



1911 Gold Corporation

True North Mine

Request for Alignment of Discharge Monitoring Requirements



Prepared by: 1911 Gold Corporation



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1 Introduction

The 1911 Gold Corporation (1911 Gold) True North Mine (Mine) is located approximately 165 km northeast of the City of Winnipeg on the northeast shore of Rice Lake in Bissett, MB. Rice Lake is located east of Lake Winnipeg in Township 24 and Range 13 East of the Prime Meridian (EPM; Figure 1).

The True North Mine is one of Manitoba's oldest mines and has been held by various ownership groups since 1932. The Mine includes five underground gold mines (Temporarily Suspended Operations: True North; Decommissioned: Cohiba, Hinge, 007 Zone, and SG1), a Mill complex, and a tailings management area (TMA) (Figure 2). Waste material from the milling process (i.e., tailings solids and process water) and water from the underground workings are discharged into the TMA, located northeast of the Mill. The function of the TMA is to provide storage of tailings solids and supernatant. Water is retained within the TMA to allow sufficient retention time for the settling of suspended solids, as well as the volatilization/degradation of ammonia and cyanide.

Under current Care and Maintenance, tailings are reprocessed seasonally which involves trucking tailings from the TMA back to the mill for processing at half of the facility capacity. The tailings reprocessing project will end in 2022. The effluent from True North Mine operations is passively treated in the TMA prior to being discharged into a small, intermittently dry creek referred to as No Name Creek (NNC) which flows into the Wanipigow River typically once or twice per year during the annual discharge campaign(s).

Canadian metal mines are required to comply with the Metal Mining Effluent Regulations (MMER) which officially came into effect on December 6, 2002 (Government of Canada 2002) and were amended on June 1, 2018 (Government of Canada 2018; now referred to as the Metal and Diamond Mining Effluent Regulations [MDMER]). The MMER/MDMER include a requirement for Environmental Effects Monitoring (EEM), which requires metal mines to conduct studies to detect, confirm, and define any effects of the mine discharge on the aquatic environment. The True North Mine has been a participant in this process since discharge into No Name Creek began in 2007 and the program is now entering Cycle 5 of its EEM.

This report discusses the current provincial and federal discharge monitoring requirements and the request by 1911 Gold Corporation (1911 Gold) to align the discharge effluent and receiving water samples required under *Environment Act* Licence 2628 RRR (the Licence) for the True North Mine with the deleterious substance and pH testing, effluent characterization and water quality monitoring sample requirements of the federal *Metal and Diamond Mining Effluent Regulation (SOR/2022-222)* (MDMER) where applicable. This request for alignment of discharge monitoring sample requirements does not have any anticipated environmental effect based on a review of the effluent, discharge and receiving water quality data for the True North Mine for the period of 2017 through 2021. The data is included and organized in standard format to allow for comparison of effluent and surface water quality data across years and sites. Potential mitigation measures have been outlined if an environmental effect is suspected or realized with respect to the alignment of the discharge monitoring sample requirements.

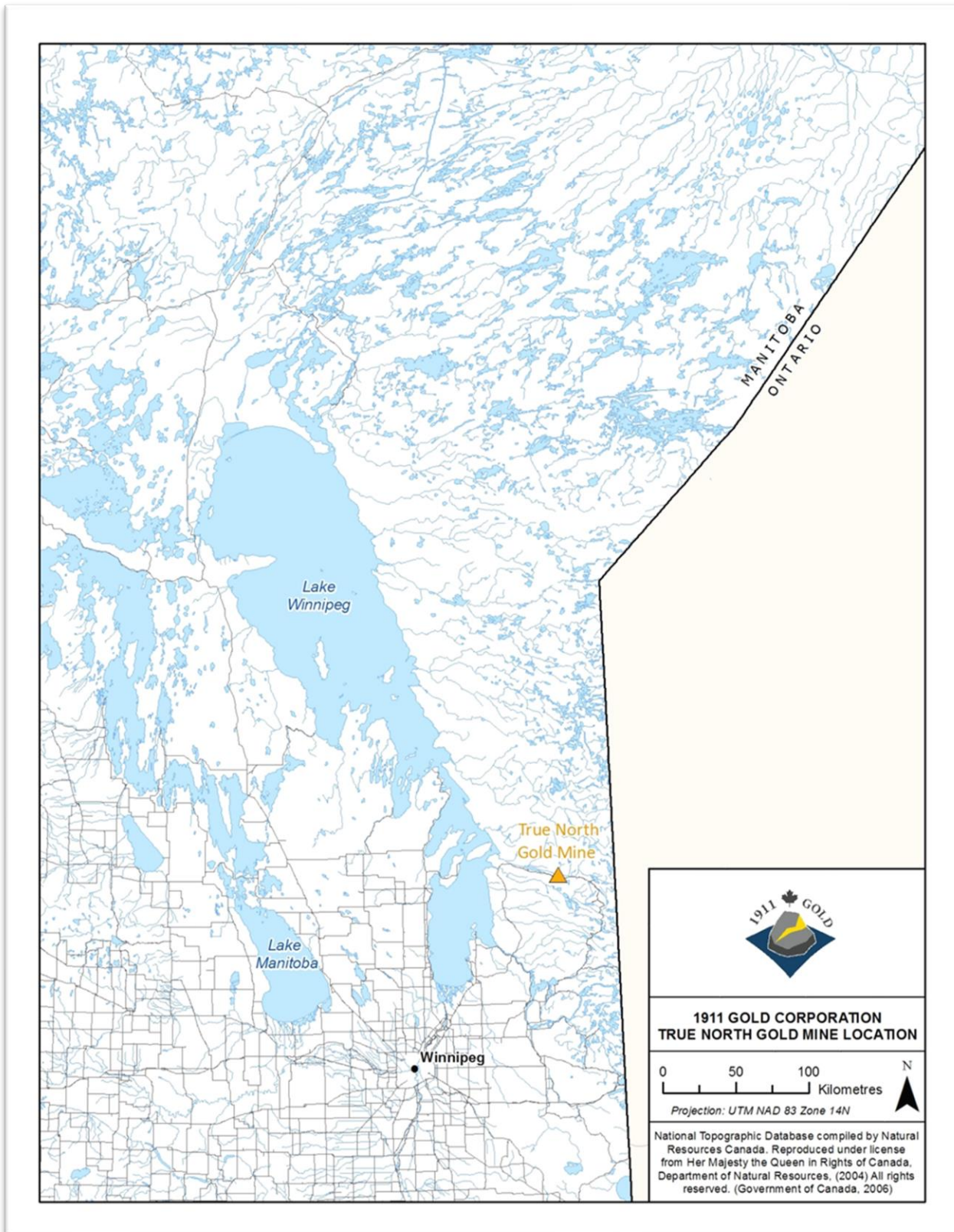


Figure 1-1: Location of the 1911 Gold Corporation True North Mine near Bissett, MB.

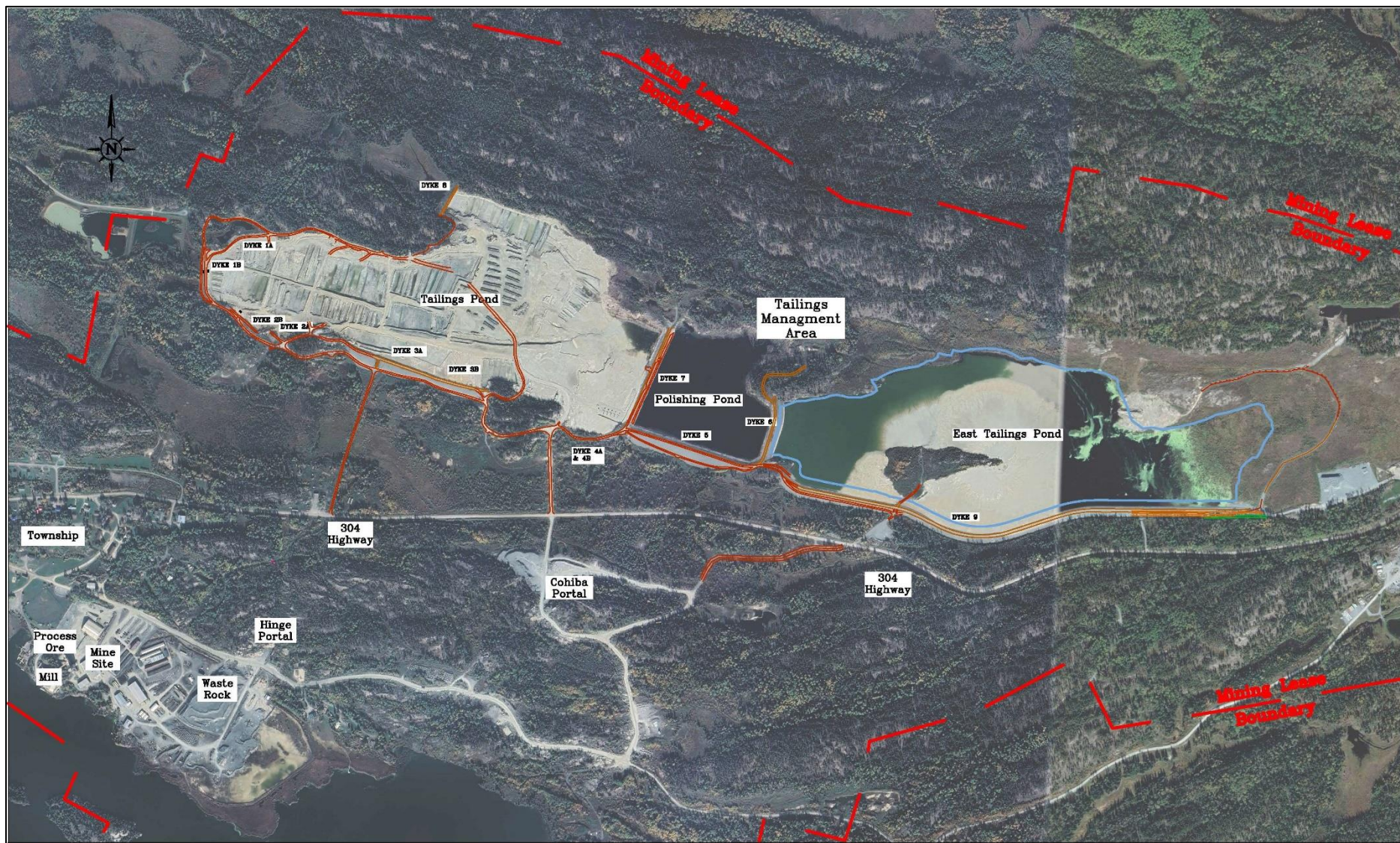


Figure 1-2: Site Plan of the True North Mine

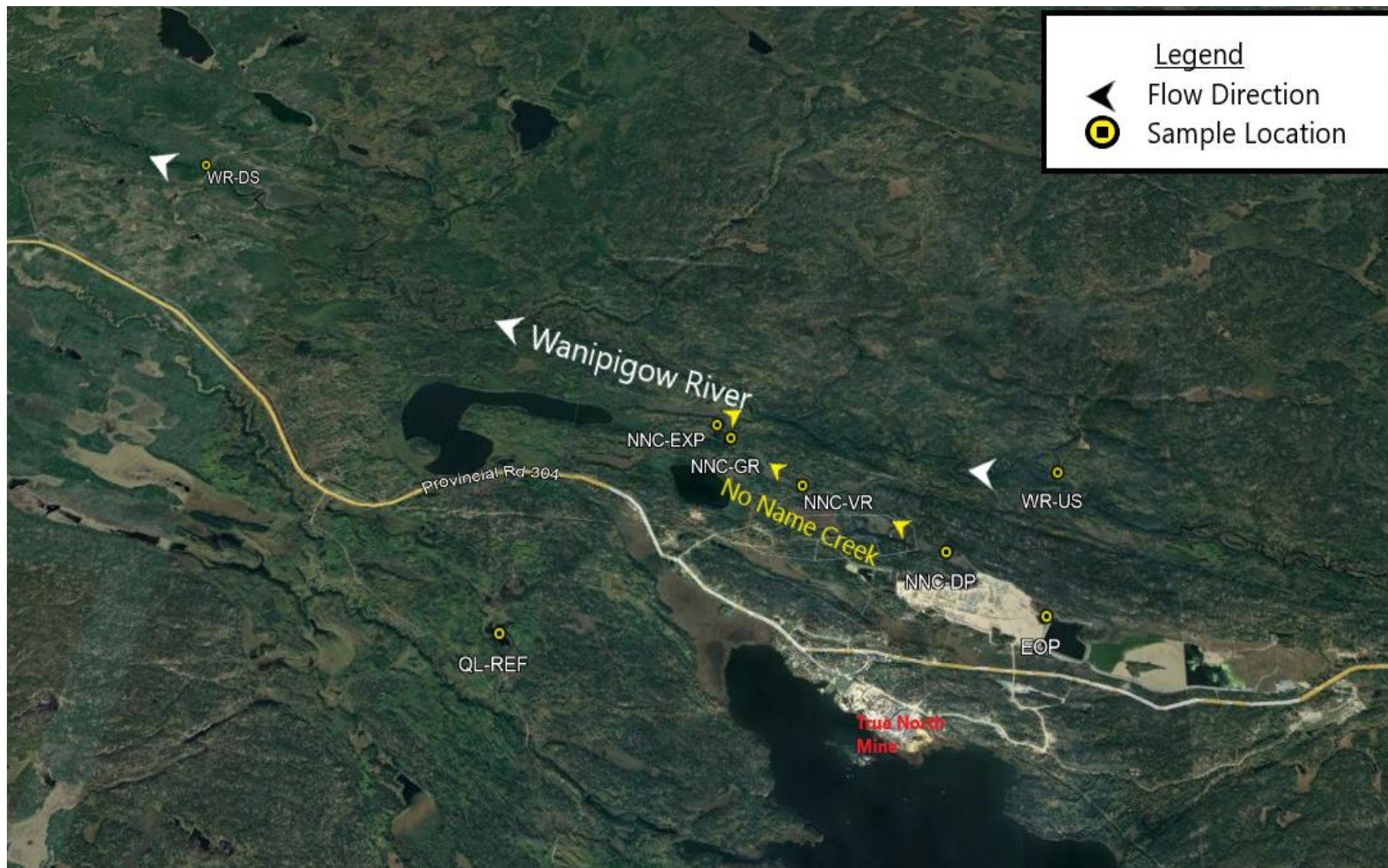


Figure 1-3: True North Mine Discharge Monitoring Sample Locations

2 Current Discharge Monitoring Requirements

The Licence and the MDMER each have specific requirements and locations for sample collection regarding discharge of effluent to the environment (Figure 1-3). A comparison of these discharge monitoring sample collection requirements is presented in Table 2-1. In Table 2-1, samples have been grouped by the pre-discharge, discharge, and post-discharge sample collection periods, then by sample collection frequency and sample location for the purposes of comparison of the Licence and MDMER discharge monitoring sample collection requirements. A summary of the discharge dates, number of discharge days, total discharge volumes and mean daily discharge volumes are presented for 2017-2021 in Table 2-2.

To simplify reporting, all Manitoba Water Quality Standards, Objectives and Guidelines (MWQSOG) Tier II and Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines (CWQG) calculations have been based on the 5-year average receiving water pH (7.19) and hardness (42.6), at temperature 25°C. The total number of discharge monitoring samples collected between 2017-2021 are broken down by type and location in Table 2-3. Water quality results of selected parameters for all discharge monitoring locations are presented in graph format in Appendix A, with MWQSOG Tier II limits, MDMER maximum allowable mean monthly concentrations and Canadian Council of Ministers of the Environment (CCME) Canadian environmental quality guidelines (CEQG) noted.

2.1 Pre-Discharge

Under the Licence, there are prescribed pre-discharge monitoring requirements that are also implied by the MDMER (Part I, Section 4) which grants authority to discharge effluent at a licenced final discharge point when it does not exceed the Schedule 4 Maximum Authorized Concentrations (MACs) of Prescribed Deleterious Substances, is within the pH range of 6.0 to 9.5, and is not acutely lethal. Conditions 48 and 52 of the Licence require bimonthly water quality sampling between the time the Polishing Pond is filled and discharge as well as sampling of the bottom, middle and surface water columns for water quality and acute lethality prior to discharge. The pre-discharge Polishing Pond acute lethality results for 2017-2021 are summarized in Table 2-4, with all samples observed to be non-acutely lethal and have 0% mortality except for a 10% mortality rate observed in the 100% concentration sample for Rainbow Trout for the August 10, 2021 surface sample.

The 2017-2021 pre-discharge Polishing Pond water quality results are presented in tabular format in Appendix B, Table B-1. The Polishing Pond pre-discharge water quality samples met the MDMER Schedule 4 MACs and was within the pH range of 6.0 to 9.5 for all samples collected. It was also generally below the MWQSOG Tier II values with the following exceptions: free cyanide (n=1), nitrate (n=6) and dissolved copper (n=21).

2.2 End of Pipe

During active discharge, Condition 55 of the Licence requires that End of Pipe water quality and acute lethality samples collected within 24-hours of discharge commencement and then at one-week intervals for the duration of active discharge. The active discharge requirements under the MDMER (Part 2, Division 2, Section 12) for the End of Pipe for deleterious substance and pH testing are once per week and at least 24 hours apart, with an additional requirement of acute lethality testing of Rainbow trout and *Daphnia magna* monthly not less than 15 days apart (Part 2, Division 2, Section 14), and effluent characterization under Schedule 5 (Part 1, Section 4) once per calendar quarter at least one month apart. The End of Pipe acute lethality results for 2017-2021 are summarized in Table 2-5, with all

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samples observed to be non-acutely lethal and have 0% mortality except for a >10% mortality rate observed in the 0% (control) sample for *Daphnia magna* for the August 3, 2018 sample and a Rainbow trout test that was missed due to shipping error/hold time exceedance for the September 21, 2020 sample.

The 2017-2021 End of Pipe discharge water quality results are presented in tabular format in Appendix B, Table B-2. The discharge water quality samples met the MDMER Schedule 4 MACs and was within the pH range of 6.0 to 9.5 for all samples collected. It was also generally below MWQSOG Tier II values with the following exceptions: free cyanide (n=5), nitrate (n=5), nitrite (n=4) and dissolved copper (n=35).

2.3 Receiving Waters

Within seven days of commencement of discharge, Condition 54 requires water quality monitoring of four (4) receiving water locations: Wanipigow River – Upstream (WR-US), No Name Creek – Vanson Road (NNC-VR), No Name Creek – Gun Range (NNC-GR), Wanipigow River – Downstream (WR-DS). The pre-discharge receiving water quality at all four locations was below the MWQSOG Tier II values with the one exception at NNC-VR: dissolved zinc (n=1).

Condition 54 also requires water quality monitoring of the 4 receiving water locations at weekly intervals for the duration of the discharge and post-discharge until the water quality returns to the pre-discharge baseline. The water quality at all four locations was generally below the MWQSOG Tier II values during active discharge with the following exceptions: dissolved copper (NNC-VR, n=6; NNC-GR, n=5) and total silver (WR-US, n=1). The water quality at all four locations post-discharge was also generally below the MWQSOG Tier II values with the following exceptions: dissolved copper (NNC-VR, n=2), and dissolved zinc (NNC-GR, n=1).

The reference (Quesnel Lake Road Creek Reference, QL-REF) and exposure (No Name Creek Exposure, NNC-EXP) water monitoring sampling requirements during active discharge under the MDMER under Schedule 5 (Part 1, Section 7) is once per calendar quarter at least one month apart. The 2017-2021 receiving water quality location results for locations WR-US, NNC-VR, NNC-GR, WR-DS, QL-REF and NNC-EXP are presented in tabular format in Appendix B, Tables B-3 through B-8.

Sediment samples are collected within 30 days post discharge campaign at the NNC-DP (discharge point), NNC-VR, and NNC-GR locations pursuant to Condition 55 of the Licence, and at locations WR-US and WR-DS within 30 days post-discharge once every three years pursuant to Condition 56 of the Licence. The results of the sediment quality samples collected between 2017 and 2021 are present in graph format for selected parameters in Appendix A, Figures A-31 through A-40, and for all parameters in tabular format in Appendix B, Tables B-9 through B-13. The concentrations of the selected parameters in Figures A-31 through A-40 in Appendix A remain unchanged or show minor variation over the monitoring time period with localized increases in copper, nickel and selenium at the discharge point (NNC-DP). Copper showed the widest variation over the monitoring period with a 5-year average of 89 µg/g and standard deviation of 82.

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Table 2-1: Comparison of Discharge Sample Requirements of *Environment Act* Licence 2628 RRR and the *Metal and Diamond Mining Effluent Regulations* for True North Mine

| Sample Collection Period | Sample Collection Frequency | Sample Location | Current <i>Environment Act</i> Licence 2628 RRR sampling requirements (Condition No.) | <i>Metal and Diamond Mining Effluent Regulations</i> sampling requirements (Section No.) |
|--------------------------|-----------------------------|----------------------------|--|---|
| Pre-Discharge | Prior to discharge | Effluent to be discharged | Polishing Pond analyzed for App. D parameters and acute lethality for surface, middle, bottom water column before discharge (48, 52) | Not specifically, assumes compliance with Schedule 4 and not acutely lethal (Part 1, 4 (1)) |
| | | Reference/ Exposure Sites | Within seven days of initiation of discharge, 4 receiving water sites analyzed for App. D parameters (54a) | None |
| During discharge | 24 hours | End of Pipe | End of pipe analyzed for App. D parameters and acute toxicity (53a,c) | None |
| | Weekly | End of Pipe | End of pipe analyzed for App. D parameters and acute lethality (53b,c) | Final discharge point deleterious substance and pH testing at least 24 hours apart (Part 2, Div. 2, 12) |
| | | Reference / Exposure Sites | 4 receiving water sites analyzed for App. D parameters (54b) | None |
| | Monthly | End of Pipe | None | Final discharge point acute lethality testing at least 15 days apart (Part 2, Div. 2, 14) |
| | Quarterly | End of Pipe | Environmental Effects Monitoring required by MDMER (sublethal testing) (59a) | Final discharge point effluent characterization at least one month apart (Sch. 5, Part 1, 4), Sublethal toxicity testing on one species (Sch 5., Part 1, 6(3)) |
| | | Reference / Exposure Sites | Environmental Effects Monitoring required by MDMER (sublethal testing) (59a) | Water quality monitoring at reference and exposure site at least one month apart (Sch. 5, Part 1, 7) |
| Post-Discharge | Weekly | Reference / Exposure Sites | 4 receiving water sites analyzed for App. D parameters until the pre-discharge baseline is established (54c) | None |
| | Once within 30 days | Reference / Exposure Sites | 3 NNC sediment sampling sites analyzed annually 2 WR sediment sampling sites analyzed tri-annually | None (Sediment sampling in EEM Study every 3 years) |



Table 2-2: Summary of 2017-2021 True North Mine Polishing Pond Discharges

| Year | Discharge Dates | Number of Days Discharging | PP Start Elevation (mASL) | PP End Elevation (mASL) | Total Discharge (m ³) | Mean Daily Discharge (m ³) |
|------|-----------------|----------------------------|---------------------------|-------------------------|-----------------------------------|--|
| 2017 | Jul 18-Aug 26 | 29 | 276.580 | 273.850 | 297,007 | 10,242 |
| 2018 | Jun 19-Jul 16 | 28 | 276.072 | 272.989 | 323,308 | 11,547 |
| 2019 | Jun 18-Aug 1 | 41 | 276.523 | 273.043 | 382,213 | 9,322 |
| | Oct 8-Nov 11 | 31 | 275.189 | 272.593 | 292,211 | 9,426 |
| 2020 | Jun 16-Jul 22 | 37 | 276.813 | 273.349 | 422,777 | 11,426 |
| | Sep 21-Oct 15 | 25 | 276.964 | 273.982 | 351,070 | 14,043 |
| 2021 | Sep 20-Oct 12 | 23 | 276.320 | 273.323 | 324,715 | 14,118 |

Table 2-3: True North Mine Discharge Monitoring Sample Numbers, 2017-2021

| Sample Collection Period | PP | EOP | WR-US | NNC-VR | NNC-GR | WR-DS | QL-REF | NNC-EXP |
|--------------------------|----|-----|-------|--------|--------|-------|--------|---------|
| Total Samples | 21 | 35 | 82 | 77 | 70 | 81 | 14 | 13 |
| Pre-Discharge | 21 | - | 7 | 7 | 7 | 7 | - | - |
| During Discharge | - | 35 | 30 | 30 | 30 | 29 | 14 | 13 |
| Post-Discharge | - | - | 45 | 40 | 33 | 45 | - | - |

Table 2-4: True North Mine Polishing Pond Pre-discharge Acute Lethality Results, 2017-2021

| Date | Sample | <i>Daphnia magna</i> | | Rainbow Trout | |
|--------------------|------------|----------------------|-------------|---------------|-----------------|
| | | Pass/Fail | % Mortality | Pass/Fail | % Mortality |
| June 17, 2017 | PP-Surface | Pass | 0 | Pass | 0 |
| | PP-Middle | Pass | 0 | Pass | 0 |
| | PP-Bottom | Pass | 0 | Pass | 0 |
| May 16, 2018 | PP-Surface | Pass | 0 | Pass | 0 |
| | PP-Middle | Pass | 0 | Pass | 0 |
| | PP-Bottom | Pass | 0 | Pass | 0 |
| May 21, 2019 | PP-Surface | Pass | 0 | Pass | 0 |
| | PP-Middle | Pass | 0 | Pass | 0 |
| | PP-Bottom | Pass | 0 | Pass | 0 |
| September 10, 2019 | PP-Surface | Pass | 0 | Pass | 0 |
| | PP-Middle | Pass | 0 | Pass | 0 |
| | PP-Bottom | Pass | 0 | Pass | 0 |
| May 13, 2020 | PP-Surface | Pass | 0 | Pass | 0 |
| | PP-Middle | Pass | 0 | Pass | 0 |
| | PP-Bottom | Pass | 0 | Pass | 0 |
| September 3, 2020 | PP-Surface | Pass | 0 | Pass | 0 |
| | PP-Middle | Pass | 0 | Pass | 0 |
| | PP-Bottom | Pass | 0 | Pass | 0 |
| August 10, 2021 | PP-Surface | Pass | 0 | Pass | 10 ¹ |
| | PP-Middle | Pass | 0 | Pass | 0 |
| | PP-Bottom | Pass | 0 | Pass | 0 |

¹The laboratory Certificate of Analysis (CoA) indicates: "No Toxicity Observed. There was 10% mortality observed in the 100% concentration."

Table 2-5: True North Mine End of Pipe Weekly Acute Lethality Results, 2017-2021

| Year | Date | <i>Daphnia magna</i> | | Rainbow Trout | |
|------|--------|----------------------|------------------|----------------|----------------|
| | | Pass/Fail | % Mortality | Pass/Fail | % Mortality |
| 2017 | 18-Jun | Pass | 0 | Pass | 0 |
| | 26-Jun | Pass | 0 | Pass | 0 |
| | 08-Jul | Pass | 0 | Pass | 0 |
| | 15-Jul | Pass | 0 | Pass | 0 |
| | 22-Aug | Pass | 0 | Pass | 0 |
| 2018 | 19-Jul | Pass | 0 | Pass | 0 |
| | 26-Jul | Pass | 0 | Pass | 0 |
| | 03-Aug | Pass | 6.7 ¹ | Pass | 0 |
| | 10-Aug | Pass | 0 | Pass | 0 |
| 2019 | 18-Jun | Pass | 0 | Pass | 0 |
| | 25-Jun | Pass | 0 | Pass | 0 |
| | 02-Jul | Pass | 0 | Pass | 0 |
| | 09-Jul | Pass | 0 | Pass | 0 |
| | 16-Jul | Pass | 0 | Pass | 0 |
| | 23-Jul | Pass | 0 | Pass | 0 |
| | 30-Jul | Pass | 0 | Pass | 0 |
| | 08-Oct | Pass | 0 | Pass | 0 |
| | 15-Oct | Pass | 0 | Pass | 0 |
| | 22-Oct | Pass | 0 | Pass | 0 |
| 2020 | 29-Oct | Pass | 0 | Pass | 0 |
| | 05-Nov | Pass | 0 | Pass | 0 |
| | 17-Jun | Pass | 0 | Pass | 0 |
| | 24-Jun | Pass | 0 | Pass | 0 |
| | 01-Jul | Pass | 0 | Pass | 0 |
| | 08-Jul | Pass | 0 | Pass | 0 |
| | 14-Jul | Pass | 0 | Pass | 0 |
| | 21-Jul | Pass | 0 | Pass | 0 |
| | 21-Sep | Pass | 0 | - ² | - ² |
| | 30-Sep | Pass | 0 | Pass | 0 |
| 2021 | 07-Oct | Pass | 0 | Pass | 0 |
| | 14-Oct | Pass | 0 | Pass | 0 |
| | 21-Sep | Pass | 0 | Pass | 0 |
| | 29-Sep | Pass | 0 | Pass | 0 |
| 2021 | 06-Oct | Pass | 0 | Pass | 0 |
| | 12-Oct | Pass | 0 | Pass | 0 |

1 The laboratory Certificate of Analysis (CoA) indicates: "No toxicity observed. There was >10% mortality observed in the 0% concentrations. The Environment Canada method states tests are invalid in these cases."

2 Testing not completed due to laboratory error; sample had exceeded the hold time due to shipping errors.

3 Proposed Alignment of Discharge Monitoring Requirements

The proposed alignment of the Licence and MDMER discharge monitoring sample collection requirement is presented in Table 3-1, utilizing the same format as Table 2-1. Additional reductions in sampling frequency have been proposed where water quality data supports the request.

3.1 Pre-Discharge

Based on the results for the PP horizon results for the bottom, middle and surface pre-discharge samples collected (Table B-1) over the monitoring periods for 2017 through 2021 which show little variation within the PP water column, True North Mine proposes to reduce the pre-discharge PP horizon sampling to surface sample collection only (Condition 48) for the parameters listed in Appendix D of the Licence and acute lethality. The variation in the PP pre-discharge horizon sample results was limited to some elevated results for ammonia, nitrate, nitrite, total cyanide, phosphorus and dissolved and total copper in the bottom samples, collected 1m from the bottom of the PP. All horizon samples collected from the PP between 2017 and 2021 were non-acutely lethal to both Rainbow trout and *Daphnia magna* (Table 2-4).

The lowest elevation of the PP is 270.0 mASL, which is approximately 2.5m below the lowest level that the PP has been drawn down to at the end of discharge (Table 2-2). During discharge, the discharge pump(s) are lowered manually within the PP as the water level is drawn down. The pumps are set up in approximately 2-2.5m of water and are lowered as required, and the bottom 2.5m of the pond is not discharged to avoid agitation of sediment. With 0.5m freeboard, the maximum elevation of the PP is 280.0 mASL though True North Mine operates all ponds to maintain a 1m freeboard to contain extreme precipitation events.

There is no anticipated environmental effect for the reduction of pre-discharge PP sampling to one surface sample. If an environmental effect is suspected, True North Mine will revert to the original frequency of pre-discharge horizon sampling for the PP in Condition 52 of the Licence.

3.2 End of Pipe

After review of the thirty-five (35) non-acute lethality samples collected from the End of Pipe weekly during active discharge over the monitoring periods for 2017 through 2021, True North Mine proposes to reduce the weekly acute lethality sampling frequency for End of Pipe to monthly in line with the MDMER acute lethality testing requirement of once a month not less than 15 days apart (Part 2, Division 2, Section 14). The first acute toxicity sample will continue to be collected within 24-hours of commencement of discharge.

There is no anticipated environmental effect for the reduction of the End of Pipe acute lethality testing to once per month. If an environmental effect is suspected, or upon receipt of any acutely lethal result for End of Pipe, True North Mine will revert to the original frequency of acute lethality sampling for End of Pipe in Condition 53c of the Licence.

3.3 Receiving Waters

Based on the receiving water quality samples collected over the monitoring periods for 2017 through 2021, there is an approximate 2-week retention time within the largely beaver impacted No Name Creek system before discharged effluent reaches the Wanipigow River. True North Mine proposes to



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commence receiving water monitoring at the NNC-VR, NNC-GR, WR-US and WR-DS locations two (2) weeks after the commencement of discharge. Additionally, True North Mine requests a reduction in the frequency of receiving water monitoring from weekly to monthly for the duration of discharge. Where the duration of discharge is shorter than one month, receiving water monitoring samples will be collected upon cessation of discharge.

Upon cessation of discharge over the monitoring periods between 2017 and 2021, the WR-DS water quality results returned to pre-discharge water quality baseline within 4 to 6 weeks. True North Mine requests a reduction in the frequency of post-discharge receiving water monitoring from weekly to monthly, commencing two weeks after cessation of discharge to account for retention time. Should the WR-DS results not return to pre-discharge water quality baseline after 6 weeks (2 samples), sample collection will increase to bi-weekly until such time it does. The MDMER Schedule 5 Water Quality monitoring at the reference (QL-REF) and exposure (NNC-EXP) will be completed at the required quarterly frequency, not less than one month apart.

There is no anticipated environmental effect for the reduction of the receiving water monitoring frequency to monthly commencing two weeks after commencement of discharge and cessation of discharge. If an environmental effect is suspected, True North Mine will revert to the original frequency of receiving water sampling for NNC-VR, NNC-GR, WR-US and WR-DS in Condition 54 of the Licence.

4 References

Canadian Council of Ministers of the Environment (CCME). 1999. Canadian environmental quality guidelines. CCME, Winnipeg, MB. Updated to 2022.

Government of Canada. 2018. Metal and Diamond Mining Effluent Regulations (*Fisheries Act*) SOR/2002-222. From the Department of Justice, Ottawa, ON. Available from: <https://laws.justice.gc.ca/PDF/SOR-2002-222.pdf> [accessed April 4, 2022]

Manitoba Water Stewardship (MWS). 2011. Manitoba water quality standards, objectives, and guidelines. Water Science and Management Branch, Manitoba Water Stewardship. July 4, 2011. Manitoba Water Stewardship Report 2011-01. 67 p.



