	<0.05	1.6	0.26	0.123	3.7	58	122	44
S670966		<0.0001	<0.00001	<0.001	<0.01	78.1	7.7	<0.05	2.4	0.28	0.058	18.8	77	152	34
S670967		<0.0001	<0.00001	<0.001	<0.01	124.0	7.6	0.05	5.7	0.53	0.048	90.1	171	304	30
S671194		<0.0001	<0.00001	<0.001	<0.01	53.5	7.8	0.07	5.5	0.60	0.222	<0.5	52	116	37
S671195		<0.0001	0.00002	<0.001	<0.01	383	7.3	<0.05	2.7	0.33	0.051	356	468	720	15
S671196		<0.0001	<0.00001	<0.001	<0.01	54.6	7.8	<0.05	1.3	0.54	0.030	3.4	49	107	41
S671197		<0.0001	<0.00001	<0.001	<0.01	45.3	7.8	0.12	8.2	0.45	0.047	0.8	59	127	36
S671257		<0.0001	<0.00001	<0.001	<0.01	36.8	7.7	0.16	8.4	0.31	0.025	5.6	59	120	27
S671356		<0.0001	<0.00001	<0.001	<0.01	110.0	7.4	0.07	4.4	0.32	0.021	79.6	134	252	22
S671586		<0.0002	0.00090	0.031	<0.02	26.5	8.7	<0.05	1.4	0.95	0.628	0.6	159	114	46
S671587		0.0002	0.00416	0.049	<0.02	34.8	9.2	<0.05	1.9	1.33	0.044	0.8	224	175	75
S671588		0.0002	0.00149	0.035	<0.02	31.3	8.9	<0.05	1.5	0.84	0.075	0.6	173	114	49
S671725		0.0004	0.00222	0.037	0.03	92.3	8.3	<0.05	2.1	1.47	0.029	4.5	437	137	46
S671961		<0.0001	<0.00001	<0.001	<0.01	41.8	7.6	<0.05	1.4	0.32	0.023	1.1	40	92	33



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To: **BAFFINLAND IRON MINES CORPORATION**
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Project: Pulps for ABA

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CERTIFICATE OF ANALYSIS	VA21076769
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CERTIFICATE COMMENTS	
LABORATORY ADDRESSES	
Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. FND-02 SND-01	
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Finalized Date: 18-JAN-2022
Account: BIMC10

CERTIFICATE VA21319699

Project: Pulps for ABA

P.O. No.: 4500092191

This report is for 56 samples of Pulp submitted to our lab in Vancouver, BC, Canada on 21-OCT-2021.

The following have access to data associated with this certificate:

TREVOR BRISCO
PAUL DAWE
FRED LAWRENCE
HAYLEY POTHIER
JUSTIN TUPPER

PAUL BRYDEN
JASON DUFF
JORDON MARSH
JACOB PRINCE
WARRICK WILLIAMS

JASON CHIASSON
SIMON FLEURY
SHAHE NAACASHIAN
MATTHEW TRACEY

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-32p	Pulverize 400 g – 85% < 75um
SPL-34	Pulp Splitting Charge
BAG-01	Bulk Master for Storage
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login – Rcvd with Barcode

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
S-GRA06a	Sulfate Sulfur (HCl leachable)	WST-SEQ
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (IR Spectroscopy)	LECO
OA-ELE07	Paste pH	
S-CAL06	Sulfide Sulfur (calculated)	LECO
S-GRA06	Sulfate Sulfur-carbonate leach	WST-SEQ
C-GAS05	Inorganic Carbon (CO2)	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.
***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver



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To: **BAFFINLAND IRON MINES CORPORATION**
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

Page: 2 – A
Total # Pages: 3 (A)
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Finalized Date: 18-JAN-2022
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS **VA21319699**

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	OA-VOL08 MPA tCaCO ₃ /lkt 0.3	OA-FIZZ RAT Unity 1	OA-VOL08 NNP tCaCO ₃ /lkt 1	OA-VOL08 NP tCaCO ₃ /lkt 1	OA-ELE07 pH Unity 0.1	OA-VOL08 Ratio (N) Unity 0.01	S-IR08 S % 0.01	S-GRA06 S % 0.01	S-GRA06a S % 0.01	S-CAL06 S % 0.01	C-GAS05 C % 0.05	C-GAS05 CO ₂ % 0.2
B625001		0.30	0.9	2	70	71	8.3	75.73	0.03	<0.01	0.03	0.03	<0.05	<0.2
B625002		0.38	0.9	1	29	30	9.1	32.00	0.03	<0.01	0.03	0.03	<0.05	<0.2
B625003		0.48	3.1	1	24	27	8.2	8.64	0.10	<0.01	0.04	0.10	<0.05	<0.2
B625004		0.42	<0.3	1	36	36	8.2	230.4	<0.01	<0.01	0.02	<0.01	<0.05	<0.2
B625005		0.32	0.6	1	21	22	9.4	35.20	0.02	<0.01	0.02	0.02	<0.05	<0.2
B625006		0.38	3.8	1	13	17	8.2	4.53	0.12	<0.01	0.02	0.12	<0.05	<0.2
B625007		0.40	0.6	1	18	19	9.1	30.40	0.02	<0.01	0.03	0.02	<0.05	<0.2
B625008		0.36	0.3	1	14	14	9.0	44.80	0.01	<0.01	0.01	0.01	<0.05	<0.2
B625009		0.54	0.6	1	15	16	9.0	25.60	0.02	<0.01	0.01	0.02	<0.05	<0.2
B625010		0.64	0.6	1	14	15	9.2	24.00	0.02	<0.01	0.01	0.02	<0.05	<0.2
B625011		0.36	2.5	1	33	35	7.8	14.00	0.08	0.01	0.08	0.07	<0.05	<0.2
B625012		0.36	2.2	2	51	53	8.1	24.23	0.07	0.01	0.07	0.06	<0.05	<0.2
B625013		0.36	1.3	1	14	15	7.3	12.00	0.04	<0.01	0.04	0.04	<0.05	<0.2
B625014		0.38	2.2	1	15	17	7.4	7.77	0.07	0.01	0.06	0.06	<0.05	<0.2
B625015		0.36	0.6	1	19	20	8.6	32.00	0.02	<0.01	0.03	0.02	<0.05	<0.2
B625016		0.36	0.9	1	16	17	7.9	18.13	0.03	<0.01	0.04	0.03	<0.05	<0.2
B625017		0.36	1.3	1	22	23	8.0	18.40	0.04	<0.01	0.05	0.04	<0.05	<0.2
B625018		0.62	2.2	1	13	15	7.3	6.86	0.07	0.01	0.05	0.06	0.09	0.3
B625019		0.38	4.4	1	11	15	8.5	3.43	0.14	<0.01	0.02	0.14	<0.05	<0.2
B625020		0.36	<0.3	1	13	13	8.4	83.20	<0.01	<0.01	0.02	<0.01	<0.05	<0.2
B625021		0.42	50.6	1	-23	28	8.2	0.55	1.62	0.02	0.09	1.60	<0.05	<0.2
B625022		0.44	1.6	1	19	21	7.5	13.44	0.05	<0.01	0.04	0.05	<0.05	<0.2
B625023		0.42	0.9	1	31	32	8.2	34.13	0.03	<0.01	0.03	0.03	<0.05	<0.2
B625024		0.46	0.3	1	28	28	7.9	89.60	0.01	<0.01	0.03	0.01	<0.05	<0.2
B625025		0.32	0.6	1	19	20	7.8	32.00	0.02	<0.01	0.03	0.02	<0.05	<0.2
B625026		0.42	0.3	1	27	27	8.3	86.40	0.01	<0.01	0.01	0.01	<0.05	<0.2
B625027		0.36	6.9	1	12	19	9.3	2.76	0.22	<0.01	<0.01	0.22	<0.05	<0.2
B625028		0.46	0.6	1	15	16	8.8	25.60	0.02	<0.01	<0.01	0.02	<0.05	<0.2
B625029		0.36	0.6	1	36	36	8.8	28.80	0.02	<0.01	<0.01	0.02	<0.05	<0.2
B625039		0.44	0.3	1	18	18	8.5	57.60	0.01	<0.01	<0.01	0.01	<0.05	<0.2
B625040		0.44	0.3	1	17	17	8.8	54.40	0.01	<0.01	<0.01	0.01	<0.05	<0.2
B625041		0.38	0.3	1	16	16	9.1	51.20	0.01	<0.01	<0.01	0.01	<0.05	<0.2
B625042		0.30	3.1	2	60	63	8.4	20.16	0.10	<0.01	0.01	0.10	<0.05	<0.2
B625043		0.42	0.9	1	42	29	8.1	32.00	0.03	<0.01	0.01	0.03	<0.05	<0.2
B625044		0.34	3.1	1	23	26	7.5	8.32	0.10	0.02	0.01	0.08	<0.05	<0.2
B625045		0.38	1.3	1	24	25	7.9	20.00	0.04	<0.01	0.01	0.04	<0.05	<0.2
B625046		0.32	1.6	1	16	18	8.3	11.52	0.05	<0.01	0.01	0.05	<0.05	<0.2
B625047		0.28	0.3	1	17	17	8.4	54.40	0.01	<0.01	0.01	0.01	<0.05	<0.2
B625048		0.40	<0.3	1	23	23	8.0	147.20	<0.01	<0.01	<0.01	<0.01	<0.05	<0.2
B625049		0.40	0.6	1	17	18	8.8	28.80	0.02	<0.01	0.01	0.02	<0.05	<0.2



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To: BAFFINLAND IRON MINES CORPORATION
2275 UPPER MIDDLE ROAD EAST
SUITE 300
OAKVILLE ON L6H 0C3