Table 3-1: True North Mine Proposed Alignment/Reduction of Discharge Sample Requirements of *Environment Act* Licence 2628 RRR

| Sample Collection Period | Sample Collection Frequency | Sample Location | Proposed alignment/reduction of <i>Environment Act</i> Licence 2628 RRR sampling requirements (Condition No.) | <i>Metal and Diamond Mining Effluent Regulations</i> sampling requirements (Section No.) |
|--------------------------|-----------------------------|----------------------------|---|---|
| Pre-discharge | Prior to discharge | Effluent to be discharged | Polishing Pond analyzed for App. D parameters and acute lethality (surface sample only) | Not specifically, assumes compliance with Schedule 4 and not acutely lethal (Part 1, 4 (1)) |
| | | Reference/ Exposure Sites | Within seven days of initiation of discharge, 4 receiving water sites analyzed for App. D parameters | None |
| During discharge | 24 hours | End of Pipe | End of pipe analyzed for App. D parameters and acute toxicity | None |
| | Weekly | End of Pipe | End of pipe analyzed for App. D parameters | Final discharge point deleterious substance and pH testing at least 24 hours apart (Part 2, Div. 2, 12) |
| | Monthly | End of Pipe | End of pipe analyzed for acute lethality | Final discharge point acute lethality testing at least 15 days apart (Part 2, Div. 2, 14) |
| | | Reference / Exposure Sites | 4 receiving water sites analyzed for App. D parameters, beginning 2 weeks after initiation of discharge | None |
| | Quarterly | End of Pipe | Environmental Effects Monitoring required by MDMER (effluent characterization, sublethal testing) (59a) | Final discharge point effluent characterization at least one month apart (Sch. 5, Part 1, 4), Sublethal toxicity testing on one species (Sch 5., Part 1, 6(3)) |
| | | Reference / Exposure Sites | Environmental Effects Monitoring required by MDMER (water quality monitoring) (59a) | Water quality monitoring at reference and exposure site at least one month apart (Sch. 5, Part 1, 7) |
| Post-Discharge | Monthly | Reference / Exposure Sites | 4 receiving water sites analyzed for App. D parameters until the pre-discharge baseline is established, beginning 2 weeks after the discontinuation of discharge. Increase to bi-weekly after 2 samples if pre-discharge baseline not reached | None |
| | Once within 30 days | Reference / Exposure Sites | 3 NNC sediment sampling sites analyzed annually 2 WR sediment sampling sites analyzed tri-annually | None (Sediment sampling in EEM Study every 3 years) |



Appendix A: Water and Sediment Quality Results – Graph Format

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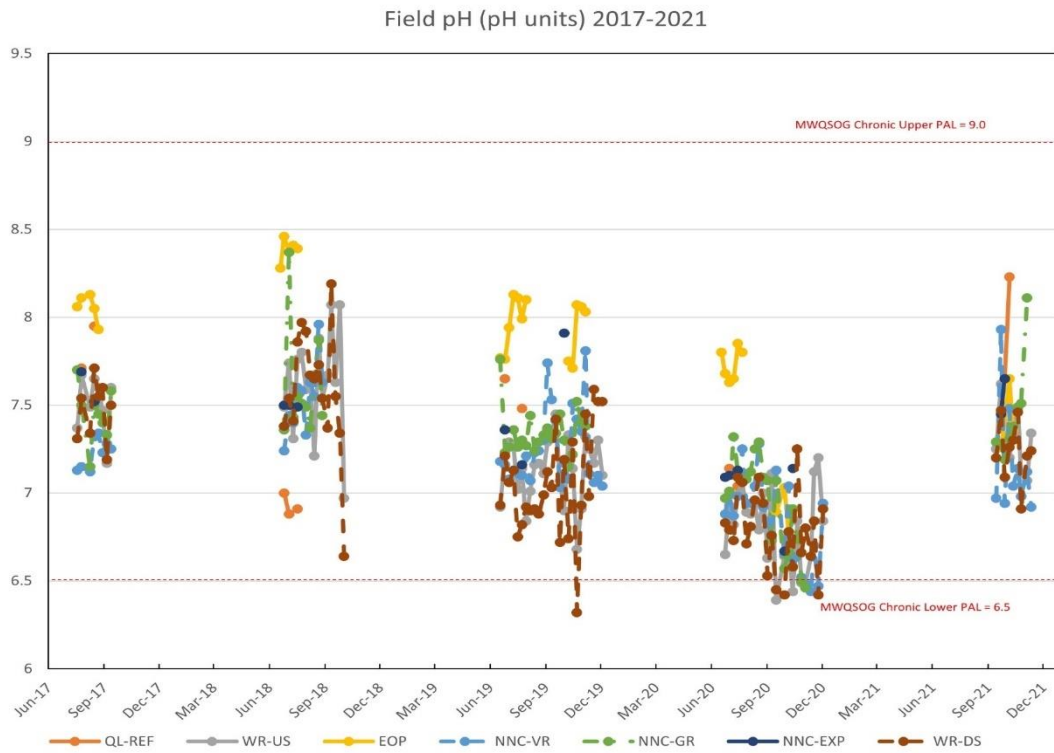


Figure A-1: True North Mine Field pH Water Quality Results, 2017-2021

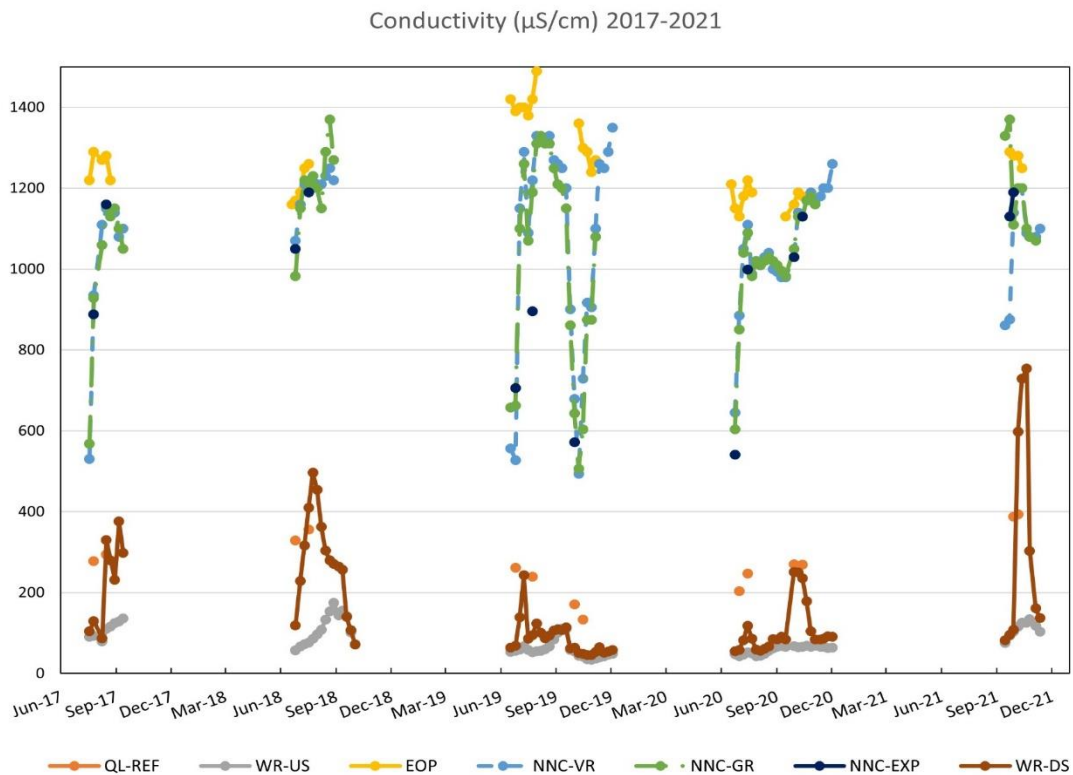


Figure A-2: True North Mine Conductivity Water Quality Results, 2017-2021

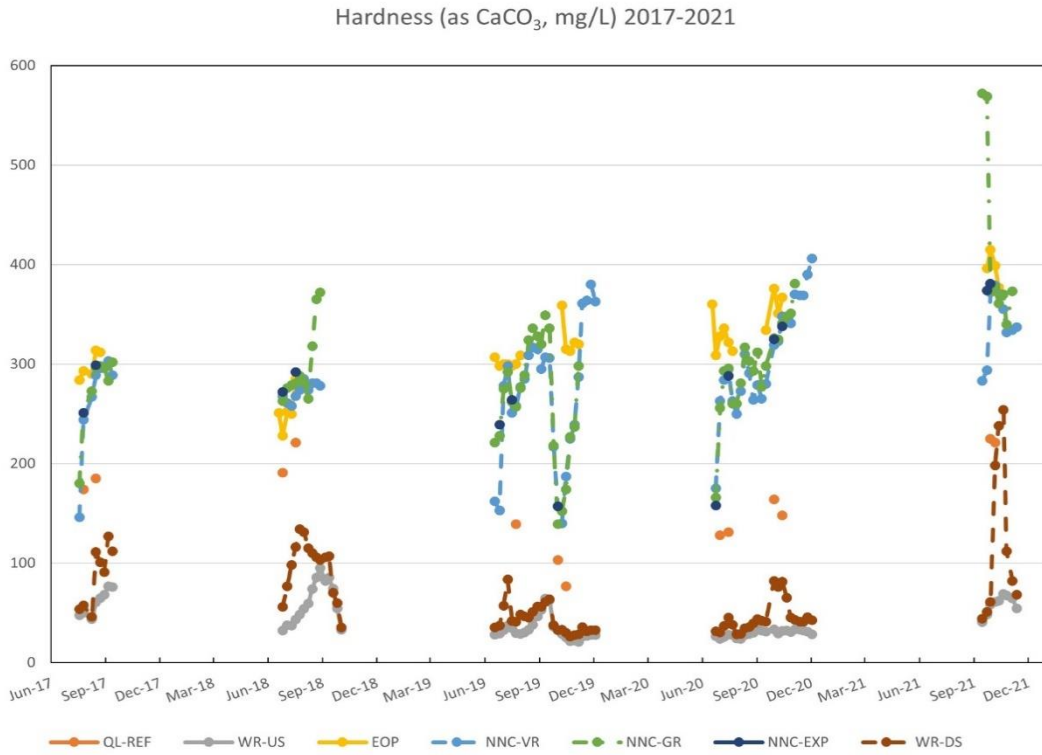


Figure A-3: True North Mine Hardness Water Quality Results, 2017-2021

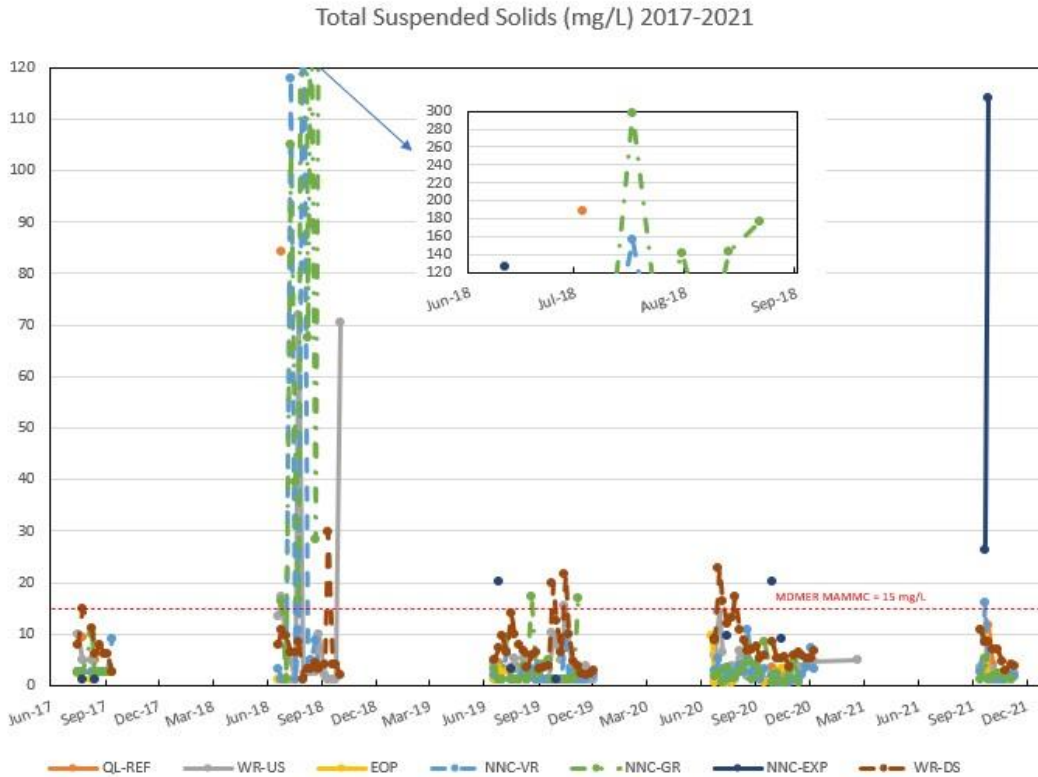


Figure A-4: True North Mine Total Suspended Solids Water Quality Results, 2017-2021

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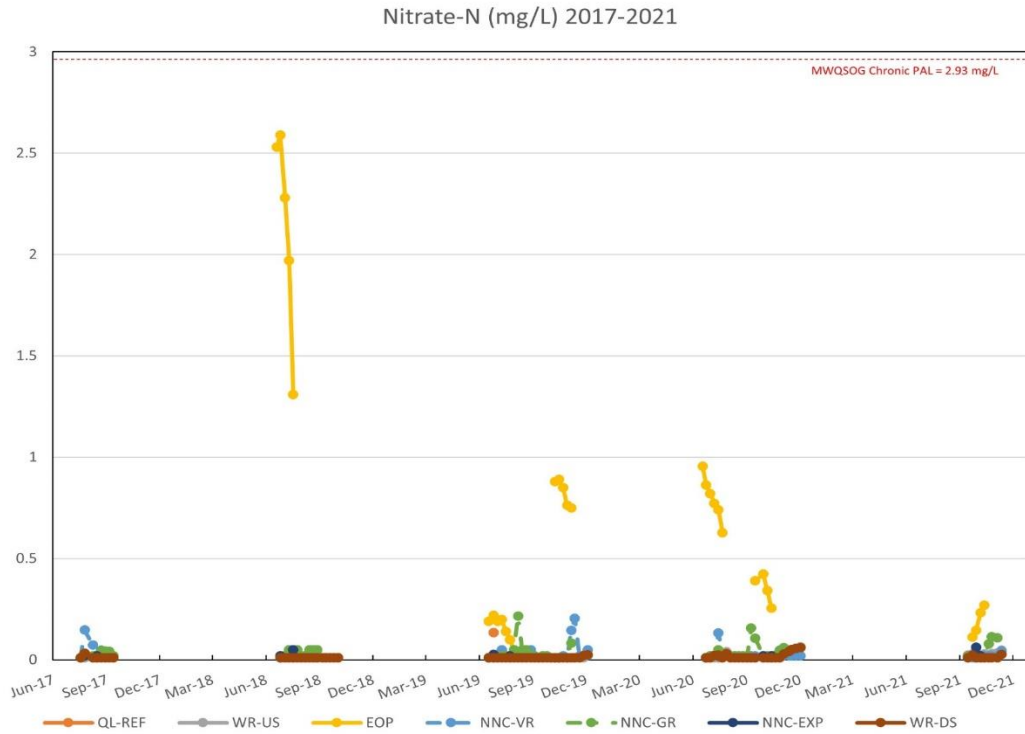


Figure A-5: True North Mine Nitrate -N Water Quality Results, 2017-2021

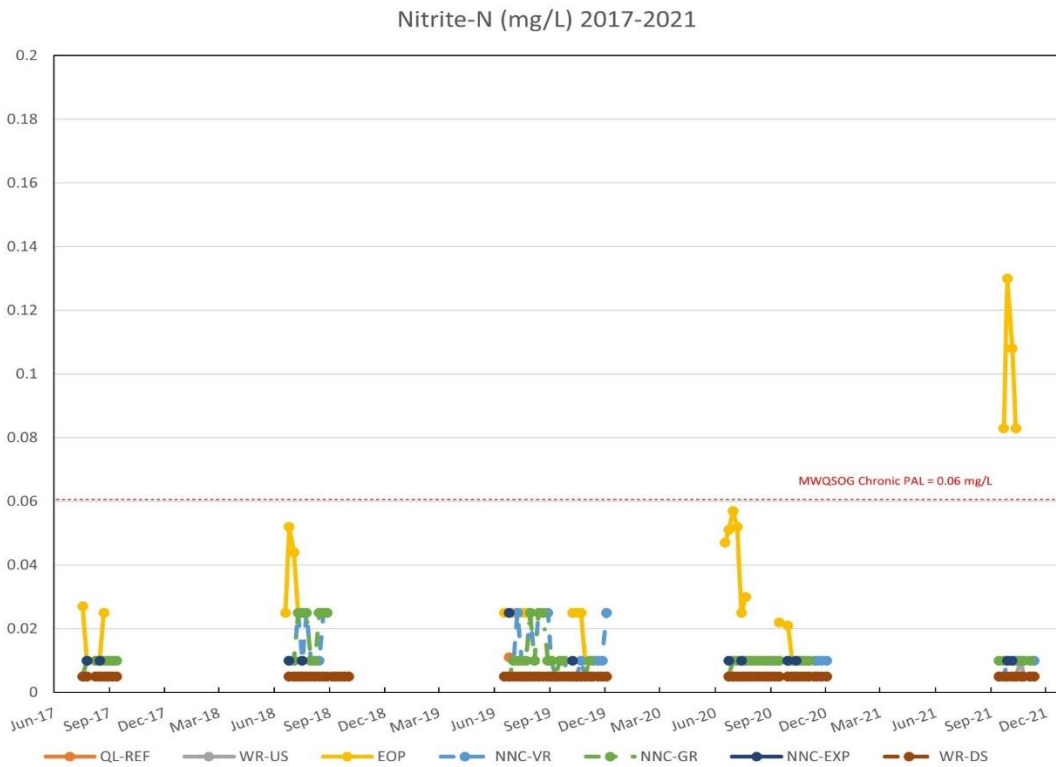


Figure A-6: True North Mine Nitrite-N Water Quality Results, 2017-2021

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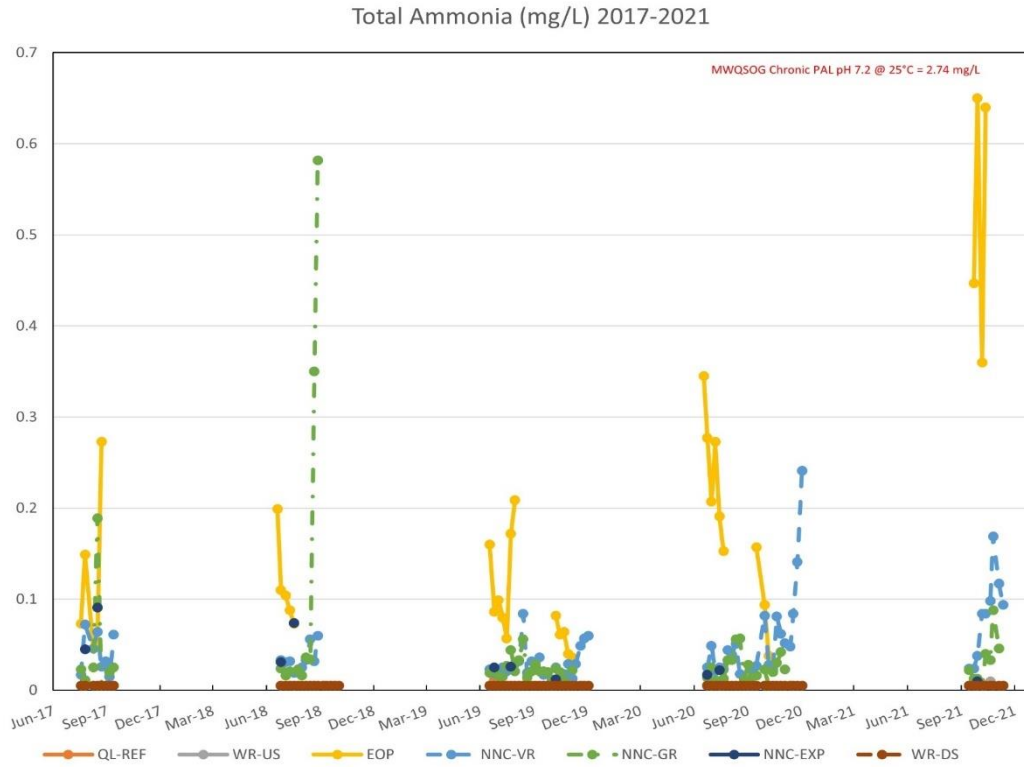


Figure A-7: True North Mine Total Ammonia Water Quality Results, 2017-2021

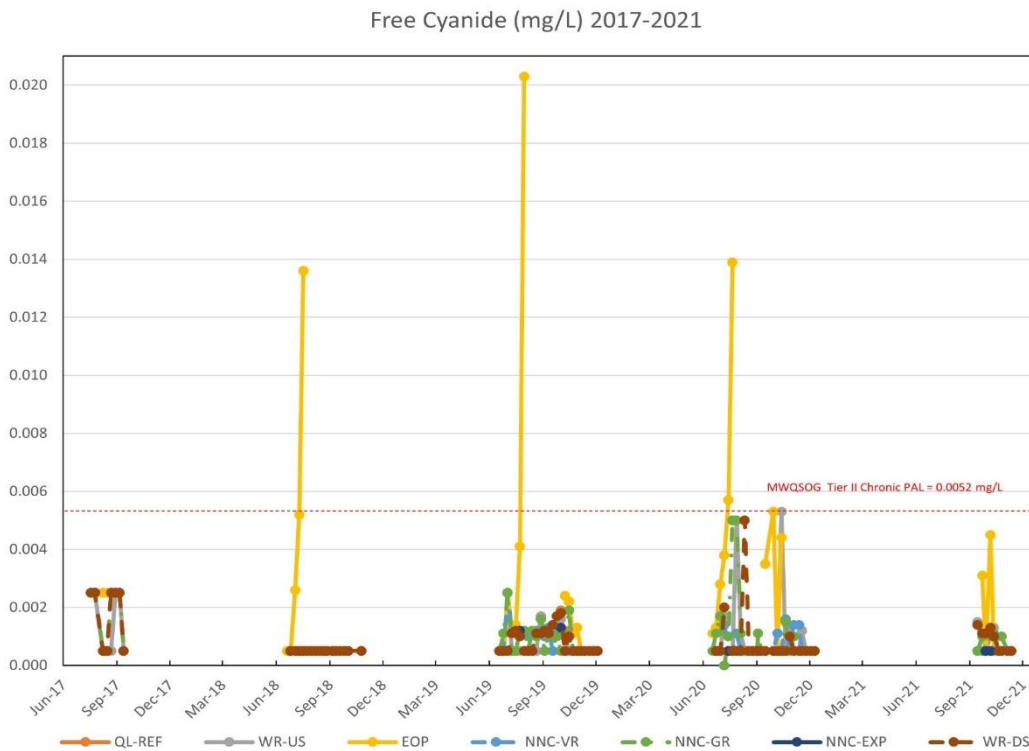


Figure A-8: True North Mine Free Cyanide Water Quality Results, 2017-2021

True North Mine
Request for Alignment of Discharge Monitoring Requirements

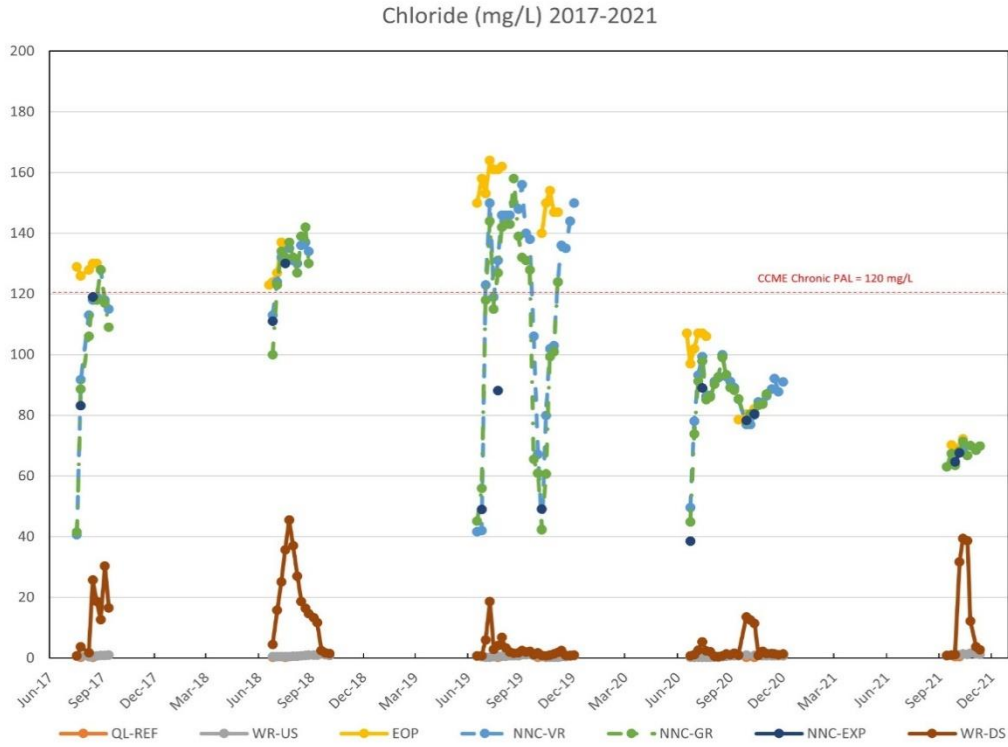


Figure A-9: True North Mine Chloride Water Quality Results, 2017-2021

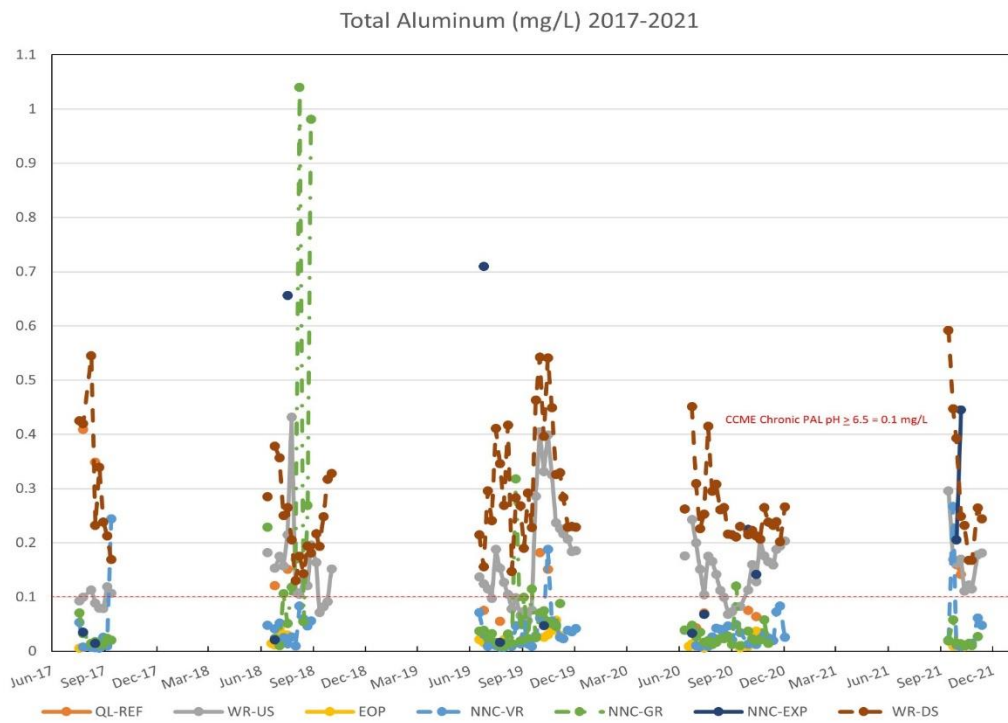


Figure A-10: True North Mine Total Aluminum Water Quality Results, 2017-2021

True North Mine
Request for Alignment of Discharge Monitoring Requirements

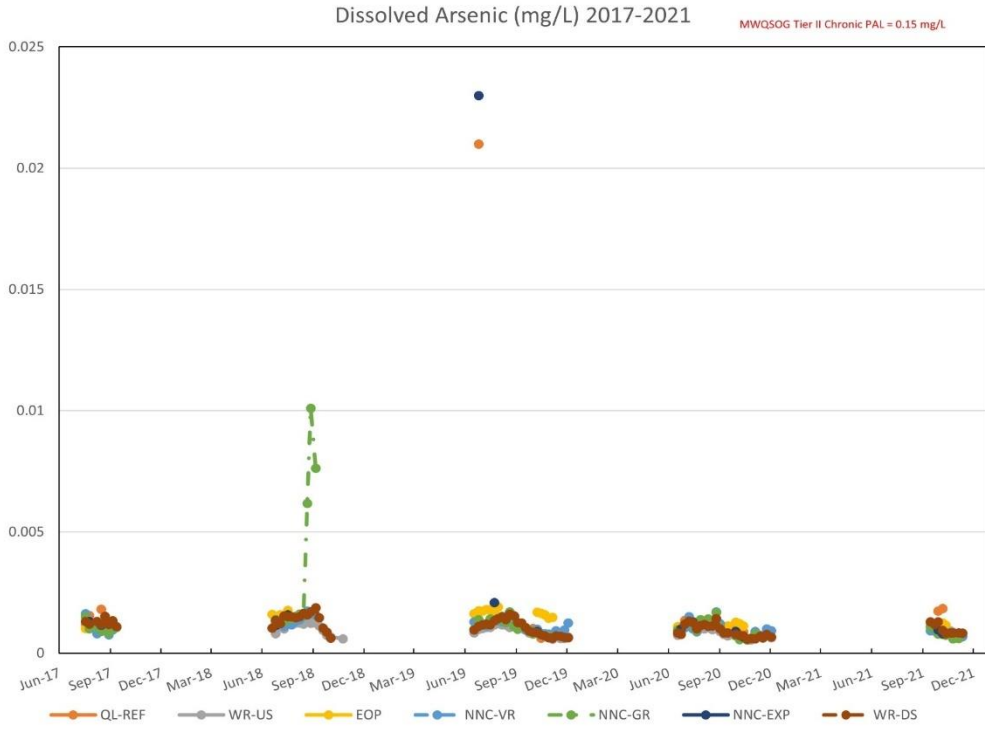


Figure A-11: True North Mine Dissolved Arsenic Water Quality Results, 2017-2021

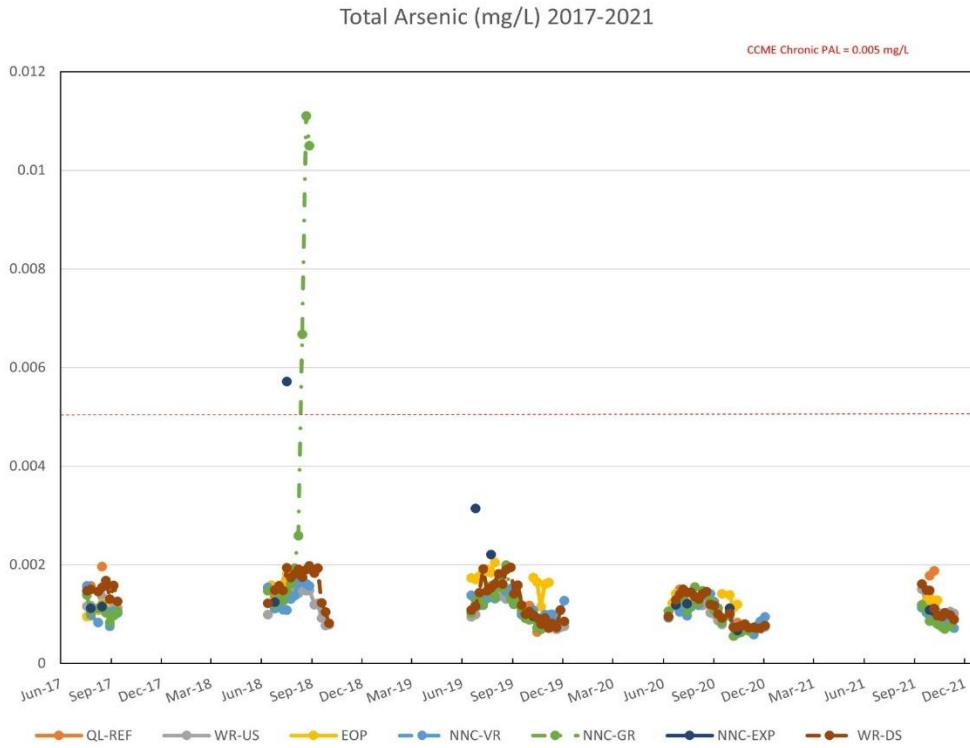


Figure A-12: True North Mine Total Arsenic Water Quality Results, 2017-2021

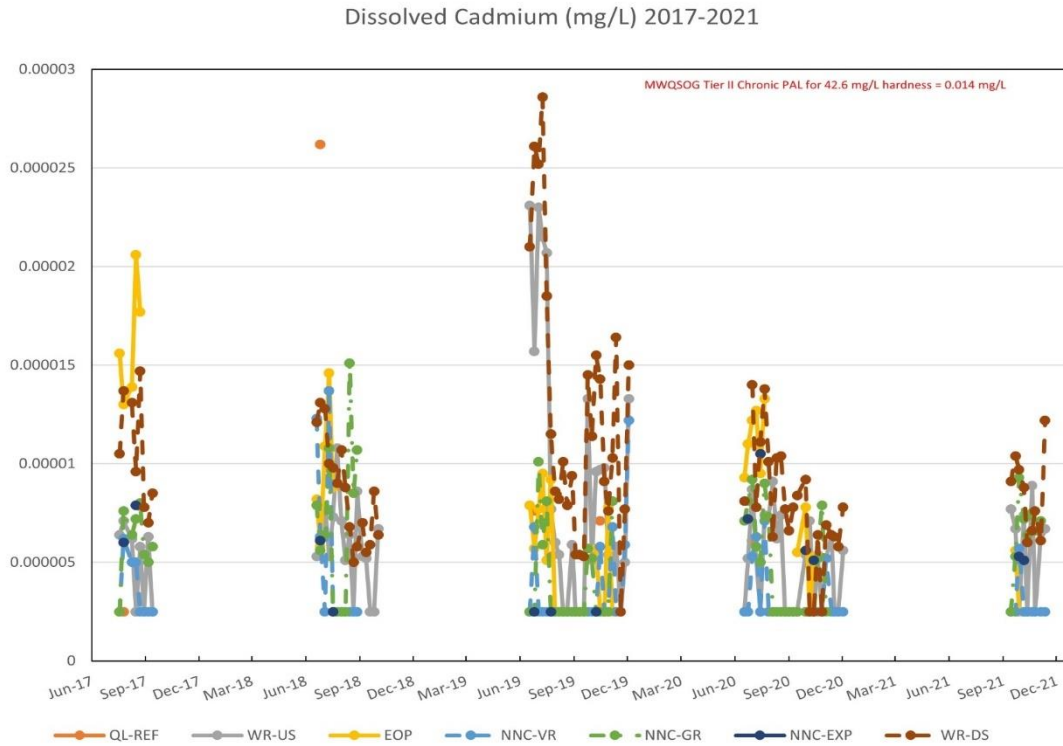


Figure A-13: True North Mine Dissolved Cadmium Water Quality Results, 2017-2021

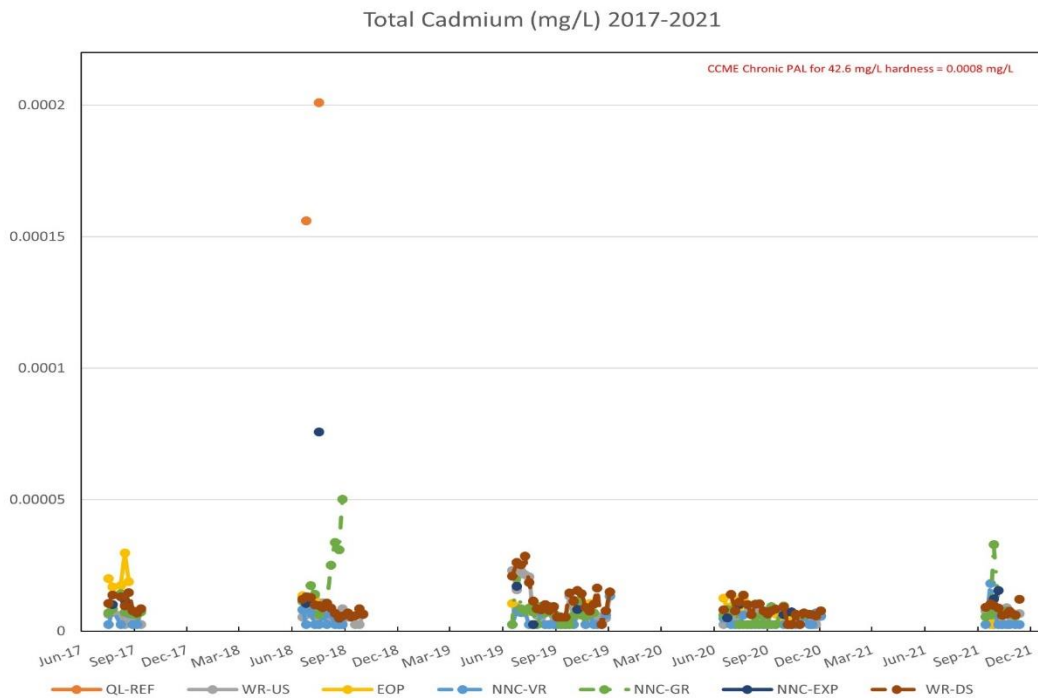


Figure A-14: True North Mine Total Cadmium Water Quality Results, 2017-2021

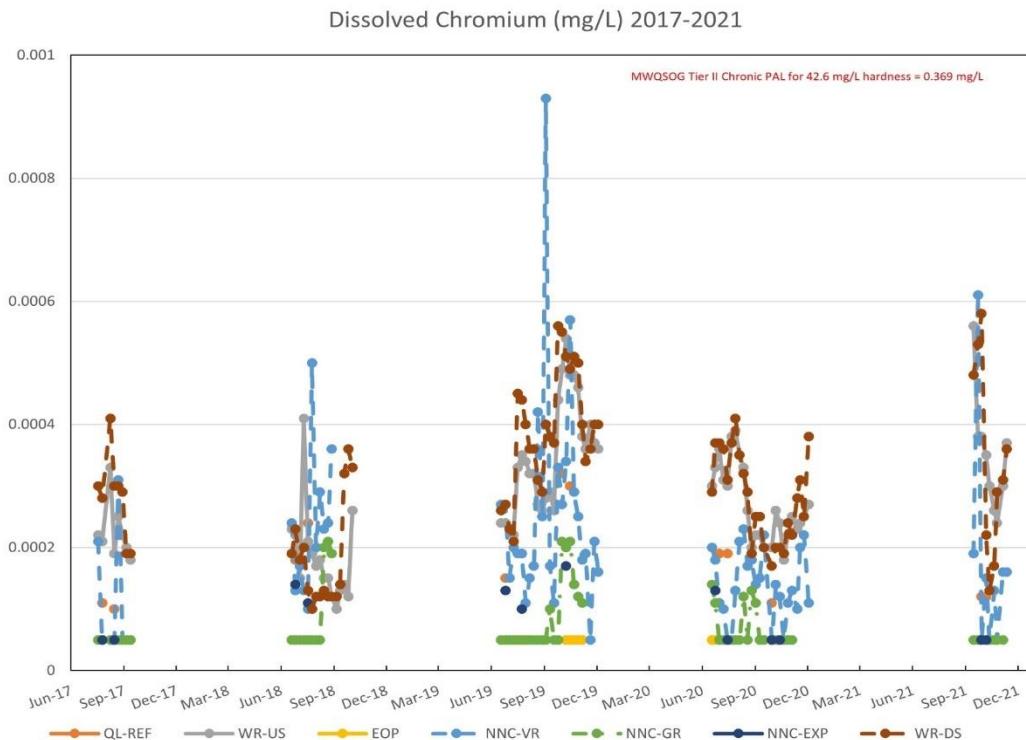


Figure A-15: True North Mine Dissolved Chromium Water Quality Results, 2017-2021

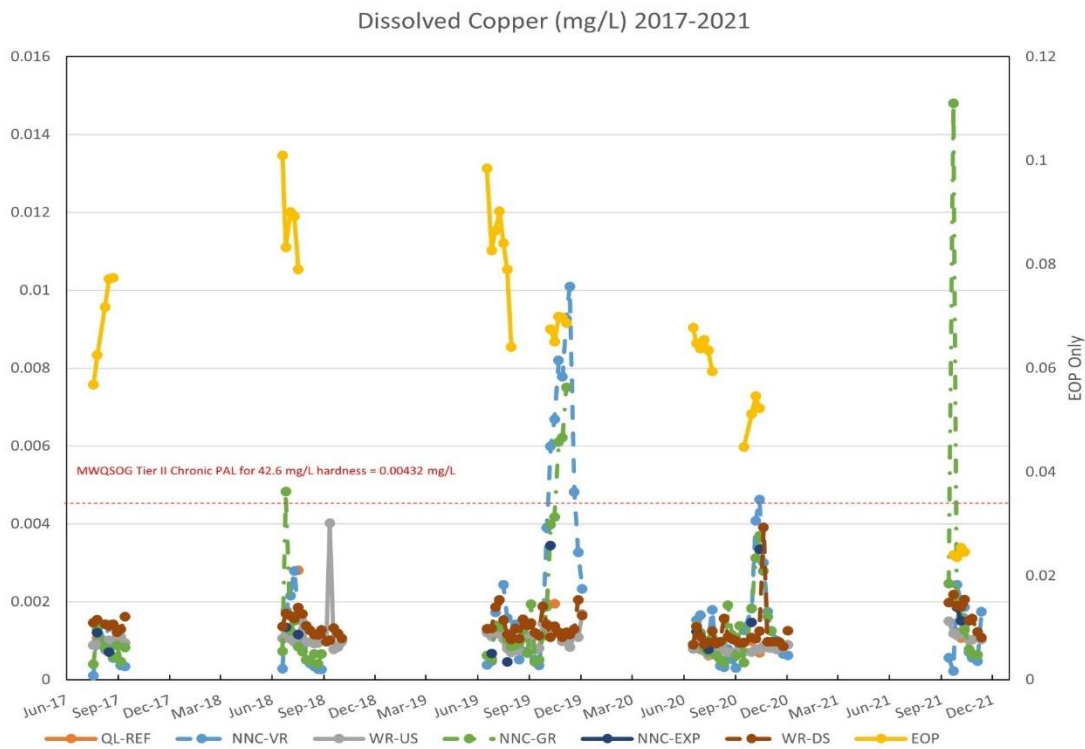


Figure A-16: True North Mine Dissolved Copper Water Quality Results, 2017-2021

True North Mine
Request for Alignment of Discharge Monitoring Requirements

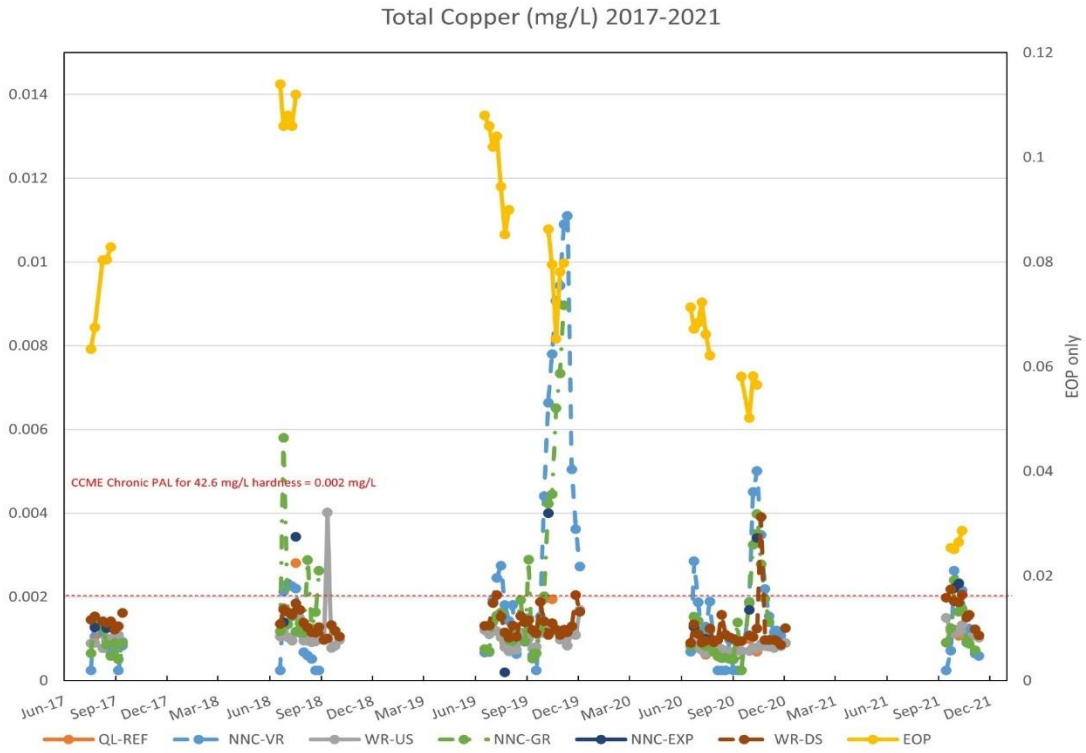


Figure A-17: True North Mine Total Copper Water Quality Results, 2017-2021

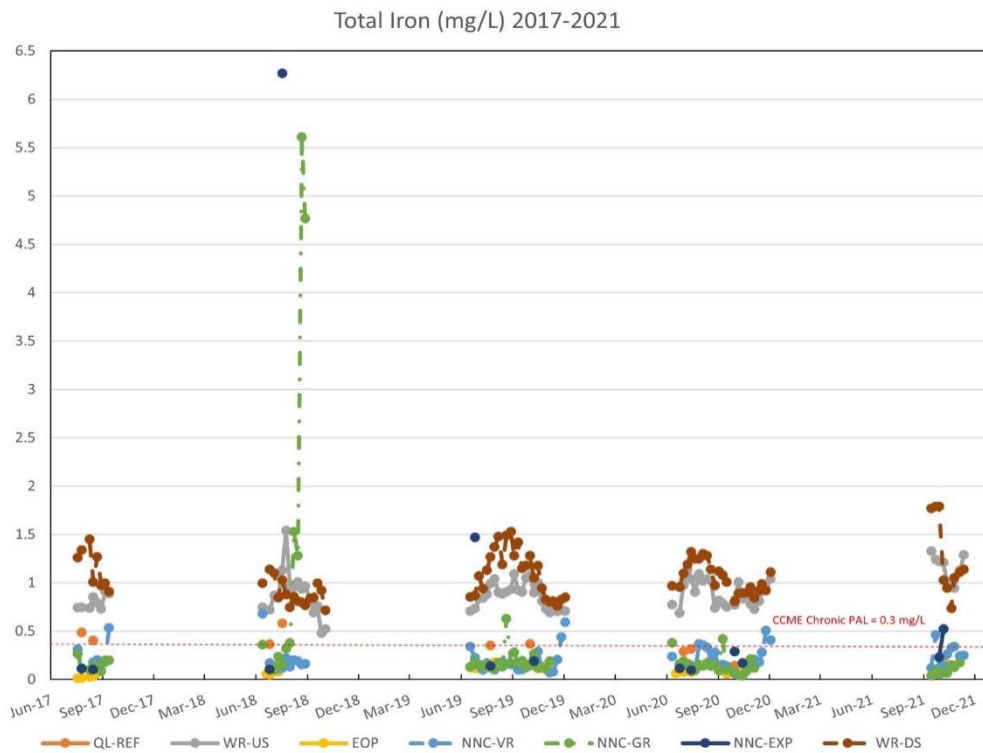


Figure A-18: True North Mine Total Iron Water Quality Results, 2017-2021

True North Mine
Request for Alignment of Discharge Monitoring Requirements

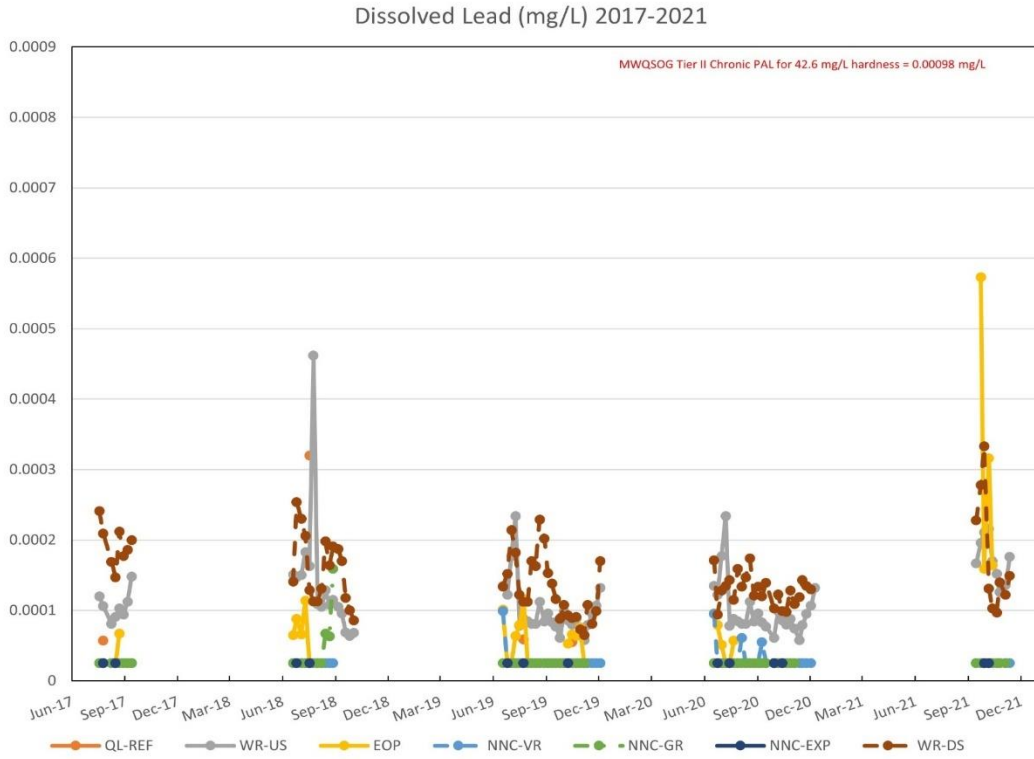


Figure A-19: True North Mine Dissolved Lead Water Quality Results, 2017-2021

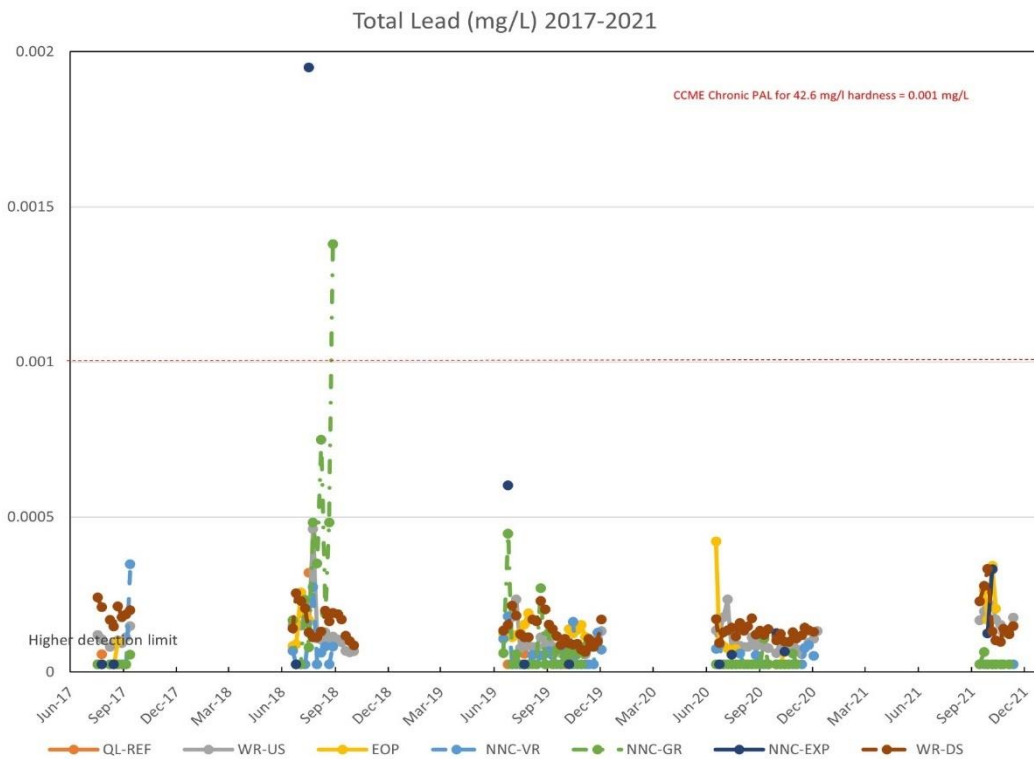


Figure A-20: True North Mine Total Lead Water Quality Results, 2017-2021

True North Mine
Request for Alignment of Discharge Monitoring Requirements

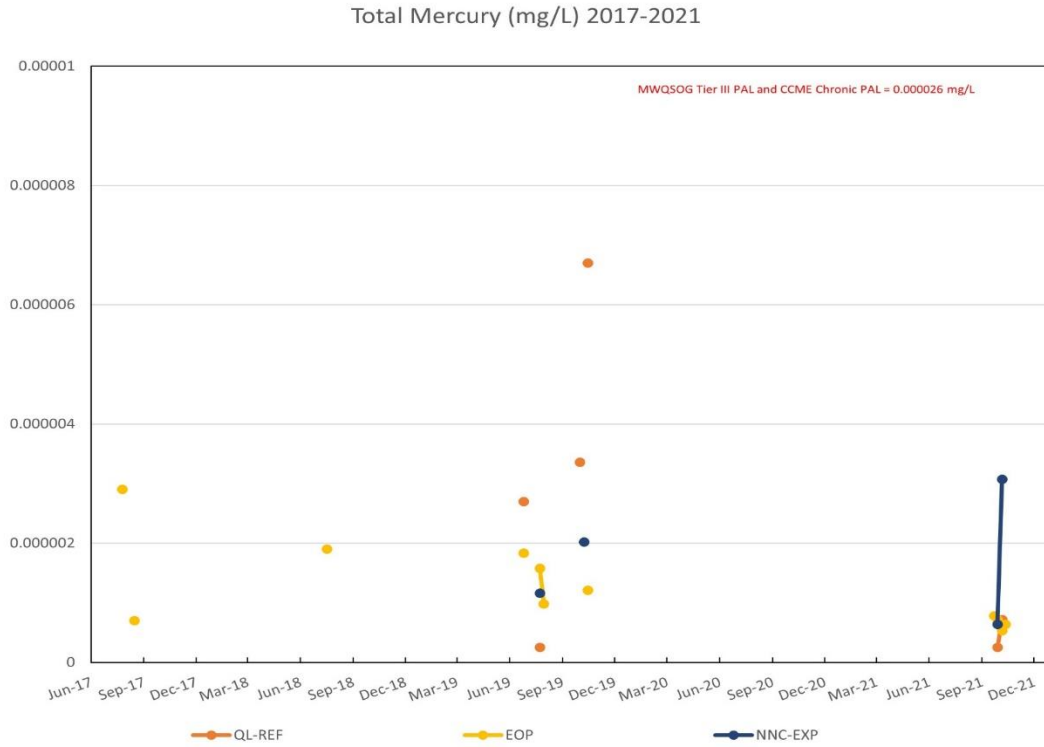


Figure A-21: True North Mine Total Mercury Water Quality Results, 2017-2021

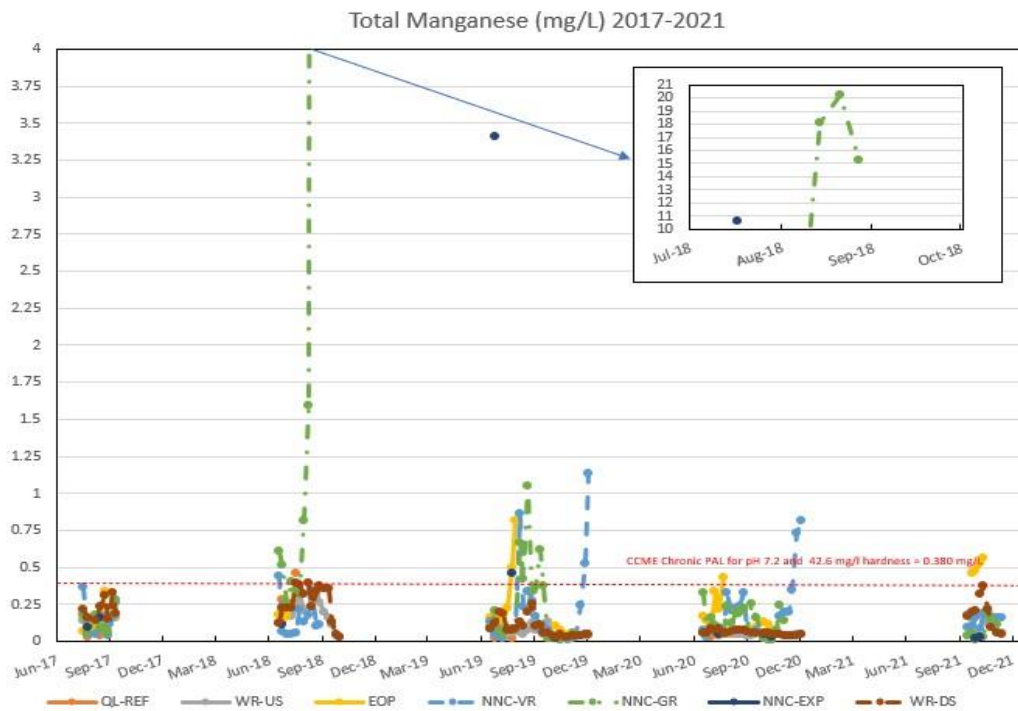


Figure A-22: True North Mine Total Manganese Water Quality Results, 2017-2021

True North Mine
Request for Alignment of Discharge Monitoring Requirements

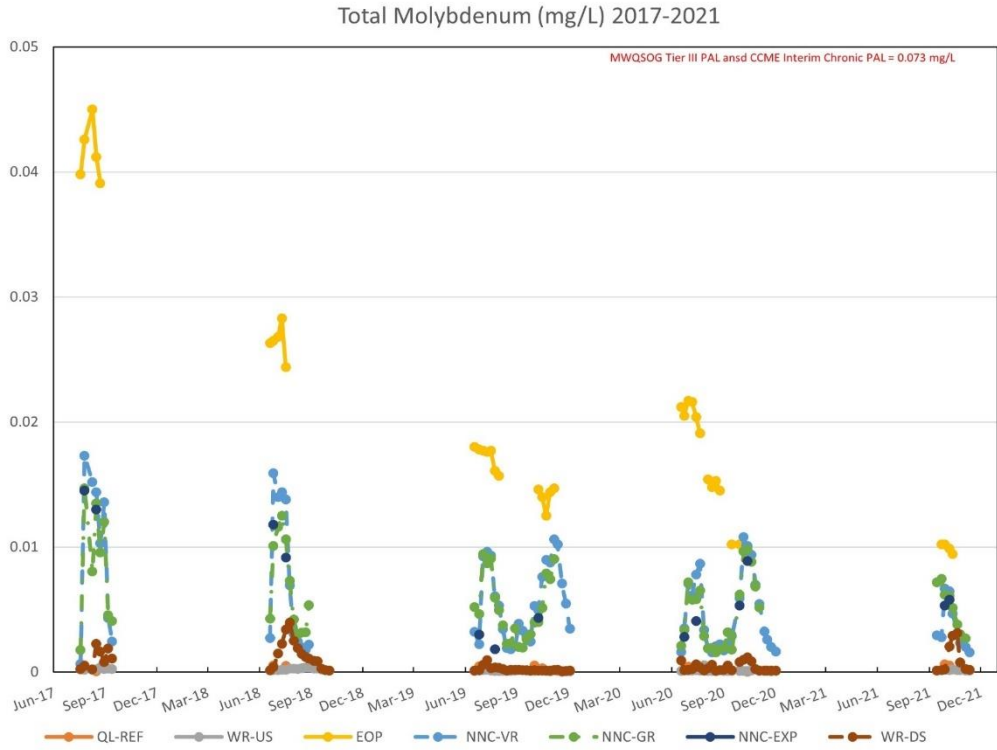


Figure A-23: True North Mine Total Molybdenum Water Quality Results, 2017-2021

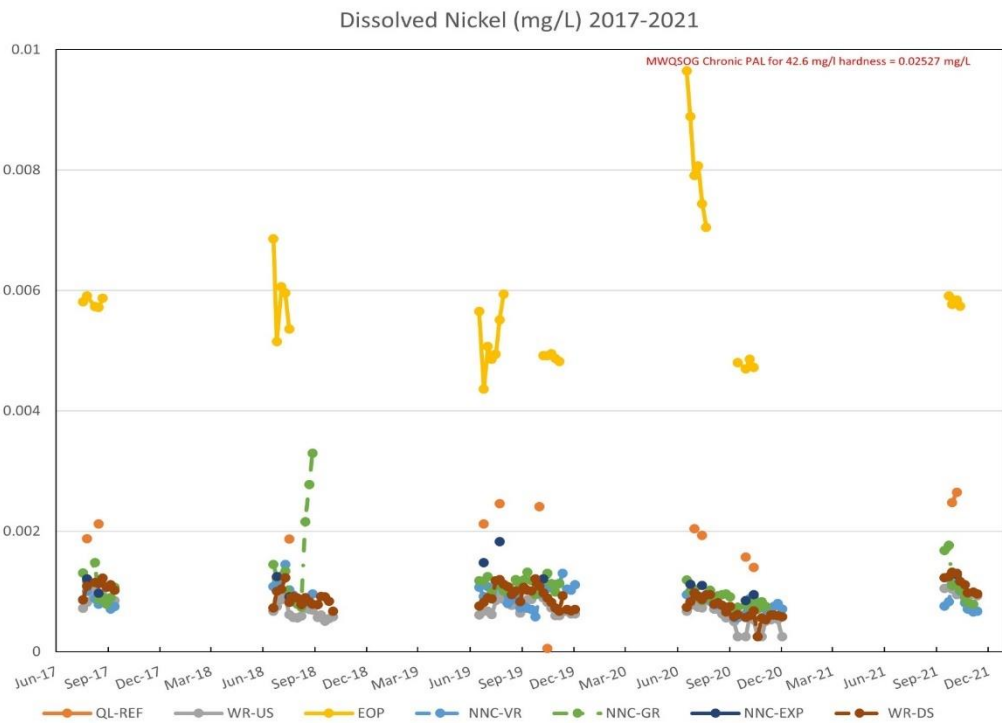


Figure A-24: True North Mine Dissolved Nickel Water Quality Results, 2017-2021

True North Mine
Request for Alignment of Discharge Monitoring Requirements

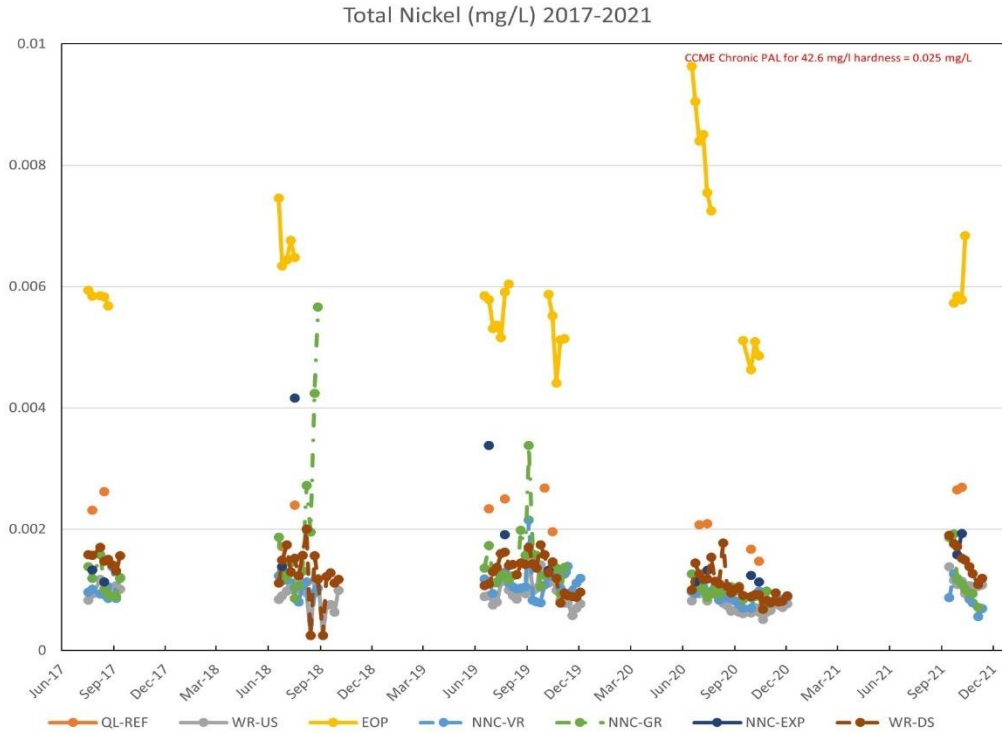


Figure A-25: True North Mine Total Nickel Water Quality Results, 2017-2021

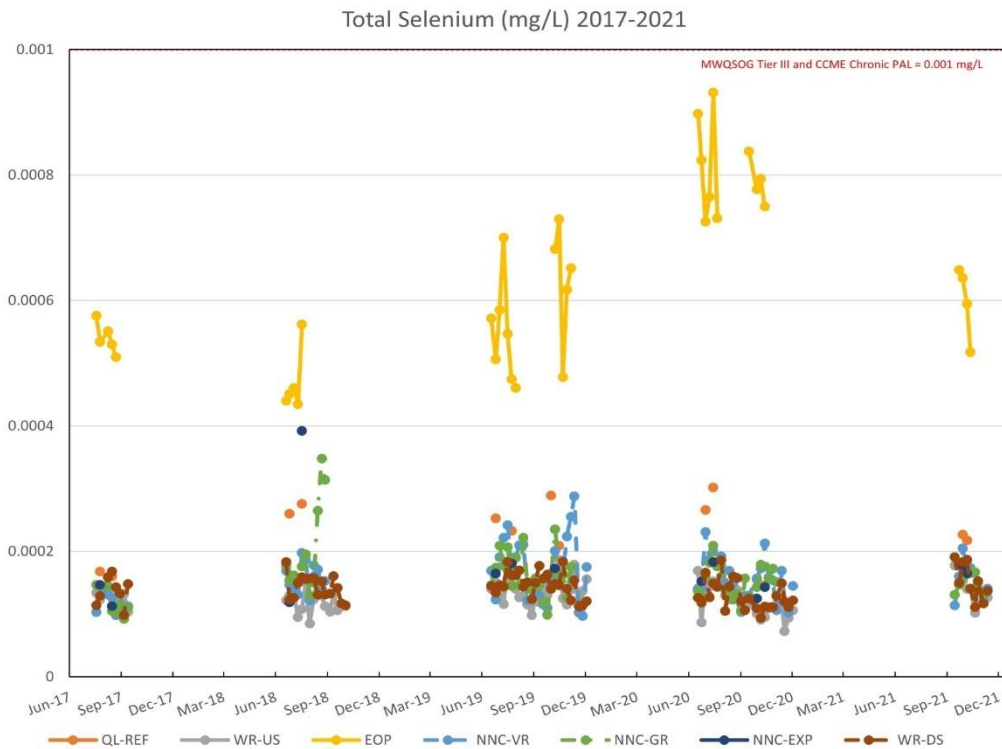


Figure A-26: True North Mine Total Selenium Water Quality Results, 2017-2021

True North Mine
Request for Alignment of Discharge Monitoring Requirements

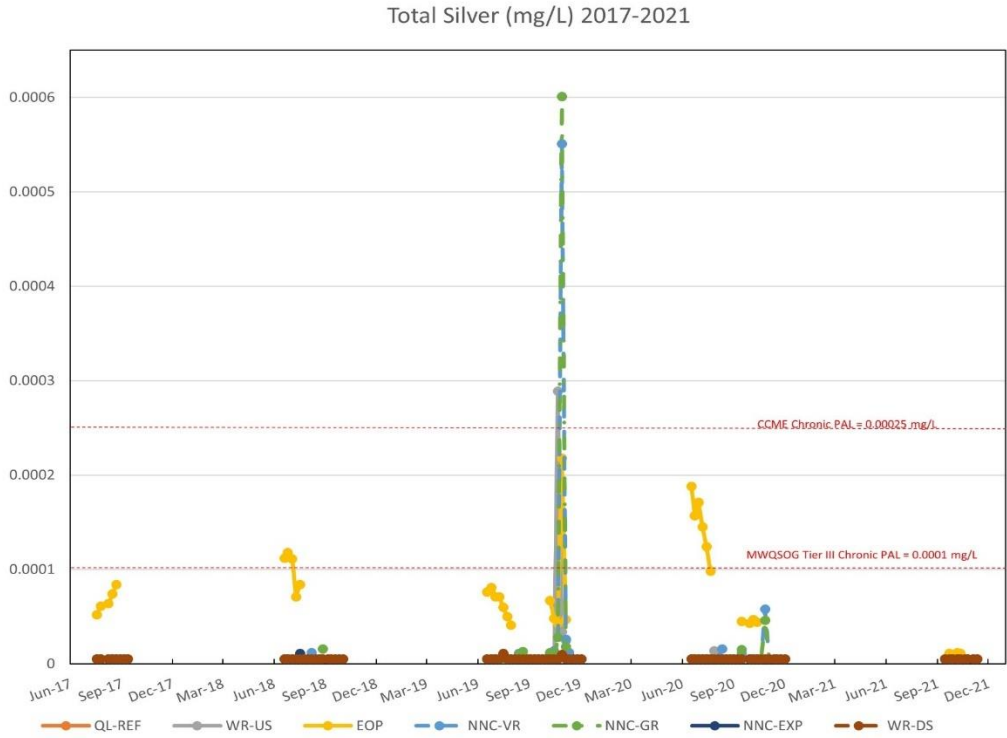


Figure A-27: True North Mine Total Silver Water Quality Results, 2017-2021

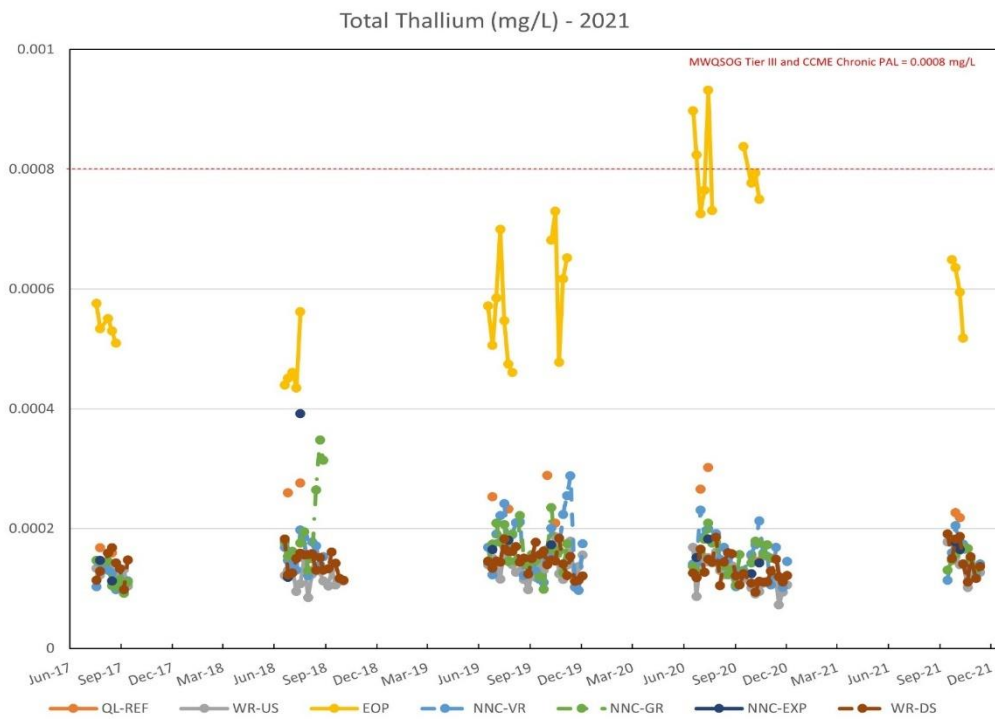


Figure A-28: True North Mine Total Thallium Water Quality Results, 2017-2021

True North Mine
Request for Alignment of Discharge Monitoring Requirements

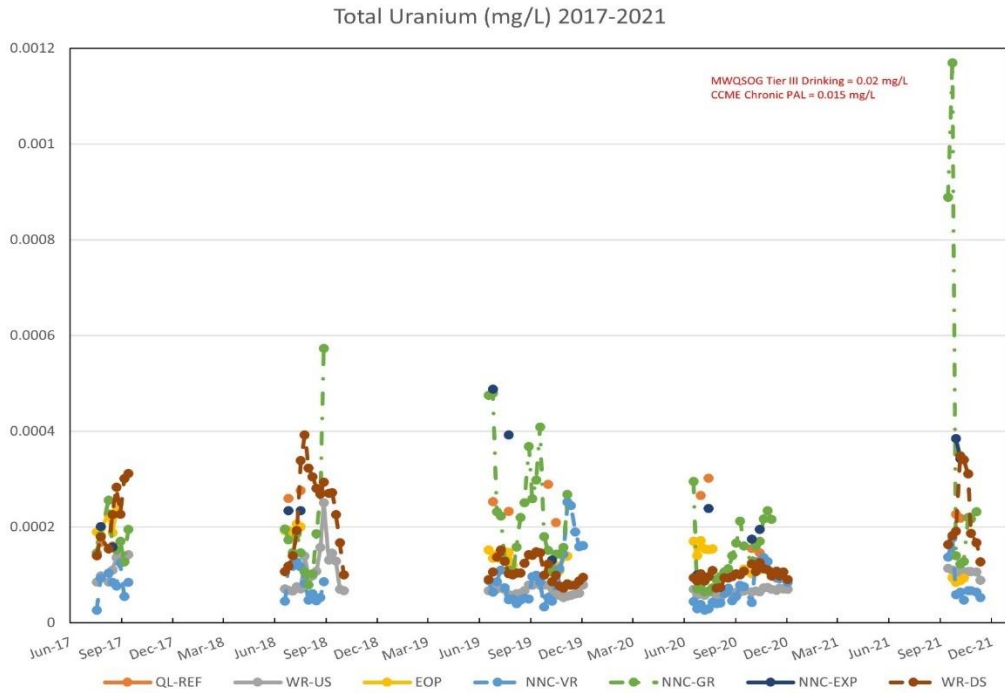


Figure A-29: True North Mine Total Uranium Water Quality Results, 2017-2021

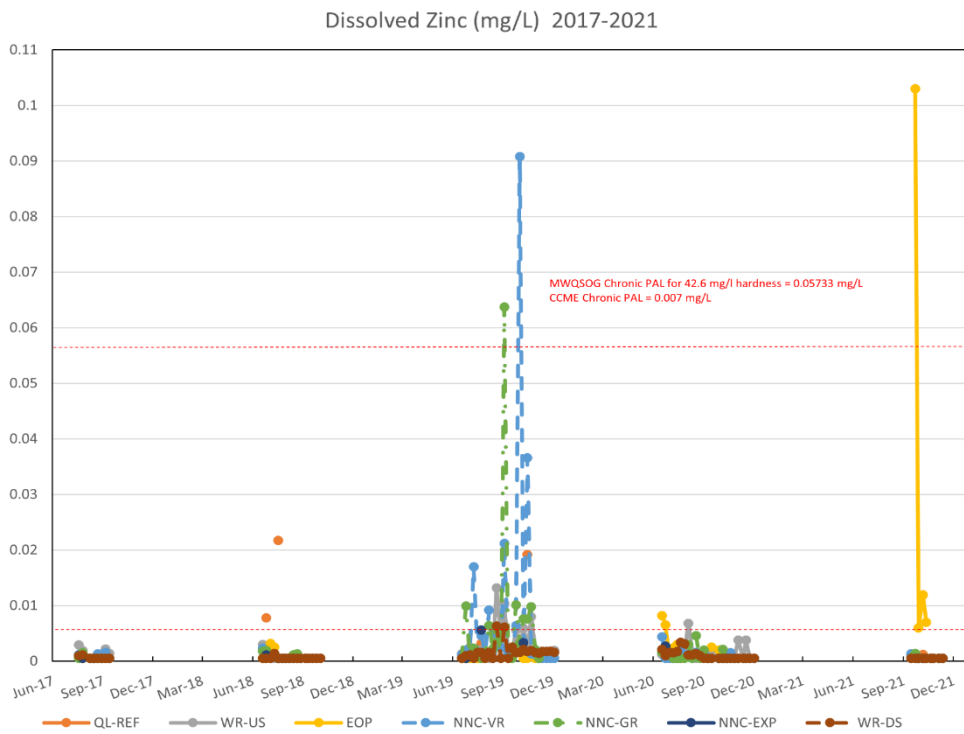


Figure A-30: True North Mine Dissolved Zinc Water Quality Results, 2017-2021

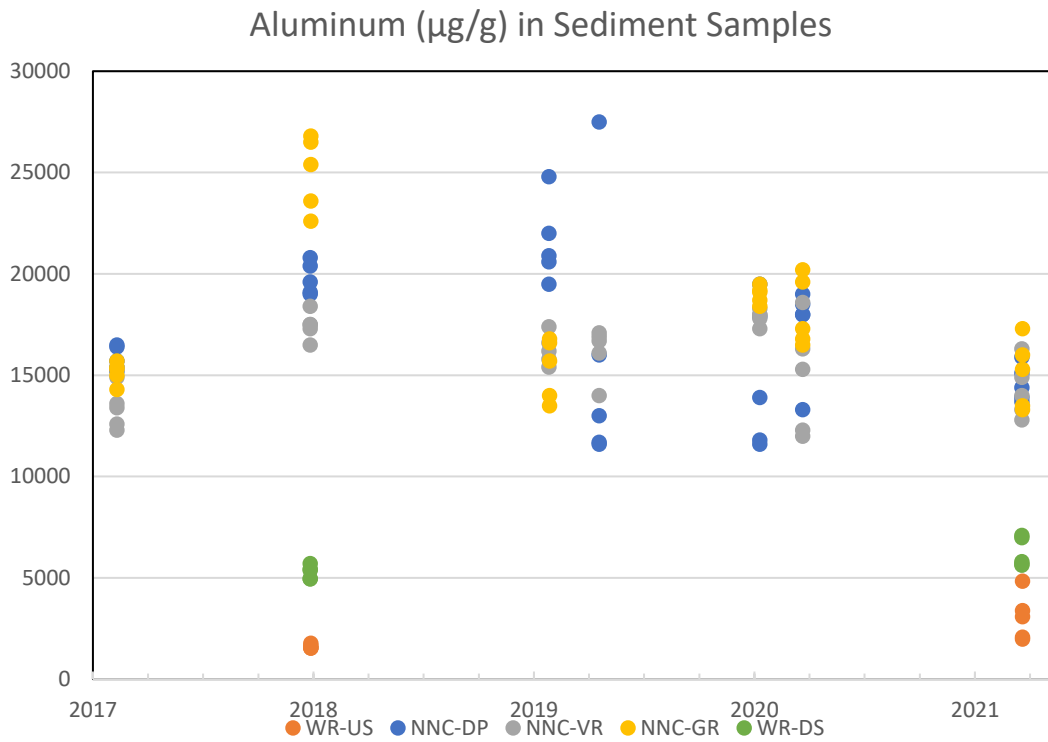


Figure A-31: True North Mine Aluminum Sediment Results, 2017-2021

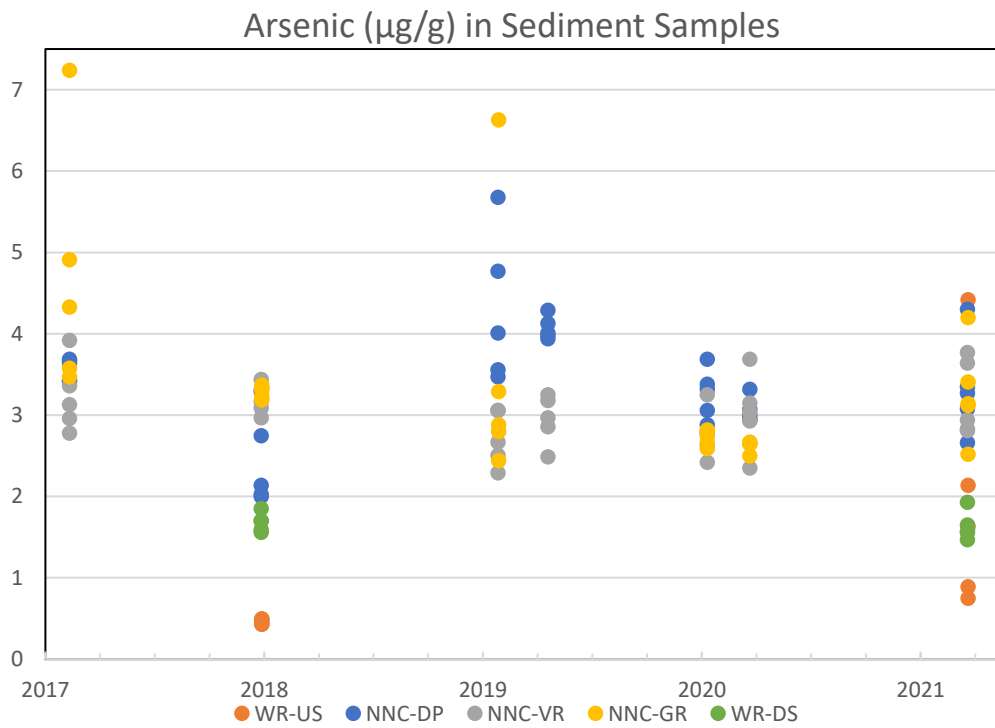


Figure A-32: True North Mine Arsenic Sediment Results, 2017-2021

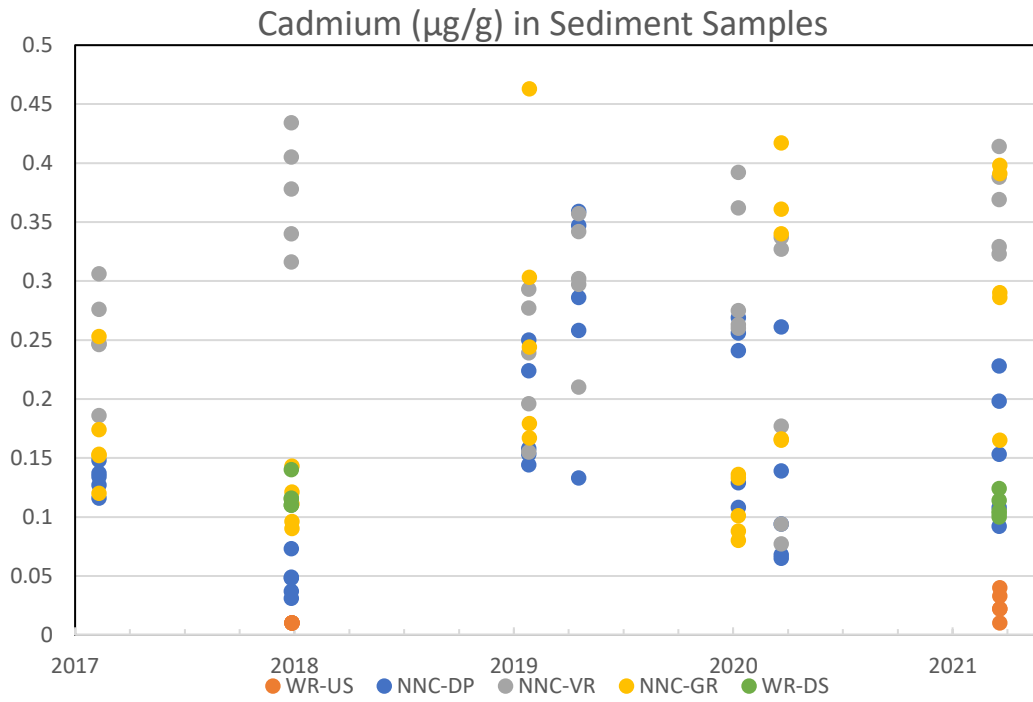


Figure A-33: True North Mine Cadmium Sediment Results, 2017-2021

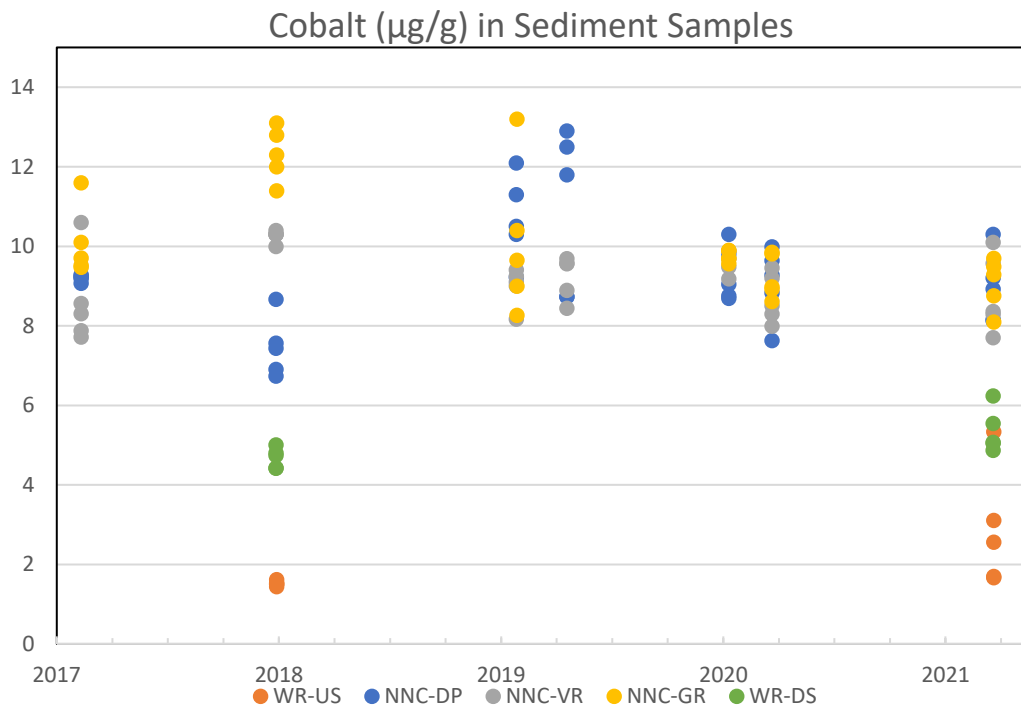


Figure A-34: True North Mine Cobalt Sediment Results, 2017-2021

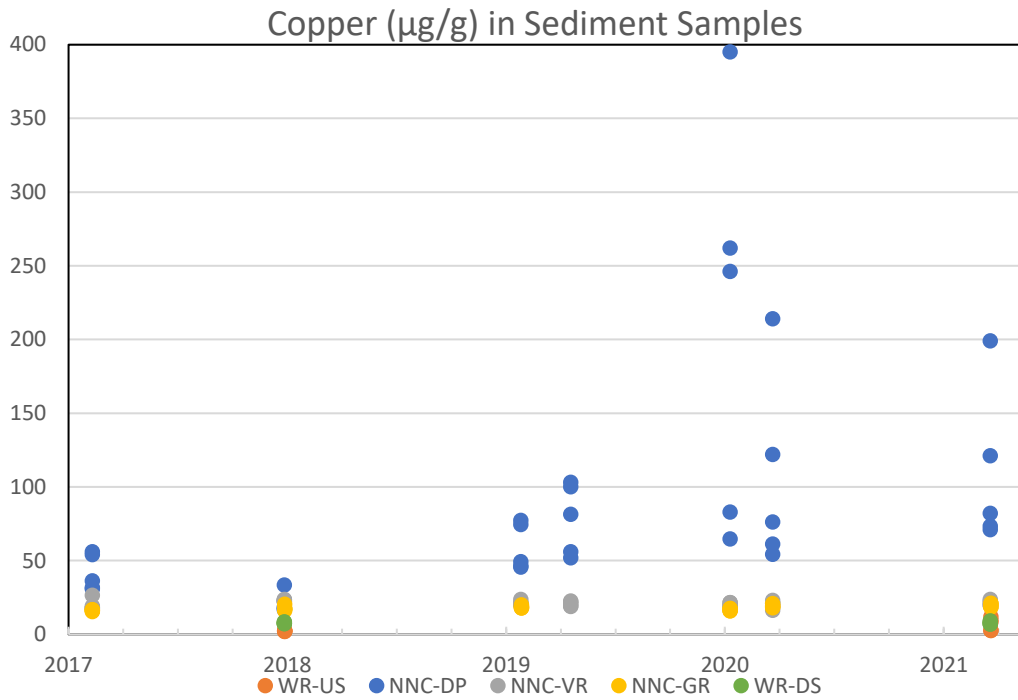


Figure A-35: True North Mine Copper Sediment Results, 2017-2021

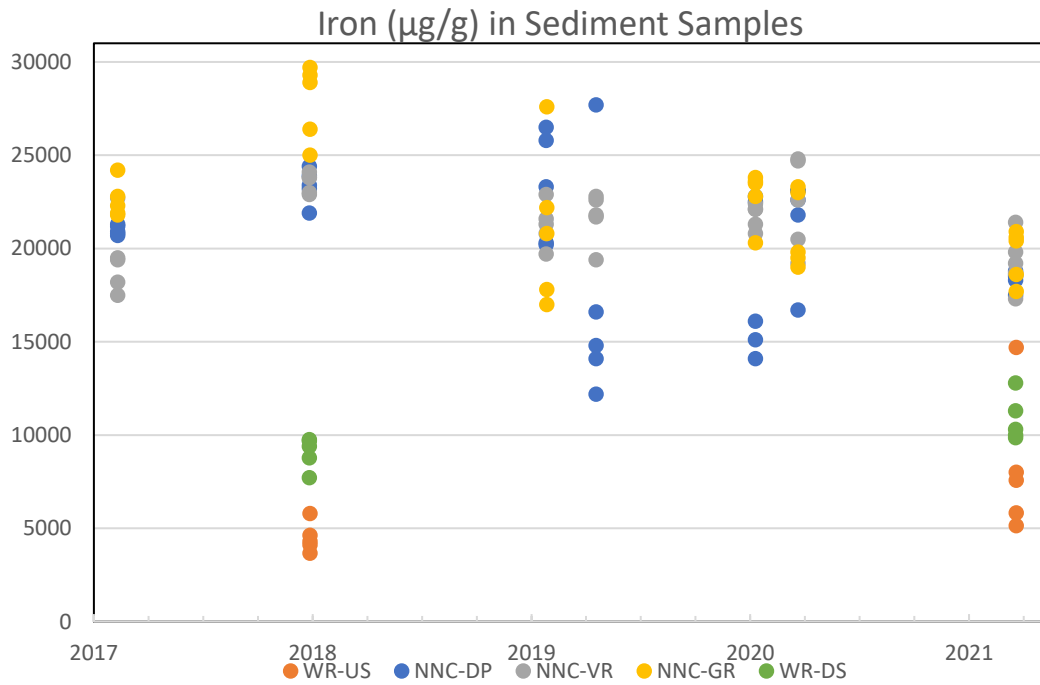


Figure A-36: True North Mine Iron Sediment Results, 2017-2021

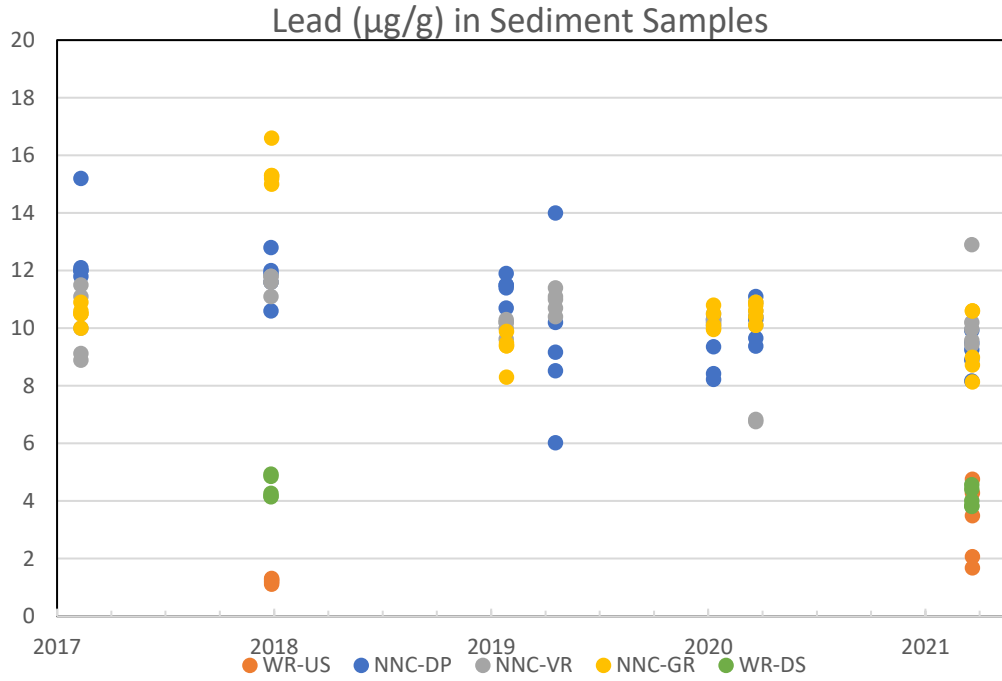


Figure A-37: True North Mine Lead Sediment Results, 2017-2021

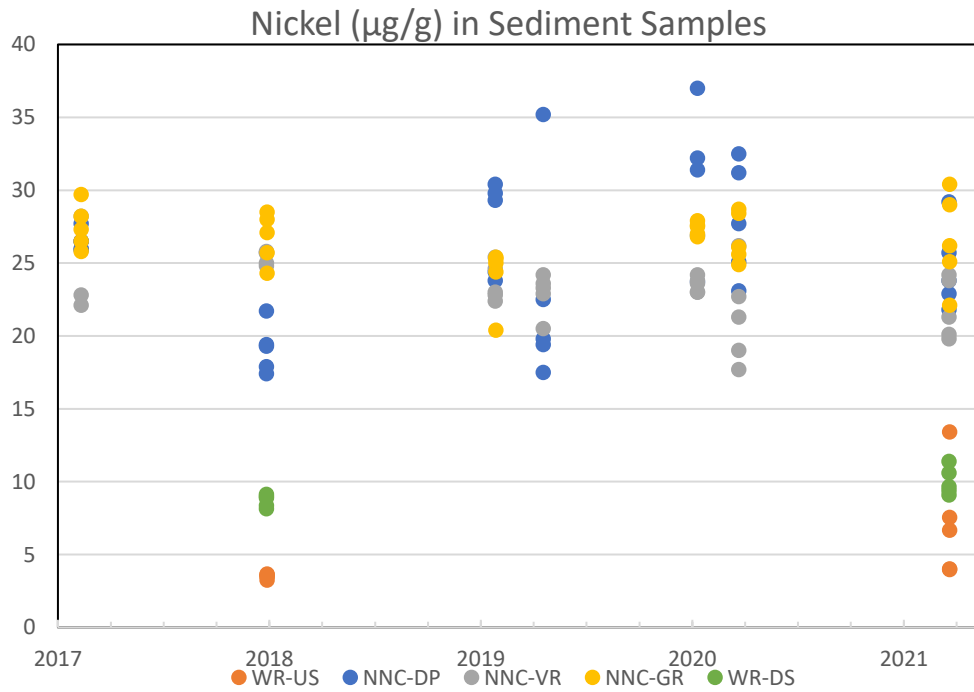


Figure A-38: True North Mine Nickel Sediment Results, 2017-2021

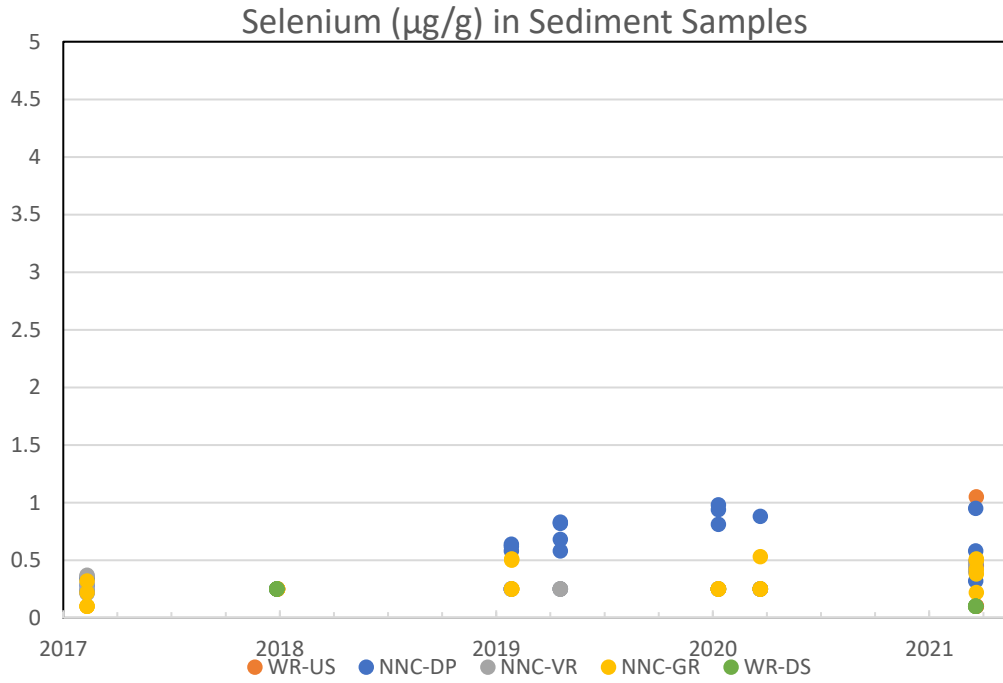


Figure A-39: True North Mine Selenium Sediment Results, 2017-2021

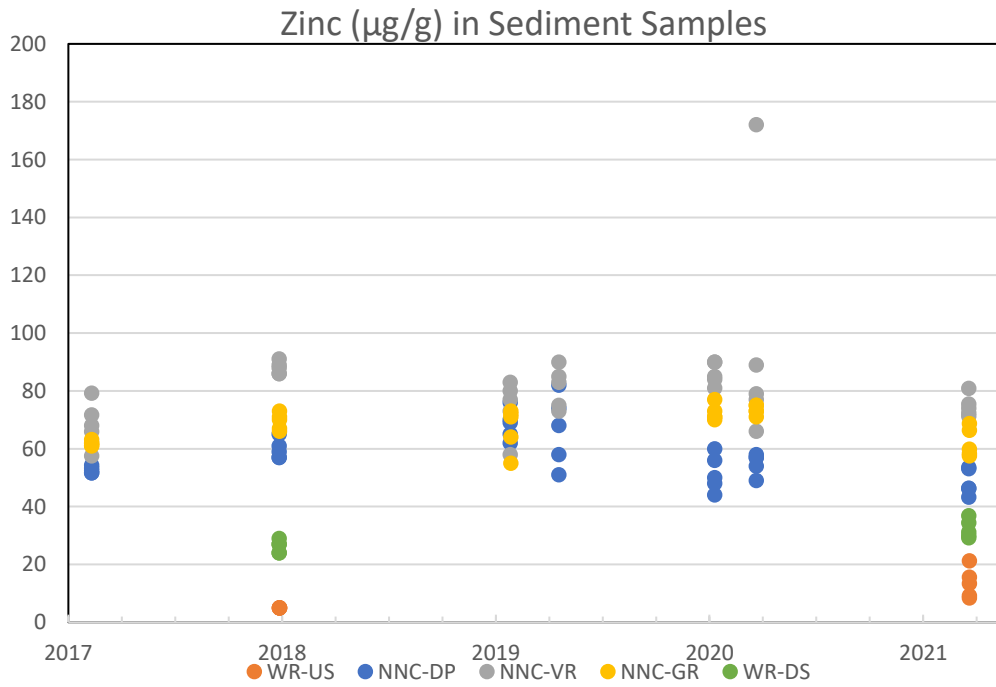


Figure A-40: True North Mine Zinc Sediment Results, 2017-2021



Appendix B: Water and Sediment Quality Results – Tabular Format



Table B-1: Polishing Pond (PP) Pre-Discharge Water Quality Results, 2017-2022

| Less than detection limit, half value | Polishing Pond | Units | PP-BOT | PP-MID | PP-SURF | PP-BOT | PP-MID | PP-SURF | PP-BOT | PP-MID | PP-SURF | PP-BOT | PP-MID | PP-SURF | PP-BOT | PP-MID | PP-SURF | PP-BOT | PP-MID | PP-SURF | PP-BOT | PP-MID | PP-SURF | 5-Yr Avg | 5-Yr Median | 5-Yr Mn | 5-Yr Max | Std Dev | No. of Samples | MWQSOG Tier II | MWQSOG Tier III | CCME Chronic PAL | MDMER Sch. 4 | |
|---------------------------------------|----------------|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|----------|----------|---------|----------------|----------------|-----------------|------------------|--------------|--|
| | | | L1950325-3 | L1950325-2 | L1950325-1 | L2095533-3 | L2095533-2 | L2095533-1 | L2276665-5 | L2276665-3 | L2276665-1 | L2344833-5 | L2344833-3 | L2344833-1 | L2447386-5 | L2447386-3 | L2447386-1 | L2498780-5 | L2498780-3 | L2498780-1 | L2498780-1 | L2625006-5 | L2625006-3 | L2625006-1 | 188 | 183 | 137 | 267 | 32 | 21 | 2.74' | | | |
| | | | 6/27/2017 | 6/27/2017 | 6/27/2017 | 5/16/2018 | 5/16/2018 | 5/16/2018 | 5/21/2019 | 5/21/2019 | 5/21/2019 | 9/10/2019 | 9/10/2019 | 9/10/2019 | 5/13/2020 | 5/13/2020 | 5/13/2020 | 9/3/2020 | 9/3/2020 | 9/3/2020 | 9/3/2020 | 9/3/2020 | 8/10/2021 | 8/10/2021 | 8/10/2021 | | | | | | | | | |
| Alkalinity, Total (as CaCO3) | mg/L | 224 | 183 | 179 | 208 | 209 | 215 | 267 | 220 | 234 | 182 | 184 | 185 | 196 | 158 | 160 | 165 | 171 | 170 | 160 | 142 | 137 | 188 | 183 | 137 | 267 | 32 | 21 | | | | | | |
| Ammonia, Total (as N) | mg/L | 0.93 | 0.378 | 0.357 | 0.19 | 0.19 | 0.19 | 0.072 | 0.022 | 0.043 | 0.223 | 0.223 | 0.214 | 1.47 | 0.68 | 0.65 | 0.171 | 0.156 | 0.136 | 0.64 | 0.078 | 0.076 | 0.338 | 0.190 | 0.022 | 1.47 | 0.36 | 21 | 2.74' | | | | | |
| Bicarbonate (HCO3) | mg/L | 274 | 223 | 217 | 243 | 244 | 246 | 326 | 244 | 261 | 222 | 224 | 226 | 239 | 182 | 185 | 202 | 201 | 202 | 195 | 173 | 156 | 223 | 223 | 156 | 326 | 38 | 21 | | | | | | |
| Carbonate (CO3) | mg/L | 0.3 | 0.3 | 0.3 | 5.28 | 5.4 | 8.16 | 0.3 | 11.8 | 11.9 | 0.3 | 0.3 | 0.3 | 0.3 | 5.4 | 5.04 | <0.60 | 3.6 | 2.64 | 0.3 | 0.3 | 5.76 | 3.40 | 1.47 | 0.3 | 11.9 | 3.83 | 21 | | 250 | 120 | | | |
| Chloride (Cl) | mg/L | 128 | 125 | 124 | 114 | 114 | 114 | 177 | 151 | 153 | 160 | 159 | 159 | 125 | 106 | 106 | 80.6 | 80.5 | 80.2 | 65.1 | 66.6 | 67.4 | 116.9 | 114 | 65.1 | 177 | 34 | 21 | | | | | | |
| Conductivity | umhos/cm | 1280 | 1230 | 1220 | 1130 | 1110 | 1110 | 1620 | 1400 | 1410 | 1400 | 1410 | 1400 | 1410 | 1210 | 1220 | 1120 | 1120 | 1130 | 1240 | 1260 | 1250 | 1270 | 1240 | 1110 | 1620 | 138 | 21 | | | | | | |
| Cyanide, Free | mg/L | 0.0025 | 0.0025 | 0.0025 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0059 | 0.0062 | 0.0062 | 0.0039 | 0.0023 | 0.0021 | 0.0016 | 0.0024 | 0.0038 | 0.0005 | 0.0011 | 0.0018 | 0.00230 | 0.0021 | 0.00050 | 0.0062 | 0.002 | 21 | 0.0052 | | | | |
| Cyanide, Total | mg/L | 0.009 | 0.0022 | 0.0017 | 0.0527 | 0.0525 | 0.0532 | 0.0481 | 0.0016 | 0.0016 | 0.0196 | 0.0189 | 0.0188 | 0.261 | 0.165 | 0.164 | 0.0561 | 0.0548 | 0.061 | 0.0723 | 0.0067 | 0.0029 | 0.0535 | 0.0481 | 0.0016 | 0.261 | 0.067 | 21 | | | | 1 | | |
| Cyanide, Weak Acid Diss | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0011 | 0.0005 | 0.0005 | 0.006 | 0.006 | 0.0063 | 0.0041 | 0.0027 | 0.003 | 0.0023 | 0.0031 | 0.004 | 0.0005 | 0.0005 | 0.0032 | 0.0022 | 0.0011 | 0.0005 | 0.0063 | 0.002 | 21 | | | | | | |
| Dissolved Organic Carbon | mg/L | 9.86 | 8.7 | 8.65 | | | | | | | | | | | | | | | | | | | 9.1 | 8.7 | 8.65 | 9.86 | 0.68 | 3 | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | | | | 9.54 | 9.55 | 9.49 | | | | 7.96 | 7.98 | 7.3 | | | | | | | | 1.24 | 5.11 | 9.35 | 7.50 | 7.98 | 1.24 | 9.55 | 2.76 | 9 | 5.5-6.5 | | | | |
| EC, Client Supplied | umhos/cm | 1380 | 1360 | 1370 | 1140 | 1150 | 1160 | 1530 | 1350 | 1360 | 1430 | 1420 | 1410 | 1380 | 1220 | 1220 | 1180 | 1130 | 1150 | 1180 | 1170 | 1170 | 1279 | 1220 | 1130 | 1530 | 124 | 21 | | | | | | |
| Fluoride (F) | mg/L | 0.11 | 0.113 | 0.11 | 0.111 | 0.113 | 0.109 | 0.14 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.094 | 0.086 | 0.087 | 0.091 | 0.087 | 0.092 | 0.05 | 0.05 | 0.05 | 0.102 | 0.11 | 0.05 | 0.14 | 0.027 | 21 | | | 0.12 | | | |
| Hardness (as CaCO3) | mg/L | 293 | 294 | 297 | 233 | 235 | 230 | 362 | 300 | 301 | 346 | 345 | 343 | 395 | 334 | 334 | 346 | 345 | 347 | 446 | 454 | 457 | 335 | 343 | 230 | 457 | 65 | 21 | | | | | | |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0 | 21 | | | | | | |
| Nitrate (as N) | mg/L | 4.22 | 9.81 | 9.72 | 3.22 | 3.19 | 3.19 | 0.75 | 0.05 | 0.05 | 1.11 | 1.11 | 1.11 | 0.922 | 0.936 | 0.933 | 0.386 | 0.34 | 0.339 | 0.05 | 0.05 | 0.05 | 1.98 | 0.933 | 0.05 | 9.81 | 2.87 | 21 | 2.93 | 13 | | | | |
| Nitrate and Nitrite as N | mg/L | 4.32 | 9.88 | 9.79 | 3.24 | 3.22 | 3.22 | 0.75 | 0.05 | 0.05 | 1.21 | 1.21 | 1.21 | 0.922 | 0.936 | 0.933 | 0.466 | 0.422 | 0.421 | 0.11 | 0.11 | 0.11 | 2.028 | 0.933 | 0.05 | 9.88 | 2.87 | 21 | 10 | | | | | |
| Nitrite (as N) | mg/L | 0.1 | 0.069 | 0.067 | 0.029 | 0.031 | 0.027 | 0.025 | 0.025 | 0.025 | 0.097 | 0.099 | 0.098 | 0.01 | 0.01 | 0.01 | 0.08 | 0.082 | 0.082 | 0.025 | 0.025 | 0.025 | 0.050 | 0.029 | 0.01 | 0.1 | 0.034 | 21 | 0.06 | 0.06 | 0.06 | | | |
| pH | pH units | 7.63 | 8.23 | 8.3 | 8.45 | 8.45 | 8.46 | 8.1 | 8.64 | 8.61 | 8.19 | 8.19 | 8.19 | 7.74 | 8.4 | 8.4 | 8.28 | 8.31 | 8.31 | 8.02 | 8.18 | 8.42 | 8.26 | 8.30 | 7.63 | 8.64 | 0.247 | 21 | 6.5-9.0 | | | 6.0-9.5 | | |
| pH, Client Supplied | pH | 7.56 | 8.36 | 8.43 | 8.72 | 8.71 | 8.6 | 7.13 | 8.57 | 8.63 | 8.02 | 7.99 | 7.9 | 7.58 | 8.38 | 8.44 | 7.54 | 6.98 | 7.98 | 7.44 | 7.96 | 8.9 | 8.09 | 8.02 | 6.98 | 8.9 | 0.553 | 21 | 6.5-9.0 | | | 6.0-9.5 | | |
| Phosphorus (P)-Total | mg/L | 0.065 | 0.031 | 0.03 | 0.0889 | 0.0885 | 0.0906 | 0.198 | 0.0537 | 0.0374 | 0.146 | 0.147 | 0.144 | 0.124 | 0.0696 | 0.0684 | 0.0961 | 0.0895 | 0.0824 | 0.0688 | 0.0612 | 0.0805 | 0.0886 | 0.0824 | 0.03 | 0.198 | 0.043 | 21 | | | | | | |
| Ra-226 | Bq/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.37 | |
| Sulfate (SO4) | mg/L | 277 | 276 | 277 | 187 | 185 | 187 | 327 | 282 | 284 | 309 | 307 | 307 | 372 | 320 | 319 | 330 | 331 | 332 | 384 | 397 | 417 | 305.10 | 309 | 185 | 417 | 63 | 21 | | | | | | |
| TDS (Calculated) | mg/L | 852 | 853 | 845 | 686 | 687 | 690 | 1020 | 874 | 881 | 897 | 894 | 893 | 912 | 772 | 772 | 749 | 751 | 750 | 810 | 814 | 830 | 820.6 | 830 | 686 | 1020 | 86 | 21 | | | | | | |
| Temperature, Client Provided | Degree C | 11.8 | 17.7 | 17.9 | 11 | 11 | 12.8 | 6.5 | 13.9 | 16.3 | 15.4 | 15.5 | 15.6 | 5.9 | 7.5 | 7.8 | 17.5 | 17.7 | 17.4 | 24.1 | 22.1 | 22.7 | 14.7 | 15.5 | 5.9 | 24.1 | 5.2 | 21 | | | | | | |
| Total Kjeldahl Nitrogen | mg/L | 2.5 | 1.52 | 1.64 | 1.71 | 1.66 | 1.67 | 1.42 | 1.55 | 1.23 | 1.2 | 1.32 | 1.2 | 2.65 | 2.08 | 2.09 | 1.31 | 1.35 | 1.31 | 1.82 | 1.3 | 1.44 | 1.6 | 1.52 | 1.2 | 2.65 | 0.41 | 21 | | | | | | |
| Total Suspended Solids | mg/L | 11 | 6 | 6 | 5.1 | 4.5 | 4 | 7.6 | 1 | 1 | 1 | 1 | 3.2 | 4.5 | 9.9 | 9.5 | 8.8 | 6.2 | 6.8 | 4.3 | 4.6 | 7.3 | 5.4 | 5.1 | 1 | 11 | 3.0 | 21 | +5' | | | 15 | | |
| Turbidity | NTU | 6.66 | 4.53 | 4.19 | 2.91 | 2.84 | 2.93 | 4.55 | 5.51 | 2.6 | 1.18 | 1.04 | 0.99 | 6.01 | 7.28 | 7.92 | 3.51 | 3.15 | 3.19 | 11.9 | 3.99 | 4.51 | 4.35 | 3.99 | 0.99 | 11.9 | 2.6 | 21 | | | | | | |
| Aluminum (Al)-Total | mg/L | 0.0409 | 0.0382 | 0.0268 | 0.0449 | 0.041 | 0.0478 | 0.0126 | 0.0153 | 0.0147 | 0.0318 | 0.0236 | 0.0247 | 0.0722 | 0.0562 | 0.0391 | 0.0129 | 0.0075 | 0.0109 | 0.0097 | 0.0078 | 0.0076 | 0.028 | 0.025 | 0.008 | 0.072 | 0.018 | 21 | | | 0.1 | | | |
| Antimony (Sb)-Total | mg/L | 0.00047 | 0.00054 | 0.00054 | 0.00042 | 0.00042 | 0.00041 | 0.0002 | 0.00021 | 0.0002 | 0.00023 | 0.00023 | 0.00025 | 0.00032 | 0.0003 | 0.0003 | 0.00023 | 0.00023 | 0.00024 | 0.00014 | 0.0002 | 0.00021 | 0.00030 | 0.00024 | 0.00014 | 0.00054 | 0.00012 | 21 | | | | | | |
| Arsenic (As)-Total | mg/L | 0.00098 | 0.00086 | 0.00091 | 0.0014 | 0.0014 | 0.00151 | 0.00164 | 0.00148 | 0.00142 | 0.00204 | 0.00204 | 0.00211 | 0.00139 | 0.00118 | 0.00118 | 0.00135 | 0.00137 | 0.00138 | 0.00137 | 0.00123 | 0.00121 | 0.00140 | 0.00138 | 0.00086 | 0.00211 | 0.00034 | 21 | | | 0.005 | 0.3 | | |
| Barium (Ba)-Total | mg/L | 0.0431 | 0.0326 | 0.0306 | 0.0253 | 0.0233 | 0.0266 | 0.039 | 0.0286 | 0.0278 | 0.0342 | 0.0339 | 0.0339 | 0.037 | 0.027 | 0.0269 | 0.0276 | 0.0272 | 0.0276 | 0.0575 | 0.0286 | 0.0268 | 0.0317 | 0.0286 | 0.0233 | 0.0575 | 0.00771 | 21 | | | | | | |
| Beryllium (Be)-Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00006 | 0.00005 | 0.00005 | 0.0001 | 0.00002 | 21 | | | | | | |
| Bismuth (Bi)-Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000036 | 0.000025 | 0.000025 | 0.0001 | 0.000027 | 21 | | | | | | |
| Boron (B)-Total | mg/L | 0.19 | 0.199 | 0.192 | 0.119 | 0.148 | 0.147 | 0.126 | 0.115 | 0.111 | 0.126 | 0.125 | 0.123 | 0.103 | 0.089 | 0.089 | 0.082 | 0.081 | 0.092 | 0.078 | 0.077 | 0.075 | 0.1184 | 0.115 | 0.075 | 0.199 | 0.03847 | 21 | | 1.5 | | | | |
| Cadmium (Cd)-Total | mg/L | 0.000029 | 0.000013 | 0.000015 | 0.0000089 | 0.0000127 | 0.0000122 | 0.0000099 | 0.0000083 | 0.0000061 | 0.0000078 | 0.0000057 | 0.0000092 | 0.0000169 | 0.0000124 | 0.0000157 | 0.0000087 | 0.0000068 | 0.0000083 | 0.0000064 | 0.0000065 | 0.0000051 | 0.000011 | 0.000009 | 0.0000051 | 0.000029 | 0.00001 | 21 | | | 0.0008' | | | |
| Calcium (Ca)-Total | mg/L | 69 | 69.1 | 66.4 | 44.6 | 52.3 | 46.3 | 65.2 | 54.7 | 53.2 | 66.3 | 64.2 | 64.2 | 81.4 | 67.7 | 70.1 | 74.8 | 71.9 | 73 | 72.8 | 69.2 | 69.1 | 65.0 | 67.7 | 44.6 | 81.4 | 9.5 | 21 | | | | | | |
| Cesium (Cs)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00003 | 0.000036 | 0.000029 | 0.000038 | 0.000041 | 0.00004 | 0.000135 | 0.000133 | 0.000129 | 0.000028 | 0.00002 | 0.000005 | 0.000027 | 0.000027 | 0.000028 | 0.000083 | 0.000051 | 0.000045 | 0.000051</ | | | | | | | | | | | |



Table B-2: End of Pipe (EOP) Discharge Water Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| End of Pipe | | L1960980-1 | L1964760-1 | L1971728-1 | L1976412-1 | L1979675-1 | L2114945-1 | L2119076-1 | L2122624-1 | L2126643-1 | L2130724-1 | L2294147-1 | L2298713-1 | L2302403-1 | L2306799-1 | L2311297-1 | L2315638-1 | L2319872-1 | L2362279-1 | L2365580-2 | L2369900-1 | L2373901-1 | L2377639-1 |
| Analyte | Units | 7/18/2017 | 7/25/2017 | 8/8/2017 | 8/15/2017 | 8/22/2017 | 6/19/2018 | 6/26/2018 | 7/3/2018 | 7/10/2018 | 7/17/2018 | 6/18/2019 | 6/25/2019 | 7/2/2019 | 7/9/2019 | 7/16/2019 | 7/23/2019 | 7/30/2019 | 10/8/2019 | 10/15/2019 | 10/22/2019 | 10/29/2019 | 11/5/2019 |
| Alkalinity, Total (as CaCO3) | mg/L | 198 | 189 | 198 | 199 | 218 | 219 | 223 | 228 | 242 | 259 | 216 | 218 | 224 | 224 | 227 | 220 | 228 | 199 | 186 | 194 | 184 | 186 |
| Ammonia, Total (as N) | mg/L | 0.073 | 0.149 | 0.046 | 0.049 | 0.273 | 0.199 | 0.11 | 0.104 | 0.088 | 0.073 | 0.16 | 0.086 | 0.099 | 0.08 | 0.057 | 0.172 | 0.209 | 0.082 | 0.061 | 0.064 | 0.04 | 0.036 |
| Bicarbonate (HCO3) | mg/L | 241 | 230 | 241 | 236 | 266 | 262 | 258 | 264 | 277 | 303 | 263 | 261 | 273 | 262 | 268 | 263 | 273 | 243 | 227 | 236 | 224 | 226 |
| Carbonate (CO3) | mg/L | 0.15 | 0.15 | 0.15 | 3.24 | 0.15 | 2.88 | 6.84 | 7.2 | 8.76 | 6.6 | 0.3 | 2.52 | 0.3 | 5.88 | 4.56 | 2.88 | 2.52 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Chloride (Cl) | mg/L | 129 | 126 | 128 | 130 | 130 | 123 | 124 | 127 | 137 | 135 | 150 | 158 | 153 | 164 | 161 | 161 | 162 | 140 | 150 | 154 | 147 | 147 |
| Conductivity | umhos/cm | 1220 | 1290 | 1270 | 1280 | 1220 | 1160 | 1170 | 1190 | 1250 | 1260 | 1420 | 1390 | 1400 | 1400 | 1380 | 1420 | 1490 | 1360 | 1300 | 1290 | 1240 | 1270 |
| Cyanide, Free | mg/L | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.0025 | 0.00025 | 0.00025 | 0.0026 | 0.0052 | 0.0136 | 0.0005 | 0.0005 | 0.0025 | 0.0012 | 0.0014 | 0.0041 | 0.0203 | 0.0024 | 0.0022 | 0.0011 | 0.0013 | 0.0005 |
| Cyanide, Total | mg/L | 0.0026 | 0.0019 | 0.0025 | 0.0021 | 0.0295 | 0.004 | 0.0033 | 0.0078 | 0.0112 | 0.0422 | 0.0023 | 0.0025 | 0.0056 | 0.0031 | 0.0094 | 0.0291 | 0.0578 | 0.0109 | 0.0102 | 0.0073 | 0.0052 | 0.0039 |
| Cyanide, Weak Acid Diss | mg/L | 0.0011 | 0.00025 | 0.0011 | 0.00025 | 0.0025 | 0.00025 | 0.00025 | 0.0024 | 0.005 | 0.0135 | 0.0005 | 0.0005 | 0.0025 | 0.0005 | 0.0013 | 0.0049 | 0.0214 | 0.0025 | 0.0012 | 0.0011 | 0.0011 | 0.0005 |
| Dissolved Organic Carbon | mg/L | 7.76 | 7.45 | 8.25 | | | 9.53 | 11.2 | 10.1 | 10.9 | 12.1 | | | 12.4 | | | 12.4 | 13 | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 7.35 | 7.52 | 7.74 | 8.01 | 6.57 | | | 7.91 | 8.68 | 7.9 | 6.87 | 7.75 | 6.91 | 7.96 | 7.47 | 7.07 | 7.33 | 9.38 | 9.54 | 10.3 | 11.4 | 12.4 |
| EC, Client Supplied | umhos/cm | 1410 | 1370 | 1380 | 1390 | 1380 | 1180 | 1200 | 1250 | 1290 | 1310 | 1440 | 1410 | 1450 | 1460 | 1370 | 1400 | 1450 | 1350 | 1340 | 1280 | 1270 | 1360 |
| Fluoride (F) | mg/L | 0.114 | 0.118 | 0.115 | 0.118 | 0.122 | 0.12 | 0.128 | 0.128 | 0.13 | 0.13 | 0.13 | 0.12 | 0.12 | 0.19 | 0.18 | 0.14 | 0.14 | 0.13 | 0.1 | 0.17 | 0.112 | 0.132 |
| Hardness (as CaCO3) | mg/L | 284 | 293 | 290 | 314 | 312 | 251 | 228 | 252 | 250 | 285 | 307 | 298 | 300 | 300 | 298 | 300 | 309 | 359 | 315 | 313 | 322 | 320 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 7.97 | 7.6 | 6.85 | 6.34 | 4.91 | 2.53 | 2.59 | 2.28 | 1.97 | 1.31 | 0.19 | 0.22 | 0.19 | 0.2 | 0.14 | 0.1 | 0.1 | 0.88 | 0.89 | 0.85 | 0.762 | 0.75 |
| Nitrate and Nitrite as N | mg/L | 7.99 | 7.6 | 6.85 | 6.34 | 4.94 | 2.53 | 2.64 | 2.33 | 1.97 | 1.31 | 0.19 | 0.22 | 0.19 | 0.2 | 0.14 | 0.055 | 0.055 | 0.88 | 0.89 | 0.85 | 0.762 | 0.75 |
| Nitrite (as N) | mg/L | 0.027 | 0.01 | 0.01 | 0.01 | 0.025 | 0.025 | 0.052 | 0.044 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.02 | 0.02 |
| pH | pH units | 8.22 | 8.13 | 8.27 | 8.32 | 8.04 | 8.35 | 8.45 | 8.47 | 8.49 | 8.43 | 8.22 | 8.33 | 8.29 | 8.39 | 8.4 | 8.36 | 8.35 | 8.27 | 8.05 | 8.1 | 8.25 | 8.25 |
| pH, Client Supplied | pH | 8.06 | 8.11 | 8.13 | 8.05 | 7.93 | 8.28 | 8.46 | 8.37 | 8.41 | 8.39 | 7.77 | 7.76 | 7.94 | 8.13 | 8.11 | 7.99 | 8.1 | 7.75 | 7.71 | 8.07 | 8.06 | 8.03 |
| Phosphorus (P)-Total | mg/L | 0.027 | 0.019 | 0.018 | 0.018 | 0.067 | 0.0354 | 0.0314 | 0.0298 | 0.0337 | 0.0419 | 0.0809 | 0.0793 | 0.0837 | 0.0789 | 0.0734 | 0.12 | 0.179 | 0.131 | 0.125 | 0.116 | 0.109 | 0.103 |
| Ra-226 | Bq/L | 0.0033 | 0.0039 | 0.0027 | 0.004 | 0.0037 | 0.0031 | 0.0042 | 0.0039 | 0.0044 | 0.0068 | | 0.0043 | | | | 0.0023 | 0.0071 | | 0.0034 | | | |
| Sulfate (SO4) | mg/L | 278 | 272 | 275 | 277 | 271 | 200 | 204 | 205 | 219 | 214 | 279 | 295 | 282 | 301 | 300 | 296 | 292 | 283 | 292 | 300 | 283 | 293 |
| TDS (Calculated) | mg/L | 866 | 847 | 828 | 853 | 836 | 736 | 745 | 748 | 783 | 826 | 869 | 892 | 880 | 919 | 913 | 888 | 904 | 856 | 837 | 850 | 832 | 840 |
| Temperature, Client Provided | Degree C | 22 | 23.3 | 22.7 | 23.9 | 20.6 | 23.7 | 24.4 | 18.9 | 21.1 | 20.6 | 21.1 | 21.8 | 23.6 | 22.6 | 24.1 | 22.4 | 22.4 | 10.9 | 7.1 | 6.8 | 3.1 | 2.6 |
| Total Kjeldahl Nitrogen | mg/L | 1 | 0.93 | 1.14 | 1.11 | 1.21 | 1.4 | 1.35 | 1.31 | 1.19 | 1.28 | 1.14 | 1.4 | 1.03 | 1.22 | 1.11 | 1.18 | 1.15 | 1 | 0.63 | 0.99 | 0.82 | 0.77 |
| Total Suspended Solids | mg/L | 2.2 | 1 | 1 | 2.4 | 2.5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3.1 | 2.8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Turbidity | NTU | 1.82 | 0.61 | 0.61 | 1.26 | 0.75 | 0.8 | 0.79 | 1.69 | 1.31 | 0.93 | 1.08 | 1.07 | 0.9 | 1.08 | 1.31 | 1.05 | 1.23 | 0.96 | 0.76 | 1.5 | 1.1 | 1.41 |
| Aluminum (Al)-Total | mg/L | 0.0059 | 0.0071 | 0.0125 | 0.0089 | 0.014 | 0.0143 | 0.0117 | 0.0421 | 0.0308 | 0.0297 | 0.0221 | 0.0156 | 0.0135 | 0.0186 | 0.0151 | 0.0155 | 0.0217 | 0.0257 | 0.0306 | 0.0385 | 0.0576 | 0.0292 |
| Antimony (Sb)-Total | mg/L | 0.00046 | 0.00054 | 0.00056 | 0.00052 | 0.00046 | 0.00044 | 0.00054 | 0.00043 | 0.00044 | 0.00039 | 0.00019 | 0.00025 | 0.00021 | 0.0002 | 0.0002 | 0.00017 | 0.00017 | 0.00023 | 0.00022 | 0.00018 | 0.00025 | 0.00022 |
| Arsenic (As)-Total | mg/L | 0.00095 | 0.00096 | 0.00107 | 0.00121 | 0.00123 | 0.00159 | 0.00151 | 0.00158 | 0.00161 | 0.00182 | 0.00173 | 0.0017 | 0.00177 | 0.00183 | 0.00191 | 0.00184 | 0.00205 | 0.00174 | 0.00165 | 0.00115 | 0.0016 | 0.00164 |
| Barium (Ba)-Total | mg/L | 0.0329 | 0.033 | 0.0333 | 0.0319 | 0.0369 | 0.0269 | 0.0249 | 0.0266 | 0.0272 | 0.0284 | 0.03 | 0.0309 | 0.0308 | 0.0312 | 0.0326 | 0.0342 | 0.0421 | 0.0326 | 0.0319 | 0.0234 | 0.0299 | 0.0301 |
| Beryllium (Be)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Bismuth (Bi)-Total | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.0001 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Boron (B)-Total | mg/L | 0.216 | 0.197 | 0.212 | 0.204 | 0.206 | 0.152 | 0.143 | 0.142 | 0.152 | 0.16 | 0.128 | 0.115 | 0.116 | 0.118 | 0.113 | 0.109 | 0.115 | 0.126 | 0.125 | 0.108 | 0.117 | 0.106 |
| Cadmium (Cd)-Total | mg/L | 0.0000200 | 0.0000168 | 0.0000174 | 0.0000298 | 0.0000188 | 0.0000135 | 0.0000096 | 0.0000097 | 0.0000124 | 0.0000072 | 0.0000106 | 0.0000079 | 0.0000077 | 0.0000069 | 0.0000075 | 0.0000108 | 0.0000080 | 0.0000091 | 0.0000061 | 0.0000025 | 0.0000105 | 0.0000069 |
| Calcium (Ca)-Total | mg/L | 71 | 66.3 | 69 | 66 | 68.8 | 49.4 | 49.9 | 50.1 | 54.7 | 51 | 55.9 | 57.7 | 58.3 | 58.2 | 53.1 | 56.7 | 61.1 | 64.9 | 59.4 | 53 | 60.3 | 59.7 |
| Cesium (Cs)-Total | mg/L | 0.000083 | 0.000094 | 0.000115 | 0.000108 | 0.000152 | 0.000021 | 0.000026 | 0.000032 | 0.000038 | 0.000045 | 0.000075 | 0.000083 | 0.00009 | 0.0001 | 0.00013 | 0.000129 | 0.000169 | 0.00012 | 0.000115 | 0.000091 | 0.000106 | 0.000099 |
| Chromium (Cr)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.0001 | 0.000025 | 0.00017 | 0.00013 | 0.00015 | 0.00005 | 0.00016 | 0.0001 | 0.00017 | 0.00015 | 0.00005 | 0.00023 | 0.00017 | 0.00083 | 0.00017 | 0.00036 | 0.00021 |
| Cobalt (Co)-Total | mg/L | 0.00146 | 0.00148 | 0.0016 | 0.00159 | 0.00189 | 0.00293 | 0.00265 | 0.00271 | 0.00283 | 0.00314 | 0.0027 | 0.00266 | 0.00244 | 0.00243 | 0.00229 | 0.00251 | 0.00284 | 0.00335 | 0.00317 | 0.00248 | 0.00289 | 0.00293 |
| Copper (Cu)-Total | mg/L | 0.0634 | 0.0675 | 0.0804 | 0.0805 | 0.0829 | 0.114 | 0.106 | 0.108 | 0.106 | 0.112 | 0.108 | 0.106 | 0.102 | 0.104 | 0.0944 | 0.0853 | 0.09 | 0.0863 | 0.0795 | 0.0653 | 0.0781 | 0.0798 |
| Iron (Fe)-Total | mg/L | 0.015 | 0.019 | 0.029 | 0.031 | 0.066 | 0.057 | 0.05 | 0.083 | 0.079 | 0.128 | 0.122 | 0.115 | 0.115 | 0.119 | 0.122 | 0.134 | 0.18 | 0.157 | 0.112 | 0.119 | 0.143 | 0.106 |
| Lead (Pb)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000099 | 0.000084 | 0.00009 | 0.000257 | 0.000191 | 0.000168 | 0.000126 | 0.000121 | 0.000112 | 0.00012 | 0.000127 | 0.000154 | 0.00019 | 0.000139 | 0.000125 | 0.000136 | 0.000152 | 0.000114 |
| Lithium (Li)-Total | mg/L | 0.0029 | 0.003 | 0.0032 | 0.0027 | 0.0032 | 0.0026 | 0.0027 | 0.0027 | 0.0027 | 0.0026 | 0.0025 | 0.0023 | 0.0027 | 0.0024 | 0.0022 | 0.002 | 0.0024 | 0.0023 | 0.0024 | 0.0023 | 0.0023 | 0.0026 |
| Magnesium (Mg)-Total | mg/L | 33.9 | 31.7 | 33 | 32.5 | 30.8 | 31.9 | 31.4 | 31.8 | 29.1 | 32.5 | 40.1 | 36.6 | 40 | 38.6 | 38.9 | 35.7 | 41.8 | 45.7 | 42.9 | 30.8 | 41.1 | 41.9 |
| Manganese (Mn)-Total | mg/L | 0.0641 | 0.0641 | 0.116 | 0.145 | 0.337 | 0.181 | 0.13 | 0.164 | 0.253 | 0.321 | 0.162 | 0.149 | 0.143 | 0.139 | 0.226 | 0.494 | 0.817 | 0.101 | 0.0707 | 0.0417 | 0.0304 | 0.0301 |
| Mercury (Hg)-Total | ng/L | | 0.000029 | | 0.00007 | | | | | | 0.000019 | | 0.00183 | | | | 0.00158 | 0.00098 | | 0.00121 | | | |
| Molybdenum (Mo)-Total | mg/L | 0.0398 | 0.0426 | 0.045 | 0.0412 | 0.0391 | 0.0263 | 0.0265 | 0.0268 | 0.0283 | 0.0244 | 0.018 | 0.0178 | 0.0177 | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-2 cont'd

| <i>Less than detection limit, half value</i> | | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | EOP | |
|--|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| End of Pipe | | L1960980-1 | L1964760-1 | L1971728-1 | L1976412-1 | L1979675-1 | L2114945-1 | L2119076-1 | L2122624-1 | L2126643-1 | L2130724-1 | L2294147-1 | L2298713-1 | L2302403-1 | L2306799-1 | L2311297-1 | L2315638-1 | L2319872-1 | L2362279-1 | L2365580-2 | L2369900-1 | L2373901-1 | L2377639-1 |
| Analyte | Units | 7/18/2017 | 7/25/2017 | 8/8/2017 | 8/15/2017 | 8/22/2017 | 6/19/2018 | 6/26/2018 | 7/3/2018 | 7/10/2018 | 7/17/2018 | 6/18/2019 | 6/25/2019 | 7/2/2019 | 7/9/2019 | 7/16/2019 | 7/23/2019 | 7/30/2019 | 10/8/2019 | 10/15/2019 | 10/22/2019 | 10/29/2019 | 11/5/2019 |
| Silver (Ag)-Total | mg/L | 0.000052 | 0.000061 | 0.000064 | 0.000074 | 0.000084 | 0.000112 | 0.000118 | 0.000111 | 0.000071 | 0.000084 | 0.000076 | 0.000081 | 0.000071 | 0.000071 | 0.00006 | 0.00005 | 0.000041 | 0.000067 | 0.000048 | 0.000043 | 0.000218 | 0.000047 |
| Sodium (Na)-Total | mg/L | 164 | 171 | 170 | 168 | 152 | 169 | 158 | 155 | 159 | 181 | 182 | 178 | 178 | 188 | 190 | 175 | 195 | 166 | 163 | 131 | 160 | 157 |
| Strontium (Sr)-Total | mg/L | 0.753 | 0.794 | 0.811 | 0.768 | 0.759 | 0.586 | 0.584 | 0.583 | 0.663 | 0.597 | 0.636 | 0.623 | 0.643 | 0.69 | 0.665 | 0.59 | 0.665 | 0.712 | 0.647 | 0.534 | 0.667 | 0.667 |
| Sulfur (S)-Total | mg/L | 114 | 104 | 106 | 104 | 109 | 80.2 | 76.7 | 77.3 | 77.6 | 82.2 | 105 | 105 | 101 | 108 | 104 | 95.3 | 100 | 109 | 107 | 86.2 | 104 | 107 |
| Tellurium (Te)-Total | mg/L | 0.0001 | 0.0001 | 0.00022 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| Thallium (Tl)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Thorium (Th)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Tin (Sn)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Titanium (Ti)-Total | mg/L | 0.00015 | 0.00015 | 0.00047 | 0.00015 | 0.00103 | 0.00032 | 0.00048 | 0.00165 | 0.00118 | 0.00088 | 0.00076 | 0.00062 | 0.00065 | 0.00085 | 0.00057 | 0.00072 | 0.00083 | 0.00083 | 0.00118 | 0.00122 | 0.00254 | 0.001 |
| Tungsten (W)-Total | mg/L | 0.00098 | 0.00107 | 0.00122 | 0.00128 | 0.00172 | 0.00131 | 0.00348 | 0.00148 | 0.00177 | 0.00189 | 0.00111 | 0.00122 | 0.00138 | 0.00168 | 0.00209 | 0.00286 | 0.00324 | 0.00092 | 0.00083 | 0.00071 | 0.00087 | 0.00076 |
| Uranium (U)-Total | mg/L | 0.00019 | 0.000197 | 0.000225 | 0.000188 | 0.000235 | 0.000193 | 0.000193 | 0.000182 | 0.000206 | 0.0002 | 0.000152 | 0.000135 | 0.000142 | 0.000133 | 0.000148 | 0.000147 | 0.00012 | 0.00011 | 0.000119 | 0.000109 | 0.000138 | 0.000139 |
| Vanadium (V)-Total | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Zinc (Zn)-Total | mg/L | 0.0032 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 |
| Zirconium (Zr)-Total | mg/L | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 | 0.000015 |
| Aluminum (Al)-Dissolved | mg/L | 0.0018 | 0.0012 | 0.0058 | 0.01 | 0.0095 | 0.0071 | 0.0122 | 0.0039 | 0.0107 | 0.0061 | 0.0138 | 0.0024 | 0.0041 | 0.0054 | 0.0064 | 0.0072 | 0.0037 | 0.007 | 0.0074 | 0.0107 | 0.0112 | 0.0071 |
| Antimony (Sb)-Dissolved | mg/L | 0.00056 | 0.00052 | 0.00051 | 0.00049 | 0.00049 | 0.00044 | 0.00042 | 0.00043 | 0.00043 | 0.00039 | 0.00019 | 0.00019 | 0.00016 | 0.0002 | 0.00016 | 0.00018 | 0.00024 | 0.00019 | 0.0002 | 0.00024 | 0.00022 | 0.00023 |
| Arsenic (As)-Dissolved | mg/L | 0.00102 | 0.00102 | 0.00108 | 0.00112 | 0.00119 | 0.0016 | 0.00124 | 0.00158 | 0.0015 | 0.00176 | 0.00163 | 0.00175 | 0.00174 | 0.00179 | 0.0018 | 0.00173 | 0.0019 | 0.00169 | 0.00164 | 0.00158 | 0.00144 | 0.00147 |
| Barium (Ba)-Dissolved | mg/L | 0.0335 | 0.0325 | 0.0333 | 0.0339 | 0.0363 | 0.0263 | 0.0203 | 0.0253 | 0.0236 | 0.0257 | 0.0302 | 0.0274 | 0.0288 | 0.0307 | 0.0319 | 0.0341 | 0.0281 | 0.0311 | 0.0304 | 0.029 | 0.0286 | 0.0288 |
| Beryllium (Be)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Bismuth (Bi)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)-Dissolved | mg/L | 0.192 | 0.193 | 0.192 | 0.23 | 0.193 | 0.155 | 0.136 | 0.135 | 0.143 | 0.167 | 0.116 | 0.112 | 0.115 | 0.129 | 0.109 | 0.114 | 0.118 | 0.121 | 0.125 | 0.112 | 0.116 | 0.107 |
| Cadmium (Cd)-Dissolved | mg/L | 0.0000156 | 0.0000130 | 0.0000139 | 0.0000206 | 0.0000177 | 0.0000082 | 0.0000058 | 0.0000109 | 0.0000146 | 0.0000088 | 0.0000079 | 0.0000057 | 0.0000077 | 0.0000095 | 0.0000051 | 0.0000092 | 0.0000057 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000078 | 0.0000025 |
| Calcium (Ca)-Dissolved | mg/L | 62.7 | 65.2 | 64.3 | 70.6 | 66.8 | 50.6 | 52.7 | 54.8 | 57.2 | 58.2 | 56.1 | 58.1 | 58.4 | 54.2 | 57.5 | 56.3 | 57.6 | 68 | 59.5 | 58.2 | 60.3 | 60.7 |
| Cesium (Cs)-Dissolved | mg/L | 0.000103 | 0.000093 | 0.000104 | 0.000111 | 0.000143 | 0.000021 | 0.000028 | 0.00003 | 0.000033 | 0.000043 | 0.000077 | 0.000076 | 0.000092 | 0.000103 | 0.000117 | 0.000157 | 0.000177 | 0.000107 | 0.000106 | 0.0001 | 0.0001 | 0.000091 |
| Chromium (Cr)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Cobalt (Co)-Dissolved | mg/L | 0.0014 | 0.00137 | 0.00148 | 0.00162 | 0.00192 | 0.00282 | 0.00205 | 0.00249 | 0.00259 | 0.00244 | 0.00258 | 0.00225 | 0.00216 | 0.00218 | 0.00216 | 0.00223 | 0.002 | 0.00298 | 0.00288 | 0.00283 | 0.00275 | 0.0027 |
| Copper (Cu)-Dissolved | mg/L | 0.0568 | 0.0625 | 0.0718 | 0.0772 | 0.0774 | 0.101 | 0.0833 | 0.0901 | 0.0893 | 0.079 | 0.0985 | 0.0827 | 0.0865 | 0.0902 | 0.0841 | 0.079 | 0.0641 | 0.0675 | 0.0651 | 0.0699 | 0.0698 | 0.0687 |
| Iron (Fe)-Dissolved | mg/L | 0.0025 | 0.0025 | 0.018 | 0.023 | 0.052 | 0.034 | 0.043 | 0.019 | 0.032 | 0.025 | 0.089 | 0.018 | 0.055 | 0.067 | 0.083 | 0.104 | 0.032 | 0.057 | 0.039 | 0.055 | 0.057 | 0.04 |
| Lead (Pb)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000067 | 0.000065 | 0.000088 | 0.000066 | 0.000114 | 0.000025 | 0.000101 | 0.000025 | 0.000025 | 0.000064 | 0.000079 | 0.000116 | 0.000025 | 0.000053 | 0.000066 | 0.000064 | 0.000076 | 0.000025 |
| Lithium (Li)-Dissolved | mg/L | 0.0032 | 0.0028 | 0.0028 | 0.0032 | 0.0028 | 0.0026 | 0.0029 | 0.0024 | 0.0028 | 0.0029 | 0.0022 | 0.0023 | 0.0022 | 0.0023 | 0.0021 | 0.0023 | 0.0022 | 0.0022 | 0.002 | 0.0021 | 0.0022 | 0.002 |
| Magnesium (Mg)-Dissolved | mg/L | 31 | 31.6 | 31.3 | 33.5 | 35.2 | 30.2 | 23.3 | 27.9 | 26 | 34 | 40.5 | 37.1 | 37.4 | 39.9 | 37.4 | 38.7 | 40.1 | 46 | 40.5 | 40.8 | 41.7 | 40.8 |
| Manganese (Mn)-Dissolved | mg/L | 0.0267 | 0.0434 | 0.108 | 0.145 | 0.339 | 0.151 | 0.104 | 0.0915 | 0.209 | 0.00419 | 0.148 | 0.00136 | 0.00605 | 0.0952 | 0.125 | 0.49 | 0.208 | 0.00256 | 0.0033 | 0.0268 | 0.0144 | 0.0109 |
| Mercury (Hg)-Dissolved | ng/L | | 1.3 | | 1 | | | | 1.3 | | 2.3 | | 0.00055 | | | | 0.00094 | 0.00025 | | 0.00095 | | | |
| Molybdenum (Mo)-Dissolved | mg/L | 0.0404 | 0.0401 | 0.0411 | 0.0408 | 0.0391 | 0.0271 | 0.025 | 0.0278 | 0.0274 | 0.0264 | 0.018 | 0.0177 | 0.0166 | 0.0179 | 0.0165 | 0.0174 | 0.0154 | 0.0137 | 0.0137 | 0.0141 | 0.0147 | 0.0145 |
| Nickel (Ni)-Dissolved | mg/L | 0.00581 | 0.00591 | 0.00573 | 0.00572 | 0.00587 | 0.00686 | 0.00515 | 0.00606 | 0.00596 | 0.00536 | 0.00565 | 0.00436 | 0.00507 | 0.00486 | 0.00494 | 0.00551 | 0.00594 | 0.00492 | 0.00492 | 0.00495 | 0.00487 | 0.00482 |
| Phosphorus (P)-Dissolved | mg/L | 0.025 | 0.025 | 0.025 | 0.025 | 0.074 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.086 | 0.072 | 0.079 | 0.059 | 0.055 | 0.101 | 0.155 | 0.129 | 0.118 | 0.115 | 0.112 | 0.093 |
| Potassium (K)-Dissolved | mg/L | 33 | 33.5 | 32.6 | 34.7 | 33.7 | 30.7 | 26.4 | 30.1 | 25.7 | 34.5 | 32.8 | 32.5 | 33.8 | 33.1 | 32.4 | 32.8 | 35.4 | 29.2 | 27.8 | 26.1 | 28 | 28 |
| Rubidium (Rb)-Dissolved | mg/L | 0.0127 | 0.0124 | 0.0125 | 0.0125 | 0.0135 | 0.0114 | 0.00988 | 0.0118 | 0.0097 | 0.0121 | 0.0123 | 0.0122 | 0.0128 | 0.0125 | 0.0123 | 0.0123 | 0.0129 | 0.0136 | 0.0126 | 0.0118 | 0.0124 | 0.0122 |
| Selenium (Se)-Dissolved | | | | | | | | | | | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-2 cont'd

| Less than detection limit, half value | End of Pipe | EOP-WK1 | EOP-WK2 | EOP-WK3 | EOP-WK4 | EOP-WK5 | EOP-D2-24HR | EOP-D2-WK1 | EOP-D2-WK2 | EOP-D2-WK3 | EOP-2021-24HR | EOP-2021-WK 1 | EOP-2021-WK2 | EOP-2021-WK3 | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | MWQSOG | MWQSOG | CCME | MDMER | |
|---------------------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-------------|------------|------------|------------|---------------|---------------|--------------|--------------|-------------|-------------|-----------|-----------|----------|----------------|---------|-------------|-------------|---------|-----|
| | | | | | | | | | | | | | | | | | | | | | Tier II | Tier III | Chronic PAL | Sch. 4 | |
| Analyte | Units | 6/24/2020 | 7/1/2020 | 7/7/2020 | 7/14/2020 | 7/21/2020 | 9/21/2020 | 9/30/2020 | 10/7/2020 | 10/14/2020 | 9/21/2021 | 9/29/2021 | 10/6/2021 | 10/12/2021 | | | | | | | | Chronic PAL | PAL | | MAC |
| Alkalinity, Total (as CaCO3) | mg/L | 146 | 159 | 157 | 159 | 164 | 170 | 175 | 162 | 166 | 162 | 166 | 162 | 171 | 194 | 194 | 146 | 259 | 53 | 37 | | | | | |
| Ammonia, Total (as N) | mg/L | 0.277 | 0.207 | 0.273 | 0.191 | 0.153 | 0.157 | 0.094 | 0.038 | 0.03 | 0.447 | 0.65 | 0.36 | 0.64 | 0.166 | 0.104 | 0.03 | 0.65 | 0.15 | 37 | 2.74' | | | | |
| Bicarbonate (HCO3) | mg/L | 178 | 194 | 192 | 194 | 200 | 208 | 213 | 197 | 203 | 198 | 202 | 198 | 209 | 234 | 236 | 178 | 303 | 62 | 37 | | | | | |
| Carbonate (CO3) | mg/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 1.73 | 0.30 | 0.15 | 8.76 | 2.46 | 37 | | 250 | 120 | | |
| Chloride (Cl) | mg/L | 97 | 102 | 107 | 107 | 106 | 78.6 | 80.4 | 79.4 | 82.2 | 70.2 | 67.3 | 69.3 | 72.2 | 122 | 128 | 67.3 | 164 | 41 | 37 | | | | | |
| Conductivity | umhos/cm | 1150 | 1130 | 1180 | 1220 | 1190 | 1130 | 1160 | 1190 | 1180 | 1290 | 1280 | 1280 | 1250 | 1266 | 1260 | 1130 | 1490 | 304 | 37 | | | | | |
| Cyanide, Free | mg/L | 0.0013 | 0.0028 | 0.0038 | 0.0057 | 0.0139 | 0.0035 | 0.0053 | 0.0005 | 0.0044 | 0.0031 | 0.005 | 0.0045 | 0.0005 | 0.00349 | 0.0025 | 0.00025 | 0.0203 | 0.004 | 37 | 0.0052 | | | | |
| Cyanide, Total | mg/L | 0.004 | 0.0081 | 0.0213 | 0.0233 | 0.0594 | 0.0227 | 0.0237 | 0.0005 | 0.021 | 0.0191 | 0.0139 | 0.0125 | 0.0376 | 0.0149 | 0.0094 | 0.0005 | 0.0594 | 0.015 | 37 | | | | 0.5 | |
| Cyanide, Weak Acid Diss | mg/L | 0.0015 | 0.002 | 0.0037 | 0.0064 | 0.0137 | 0.0038 | 0.0058 | 0.0005 | 0.0048 | 0.0029 | 0.0045 | 0.0046 | 0.0029 | 0.00351 | 0.0024 | 0.00025 | 0.0214 | 0.004 | 37 | | | | | |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | 13.4 | 12.1 | 11.7 | 12.3 | 11.0 | 11.65 | 7.45 | 13.4 | 3.97 | 18 | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | | | | | | | | | | 4.36 | 5.48 | 6.93 | 2.92 | 7.74 | 7.63 | 2.92 | 12.4 | 2.85 | 26 | 5.5-6.5 | | | | |
| EC, Client Supplied | umhos/cm | 1160 | | 1210 | 1200 | 1190 | 1130 | 1170 | 1140 | 1110 | 1200 | 1280 | 1160 | 1190 | 1291 | 1285 | 1110 | 1460 | 318 | 36 | | | | | |
| Fluoride (F) | mg/L | 0.083 | 0.088 | 0.087 | 0.05 | 0.091 | 0.085 | 0.087 | 0.095 | 0.098 | 0.091 | 0.076 | 0.098 | 0.101 | 0.115 | 0.118 | 0.05 | 0.19 | 0.038 | 37 | | | 0.12 | | |
| Hardness (as CaCO3) | mg/L | 309 | 328 | 336 | 322 | 313 | 334 | 376 | 351 | 367 | 396 | 415 | 399 | 377 | 317.8 | 313 | 228 | 415 | 84 | 37 | | | | | |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0 | 37 | | | | | |
| Nitrate (as N) | mg/L | 0.862 | 0.821 | 0.771 | 0.74 | 0.627 | 0.39 | 0.424 | 0.342 | 0.255 | 0.112 | 0.145 | 0.232 | 0.27 | 1.589 | 0.75 | 0.1 | 7.97 | 2.24 | 37 | 2.93 | 13 | | | |
| Nitrate and Nitrite as N | mg/L | 0.914 | 0.878 | 0.824 | 0.74 | 0.657 | 0.412 | 0.445 | 0.342 | 0.255 | 0.195 | 0.275 | 0.34 | 0.353 | 1.609 | 0.75 | 0.055 | 7.99 | 2.23 | 37 | 10 | | | | |
| Nitrite (as N) | mg/L | 0.051 | 0.057 | 0.052 | 0.025 | 0.03 | 0.022 | 0.021 | 0.005 | 0.005 | 0.083 | 0.13 | 0.108 | 0.083 | 0.035 | 0.025 | 0.005 | 0.13 | 0.028 | 37 | 0.06 | 0.06 | 0.06 | | |
| pH | pH units | 8.16 | 8.2 | 8.17 | 8.2 | 8.25 | 8.11 | 8.22 | 8.27 | 8.24 | 8.07 | 8.22 | 8.02 | 8.1 | 8.25 | 8.25 | 8.02 | 8.49 | 1.895 | 37 | 6.5-9.0 | | | 6.0-9.5 | |
| pH, Client Supplied | pH | 7.68 | 7.63 | 7.65 | 7.85 | 7.8 | 6.89 | 7.03 | 6.78 | 6.73 | 7.26 | 7.4 | 7.65 | 7.36 | 7.81 | 7.93 | 6.73 | 8.46 | 1.843 | 37 | 6.5-9.0 | | | 6.0-9.5 | |
| Phosphorus (P)-Total | mg/L | 0.0255 | 0.0232 | 0.0295 | 0.0283 | 0.0307 | 0.068 | 0.0855 | 0.0785 | 0.0677 | 0.134 | 0.14 | 0.131 | 0.176 | 0.0748 | 0.0734 | 0.018 | 0.179 | 0.049 | 37 | | | | | |
| Ra-226 | Bq/L | 0.0074 | | | 0.0036 | | | 0.0069 | | 0.0065 | 0.017 | 0.0033 | 0.002 | 0.0047 | 0.0049 | 0.00395 | 0.002 | 0.017 | 0.003297 | 24 | | 0.5 | | 0.37 | |
| Sulfate (SO4) | mg/L | 296 | 303 | 317 | 318 | 311 | 321 | 330 | 330 | 330 | 397 | 385 | 391 | 396 | 295 | 295 | 200 | 397 | 83 | 37 | | | | | |
| TDS (Calculated) | mg/L | 728 | 747 | 766 | 775 | 763 | 728 | 730 | 747 | 760 | 828 | 829 | 830 | 830 | 817.4 | 830 | 728 | 919 | 196 | 37 | | | | | |
| Temperature, Client Provided | Degree C | 19.9 | | 21.7 | 21 | 20.2 | 14.2 | 13.5 | 11.4 | 9.7 | 15.7 | 15.8 | 18.1 | 14.8 | 17.8 | 20.6 | 2.6 | 24.4 | 7.4 | 36 | | | | | |
| Total Kjeldahl Nitrogen | mg/L | 1.18 | 1.08 | 1.15 | 1.05 | 0.91 | 1.05 | 0.99 | 0.93 | 0.86 | 1.52 | 1.35 | 1.37 | 1.5 | 1.12 | 1.14 | 0.63 | 1.52 | 0.33 | 37 | | | | | |
| Total Suspended Solids | mg/L | 9.6 | 0.5 | 1.7 | 0.5 | 0.5 | 0.5 | 1.2 | 2.7 | 3.2 | 9.8 | 1.8 | 1.3 | 2.3 | 1.9 | 1.0 | 0.5 | 9.8 | 2.1 | 37 | +5' | | | 15 | |
| Turbidity | NTU | 1.56 | 1.17 | 1.32 | 0.87 | 0.55 | 1.57 | 1.14 | 1.3 | 2.03 | 2.9 | 1.97 | 1.16 | 1.05 | 1.22 | 1.14 | 0.55 | 2.9 | 0.5 | 37 | | | | | |
| Aluminum (Al)-Total | mg/L | 0.0136 | 0.01 | 0.0148 | 0.0059 | 0.012 | 0.0067 | 0.0088 | 0.0159 | 0.0372 | 0.0094 | 0.0096 | 0.0127 | 0.0087 | 0.018 | 0.014 | 0.006 | 0.058 | 0.012 | 37 | | | 0.1 | | |
| Antimony (Sb)-Total | mg/L | 0.00025 | 0.00027 | 0.00026 | 0.00029 | 0.00026 | 0.0002 | 0.0002 | 0.00018 | 0.00025 | 0.00012 | 0.00013 | 0.00013 | 0.0001 | 0.00028 | 0.00025 | 0.0001 | 0.00056 | 0.00015 | 37 | | | | | |
| Arsenic (As)-Total | mg/L | 0.00141 | 0.0011 | 0.0012 | 0.00115 | 0.00141 | 0.00141 | 0.00139 | 0.00113 | 0.0012 | 0.00128 | 0.00134 | 0.00127 | 0.00128 | 0.00145 | 0.00141 | 0.00095 | 0.00205 | 0.00044 | 37 | | | 0.005 | 0.3 | |
| Barium (Ba)-Total | mg/L | 0.0251 | 0.024 | 0.0279 | 0.0261 | 0.0281 | 0.0273 | 0.0284 | 0.0274 | 0.0291 | 0.036 | 0.036 | 0.0376 | 0.0395 | 0.0307 | 0.0301 | 0.0234 | 0.0421 | 0.00825 | 37 | | | | | |
| Beryllium (Be)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00004 | 0.00005 | 0.000025 | 0.00005 | 0.00001 | 37 | | | | | |
| Bismuth (Bi)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000027 | 0.000025 | 0.000025 | 0.0001 | 0.00001 | 37 | | | | | |
| Boron (B)-Total | mg/L | 0.082 | 0.082 | 0.09 | 0.092 | 0.085 | 0.097 | 0.086 | 0.085 | 0.085 | 0.068 | 0.079 | 0.07 | 0.082 | 0.1218 | 0.115 | 0.068 | 0.216 | 0.04990 | 37 | | 1.5 | | | |
| Cadmium (Cd)-Total | mg/L | 0.0000090 | 0.0000093 | 0.0000119 | 0.0000088 | 0.0000123 | 0.0000065 | 0.0000051 | 0.0000052 | 0.0000066 | 0.0000025 | 0.0000057 | 0.0000061 | 0.0000025 | 0.0000097 | 0.0000088 | 0.0000025 | 0.0000298 | 0.00001 | 37 | | | 0.0008' | | |
| Calcium (Ca)-Total | mg/L | 66.4 | 67.5 | 66.6 | 64.3 | 64.7 | 69.9 | 64.6 | 76 | 74.6 | 74.1 | 76 | 68.9 | 81.4 | 63.1 | 64.6 | 49.4 | 81.4 | 16.6 | 37 | | | | | |
| Cesium (Cs)-Total | mg/L | 0.000005 | 0.000015 | 0.000012 | 0.000016 | 0.000005 | 0.000027 | 0.00003 | 0.000035 | 0.000034 | 0.000091 | 0.000085 | 0.000096 | 0.000114 | 0.000074 | 0.000085 | 0.000005 | 0.000169 | 0.00005 | 37 | | | | | |
| Chromium (Cr)-Total | mg/L | 0.00005 | 0.00013 | 0.00011 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00011 | 0.00011 | 0.0001 | 0.00012 | 0.0001 | 0.00477 | 0.000263143 | 0.00011 | 0.000025 | 0.00477 | 0.00078 | 37 | | | | | |
| Cobalt (Co)-Total | mg/L | 0.00399 | 0.00378 | 0.00393 | 0.00373 | 0.00362 | 0.00363 | 0.00334 | 0.00337 | 0.00323 | 0.00339 | 0.00332 | 0.00306 | 0.00282 | 0.002862286 | 0.00289 | 0.00146 | 0.00399 | 0.00093 | 37 | | | | | |
| Copper (Cu)-Total | mg/L | 0.0672 | 0.0684 | 0.0723 | 0.0662 | 0.0621 | 0.0581 | 0.0502 | 0.0582 | 0.0565 | 0.0254 | 0.0251 | 0.0265 | 0.0287 | 0.076122857 | 0.0795 | 0.0251 | 0.114 | 0.03030 | 37 | | | 0.002' | 0.3 | |
| Iron (Fe)-Total | mg/L | 0.087 | 0.08 | 0.117 | 0.078 | 0.094 | 0.055 | 0.064 | 0.068 | 0.082 | 0.102 | 0.12 | 0.161 | 0.151 | 0.0960 | 0.102 | 0.015 | 0.18 | 0.04571 | 37 | | | 0.3 | | |
| Lead (Pb)-Total | mg/L | 0.000096 | 0.000084 | 0.000076 | 0.000058 | 0.000075 | 0.000025 | 0.000025 | 0.000025 | 0.000065 | 0.000263 | 0.000169 | 0.000343 | 0.000205 | 0.00012 | 0.000114 | 0.000025 | 0.000343 | 0.00008 | 37 | | | 0.001' | 0.2 | |
| Lithium (Li)-Total | mg/L | 0.002 | 0.0011 | 0.002 | 0.0019 | 0.0018 | 0.0021 | 0.0021 | 0.0018 | 0.0018 | 0.0018 | 0.0022 | 0.002 | 0.0021 | 0.0023 | 0.0023 | 0.0011 | 0.0032 | 0.00069 | 37 | | | | | |
| Magnesium (Mg)-Total | mg/L | 42.3 | 37.8 | 43.3 | 43.2 | 39.2 | 42.9 | 39.1 | 40.2 | 44.4 | 47.9 | 53.6 | 53.3 | 47.9 | 39.08 | 39.2 | 29.1 | 53.6 | 10.9 | 37 | | | | | |
| Manganese (Mn)-Total | mg/L | | | | | | | | | | | | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-2 cont'd

| End of Pipe Analyte | Units | EOP-WK1 | EOP-WK2 | EOP-WK3 | EOP-WK4 | EOP-WK5 | EOP-D2-24HR | EOP-D2-WK1 | EOP-D2-WK2 | EOP-D2-WK3 | EOP-2021-24HR | EOP-2021-WK1 | EOP-2021-WK2 | EOP-2021-WK3 | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | MWQSOG | MWQSOG | CCME | MDMER |
|---------------------------|-------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|---------------|--------------|--------------|--------------|-------------|-------------|-----------|-----------|----------|----------------|----------------------|----------|-------------|--------|
| | | L2465848-5 | L2468477-5 | L2471686-5 | L2474258-7 | L2478400-6 | L2507428-1 | L2510579-5 | L2513882-5 | L2516774-7 | L2642990-1 | L2645848-3 | L2648478-5 | L2650898-1 | | | | | | | Tier II | Tier III | Chronic PAL | Sch. 4 |
| | | 6/24/2020 | 7/1/2020 | 7/7/2020 | 7/14/2020 | 7/21/2020 | 9/21/2020 | 9/30/2020 | 10/7/2020 | 10/14/2020 | 9/21/2021 | 9/29/2021 | 10/6/2021 | 10/12/2021 | | | | | | | Chronic PAL | PAL | | MAC |
| Silver (Ag)-Total | mg/L | 0.000157 | 0.000171 | 0.000145 | 0.000124 | 0.000098 | 0.000045 | 0.000043 | 0.000047 | 0.000044 | 0.000011 | 0.000005 | 0.000012 | 0.000011 | 0.000075 | 0.000067 | 0.000005 | 0.000218 | 0.0000 | 37 | | 0.0001 | 0.00025 | |
| Sodium (Na)-Total | mg/L | 119 | 118 | 128 | 123 | 124 | 103 | 93.7 | 100 | 111 | 118 | 124 | 120 | 117 | 148.8 | 158.0 | 93.7 | 195 | 44.4 | 37 | | | | |
| Strontium (Sr)-Total | mg/L | 0.617 | 0.638 | 0.68 | 0.631 | 0.667 | 0.637 | 0.637 | 0.657 | 0.651 | 0.655 | 0.656 | 0.668 | 0.672 | 0.6601 | 0.656 | 0.534 | 0.811 | 0.162 | 37 | | | | |
| Sulfur (S)-Total | mg/L | 104 | 111 | 111 | 113 | 107 | 114 | 107 | 115 | 116 | 139 | 144 | 149 | 148 | 107 | 107 | 76.7 | 149 | 30.0 | 37 | | | | |
| Tellurium (Te)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.000091 | 0.0001 | 0.00005 | 0.00022 | 0.00004 | 37 | | | | |
| Thallium (Tl)-Total | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000004 | 0.000005 | 0.0000025 | 0.000005 | 0.000001 | 37 | | 0.0008 | 0.00008 | |
| Thorium (Th)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000043 | 0.00005 | 0.000025 | 0.00005 | 0.00001 | 37 | | | | |
| Tin (Sn)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000050 | 0.00005 | 0.000025 | 0.0002 | 0.000034 | 37 | | | | |
| Titanium (Ti)-Total | mg/L | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0004 | 0.0003 | 0.00033 | 0.00069 | 0.00182 | 0.00044 | 0.00043 | 0.00083 | 0.00059 | 0.00072 | 0.00062 | 0.00015 | 0.00254 | 0.00052 | 37 | | | | |
| Tungsten (W)-Total | mg/L | 0.0007 | 0.00088 | 0.0009 | 0.00094 | 0.00103 | 0.00073 | 0.00071 | 0.00067 | 0.00054 | 0.00124 | 0.00103 | 0.00119 | 0.00123 | 0.00130 | 0.00111 | 0.00054 | 0.00348 | 0.00074 | 37 | | | | |
| Uranium (U)-Total | mg/L | 0.00014 | 0.000172 | 0.000154 | 0.000153 | 0.000154 | 0.000112 | 0.000102 | 0.000113 | 0.000111 | 0.000094 | 0.000084 | 0.000088 | 0.000093 | 0.00015 | 0.000142 | 0.000084 | 0.000235 | 0.00005 | 37 | | 0.015 | 0.015 | |
| Vanadium (V)-Total | mg/L | 0.00025 | 0.00025 | 0.00066 | 0.00025 | 0.0008 | 0.00025 | 0.00025 | 0.00025 | 0.0005 | 0.00056 | 0.00077 | 0.0006 | 0.00067 | 0.00057 | 0.0006 | 0.00025 | 0.00134 | 0.00028 | 37 | | | | |
| Zinc (Zn)-Total | mg/L | 0.0074 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.0111 | 0.0075 | 0.0114 | 0.008 | 0.003666 | 0.003 | 0.0015 | 0.0114 | 0.0028 | 37 | | | | 0.5 |
| Zirconium (Zr)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.000068 | 0.000068 | 0.000015 | 0.0001 | 0.0000 | 37 | | | | |
| Aluminum (Al)-Dissolved | mg/L | 0.0084 | 0.0061 | 0.0031 | 0.0033 | 0.0071 | 0.0025 | 0.002 | 0.0028 | 0.004 | 0.0125 | 0.0024 | 0.0037 | 0.0053 | 0.00623 | 0.0061 | 0.0012 | 0.0138 | 0.0036 | 37 | | | | |
| Antimony (Sb)-Dissolved | mg/L | 0.00026 | 0.00021 | 0.00022 | 0.00022 | 0.00022 | 0.0002 | 0.00018 | 0.00018 | 0.00021 | 0.0001 | 0.00013 | 0.00011 | 0.00005 | 0.000268 | 0.00022 | 0.00005 | 0.00056 | 0.0001 | 37 | | | | |
| Arsenic (As)-Dissolved | mg/L | 0.00108 | 0.00111 | 0.00123 | 0.00119 | 0.0012 | 0.00113 | 0.00128 | 0.00122 | 0.00113 | 0.0012 | 0.00127 | 0.00125 | 0.00116 | 0.001392 | 0.00127 | 0.00102 | 0.0019 | 0.0004 | 37 | 0.15 | 0.01 | | |
| Barium (Ba)-Dissolved | mg/L | 0.025 | 0.025 | 0.027 | 0.0268 | 0.0278 | 0.0259 | 0.0294 | 0.0276 | 0.0265 | 0.039 | 0.0369 | 0.0355 | 0.0401 | 0.02978 | 0.0288 | 0.0203 | 0.0401 | 0.0081 | 37 | | | | |
| Beryllium (Be)-Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00004 | 0.00005 | 0.000025 | 0.00005 | 0.00001 | 37 | | | | |
| Bismuth (Bi)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00001 | 37 | | | | |
| Boron (B)-Dissolved | mg/L | 0.09 | 0.08 | 0.085 | 0.085 | 0.082 | 0.086 | 0.082 | 0.083 | 0.078 | 0.069 | 0.083 | 0.08 | 0.062 | 0.1193 | 0.114 | 0.062 | 0.23 | 0.0489 | 37 | | | | |
| Cadmium (Cd)-Dissolved | mg/L | 0.0000110 | 0.0000122 | 0.0000127 | 0.0000095 | 0.0000133 | 0.0000055 | 0.0000078 | 0.0000025 | 0.0000053 | 0.0000056 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000083 | 0.0000078 | 0.0000025 | 0.0000206 | 0.00001 | 37 | 0.014 ¹ | 0.005 | | |
| Calcium (Ca)-Dissolved | mg/L | 61.3 | 59.8 | 64 | 63.6 | 62.7 | 71.3 | 78.3 | 75.4 | 73.2 | 79.4 | 74.9 | 73 | 77.7 | 63.5 | 61.3 | 50.6 | 79.4 | 16.44 | 37 | | | | |
| Cesium (Cs)-Dissolved | mg/L | 0.000011 | 0.000013 | 0.000011 | 0.000013 | 0.000011 | 0.000025 | 0.000028 | 0.000027 | 0.000025 | 0.000092 | 0.000091 | 0.000089 | 0.000107 | 0.000073 | 0.000091 | 0.000011 | 0.000177 | 0.000048 | 37 | | | | |
| Chromium (Cr)-Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000043 | 0.00005 | 0.000025 | 0.00005 | 0.0000 | 37 | 0.369 ¹ | | | |
| Cobalt (Co)-Dissolved | mg/L | 0.00401 | 0.00355 | 0.00361 | 0.00349 | 0.00343 | 0.00324 | 0.00339 | 0.00335 | 0.00309 | 0.00327 | 0.00306 | 0.00302 | 0.00259 | 0.00266 | 0.0027 | 0.00137 | 0.00401 | 0.0009 | 37 | | | | |
| Copper (Cu)-Dissolved | mg/L | 0.0648 | 0.0638 | 0.0655 | 0.0634 | 0.0594 | 0.0448 | 0.0512 | 0.0546 | 0.0523 | 0.024 | 0.0236 | 0.0254 | 0.0246 | 0.066626 | 0.0675 | 0.0236 | 0.101 | 0.0250 | 37 | 0.00432 ¹ | | | |
| Iron (Fe)-Dissolved | mg/L | 0.064 | 0.08 | 0.082 | 0.065 | 0.087 | 0.027 | 0.083 | 0.037 | 0.033 | 0.091 | 0.105 | 0.12 | 0.118 | 0.055 | 0.055 | 0.0025 | 0.12 | 0.0337 | 37 | | | | |
| Lead (Pb)-Dissolved | mg/L | 0.000079 | 0.000051 | 0.000025 | 0.000025 | 0.000057 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000573 | 0.000159 | 0.000316 | 0.000164 | 0.000080 | 0.000057 | 0.000025 | 0.0000573 | 0.000102 | 37 | 0.00098 ¹ | | | |
| Lithium (Li)-Dissolved | mg/L | 0.0016 | 0.0015 | 0.0017 | 0.0017 | 0.0018 | 0.0011 | 0.0019 | 0.0018 | 0.0018 | 0.002 | 0.002 | 0.0017 | 0.0015 | 0.0022 | 0.0022 | 0.0011 | 0.0032 | 0.000702 | 37 | | | | |
| Magnesium (Mg)-Dissolved | mg/L | 37.9 | 43.3 | 42.9 | 39.7 | 38 | 38 | 43.9 | 39.4 | 44.7 | 48 | 55.3 | 52.8 | 44.4 | 38.7 | 39.4 | 23.3 | 55.3 | 11.1 | 37 | | | | |
| Manganese (Mn)-Dissolved | mg/L | 0.135 | 0.0944 | 0.299 | 0.214 | 0.414 | 0.0121 | 0.109 | 0.0897 | 0.0425 | 0.466 | 0.467 | 0.526 | 0.522 | 0.16412 | 0.108 | 0.00136 | 0.526 | 0.168 | 37 | | | | |
| Mercury (Hg)-Dissolved | ng/L | | | | | | | | | | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.49197 | 0.000745 | 0.00025 | 2.3 | 0.743198 | 14 | | | | |
| Molybdenum (Mo)-Dissolved | mg/L | 0.0202 | 0.0205 | 0.0207 | 0.0213 | 0.0188 | 0.015 | 0.0139 | 0.0142 | 0.0139 | 0.0095 | 0.01 | 0.0101 | 0.00897 | 0.020642 | 0.0177 | 0.00897 | 0.0411 | 0.0104 | 37 | | | | |
| Nickel (Ni)-Dissolved | mg/L | 0.00889 | 0.00791 | 0.00807 | 0.00744 | 0.00705 | 0.0048 | 0.0047 | 0.00486 | 0.00472 | 0.00591 | 0.00577 | 0.00584 | 0.00574 | 0.00574 | 0.00572 | 0.00436 | 0.00889 | 0.0017 | 37 | 0.02527 ¹ | | | |
| Phosphorus (P)-Dissolved | mg/L | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.071 | 0.071 | 0.053 | 0.035 | 0.112 | 0.14 | 0.125 | 0.163 | 0.066 | 0.059 | 0.015 | 0.163 | 0.0471 | 37 | | | | |
| Potassium (K)-Dissolved | mg/L | 20.5 | 20.1 | 21.3 | 20.4 | 20.9 | 19.4 | 21.4 | 20.3 | 20 | 23.7 | 23 | 22.1 | 22.6 | 27.50 | 28 | 19.4 | 35.4 | 8.27 | 37 | | | | |
| Rubidium (Rb)-Dissolved | mg/L | 0.00388 | 0.00408 | 0.00456 | 0.00432 | 0.00402 | 0.00562 | 0.00614 | 0.00577 | 0.00582 | 0.00735 | 0.0075 | 0.00714 | 0.00781 | 0.00978 | 0.0118 | 0.00388 | 0.0136 | 0.0040 | 37 | | | | |
| Selenium (Se)-Dissolved | mg/L | 0.000863 | 0.000868 | 0.000949 | 0.000816 | 0.000856 | 0.000744 | 0.000842 | 0.000693 | 0.000669 | 0.000609 | 0.000661 | 0.000554 | 0.000422 | 0.000650171 | 0.000636 | 0.000304 | 0.000949 | 0.0002 | 37 | | | | |
| Silicon (Si)-Dissolved | mg/L | 1.67 | 1.56 | 1.48 | 1.14 | 1.2 | 1.39 | 1.37 | 1.43 | 1.47 | 1.75 | 1.87 | 1.86 | 2.22 | 1.78 | 1.86 | 0.616 | 2.84 | 0.71 | 37 | | | | |
| Silver (Ag)-Dissolved | mg/L | 0.000124 | 0.000106 | 0.000097 | 0.000083 | 0.000082 | 0.000043 | 0.00003 | 0.000034 | 0.000029 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000047 | 0.000042 | 0.000005 | 0.000124 | 0.000031 | 37 | | | | |



Table B-3: Wanipigow River – Upstream (WR-US) Water Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Wanipigow River - Upstream | | L1960980-3 | L1964768-1 | L1971728-2 | L1976404-1 | L1979675-3 | L1983563-1 | L1986645-1 | L1990659-1 | L2110715-1 | L2119089-1 | L2122649-1 | L2126638-1 | L2130766-1 | L2134939-1 | L2138555-2 | L2142255-2 | L2146033-2 | L2150717-2 | L2153825-2 | L2159916-2 | L2162240-2 | L2166385-2 | L2170473-2 |
| Analyte | Units | 7/18/2017 | 7/25/2017 | 8/8/2017 | 8/15/2017 | 8/22/2017 | 8/29/2017 | 9/5/2017 | 9/12/2017 | 6/12/2018 | 6/25/2018 | 7/3/2018 | 7/10/2018 | 7/17/2018 | 7/24/2018 | 7/31/2018 | 8/7/2018 | 8/14/2018 | 8/21/2018 | 8/27/2018 | 9/5/2018 | 9/11/2018 | 9/18/2018 | 9/25/2018 |
| Alkalinity, Total (as CaCO3) | mg/L | 49.7 | 48.1 | 43 | 60.5 | 65.9 | 67.4 | 70.3 | 74.8 | 26.6 | 28.4 | 34.9 | 38.4 | 41.7 | 46.6 | 51 | 57.2 | 68.3 | 84.2 | 93.6 | 77.2 | 83.5 | 71.6 | 48.5 |
| Ammonia, Total (as N) | mg/L | 0.016 | 0.012 | 0.016 | 0.124 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.025 | 0.0025 | 0.022 | 0.027 | 0.015 | 0.018 | 0.024 | 0.0025 | 0.0025 | 0.0025 | 0.01 | 0.0025 | 0.0025 | 0.0025 | 0.0025 |
| Bicarbonate (HCO3) | mg/L | 60.6 | 58.7 | 52.5 | 73.8 | 80.4 | 82.2 | 85.8 | 91.3 | 32.5 | 34.6 | 42.6 | 46.8 | 50.9 | 56.9 | 62.2 | 69.8 | 83.3 | 103 | 114 | 94.2 | 102 | 87.4 | 59.2 |
| Carbonate (CO3) | mg/L | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Chloride (Cl) | mg/L | 0.59 | 0.66 | 0.5 | 0.63 | 0.74 | 0.89 | 0.92 | 0.97 | 0.63 | 0.55 | 0.51 | 0.52 | 0.54 | 0.56 | 0.6 | 0.67 | 0.8 | 0.89 | 1.01 | 0.98 | 1.05 | 1.31 | 1.06 |
| Conductivity | umhos/cm | 91.1 | 92.9 | 79 | 110 | 116 | 125 | 129 | 136 | 53.8 | 57.1 | 67 | 73.1 | 76.7 | 86.3 | 97.3 | 108 | 133 | 154 | 175 | 144 | 156 | 142 | 102 |
| Cyanide, Free | mg/L | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Cyanide, Total | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Cyanide, Weak Acid Diss | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 7.1 | 7.55 | 8.05 | 7.55 | 8.37 | 8.48 | 8.03 | 7.62 | 6.05 | 8.04 | 7.36 | 6.48 | 6.97 | 6.97 | 7.27 | 7.65 | | 0.95 | 8.1 | | 8.23 | 9.35 | 10.7 |
| EC, Client Supplied | umhos/cm | 94.3 | 95.1 | 81.5 | 112 | 120 | 129 | 134 | 138 | 74.5 | 58 | 69.3 | 74.6 | 83 | 92.7 | 99.5 | 109 | 135 | 158 | 180 | | 159 | 141 | 103 |
| Fluoride (F) | mg/L | 0.057 | 0.06 | 0.057 | 0.065 | 0.068 | 0.07 | 0.069 | 0.068 | 0.044 | 0.049 | 0.054 | 0.059 | 0.06 | 0.059 | 0.063 | 0.067 | 0.072 | 0.079 | 0.083 | 0.08 | 0.081 | 0.071 | 0.057 |
| Hardness (as CaCO3) | mg/L | 47.5 | 50.1 | 43.6 | 60.6 | 64.8 | 68.1 | 76.9 | 76.1 | 30.1 | 32.1 | 37.5 | 37.1 | 43.3 | 48.5 | 54.2 | 59.3 | 74.1 | 85.5 | 95.1 | 82.2 | 85.4 | 74.4 | 54.4 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Nitrite (as N) | mg/L | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 |
| pH | pH units | 7.64 | 7.53 | 7.5 | 7.72 | 7.55 | 7.75 | 7.62 | 7.69 | 7.4 | 7.56 | 7.66 | 7.54 | 7.57 | 7.53 | 7.58 | 7.63 | 7.56 | 8.07 | 7.91 | 7.75 | 7.82 | 7.76 | 7.71 |
| pH, Client Supplied | pH | 7.37 | 7.67 | 7.49 | 7.65 | 7.6 | 7.47 | 7.17 | 7.6 | 7.25 | 7.49 | 7.74 | 7.31 | 7.76 | 7.8 | 7.59 | 7.65 | 7.21 | 7.88 | 7.54 | 7.67 | 8.07 | 7.63 | 8.07 |
| Phosphorus (P)-Total | mg/L | 0.038 | 0.035 | 0.033 | 0.028 | 0.031 | 0.029 | 0.025 | 0.027 | 0.0291 | 0.0331 | 0.037 | 0.0379 | 0.0404 | 0.0574 | 0.0345 | 0.0286 | 0.0323 | 0.0699 | 0.0299 | 0.0236 | 0.0206 | 0.0244 | 0.0287 |
| Ra-226 | Bq/L | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate (SO4) | mg/L | 0.77 | 0.71 | 0.38 | 0.55 | 0.62 | 0.9 | 0.81 | 0.76 | 0.63 | 0.69 | 0.73 | 0.69 | 0.72 | 0.75 | 0.78 | 0.85 | 0.85 | 1.04 | 1.18 | 1.1 | 1.11 | 1.48 | 3.14 |
| TDS (Calculated) | mg/L | 50.8 | 50.5 | 43.3 | 60.5 | 65.4 | 68.3 | 73.3 | 75.2 | 29.2 | 30.2 | 36.5 | 38.8 | 41.3 | 47.9 | 52 | 57.6 | 68.3 | 82.7 | 89.3 | 76.8 | 82.9 | 74.1 | 54.2 |
| Temperature, Client Provided | Degree C | 20.5 | 22.4 | 18.4 | 20.5 | 18.7 | 19.4 | 15.1 | 17.4 | 20.5 | 25.3 | 20.9 | 21.8 | 19 | 21.9 | 22.2 | 18.8 | 19.6 | 12.9 | 16 | 14.5 | 14.2 | 12.1 | 8.8 |
| Total Kjeldahl Nitrogen | mg/L | 0.56 | 0.67 | 0.75 | 0.88 | 0.49 | 0.7 | 0.61 | 0.7 | 0.73 | 0.84 | 0.73 | 0.72 | 0.71 | 0.71 | 0.64 | 0.51 | 0.58 | 0.66 | 0.25 | 0.56 | 0.5 | 0.42 | 0.7 |
| Total Suspended Solids | mg/L | 10 | 5 | 5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 13.3 | 17.3 | 7.7 | 4.7 | 1 | 72 | 1 | 2.5 | 2.7 | 2.7 | 10 | 2.1 | 1 | 1 | 1 |
| Turbidity | NTU | 3.42 | 3.6 | 2.56 | 2.42 | 2.85 | 2.85 | 3.22 | 3.15 | 6.47 | 6.94 | 5.68 | 4.94 | 4.42 | 17.6 | 3.55 | 2.86 | 3.92 | 3.95 | 4.43 | 5.02 | 2.22 | 2.92 | 3.34 |
| Aluminum (Al)-Total | mg/L | 0.093 | 0.0997 | 0.113 | 0.0888 | 0.0794 | 0.0789 | 0.119 | 0.107 | 0.182 | 0.153 | 0.175 | 0.157 | 0.215 | 0.432 | 0.109 | 0.105 | 0.131 | 0.121 | 0.196 | 0.164 | 0.0712 | 0.0818 | 0.0917 |
| Antimony (Sb)-Total | mg/L | 0.000025 | 0.00015 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.0001 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Arsenic (As)-Total | mg/L | 0.00116 | 0.00117 | 0.00112 | 0.00136 | 0.00118 | 0.00116 | 0.00119 | 0.00113 | 0.00099 | 0.00111 | 0.00127 | 0.00125 | 0.00148 | 0.00168 | 0.00153 | 0.00142 | 0.00161 | 0.00147 | 0.00148 | 0.00119 | 0.00122 | 0.00092 | 0.00077 |
| Barium (Ba)-Total | mg/L | 0.0112 | 0.0116 | 0.0104 | 0.0106 | 0.0114 | 0.0105 | 0.0125 | 0.0149 | 0.0108 | 0.0096 | 0.0109 | 0.0102 | 0.0122 | 0.0149 | 0.0108 | 0.0107 | 0.0122 | 0.0152 | 0.0173 | 0.0146 | 0.0145 | 0.015 | 0.0104 |
| Beryllium (Be)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Bismuth (Bi)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)-Total | mg/L | 0.011 | 0.01 | 0.013 | 0.013 | 0.013 | 0.0025 | 0.014 | 0.01 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.013 | 0.0025 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.012 |
| Cadmium (Cd)-Total | mg/L | 0.000064 | 0.000071 | 0.000062 | 0.000025 | 0.000058 | 0.000025 | 0.000063 | 0.000025 | 0.000053 | 0.000061 | 0.000078 | 0.000053 | 0.000073 | 0.000108 | 0.000071 | 0.000051 | 0.000064 | 0.000025 | 0.000086 | 0.000053 | 0.000052 | 0.000025 | 0.000025 |
| Calcium (Ca)-Total | mg/L | 12.9 | 13.4 | 11 | 14.6 | 15.9 | 17.8 | 18.8 | 18.1 | 7.59 | 7.48 | 8.86 | 9.38 | 9.17 | 11.8 | 12.8 | 13.8 | 16.4 | 18.9 | 20 | 17.9 | 19.3 | 18 | 12.7 |
| Cesium (Cs)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000014 | 0.000012 | 0.000015 | 0.000016 | 0.000025 | 0.000021 | 0.000021 | 0.000025 | 0.000026 | 0.000076 | 0.000018 | 0.000015 | 0.000018 | 0.000017 | 0.00003 | 0.000026 | 0.000012 | 0.000013 | 0.00001 |
| Chromium (Cr)-Total | mg/L | 0.00033 | 0.00037 | 0.00046 | 0.00039 | 0.00054 | 0.0003 | 0.00044 | 0.00025 | 0.00049 | 0.00038 | 0.00048 | 0.00046 | 0.00057 | 0.00101 | 0.00054 | 0.00044 | 0.00034 | 0.00086 | 0.00064 | 0.00041 | 0.00025 | 0.00033 | 0.00024 |
| Cobalt (Co)-Total | mg/L | 0.00027 | 0.00027 | 0.00027 | 0.00028 | 0.00026 | 0.00027 | 0.00029 | 0.0003 | 0.00033 | 0.0003 | 0.00036 | 0.00034 | 0.00045 | 0.00071 | 0.00032 | 0.00031 | 0.00034 | 0.00034 | 0.00038 | 0.0003 | 0.00023 | 0.00022 | 0.00015 |
| Copper (Cu)-Total | mg/L | 0.00089 | 0.0009 | 0.00077 | 0.00101 | 0.00101 | 0.00088 | 0.00109 | 0.00094 | 0.00106 | 0.00117 | 0.00104 | 0.00096 | 0.00115 | 0.00149 | 0.00096 | 0.00096 | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-3 cont'd

| <i>Less than detection limit, half value</i> | | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Wanipigow River - Upstream | | L2174471-2 | L2294147-5 | L2298725-3 | L2302403-5 | L2306799-5 | L2311297-5 | L2315601-3 | L2319873-3 | L2323329-3 | L2328155-3 | L2332529-3 | L2338063-3 | L2340315-3 | L2344830-3 | L2349240-3 | L2353453-3 | L2357774-3 | L2362279-4 | L2365580-6 | L2369900-4 | L2373901-4 | L2377639-4 | L2380719-2 |
| Analyte | Units | 10/2/2018 | 6/18/2019 | 6/25/2019 | 7/2/2019 | 7/9/2019 | 7/16/2019 | 7/23/2019 | 7/30/2019 | 8/6/2019 | 8/13/2019 | 8/20/2019 | 8/28/2019 | 9/3/2019 | 9/10/2019 | 9/17/2019 | 9/24/2019 | 10/1/2019 | 10/8/2019 | 10/15/2019 | 10/22/2019 | 10/29/2019 | 11/5/2019 | 11/12/2019 |
| Alkalinity, Total (as CaCO3) | mg/L | 33.6 | 25.2 | 26.5 | 29.3 | 34.2 | 29 | 22.5 | 22.6 | 25.2 | 29.2 | 33.6 | 43.8 | 51.4 | 56.2 | 57.5 | 26.1 | 26.6 | 20.3 | 19.1 | 12.3 | 11.7 | 13.1 | 14.4 |
| Ammonia, Total (as N) | mg/L | 0.0025 | 0.02 | 0.017 | 0.018 | 0.026 | 0.043 | 0.028 | 0.023 | 0.016 | 0.033 | 0.016 | 0.02 | 0.143 | 0.012 | 0.025 | 0.021 | 0.032 | 0.024 | 0.018 | 0.013 | 0.012 | 0.013 | 0.021 |
| Bicarbonate (HCO3) | mg/L | 41 | 30.7 | 32.3 | 35.7 | 41.7 | 35.4 | 27.5 | 27.6 | 30.7 | 35.6 | 41 | 53.4 | 62.7 | 68.6 | 70.2 | 31.8 | 32.5 | 24.8 | 23.3 | 15 | 14.3 | 16 | 17.6 |
| Carbonate (CO3) | mg/L | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Chloride (Cl) | mg/L | 0.91 | 0.58 | 0.56 | 0.25 | 0.25 | 0.55 | 0.64 | 0.58 | 0.59 | 0.7 | 0.71 | 0.8 | 1.17 | 1.14 | 1.23 | 0.83 | 0.74 | 0.52 | 0.25 | 0.25 | 0.25 | 0.25 | 0.52 |
| Conductivity | umhos/cm | 73.1 | 53.5 | 56 | 59.7 | 68.1 | 58.7 | 52.2 | 55.2 | 56.4 | 60.2 | 67.3 | 84.3 | 101 | 111 | 110 | 57.9 | 54.1 | 44 | 42.2 | 35.6 | 33.7 | 36.6 | 40 |
| Cyanide, Free | mg/L | 0.00025 | 0.0005 | 0.0005 | 0.0025 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0017 | 0.0011 | 0.0013 | 0.0014 | 0.0014 | 0.0016 | 0.001 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| Cyanide, Total | mg/L | 0.00025 | 0.0005 | 0.0005 | 0.0025 | 0.0005 | 0.0005 | 0.0012 | 0.0012 | 0.0013 | 0.0011 | 0.0005 | 0.0025 | 0.0016 | 0.0014 | 0.0016 | 0.0019 | 0.0016 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| Cyanide, Weak Acid Diss | mg/L | 0.00025 | 0.0005 | 0.0005 | 0.0025 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0013 | 0.0005 | 0.0005 | 0.0014 | 0.0018 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 10.9 | 8.67 | 7.99 | 8.1 | 6.46 | 8.03 | 8.43 | 8.49 | 7.8 | 8.85 | 7.9 | 8.46 | 8.71 | 8.87 | 9.19 | 9.52 | 11.9 | 11.5 | 12.7 | 12 | 13.7 | | 14.4 |
| EC, Client Supplied | umhos/cm | 70.7 | 78.8 | 66.5 | 61 | 341 | 58.7 | 50.5 | 51.6 | 55.6 | 59.2 | 66.7 | 82.5 | 98.3 | 111 | 108 | 58.5 | 52.3 | 43.5 | 41.2 | 34.8 | 34 | 35.8 | 39.8 |
| Fluoride (F) | mg/L | 0.045 | 0.042 | 0.046 | 0.047 | 0.052 | 0.049 | 0.037 | 0.048 | 0.05 | 0.049 | 0.053 | 0.052 | 0.06 | 0.056 | 0.054 | 0.043 | 0.032 | 0.024 | 0.039 | 0.042 | 0.034 | 0.039 | 0.034 |
| Hardness (as CaCO3) | mg/L | 33 | 28.2 | 29.4 | 32.7 | 37.1 | 34.6 | 29.5 | 28.7 | 30.4 | 33 | 38 | 46.3 | 52.8 | 64.3 | 62.5 | 36 | 33 | 28.9 | 25.2 | 21.5 | 22.5 | 20.8 | 26 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Nitrate and Nitrite as N | mg/L | 0.07 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 |
| Nitrite (as N) | mg/L | 0.0025 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| pH | pH units | 7.53 | 7.37 | 7.47 | 7.53 | 7.56 | 7.34 | 7.31 | 7.25 | 7.29 | 7.48 | 7.48 | 7.53 | 7.57 | 7.72 | 7.76 | 7.31 | 7.18 | 7.15 | 6.99 | 6.86 | 6.96 | 7.04 | 7.01 |
| pH, Client Supplied | pH | 6.97 | 6.92 | 7.21 | 7.29 | 7.26 | 7.02 | 7.14 | 6.84 | 7.01 | 7.16 | 7.17 | 7.11 | 7.29 | 7.31 | 7.45 | 7.07 | 6.9 | 7.33 | 7.14 | 6.68 | 6.91 | 7.32 | 7.25 |
| Phosphorus (P)-Total | mg/L | 0.0235 | 0.0216 | 0.0317 | 0.0386 | 0.0372 | 0.0348 | 0.031 | 0.0308 | 0.0305 | 0.0299 | 0.0272 | 0.0257 | 0.0295 | 0.0259 | 0.0293 | 0.0822 | 0.0317 | 0.0248 | 0.0276 | 0.0248 | 0.022 | 0.0163 | 0.0182 |
| Ra-226 | Bq/L | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate (SO4) | mg/L | 1.45 | 0.62 | 0.64 | 0.57 | 0.54 | 0.31 | 0.45 | 0.55 | 0.39 | 0.44 | 0.51 | 0.56 | 0.53 | 0.59 | 0.52 | 0.68 | 0.77 | 0.68 | 0.58 | 0.63 | 0.61 | 0.72 | 0.82 |
| TDS (Calculated) | mg/L | 35.6 | 27.8 | 29.5 | 32.1 | 35.8 | 31.6 | 26.4 | 26.8 | 27.6 | 31.9 | 35.8 | 45.8 | 54.1 | 59.7 | 60.6 | 31.7 | 31.3 | 25 | 22.1 | 16.8 | 17 | 17.8 | 19.8 |
| Temperature, Client Provided | Degree C | 6.3 | 20.2 | 24.1 | 25.2 | 23.2 | 23.5 | 22.8 | 20.4 | 22.1 | 19.3 | 19.6 | 15.9 | 14.9 | 14.2 | 17.4 | 15.1 | 7.6 | 7.9 | 7.2 | 5.7 | 2 | 0 | 0.8 |
| Total Kjeldahl Nitrogen | mg/L | 0.81 | 0.78 | 0.67 | 0.79 | 0.82 | 0.95 | 0.9 | 0.86 | 0.79 | 0.91 | 0.85 | 0.74 | 1.64 | 0.75 | 0.71 | 1.37 | 1 | 0.86 | 0.65 | 0.85 | 0.72 | 0.6 | 0.71 |
| Total Suspended Solids | mg/L | 70.4 | 4.3 | 3.5 | 3.1 | 2.8 | 3.5 | 5.1 | 2.9 | 5.1 | 1 | 2 | 1 | 1 | 1 | 1 | 10.3 | 8 | 4.9 | 15.6 | 8 | 2.5 | 2.4 | 1 |
| Turbidity | NTU | 2.88 | 3.64 | 2.95 | 3.22 | 2.76 | 3.22 | 2.7 | 2.3 | 1.95 | 1.94 | 2.06 | 1.54 | 2.07 | 1.74 | 2.54 | 4.72 | 5.05 | 3.38 | 5.82 | 3.67 | 2.05 | 2.77 | 2.68 |
| Aluminum (Al)-Total | mg/L | 0.152 | 0.137 | 0.124 | 0.115 | 0.0977 | 0.188 | 0.153 | 0.127 | 0.105 | 0.0781 | 0.0989 | 0.0657 | 0.0732 | 0.0566 | 0.0762 | 0.286 | 0.405 | 0.331 | 0.399 | 0.325 | 0.237 | 0.226 | 0.217 |
| Antimony (Sb)-Total | mg/L | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Arsenic (As)-Total | mg/L | 0.00078 | 0.00094 | 0.00099 | 0.00119 | 0.00127 | 0.00131 | 0.00137 | 0.00135 | 0.00136 | 0.0014 | 0.0013 | 0.00132 | 0.00125 | 0.00133 | 0.00106 | 0.00102 | 0.00105 | 0.00099 | 0.00085 | 0.00079 | 0.00089 | 0.00073 | 0.00075 |
| Barium (Ba)-Total | mg/L | 0.00856 | 0.00953 | 0.00897 | 0.00878 | 0.0096 | 0.0106 | 0.00943 | 0.00878 | 0.00801 | 0.00849 | 0.00963 | 0.0113 | 0.0112 | 0.0121 | 0.0117 | 0.0151 | 0.0124 | 0.0108 | 0.0112 | 0.00986 | 0.0084 | 0.00845 | 0.00902 |
| Beryllium (Be)-Total | mg/L | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)-Total | mg/L | 0.0025 | 0.012 | 0.011 | 0.01 | 0.01 | 0.01 | 0.01 | 0.012 | 0.01 | 0.01 | 0.01 | 0.01 | 0.012 | 0.012 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Cadmium (Cd)-Total | mg/L | 0.000067 | 0.0000231 | 0.0000157 | 0.0000230 | 0.0000215 | 0.0000207 | 0.0000077 | 0.0000060 | 0.0000054 | 0.0000025 | 0.0000025 | 0.0000059 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000133 | 0.0000051 | 0.0000096 | 0.0000097 | 0.0000098 | 0.0000054 | 0.0000051 | 0.0000058 |
| Calcium (Ca)-Total | mg/L | 8.81 | 7.23 | 7.68 | 8.43 | 9.68 | 7.93 | 6.96 | 7.33 | 6.73 | 7.75 | 8.14 | 11 | 13.2 | 14.8 | 14.9 | 7.77 | 8.13 | 6.74 | 6.63 | 5.57 | 5.25 | 5.54 | 6.03 |
| Cesium (Cs)-Total | mg/L | 0.000012 | 0.000016 | 0.000012 | 0.000015 | 0.000019 | 0.000021 | 0.000013 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000015 | 0.000031 | 0.00001 | 0.000036 | 0.000019 | 0.000016 | 0.000013 | 0.000005 |
| Chromium (Cr)-Total | mg/L | 0.00056 | 0.00042 | 0.0005 | 0.0004 | 0.00055 | 0.00055 | 0.00058 | 0.00047 | 0.00039 | 0.00039 | 0.00044 | 0.00047 | 0.00063 | 0.00032 | 0.00034 | 0.00073 | 0.00093 | 0.00078 | 0.0009 | 0.00083 | 0.00069 | 0.00059 | 0.00054 |
| Cobalt (Co)-Total | mg/L | 0.00016 | 0.00026 | 0.00029 | 0.00029 | 0.00028 | 0.00031 | 0.00027 | 0.00026 | 0.00021 | 0.00019 | 0.00022 | 0.00024 | 0.00023 | 0.0002 | 0.00019 | 0.0006 | 0.00033 | 0.00023 | 0.00032 | 0.00022 | 0.00017 | 0.00017 | 0.00019 |
| Copper (Cu)-Total | mg/L | 0.00097 | 0.00121 | 0.00111 | 0.00125 | 0.00118 | 0.00104 | 0.0008 | 0.0007 | 0.00076 | 0.00074 | 0.00116 | 0.00109 | 0.00101 | 0.00077 | 0.00081 | 0.00144 | 0.00114 | 0.00122 | 0.0012 | 0.00123 | 0.00098 | 0.00117 | 0.00084 |
| Iron (Fe)-Total | mg/L | 0.521 | 0.709 | 0.734 | 0.834 | 0.842 | 0.883 | 0.991 | 1.04 | 0.901 | 0.887 | 0.907 | 0.935 | 1.09 | 0.927 | 0.904 | 1.05 | 1.08 | 0.899 | 1 | 0.812 | 0.732 | 0.693 | 0.719 |
| Lead (Pb)-Total | mg/L | 0.000178 | 0.000308 | 0.000283 | 0.000274 | 0.000637 | 0.000789 | 0.000144 | 0.000136 | 0.000128 | 0.000129 | 0.000151 | 0.000133 | 0.000141 | 0.000124 | 0.000115 | 0.000277 | 0.00023 | 0.000185 | 0.000267 | 0.000261 | 0.000142 | 0.000155 | 0.000142 |
| Lithium (Li)-Total | mg/L | 0.0018 | 0.0015 | 0.0015 | 0.0019 | 0.0019 | 0.0017 | 0.0016 | 0.0018 | 0.0015 | 0.0016 | 0.0018 | 0.0024 | 0.0026 | 0.0026 | 0.0024 | 0.0017 | 0.0018 | 0.0016 | 0.0017 | 0.0015 | 0.0014 | 0.0014 | 0.0014 |
| Magnesium (Mg)-Total | mg/L | 3.71 | 2.56 | 2.91 | 3.25 | 3.49 | 3.47 | 3.06 | 3.11 | 3.16 | 3.59 | 4.03 | 4.79 | 5.62 | 6.51 | 6.52 | 3.55 | 3.53 | 3 | 2.84 | 2.14 | 1.97 | 2.01 | 2.14 |
| Manganese (Mn)-Total | mg/L | 0.0238 | 0.0844 | 0.0937 | 0.0973 | 0.105 | 0.0663 | 0.0529 | | | | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-3 cont'd

| <i>Less than detection limit, half value</i> | | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Wanipigow River - Upstream | | L2384847-2 | L2387900-2 | L2391104-2 | L2459189-1 | L2465848-1 | L2468477-3 | L2471686-4 | L2474258-1 | L2478400-2 | L2481567-4 | L2484805-2 | L2487940-2 | L2492070-1 | L2494017-2 | L2498782-8 | L2501688-2 | L2504186-2 | L2510579-2 | L2513882-2 | L2516774-2 | L2520597-2 | L2523594-2 |
| Analyte | Units | 11/19/2019 | 11/26/2019 | 12/3/2019 | 6/10/2020 | 6/23/2020 | 6/30/2020 | 7/7/2020 | 7/14/2020 | 7/21/2020 | 7/28/2020 | 8/4/2020 | 8/11/2020 | 8/18/2020 | 8/25/2020 | 9/1/2020 | 9/8/2020 | 9/15/2020 | 9/29/2020 | 10/6/2020 | 10/13/2020 | 10/20/2020 | 10/27/2020 |
| Alkalinity, Total (as CaCO3) | mg/L | 19 | 20.1 | 22.4 | 27.4 | 24.1 | 21.9 | 22.3 | 25.2 | 25.9 | 20.1 | 19.8 | 23.7 | 27.5 | 31.1 | 32.5 | 33.9 | 32.4 | 32.3 | 26.8 | 29.1 | 29.6 | 27.9 |
| Ammonia, Total (as N) | mg/L | 0.018 | 0.022 | 0.02 | 0.026 | 0.012 | 0.01 | 0.005 | 0.011 | 0.005 | 0.023 | 0.01 | 0.024 | 0.012 | 0.005 | 0.005 | 0.005 | 0.076 | 0.022 | 0.019 | 0.016 | 0.034 | 0.013 |
| Bicarbonate (HCO3) | mg/L | 23.2 | 24.5 | 27.3 | 33.4 | 29.4 | 26.7 | 27.2 | 30.7 | 31.6 | 24.5 | 24.2 | 28.9 | 33.6 | 37.9 | 39.7 | 41.4 | 39.5 | 39.4 | 32.7 | 35.5 | 36.1 | 34 |
| Carbonate (CO3) | mg/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Chloride (Cl) | mg/L | 0.56 | 0.62 | 0.7 | 0.6 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.54 | 0.68 | 0.72 | 0.75 | 0.74 | 0.96 | 0.82 | 0.86 | 0.86 | 0.79 |
| Conductivity | umhos/cm | 43.3 | 47.1 | 49.1 | 56.6 | 47.6 | 43.3 | 46.9 | 52.2 | 49.8 | 43.1 | 43.4 | 49 | 56.6 | 62.2 | 65.8 | 67.8 | 65.7 | 68 | 64.7 | 66.1 | 68.4 | 65.8 |
| Cyanide, Free | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0017 | 0.0005 | 0.005 | 0.0011 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0053 | 0.0005 | 0.0013 | 0.0005 |
| Cyanide, Total | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0011 | 0.0005 | 0.0005 | 0.0005 | 0.005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0013 | 0.0005 | 0.0011 | 0.0236 | 0.0011 | 0.0005 |
| Cyanide, Weak Acid Diss | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0043 | 0.0005 | 0.0005 | 0.0005 |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 13.1 | 12.7 | 14.7 | 8.89 | 8.81 | 7.58 | 7.73 | 8.22 | 8.22 | 7.98 | 7.83 | 7.98 | 8.45 | 8.22 | 8.97 | 9.91 | 9.18 | 9.23 | 10.9 | 10.8 | 12.9 | 12.5 |
| EC, Client Supplied | umhos/cm | 42.3 | 44.6 | 42.4 | 54.8 | 46.9 | 43.4 | 46.6 | 50.8 | 49.8 | 42.5 | 43.9 | 49.5 | 56.1 | 62.7 | 65.5 | 66.7 | 63.1 | 66.1 | 59.4 | 62.4 | 62.6 | 60.9 |
| Fluoride (F) | mg/L | 0.039 | 0.039 | 0.042 | 0.039 | 0.042 | 0.04 | 0.041 | 0.043 | 0.043 | 0.042 | 0.044 | 0.047 | 0.049 | 0.048 | 0.048 | 0.048 | 0.043 | 0.045 | 0.047 | 0.044 | 0.044 | 0.042 |
| Hardness (as CaCO3) | mg/L | 26.8 | 27.7 | 27.5 | 31.1 | 26.7 | 24 | 25.7 | 27.9 | 27.5 | 24.3 | 23.7 | 27.7 | 29 | 30 | 34.1 | 32.2 | 31.1 | 33.5 | 29.4 | 31.8 | 32.3 | 30.8 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 0.02 | 0.02 | 0.022 | 0.023 | 0.005 | 0.005 | 0.005 | 0.023 | 0.005 | 0.04 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.023 | 0.03 |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 |
| Nitrite (as N) | mg/L | 0.01 | 0.01 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| pH | pH units | 7.07 | 7.29 | 7.25 | 7.52 | 7.3 | 7.22 | 7.27 | 7.29 | 7.32 | 7.21 | 7.49 | 7.22 | 7.5 | 7.54 | 7.55 | 7.53 | 7.57 | 7.54 | 7.48 | 7.53 | 7.52 | 7.52 |
| pH, Client Supplied | pH | 7.17 | 7.3 | 7.1 | 7.57 | 6.65 | 6.93 | 6.82 | 6.99 | 7.07 | 6.89 | 6.88 | 6.94 | 6.79 | 7 | 6.63 | 7.11 | 6.39 | 6.64 | 6.69 | 6.44 | 6.84 | 6.49 |
| Phosphorus (P)-Total | mg/L | 0.0233 | 0.0177 | 0.0193 | 0.0276 | 0.03 | 0.0285 | 0.0322 | 0.0364 | 0.0365 | 0.0298 | 0.0294 | 0.0303 | 0.0282 | 0.0277 | 0.0236 | 0.0232 | 0.0244 | 0.0283 | 0.0293 | 0.0263 | 0.0268 | 0.0227 |
| Ra-226 | Bq/L | | | | | | 0.0085 | 0.0067 | | | | | | | | | | | 0.013 | | 0.011 | | |
| Sulfate (SO4) | mg/L | 0.77 | 0.84 | 0.94 | 0.59 | 0.3 | 0.33 | 0.35 | 0.4 | 0.3 | 0.3 | 0.4 | 0.49 | 0.56 | 0.66 | 0.71 | 0.69 | 0.72 | 0.66 | 0.61 | 0.84 | 0.85 | 0.87 |
| TDS (Calculated) | mg/L | 23.6 | 24.7 | 25.9 | 29.9 | 25 | 22.9 | 24.5 | 26.8 | 26.2 | 21.6 | 21.6 | 25.7 | 29 | 31.9 | 35 | 34.6 | 33.5 | 33.6 | 29.7 | 31.9 | 32.6 | 30.9 |
| Temperature, Client Provided | Degree C | 0.7 | 0.3 | 0 | 16.3 | 18.8 | 26.1 | 25.2 | 22.4 | 21.3 | 23.5 | 23.2 | 21.3 | 21.5 | 21.5 | 16.6 | 14.4 | 12.6 | 11.8 | 12.9 | 7.4 | 1.7 | 0.1 |
| Total Kjeldahl Nitrogen | mg/L | 0.67 | 0.76 | 0.82 | 0.63 | 0.67 | 0.74 | 0.73 | 0.74 | 0.75 | 0.94 | 0.94 | 0.75 | 0.73 | 0.87 | 0.62 | 0.57 | 0.66 | 0.59 | 0.63 | 0.53 | 0.6 | 0.51 |
| Total Suspended Solids | mg/L | 3.9 | 1 | 1 | 5.9 | 14.2 | 6.3 | 3.8 | 3.2 | 6.8 | 4.5 | 1.6 | 1.8 | 1.8 | 2.2 | 1 | 1.7 | 2.1 | 1.6 | 3.1 | 2.6 | 5.7 | 3.6 |
| Turbidity | NTU | 2.91 | 1.93 | 2.48 | 2.77 | 3.24 | 2.14 | 2.93 | 8.6 | 3.06 | 2.15 | 1.88 | 2.23 | 2.2 | 2.67 | 2.92 | 3.25 | 3.54 | 4.36 | 5.26 | 5.18 | 7.11 | 6.1 |
| Aluminum (Al)-Total | mg/L | 0.207 | 0.184 | 0.185 | 0.176 | 0.243 | 0.2 | 0.151 | 0.104 | 0.175 | 0.166 | 0.142 | 0.112 | 0.0993 | 0.068 | 0.0729 | 0.0823 | 0.0827 | 0.113 | 0.16 | 0.128 | 0.206 | 0.176 |
| Antimony (Sb)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00013 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Arsenic (As)-Total | mg/L | 0.00069 | 0.00073 | 0.00075 | 0.00092 | 0.00125 | 0.00125 | 0.0014 | 0.00119 | 0.00127 | 0.00126 | 0.00117 | 0.00117 | 0.00123 | 0.00103 | 0.001 | 0.00087 | 0.00079 | 0.001 | 0.00076 | 0.00069 | 0.00072 | 0.00071 |
| Barium (Ba)-Total | mg/L | 0.00872 | 0.00841 | 0.00887 | 0.00931 | 0.00949 | 0.0099 | 0.00972 | 0.00846 | 0.00945 | 0.00942 | 0.00878 | 0.00857 | 0.00839 | 0.00763 | 0.00761 | 0.0076 | 0.00796 | 0.00936 | 0.00886 | 0.00844 | 0.00861 | 0.00808 |
| Beryllium (Be)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)-Total | mg/L | 0.01 | 0.01 | 0.01 | 0.005 | 0.005 | 0.005 | 0.012 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 |
| Cadmium (Cd)-Total | mg/L | 0.000025 | 0.0000050 | 0.0000133 | 0.000025 | 0.0000052 | 0.0000087 | 0.0000052 | 0.0000074 | 0.0000073 | 0.0000091 | 0.0000062 | 0.0000074 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000054 | 0.0000071 | 0.0000025 | 0.0000054 | 0.0000025 |
| Calcium (Ca)-Total | mg/L | 5.95 | 6.56 | 6.66 | 7.63 | 6.92 | 6.07 | 6.62 | 7.02 | 7.17 | 6.43 | 6.08 | 6.86 | 7.49 | 8.38 | 8.83 | 9.26 | 8.31 | 7.61 | 7.72 | 8.39 | 8.1 | 8.12 |
| Cesium (Cs)-Total | mg/L | 0.00001 | 0.000005 | 0.000014 | 0.00002 | 0.000019 | 0.000019 | 0.000012 | 0.000005 | 0.000014 | 0.000011 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000013 | 0.000017 | 0.000021 | 0.000005 | 0.000033 | 0.000025 |
| Chromium (Cr)-Total | mg/L | 0.00044 | 0.00047 | 0.0005 | 0.0005 | 0.00059 | 0.00054 | 0.00047 | 0.00041 | 0.00058 | 0.00054 | 0.00052 | 0.00047 | 0.00042 | 0.00029 | 0.0003 | 0.00031 | 0.00037 | 0.0003 | 0.00047 | 0.00037 | 0.00052 | 0.00043 |
| Cobalt (Co)-Total | mg/L | 0.0002 | 0.00019 | 0.00021 | 0.00028 | 0.00025 | 0.00036 | 0.00028 | 0.00024 | 0.00023 | 0.00024 | 0.00021 | 0.00022 | 0.00019 | 0.00018 | 0.00018 | 0.00018 | 0.00017 | 0.00019 | 0.00026 | 0.0002 | 0.0003 | 0.00023 |
| Copper (Cu)-Total | mg/L | 0.00114 | 0.00109 | 0.00169 | 0.00083 | 0.00089 | 0.00083 | 0.00073 | 0.00065 | 0.00077 | 0.00068 | 0.00074 | 0.00076 | 0.00071 | 0.00069 | 0.00069 | 0.00072 | 0.00071 | 0.00071 | 0.00079 | 0.00077 | 0.00087 | 0.00083 |
| Iron (Fe)-Total | mg/L | 0.703 | 0.719 | 0.71 | 0.776 | 0.69 | 0.972 | 1.13 | 1.04 | 0.904 | 1.09 | 1.02 | 1.04 | 1.02 | 0.74 | 0.82 | 0.789 | 0.753 | 0.77 | 1.01 | 0.835 | 0.887 | 0.779 |
| Lead (Pb)-Total | mg/L | 0.000224 | 0.000479 | 0.000662 | 0.000282 | 0.000212 | 0.000269 | 0.000161 | 0.000159 | 0.000198 | 0.000259 | 0.000254</ | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-3 cont'd

| <i>Less than detection limit, half value</i> | | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | |
|--|-------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Wanipigow River - Upstream | | L1960980-3 | L1964768-1 | L1971728-2 | L1976404-1 | L1979675-3 | L1983563-1 | L1986645-1 | L1990659-1 | L21107151 | L21190891 | L21226491 | L21266381 | L21307661 | L21349391 | L21385552 | L21422552 | L21460332 | L21507172 | L21538252 | L21599162 | L21622402 | L21663852 | L21704732 |
| Analyte | Units | 7/18/2017 | 7/25/2017 | 8/8/2017 | 8/15/2017 | 8/22/2017 | 8/29/2017 | 9/5/2017 | 9/12/2017 | 6/12/2018 | 6/25/2018 | 7/3/2018 | 7/10/2018 | 7/17/2018 | 7/24/2018 | 7/31/2018 | 8/7/2018 | 8/14/2018 | 8/21/2018 | 8/27/2018 | 9/5/2018 | 9/11/2018 | 9/18/2018 | 9/25/2018 |
| Silver (Ag)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Sodium (Na)-Total | mg/L | 1.21 | 1.37 | 1.52 | 1.61 | 2.04 | 1.47 | 1.93 | 1.87 | 1.21 | 1.09 | 1.22 | 1 | 1.21 | 1.46 | 1.38 | 1.46 | 1.56 | 1.88 | 1.81 | 1.83 | 1.96 | 2.01 | 1.49 |
| Strontium (Sr)-Total | mg/L | 0.0302 | 0.0313 | 0.03 | 0.0363 | 0.0392 | 0.0401 | 0.0422 | 0.0435 | 0.0193 | 0.0203 | 0.0222 | 0.0264 | 0.0254 | 0.0353 | 0.0352 | 0.0364 | 0.0413 | 0.0457 | 0.0521 | 0.0451 | 0.0477 | 0.0436 | 0.0282 |
| Sulfur (S)-Total | mg/L | 0.64 | 0.25 | 0.52 | 0.58 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.63 | 0.63 | 0.69 | 0.65 | 0.59 | 0.61 | 0.98 |
| Tellurium (Te)-Total | mg/L | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| Thallium (Tl)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Thorium (Th)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Tin (Sn)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Titanium (Ti)-Total | mg/L | 0.00265 | 0.00302 | 0.00331 | 0.00275 | 0.00284 | 0.00245 | 0.0049 | 0.00404 | 0.00661 | 0.00505 | 0.00587 | 0.00533 | 0.00765 | 0.0155 | 0.00381 | 0.00374 | 0.00541 | 0.00528 | 0.00876 | 0.00638 | 0.00287 | 0.00292 | 0.00325 |
| Tungsten (W)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.00281 | 0.00273 | 0.00059 | 0.00014 | 0.00015 | 0.00025 | 0.00023 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Uranium (U)-Total | mg/L | 0.000085 | 0.000098 | 0.000085 | 0.00011 | 0.000136 | 0.000135 | 0.000134 | 0.000142 | 0.000071 | 0.000068 | 0.000075 | 0.000075 | 0.000071 | 0.000139 | 0.000093 | 0.000098 | 0.000108 | 0.000157 | 0.000251 | 0.000131 | 0.000145 | 0.000129 | 0.00007 |
| Vanadium (V)-Total | mg/L | 0.00092 | 0.00097 | 0.00088 | 0.00121 | 0.00112 | 0.00088 | 0.0011 | 0.00102 | 0.0011 | 0.00108 | 0.00127 | 0.00115 | 0.00163 | 0.00209 | 0.00116 | 0.0014 | 0.00155 | 0.00132 | 0.0014 | 0.00154 | 0.00104 | 0.00103 | 0.00072 |
| Zinc (Zn)-Total | mg/L | 0.0015 | 0.0052 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0072 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0015 | 0.0032 | 0.0015 | 0.0015 |
| Zirconium (Zr)-Total | mg/L | 0.000191 | 0.000249 | 0.000284 | 0.000236 | 0.000519 | 0.0002 | 0.000229 | 0.000239 | 0.000219 | 0.000169 | 0.000162 | 0.000183 | 0.000165 | 0.000288 | 0.000147 | 0.000155 | 0.000174 | 0.000217 | 0.00022 | 0.000237 | 0.000125 | 0.000113 | 0.000203 |
| Aluminum (Al)-Dissolved | mg/L | 0.038 | 0.0468 | 0.0588 | 0.0349 | 0.0287 | 0.027 | 0.0241 | 0.0198 | 0.0427 | 0.0463 | 0.0367 | 0.108 | 0.0342 | 0.0217 | 0.0189 | 0.0187 | 0.0203 | 0.0179 | 0.0178 | 0.0169 | 0.014 | 0.0138 | 0.0179 |
| Antimony (Sb)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Arsenic (As)-Dissolved | mg/L | 0.00117 | 0.00101 | 0.00111 | 0.00116 | 0.00117 | 0.00109 | 0.00106 | 0.00108 | 0.00081 | 0.0011 | 0.00101 | 0.00148 | 0.00138 | 0.00125 | 0.00124 | 0.0012 | 0.0015 | 0.00123 | 0.00124 | 0.00113 | 0.00094 | 0.00074 | 0.00067 |
| Barium (Ba)-Dissolved | mg/L | 0.00986 | 0.00967 | 0.00921 | 0.00976 | 0.01 | 0.00902 | 0.0115 | 0.0134 | 0.00819 | 0.00825 | 0.00927 | 0.0102 | 0.00922 | 0.00813 | 0.00805 | 0.00817 | 0.0108 | 0.0132 | 0.015 | 0.0125 | 0.0136 | 0.0129 | 0.00913 |
| Beryllium (Be)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Bismuth (Bi)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)-Dissolved | mg/L | 0.012 | 0.016 | 0.012 | 0.01 | 0.014 | 0.011 | 0.012 | 0.0025 | 0.0025 | 0.011 | 0.0025 | 0.0025 | 0.01 | 0.0025 | 0.0025 | 0.01 | 0.011 | 0.01 | 0.01 | 0.01 | 0.013 | 0.012 | 0.011 |
| Cadmium (Cd)-Dissolved | mg/L | 0.000054 | 0.000025 | 0.000025 | 0.000025 | 0.000062 | 0.000025 | 0.000025 | 0.000025 | 0.0000110 | 0.000025 | 0.000052 | 0.000078 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Calcium (Ca)-Dissolved | mg/L | 12 | 11.9 | 10.1 | 14.5 | 15.3 | 15.9 | 18.4 | 17.5 | 7.28 | 8.19 | 9.28 | 9.71 | 10.6 | 12.2 | 12.9 | 13.4 | 17 | 19.6 | 21.7 | 19.1 | 19.2 | 17.2 | 12.5 |
| Cesium (Cs)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000011 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Chromium (Cr)-Dissolved | mg/L | 0.00022 | 0.00021 | 0.00033 | 0.00019 | 0.00025 | 0.00022 | 0.0002 | 0.00018 | 0.00023 | 0.00022 | 0.00015 | 0.00041 | 0.00021 | 0.00019 | 0.00017 | 0.00018 | 0.00015 | 0.00015 | 0.00012 | 0.0001 | 0.00013 | 0.00014 | 0.00012 |
| Cobalt (Co)-Dissolved | mg/L | 0.00017 | 0.00014 | 0.00018 | 0.0002 | 0.00018 | 0.00019 | 0.00018 | 0.00016 | 0.00025 | 0.00015 | 0.00023 | 0.00019 | 0.00017 | 0.00025 | 0.00025 | 0.00025 | 0.00018 | 0.00013 | 0.00018 | 0.00011 | 0.00015 | 0.00013 | 0.00025 |
| Copper (Cu)-Dissolved | mg/L | 0.00082 | 0.00082 | 0.00092 | 0.00074 | 0.00082 | 0.00082 | 0.00081 | 0.00081 | 0.00088 | 0.00091 | 0.0009 | 0.00116 | 0.0008 | 0.00082 | 0.00074 | 0.00075 | 0.00119 | 0.00077 | 0.00076 | 0.00076 | 0.00065 | 0.00057 | 0.00074 |
| Iron (Fe)-Dissolved | mg/L | 0.583 | 0.555 | 0.537 | 0.65 | 0.633 | 0.577 | 0.619 | 0.643 | 0.397 | 0.456 | 0.565 | 0.908 | 0.687 | 0.593 | 0.619 | 0.617 | 0.729 | 0.62 | 0.59 | 0.478 | 0.497 | 0.482 | 0.231 |
| Lead (Pb)-Dissolved | mg/L | 0.00012 | 0.000106 | 0.000081 | 0.000091 | 0.000103 | 0.000094 | 0.000112 | 0.000148 | 0.000151 | 0.000147 | 0.00015 | 0.000183 | 0.000163 | 0.000462 | 0.000109 | 0.000105 | 0.000129 | 0.000108 | 0.000115 | 0.000105 | 0.000096 | 0.000069 | 0.000064 |
| Lithium (Li)-Dissolved | mg/L | 0.0023 | 0.002 | 0.0019 | 0.0024 | 0.0025 | 0.0029 | 0.0025 | 0.0028 | 0.0014 | 0.0016 | 0.0019 | 0.0017 | 0.0019 | 0.002 | 0.0023 | 0.003 | 0.0029 | 0.0032 | 0.0037 | 0.003 | 0.0033 | 0.0024 | 0.0018 |
| Magnesium (Mg)-Dissolved | mg/L | 4.28 | 4.94 | 4.49 | 5.95 | 6.48 | 6.87 | 7.56 | 7.84 | 2.89 | 2.84 | 3.47 | 3.13 | 4.07 | 4.42 | 5.3 | 6.26 | 7.67 | 8.89 | 9.95 | 8.35 | 9.09 | 7.65 | 5.63 |
| Manganese (Mn)-Dissolved | mg/L | 0.0968 | 0.0526 | 0.0662 | 0.0993 | 0.122 | 0.0994 | 0.115 | 0.0941 | 0.0353 | 0.0683 | 0.121 | 0.0712 | 0.11 | 0.00251 | 0.0021 | 0.00289 | 0.245 | 0.178 | 0.181 | 0.106 | 0.129 | 0.0782 | 0.0012 |
| Mercury (Hg)-Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)-Dissolved | mg/L | 0.0003 | 0.000193 | 0.000181 | 0.00021 | 0.000233 | 0.00026 | 0.000252 | 0.000279 | 0.000201 | 0.000149 | 0.000151 | 0.00016 | 0.000203 | 0.000217 | 0.000216 | 0.00022 | 0.000299 | 0.000326 | 0.00038 | 0.000301 | 0.000257 | 0.000238 | 0.000147 |
| Nickel (Ni)-Dissolved | mg/L | 0.00072 | 0.00082 | 0.00102 | 0.00094 | 0.00094 | 0.00086 | 0.0008 | 0.00085 | 0.00067 | 0.00075 | 0.00086 | 0.00092 | 0.00062 | 0.00057 | 0.00056 | 0.00059 | 0.00072 | 0.0007 | 0.00069 | 0.00057 | 0.00061 | 0.00051 | 0.00055 |
| Phosphorus (P)-Dissolved | mg/L | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 |
| Potassium (K)-Dissolved | mg/L | 0.466 | 0.573 | 0.655 | 0.615 | 0.666 | 0.735 | 0.814 | 0.878 | 0.619 | 0.408 | 0.311 | 0.393 | 0.383 | 0.398 | 0.398 | 0.492 | 0.574 | 0.638 | 0.734 | 0.612 | 0.691 | 0.787 | 1.04 |
| Rubidium (Rb)-Dissolved | mg/L | 0.00133 | 0.00167 | 0.00182 | 0.00176 | 0.00188 | 0.00181 | 0.00179 | 0.00184 | 0.00178 | 0.00132 | 0.00112 | 0.00111 | 0.00118 | 0.00131 | 0.00123 | 0.00128 | 0.00157 | 0.00152 | 0.00158 | 0.00137 | 0.00144 | 0.00179 | 0.00204 |
| Selenium (Se)-Dissolved | mg/L | 0.000109 | 0.000124 | 0.000141 | 0.000124 | 0.00013 | 0.000076 | 0.000106 | 0.000118 | 0.00011 | 0.000095 | 0.000138 | 0.000105 | 0.000152 | 0.000122 | 0.000136 | 0.000102 | 0.000111 | 0.000106 | 0.00012 | 0.000103 | 0.000096 | 0.0001 | 0.000077 |
| Silicon (Si)-Dissolved | mg/L | 1.77 | 2.07 | 2.76 | 2.45 | 2.48 | 2.36 | 2.27 | 2.33 | 0.902 | 0.858</ | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-3 cont'd

| <i>Less than detection limit, half value</i> | | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | |
|--|-------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Wanipigow River - Upstream | | L21744712 | L2294147-5 | L2298725-3 | L2302403-5 | L2306799-5 | L2311297-5 | L2315601-3 | L2319873-3 | L2323329-3 | L2328155-3 | L2332529-3 | L2338063-3 | L2340315-3 | L2344830-3 | L2349240-3 | L2353453-3 | L2357774-3 | L2362279-4 | L2365580-6 | L2369900-4 | L2373901-4 | L2377639-4 | L2380719-2 |
| Analyte | Units | 10/2/2018 | 6/18/2019 | 6/25/2019 | 7/2/2019 | 7/9/2019 | 7/16/2019 | 7/23/2019 | 7/30/2019 | 8/6/2019 | 8/13/2019 | 8/20/2019 | 8/28/2019 | 9/3/2019 | 9/10/2019 | 9/17/2019 | 9/24/2019 | 10/1/2019 | 10/8/2019 | 10/15/2019 | 10/22/2019 | 10/29/2019 | 11/5/2019 | 11/12/2019 |
| Silver (Ag)-Total | mg/L | 0.000025 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 |
| Sodium (Na)-Total | mg/L | 1.35 | 1.07 | 1.34 | 1.83 | 1.24 | 1.34 | 1.26 | 1.21 | 1.18 | 1.33 | 1.54 | 1.6 | 1.77 | 1.94 | 1.83 | 1.6 | 1.34 | 1.25 | 1.25 | 1.08 | 1.15 | 1.16 | 1.14 |
| Strontium (Sr)-Total | mg/L | 0.0221 | 0.0194 | 0.0219 | 0.0228 | 0.0246 | 0.0247 | 0.0226 | 0.0239 | 0.0225 | 0.0251 | 0.026 | 0.0304 | 0.0351 | 0.04 | 0.0369 | 0.0203 | 0.0219 | 0.0184 | 0.0168 | 0.0151 | 0.0146 | 0.0158 | 0.0175 |
| Sulfur (S)-Total | mg/L | 0.69 | 0.53 | 0.25 | 0.54 | 0.6 | 0.25 | 0.25 | 0.54 | 0.25 | 0.25 | 0.25 | 0.54 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.52 | 0.53 |
| Tellurium (Te)-Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| Thallium (Tl)-Total | mg/L | 0.000025 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 |
| Thorium (Th)-Total | mg/L | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Tin (Sn)-Total | mg/L | 0.000025 | 0.0004 | 0.00005 | 0.00025 | 0.00031 | 0.0002 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00012 | 0.00005 | 0.00005 | 0.00005 |
| Titanium (Ti)-Total | mg/L | 0.00439 | 0.00394 | 0.00363 | 0.0036 | 0.00302 | 0.00568 | 0.00351 | 0.0031 | 0.0023 | 0.00147 | 0.00281 | 0.00168 | 0.0025 | 0.00187 | 0.00217 | 0.0047 | 0.0098 | 0.00474 | 0.00955 | 0.00622 | 0.00373 | 0.00339 | 0.00343 |
| Tungsten (W)-Total | mg/L | 0.000025 | 0.00005 | 0.00005 | 0.00016 | 0.00012 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00013 | 0.00025 | 0.00081 | 0.00014 | 0.00005 | 0.00005 | 0.00014 | 0.00005 | 0.0004 | 0.00005 | 0.00005 | 0.00012 | 0.00005 | 0.00005 |
| Uranium (U)-Total | mg/L | 0.000067 | 0.000067 | 0.000079 | 0.000071 | 0.000072 | 0.000069 | 0.000059 | 0.000057 | 0.000061 | 0.000062 | 0.000067 | 0.000079 | 0.000078 | 0.000092 | 0.000078 | 0.000079 | 0.000078 | 0.000059 | 0.000069 | 0.000057 | 0.000053 | 0.000056 | 0.000057 |
| Vanadium (V)-Total | mg/L | 0.00067 | 0.00099 | 0.00108 | 0.00095 | 0.00092 | 0.00105 | 0.00088 | 0.00101 | 0.0009 | 0.0009 | 0.00107 | 0.00208 | 0.00105 | 0.00121 | 0.00077 | 0.00107 | 0.00127 | 0.00091 | 0.0013 | 0.00092 | 0.00101 | 0.00065 | 0.00085 |
| Zinc (Zn)-Total | mg/L | 0.0015 | 0.0066 | 0.0035 | 0.0075 | 0.0064 | 0.003 | 0.0035 | 0.0015 | 0.0015 | 0.0031 | 0.0155 | 0.0061 | 0.0194 | 0.003 | 0.0015 | 0.0112 | 0.005 | 0.0077 | 0.0061 | 0.0112 | 0.0045 | 0.0015 | |
| Zirconium (Zr)-Total | mg/L | 0.00027 | 0.00023 | 0.0001 | 0.0001 | 0.0001 | 0.00031 | 0.0003 | 0.00028 | 0.00024 | 0.00022 | 0.00022 | 0.00021 | 0.00021 | 0.00021 | 0.00021 | 0.00036 | 0.0005 | 0.0004 | 0.00045 | 0.00037 | 0.0003 | 0.00026 | 0.00026 |
| Aluminum (Al)-Dissolved | mg/L | 0.062 | 0.0523 | 0.0474 | 0.0413 | 0.0371 | 0.0651 | 0.082 | 0.0713 | 0.0594 | 0.06 | 0.0503 | 0.0386 | 0.0335 | 0.0301 | 0.0393 | 0.125 | 0.2 | 0.21 | 0.175 | 0.18 | 0.186 | 0.141 | 0.153 |
| Antimony (Sb)-Dissolved | mg/L | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Arsenic (As)-Dissolved | mg/L | 0.00059 | 0.00083 | 0.00099 | 0.00102 | 0.00106 | 0.00106 | 0.00117 | 0.00121 | 0.00117 | 0.00115 | 0.00107 | 0.00111 | 0.00109 | 0.00108 | 0.00097 | 0.00083 | 0.00083 | 0.00084 | 0.00073 | 0.00071 | 0.00063 | 0.00058 | 0.00068 |
| Barium (Ba)-Dissolved | mg/L | 0.00665 | 0.00755 | 0.0075 | 0.00797 | 0.00805 | 0.00885 | 0.00823 | 0.00818 | 0.00707 | 0.00759 | 0.00874 | 0.00981 | 0.01 | 0.0114 | 0.0106 | 0.0105 | 0.0099 | 0.00972 | 0.00811 | 0.00832 | 0.00803 | 0.00727 | 0.0088 |
| Beryllium (Be)-Dissolved | mg/L | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)-Dissolved | mg/L | 0.0025 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Cadmium (Cd)-Dissolved | mg/L | 0.0000119 | 0.0000127 | 0.0000119 | 0.0000192 | 0.0000098 | 0.0000092 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000055 | 0.0000074 | 0.0000066 | 0.0000025 | 0.0000068 | 0.0000025 | 0.0000108 | 0.0000070 |
| Calcium (Ca)-Dissolved | mg/L | 7.81 | 6.86 | 7.29 | 8.26 | 8.91 | 8.32 | 6.98 | 6.88 | 7.03 | 7.42 | 9.27 | 10.5 | 12.1 | 14.8 | 14.4 | 8.25 | 7.85 | 6.66 | 5.8 | 5.31 | 5.46 | 5.14 | 6.59 |
| Cesium (Cs)-Dissolved | mg/L | 0.000025 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 |
| Chromium (Cr)-Dissolved | mg/L | 0.00026 | 0.00024 | 0.00024 | 0.00023 | 0.00022 | 0.00033 | 0.00035 | 0.00034 | 0.00032 | 0.00032 | 0.00027 | 0.00026 | 0.00028 | 0.00029 | 0.00026 | 0.00044 | 0.00049 | 0.00054 | 0.00048 | 0.00048 | 0.00046 | 0.00038 | 0.00036 |
| Cobalt (Co)-Dissolved | mg/L | 0.000025 | 0.00012 | 0.00012 | 0.00005 | 0.00013 | 0.00013 | 0.00013 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Copper (Cu)-Dissolved | mg/L | 0.00066 | 0.00092 | 0.00089 | 0.00126 | 0.00087 | 0.00078 | 0.00072 | 0.00077 | 0.00063 | 0.00065 | 0.00098 | 0.00085 | 0.00091 | 0.00072 | 0.00066 | 0.00117 | 0.0009 | 0.00094 | 0.00092 | 0.00109 | 0.00071 | 0.00077 | 0.00088 |
| Iron (Fe)-Dissolved | mg/L | 0.295 | 0.429 | 0.486 | 0.522 | 0.593 | 0.482 | 0.698 | 0.749 | 0.672 | 0.683 | 0.704 | 0.695 | 0.823 | 0.677 | 0.621 | 0.46 | 0.63 | 0.5 | 0.476 | 0.476 | 0.456 | 0.38 | 0.474 |
| Lead (Pb)-Dissolved | mg/L | 0.000068 | 0.000135 | 0.000122 | 0.000177 | 0.000234 | 0.000078 | 0.000088 | 0.000085 | 0.000081 | 0.000081 | 0.000112 | 0.000084 | 0.000096 | 0.000083 | 0.000077 | 0.000061 | 0.000099 | 0.000086 | 0.00008 | 0.000088 | 0.000074 | 0.000058 | 0.000079 |
| Lithium (Li)-Dissolved | mg/L | 0.0017 | 0.0012 | 0.0014 | 0.0015 | 0.0015 | 0.0017 | 0.0015 | 0.0015 | 0.0016 | 0.0016 | 0.0019 | 0.0022 | 0.0023 | 0.0029 | 0.0023 | 0.0016 | 0.0017 | 0.0015 | 0.0013 | 0.0013 | 0.0013 | 0.001 | 0.0014 |
| Magnesium (Mg)-Dissolved | mg/L | 3.28 | 2.7 | 2.73 | 2.94 | 3.61 | 3.37 | 2.92 | 2.79 | 3.12 | 3.51 | 3.6 | 4.84 | 5.47 | 6.62 | 6.45 | 3.73 | 3.25 | 2.97 | 2.59 | 2 | 2.14 | 1.93 | 2.32 |
| Manganese (Mn)-Dissolved | mg/L | 0.0112 | 0.0378 | 0.0359 | 0.00403 | 0.0498 | 0.0164 | 0.0214 | 0.00467 | 0.00487 | 0.00528 | 0.00612 | 0.00521 | 0.00662 | 0.00597 | 0.00328 | 0.00163 | 0.00503 | 0.00196 | 0.00141 | 0.00315 | 0.00426 | 0.00363 | 0.0135 |
| Mercury (Hg)-Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)-Dissolved | mg/L | 0.000082 | 0.000112 | 0.000125 | 0.000143 | 0.000142 | 0.000098 | 0.000112 | 0.000103 | 0.000092 | 0.000081 | 0.000095 | 0.000117 | 0.000114 | 0.000151 | 0.000122 | 0.000102 | 0.000095 | 0.000146 | 0.000127 | 0.000095 | 0.000098 | 0.000137 | 0.000093 |
| Nickel (Ni)-Dissolved | mg/L | 0.00058 | 0.00061 | 0.00067 | 0.00067 | 0.00062 | 0.00085 | 0.00101 | 0.00087 | 0.00082 | 0.00077 | 0.0008 | 0.00064 | 0.00086 | 0.00087 | 0.00104 | 0.00097 | 0.00089 | 0.00082 | 0.00073 | 0.0006 | 0.0006 | 0.0006 | 0.00066 |
| Phosphorus (P)-Dissolved | mg/L | 0.025 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| Potassium (K)-Dissolved | mg/L | 0.777 | 0.593 | 0.479 | 0.402 | 0.299 | 0.527 | 0.565 | 0.574 | 0.477 | 0.607 | 0.727 | 0.753 | 0.986 | 1.11 | 1.08 | 1.16 | 0.905 | 0.628 | 0.566 | 0.493 | 0.635 | 0.479 | 0.584 |
| Rubidium (Rb)-Dissolved | mg/L | 0.00172 | 0.00195 | 0.00174 | 0.0015 | 0.00112 | 0.00191 | 0.00212 | 0.00199 | 0.00202 | 0.00202 | 0.00227 | 0.0024 | 0.0029 | 0.00312 | 0.00262 | 0.00333 | 0.00243 | 0.00205 | 0.00181 | 0.00168 | 0.0017 | 0.00151 | 0.00175 |
| Selenium (Se)-Dissolved | mg/L | 0.000086 | 0.000128 | 0.000143 | 0.000149 | 0.000113 | 0.00015 | 0.000132 | 0.000133 | 0.000175 | 0.000135 | 0.000172 | 0.000144 | 0.000155 | 0.000134 | 0.000093 | 0.000125 | 0.00016 | 0.000147 | 0.000122 | 0.000119 | 0.000133 | 0.000082 | 0.000097 |
| Silicon (Si)-Dissolved | mg/L | 1.88 | 0.561 | 0.663 | 0.776 | 0.924 | 2.07 | 1.72 | 2.03 | 1.83 | 2.07 | 1.7 | 1.74 | 2.41 | 2.78 | 3.11 | 3.28 | 3.1 | 3.32 | 3.45</ | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-3 cont'd

| <i>Less than detection limit, half value</i> | | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | |
|--|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Wanipigow River - Upstream | | L2384847-2 | L2387900-2 | L2391104-2 | L2459189-1 | L2465848-1 | L2468477-3 | L2471686-4 | L2474258-1 | L2478400-2 | L2481567-4 | L2484805-2 | L2487940-2 | L2492070-1 | L2494017-2 | L2498782-8 | L2501688-2 | L2504186-2 | L2510579-2 | L2513882-2 | L2516774-2 | L2520597-2 | L2523594-2 |
| Analyte | Units | 11/19/2019 | 11/26/2019 | 12/3/2019 | 6/10/2020 | 6/23/2020 | 6/30/2020 | 7/7/2020 | 7/14/2020 | 7/21/2020 | 7/28/2020 | 8/4/2020 | 8/11/2020 | 8/18/2020 | 8/25/2020 | 9/1/2020 | 9/8/2020 | 9/15/2020 | 9/29/2020 | 10/6/2020 | 10/13/2020 | 10/20/2020 | 10/27/2020 |
| Silver (Ag)-Total | mg/L | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000140 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 |
| Sodium (Na)-Total | mg/L | 1.1 | 1.27 | 1.16 | 1.1 | 0.938 | 1.04 | 1.11 | 1.03 | 0.955 | 0.906 | 1.01 | 1.04 | 1.09 | 1.2 | 1.14 | 1.22 | 1.27 | 1.12 | 1.15 | 1.46 | 1.17 | 1.19 |
| Strontium (Sr)-Total | mg/L | 0.0169 | 0.017 | 0.0184 | 0.0193 | 0.0161 | 0.018 | 0.0199 | 0.0197 | 0.0197 | 0.0185 | 0.0185 | 0.0241 | 0.0207 | 0.0219 | 0.0222 | 0.0217 | 0.0214 | 0.0214 | 0.0206 | 0.02 | 0.0191 | 0.0189 |
| Sulfur (S)-Total | mg/L | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.69 | 0.82 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.6 |
| Tellurium (Te)-Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 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 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| Thallium (Tl)-Total | mg/L | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 |
| Thorium (Th)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Tin (Sn)-Total | mg/L | 0.00005 | 0.00123 | 0.00167 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Titanium (Ti)-Total | mg/L | 0.00388 | 0.00264 | 0.00334 | 0.00481 | 0.0059 | 0.00471 | 0.00313 | 0.00212 | 0.00419 | 0.00298 | 0.00281 | 0.00247 | 0.00226 | 0.00193 | 0.00207 | 0.00251 | 0.00241 | 0.00304 | 0.0049 | 0.0044 | 0.00619 | 0.00528 |
| Tungsten (W)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.0001 | 0.00005 |
| Uranium (U)-Total | mg/L | 0.00006 | 0.000062 | 0.000079 | 0.00007 | 0.000058 | 0.000061 | 0.000057 | 0.000063 | 0.000066 | 0.000054 | 0.000052 | 0.000064 | 0.000064 | 0.000059 | 0.000064 | 0.000065 | 0.000066 | 0.000065 | 0.000066 | 0.000065 | 0.000073 | 0.000074 |
| Vanadium (V)-Total | mg/L | 0.00066 | 0.00083 | 0.00082 | 0.00086 | 0.0009 | 0.00088 | 0.00123 | 0.00068 | 0.0014 | 0.00092 | 0.00094 | 0.00105 | 0.00113 | 0.00072 | 0.00092 | 0.00072 | 0.00069 | 0.00072 | 0.00081 | 0.00087 | 0.00149 | 0.00088 |
| Zinc (Zn)-Total | mg/L | 0.0015 | 0.0015 | 0.0015 | 0.0062 | 0.0064 | 0.003 | 0.0033 | 0.003 | 0.003 | 0.0062 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| Zirconium (Zr)-Total | mg/L | 0.00024 | 0.00022 | 0.00022 | 0.00026 | 0.0003 | 0.00027 | 0.00025 | 0.00023 | 0.0003 | 0.00027 | 0.00021 | 0.0002 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00021 | 0.00005 | 0.00005 | 0.00005 |
| Aluminum (Al)-Dissolved | mg/L | 0.137 | 0.137 | 0.134 | 0.0737 | 0.108 | 0.0951 | 0.0853 | 0.0738 | 0.102 | 0.112 | 0.0892 | 0.0762 | 0.0542 | 0.0321 | 0.0377 | 0.0379 | 0.0352 | 0.0327 | 0.0502 | 0.033 | 0.0352 | 0.0414 |
| Antimony (Sb)-Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Arsenic (As)-Dissolved | mg/L | 0.00061 | 0.00061 | 0.00066 | 0.00074 | 0.00079 | 0.0011 | 0.00136 | 0.00115 | 0.00102 | 0.00105 | 0.001 | 0.00105 | 0.00097 | 0.00123 | 0.00089 | 0.00077 | 0.00072 | 0.00072 | 0.00068 | 0.00065 | 0.00054 | 0.00055 |
| Barium (Ba)-Dissolved | mg/L | 0.00771 | 0.00778 | 0.00833 | 0.00819 | 0.0081 | 0.00872 | 0.00862 | 0.00828 | 0.00859 | 0.00878 | 0.00774 | 0.00753 | 0.00789 | 0.00723 | 0.00732 | 0.00741 | 0.00781 | 0.00872 | 0.00788 | 0.00736 | 0.00691 | 0.00723 |
| Beryllium (Be)-Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)-Dissolved | mg/L | 0.01 | 0.01 | 0.01 | 0.005 | 0.012 | 0.005 | 0.005 | 0.005 | 0.011 | 0.005 | 0.005 | 0.011 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.012 |
| Cadmium (Cd)-Dissolved | mg/L | 0.000025 | 0.000084 | 0.000071 | 0.000052 | 0.000025 | 0.000058 | 0.000068 | 0.000025 | 0.000025 | 0.000068 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000056 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Calcium (Ca)-Dissolved | mg/L | 6.61 | 6.81 | 6.71 | 7.46 | 6.45 | 5.53 | 6.16 | 6.9 | 6.77 | 6 | 5.77 | 6.63 | 7.31 | 7.51 | 8.31 | 8.15 | 7.9 | 8.13 | 7.38 | 7.89 | 7.79 | 7.74 |
| Cesium (Cs)-Dissolved | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 |
| Chromium (Cr)-Dissolved | mg/L | 0.0004 | 0.00037 | 0.00036 | 0.0003 | 0.00033 | 0.00036 | 0.00031 | 0.0003 | 0.00038 | 0.00039 | 0.00035 | 0.00033 | 0.00026 | 0.0002 | 0.00022 | 0.00022 | 0.0002 | 0.0002 | 0.00026 | 0.00024 | 0.00018 | 0.00022 |
| Cobalt (Co)-Dissolved | mg/L | 0.00005 | 0.00016 | 0.00016 | 0.00017 | 0.00014 | 0.00019 | 0.00018 | 0.00019 | 0.00015 | 0.00016 | 0.00014 | 0.00016 | 0.00015 | 0.00012 | 0.00014 | 0.00014 | 0.00013 | 0.00015 | 0.0002 | 0.00015 | 0.00019 | 0.00015 |
| Copper (Cu)-Dissolved | mg/L | 0.00125 | 0.00115 | 0.001 | 0.00074 | 0.00065 | 0.00064 | 0.00055 | 0.00057 | 0.00064 | 0.00058 | 0.00058 | 0.00062 | 0.00063 | 0.00082 | 0.00062 | 0.00066 | 0.00064 | 0.0007 | 0.00072 | 0.00064 | 0.00065 | 0.00082 |
| Iron (Fe)-Dissolved | mg/L | 0.488 | 0.527 | 0.544 | 0.523 | 0.413 | 0.567 | 0.742 | 0.824 | 0.617 | 0.768 | 0.681 | 0.777 | 0.676 | 0.489 | 0.597 | 0.56 | 0.523 | 0.584 | 0.627 | 0.495 | 0.427 | 0.407 |
| Lead (Pb)-Dissolved | mg/L | 0.000095 | 0.000107 | 0.000132 | 0.00021 | 0.000117 | 0.000102 | 0.000135 | 0.000118 | 0.000129 | 0.000145 | 0.000213 | 0.000125 | 0.000139 | 0.000106 | 0.000122 | 0.000107 | 0.00021 | 0.000118 | 0.000145 | 0.000102 | 0.000123 | 0.00014 |
| Lithium (Li)-Dissolved | mg/L | 0.0013 | 0.0012 | 0.0013 | 0.0013 | 0.0013 | 0.0011 | 0.0012 | 0.0013 | 0.0013 | 0.0014 | 0.0013 | 0.0016 | 0.0014 | 0.0014 | 0.0016 | 0.0013 | 0.0013 | 0.0015 | 0.0012 | 0.0013 | 0.0012 | 0.0013 |
| Magnesium (Mg)-Dissolved | mg/L | 2.51 | 2.59 | 2.61 | 3.02 | 2.58 | 2.48 | 2.49 | 2.58 | 2.56 | 2.26 | 2.25 | 2.71 | 2.61 | 2.72 | 3.25 | 2.89 | 2.76 | 3.21 | 2.68 | 2.95 | 3.13 | 2.79 |
| Manganese (Mn)-Dissolved | mg/L | 0.0101 | 0.0287 | 0.0305 | 0.0414 | 0.0221 | 0.0509 | 0.0495 | 0.0444 | 0.0248 | 0.0317 | 0.0314 | 0.0378 | 0.0365 | 0.0377 | 0.0371 | 0.0343 | 0.0368 | 0.0505 | 0.0545 | 0.0412 | 0.0546 | 0.043 |
| Mercury (Hg)-Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)-Dissolved | mg/L | 0.000075 | 0.000072 | 0.000063 | 0.000098 | 0.000083 | 0.000098 | 0.000086 | 0.000099 | 0.000078 | 0.000062 | 0.000056 | 0.000076 | 0.000073 | 0.000094 | 0.000111 | 0.000083 | 0.000079 | 0.00008 | 0.000078 | 0.000094 | 0.000076 | 0.000079 |
| Nickel (Ni)-Dissolved | mg/L | 0.00067 | 0.00063 | 0.00063 | 0.00067 | 0.00077 | 0.00079 | 0.00074 | 0.00073 | 0.00085 | 0.00083 | 0.00071 | 0.0007 | 0.00063 | 0.00056 | 0.0006 | 0.0005 | 0.00025 | 0.00025 | 0.00064 | 0.00053 | 0.00025 | 0.00025 |
| Phosphorus (P)-Dissolved | mg/L | 0.03 | 0.03 | 0.03 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 |
| Potassium (K)-Dissolved | mg/L | 0.539 | 0.583 | 0.646 | 0.62 | 0.392 | 0.438 | 0.484 | 0.433 | 0.361 | 0.416 | 0.392 | 0.474 | 0.478 | 0.688 | 0.783 | 0.769 | 0.839 | 1.08 | 0.978 | 0.764 | 0.799 | 0.846 |
| Rubidium (Rb)-Dissolved | mg/L | 0.00163 | 0.00172 | 0.00184 | 0.00185 | 0.00123 | 0.0017 | 0.00163 | 0.00154 | 0.00127 | 0.00146 | 0.0014 | 0.00166 | 0.00176 | 0.00195 | 0.00228 | 0.00199 | 0.00208 | 0.00246 | 0.00216 | 0.00181 | 0.00159 | 0.00161 |
| Selenium (Se)-Dissolved | mg/L | 0.000092 | 0.000207 | 0.000147 | 0.00016 | 0.000093 | 0.00013 | 0.000137 | 0.000112 | 0.000121 | 0.000117 | 0.000116 | 0.000132 | 0.000095 | 0.000111 | 0.000149 | 0.000109 | 0.000095 | 0.00013 | 0.000128 | 0.000118 | 0.000091 | 0.000109 |
| Silicon (Si)-Dissolved | mg/L | 3.15 | 3.18 | 3.38 | 1.64 | 2.07 | 1.82 | 2.03 | 1.94 | 2.42 | 2.08 | 2.12 | 1.94 | 1.51 | 1.6 | 1.85 | 1.88 | 1.61 | 1.58 | 1.61 | 1.86 | 2.27 | 2.31 |
| Silver (Ag)-Dissolved | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 |
| Sodium (Na)-Dissolved | mg/L | 1.23 | 1.29 | 1.32 | 1.15 | 1.08 | 1.02 | 0.989 | 0.998 | 0.961 | 0.908 | 0.933 | 1.11 | 0 | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-3 cont'd

| Less than detection limit, half value | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | WR-US | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | MWQSOG | MWQSOG | CCME | MDMER | |
|---------------------------------------|-------|-----------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-----------|------------|-----------|-------------|-----------|-----------|----------|----------------|----------------------|----------|-------------|--------|--|
| | | | | | | | | | | | | | | | | | | | | | | Tier II | Tier III | Chronic PAL | Sch. 4 | |
| Wanipigow River - Upstream | Units | 11/3/2020 | 11/12/2020 | 11/17/2020 | 11/24/2020 | 12/2/2020 | 9/14/2021 | 9/22/2021 | 9/28/2021 | 10/6/2021 | 10/12/2021 | 10/20/2021 | 10/25/2021 | 11/4/2021 | 11/11/2021 | | | | | | | Chronic PAL | PAL | Chronic PAL | MAC | |
| Silver (Ag)-Total | mg/L | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000008 | 0.000005 | 0.0000025 | 0.000289 | 0.0000 | 88 | | 0.0001 | 0.00025 | | |
| Sodium (Na)-Total | mg/L | 1.21 | 1.22 | 1.28 | 1.22 | 1.31 | 1.41 | 1.56 | 1.79 | 1.76 | 1.96 | 1.92 | 2.07 | 1.87 | 1.76 | 1.40 | 1.28 | 0.906 | 2.07 | 0.5 | 88 | | | | | |
| Strontium (Sr)-Total | mg/L | 0.0215 | 0.0208 | 0.0205 | 0.0202 | 0.0205 | 0.0279 | 0.0311 | 0.0334 | 0.0352 | 0.0412 | 0.0376 | 0.0371 | 0.0331 | 0.0289 | 0.0268 | 0.02255 | 0.0146 | 0.0521 | 0.011 | 88 | | | | | |
| Sulfur (S)-Total | mg/L | 0.25 | 0.25 | 0.25 | 0.52 | 0.58 | 0.25 | 0.25 | 0.65 | 0.67 | 0.25 | 0.25 | 0.57 | 1.1 | 0.25 | 0.377561 | 0.25 | 0.25 | 1.1 | 0.2 | 88 | | | | | |
| Tellurium (Te)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.000085 | 0.0001 | 0.00005 | 0.0001 | 0.00003 | 88 | | | | | |
| Thallium (Tl)-Total | mg/L | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000004 | 0.000005 | 0.0000025 | 0.000014 | 0.000002 | 88 | | 0.0008 | 0.00008 | | |
| Thorium (Th)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000043 | 0.00005 | 0.000025 | 0.00005 | 0.000015 | 88 | | | | | |
| Tin (Sn)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000099 | 0.00005 | 0.000025 | 0.00167 | 0.000225 | 88 | | | | | |
| Titanium (Ti)-Total | mg/L | 0.00529 | 0.00447 | 0.00488 | 0.00544 | 0.00562 | 0.00734 | 0.0047 | 0.0046 | 0.00529 | 0.00317 | 0.0036 | 0.00374 | 0.00548 | 0.00497 | 0.00429 | 0.00378 | 0.00147 | 0.0155 | 0.00232 | 88 | | | | | |
| Tungsten (W)-Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00016 | 0.00005 | 0.00026 | 0.00012 | 0.00005 | 0.00021 | 0.00048 | | 0.00016 | 0.00005 | 0.000025 | 0.00281 | 0.00042 | 87 | | | | | |
| Uranium (U)-Total | mg/L | 0.00007 | 0.000068 | 0.000072 | 0.000071 | 0.00007 | 0.000114 | 