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Finalized Date: 18-JAN-2022
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS **VA21319699**

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	OA-VOL08 MPA tCaCO ₃ /1kt 0.3	OA-VOL08 FIZZ RAT Unity 1	OA-VOL08 NNP tCaCO ₃ /1kt 1	OA-VOL08 NP tCaCO ₃ /1kt 1	OA-ELE07 pH Unity 0.1	OA-VOL08 Ratio (N Unity 0.01	S-IR08 S % 0.01	S-GRA06 S % 0.01	S-GRA06a S % 0.01	S-CAL06 S % 0.01	C-GAS05 C % 0.05	C-GAS05 CO ₂ % 0.2
B625050		0.46	1.6	1	18	20	9.1	12.80	0.05	<0.01	0.01	0.05	<0.05	<0.2
B625051		0.42	0.3	1	10	10	8.2	32.00	0.01	<0.01	<0.01	0.01	<0.05	<0.2
B625052		0.34	1.9	1	21	23	7.9	12.27	0.06	<0.01	0.01	0.06	<0.05	<0.2
B625053		0.42	22.2	1	10	32	7.9	1.44	0.71	0.02	<0.01	0.69	<0.05	<0.2
B625054		0.36	24.7	1	0	25	7.8	1.01	0.79	0.02	0.02	0.77	<0.05	<0.2
B625055		0.36	0.6	1	16	17	9.3	27.20	0.02	<0.01	0.01	0.02	<0.05	<0.2
B625056		0.36	0.6	1	18	19	8.7	30.40	0.02	0.01	0.01	0.01	<0.05	<0.2
B625057		0.36	0.3	1	21	21	8.7	67.20	0.01	<0.01	0.01	0.01	<0.05	<0.2
B625058		0.40	10.3	1	24	34	7.5	3.30	0.33	0.20	0.30	0.13	<0.05	<0.2
B625059		0.40	0.6	1	29	30	8.3	48.00	0.02	<0.01	0.01	0.02	<0.05	<0.2
B625060		0.42	0.6	1	19	20	9.0	32.00	0.02	<0.01	<0.01	0.02	<0.05	<0.2
B625061		0.38	0.9	1	18	19	9.5	20.27	0.03	<0.01	0.01	0.03	<0.05	<0.2
B625062		0.38	1.3	1	16	17	9.2	13.60	0.04	<0.01	<0.01	0.04	<0.05	<0.2
B625063		0.40	0.6	1	15	16	9.3	25.60	0.02	<0.01	0.01	0.02	<0.05	<0.2
B625064		0.36	0.6	1	16	17	9.2	27.20	0.02	<0.01	<0.01	0.02	<0.05	<0.2
B625065		0.36	1.3	1	19	20	8.9	16.00	0.04	<0.01	<0.01	0.04	<0.05	<0.2



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To: BAFFINLAND IRON MINES CORPORATION
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Finalized Date: 18-JAN-2022
Account: BIMCIO

Project: Pulps for ABA

CERTIFICATE OF ANALYSIS VA21319699

CERTIFICATE COMMENTS	
Applies to Method:	<p>LABORATORY ADDRESSES</p> <p>Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.</p> <p>BAG-01 OA-VOL08 S-GRA06 WEI-21</p> <p>C-GAS05 PUL-32p S-GRA06a</p> <p>LOG-23 PUL-QC S-IR08</p> <p>OA-ELE07 S-CAL06 SPL-34</p>



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Plus Appendix Pages
Finalized Date: 12-JAN-2022
Account: BIMC10

CERTIFICATE VA21319700

Project: Pulps for ABA

P.O. No.: 4500092191

This report is for 46 samples of Pulp submitted to our lab in Vancouver, BC, Canada on 21-OCT-2021.

The following have access to data associated with this certificate:

TREVOR BRISCO
PAUL DAWE
FRED LAWRENCE
HAYLEY POTHIER
JUSTIN TUPPER

PAUL BRYDEN
JASON DUFF
JORDON MARSH
JACOB PRINCE
WARRICK WILLIAMS

JASON CHIASSON
SIMON FLEURY
SHAHE NAACASHIAN
MATTHEW TRACEY

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-32p	Pulverize 400 g – 85%<75um
SPL-34	Pulp Splitting Charge
BAG-01	Bulk Master for Storage
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login – Rcvd with Barcode

ANALYTICAL PROCEDURES	
ALS CODE	DESCRIPTION
S-GRA06a	Sulfate Sulfur (HCl leachable)
OA-VOL08	Basic Acid Base Accounting
S-IR08	Total Sulphur (IR Spectroscopy)
OA-ELE07	Paste pH
S-CAL06	Sulfide Sulfur (calculated)
S-GRA06	Sulfate Sulfur-carbonate leach
C-GAS05	Inorganic Carbon (CO2)

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.
***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver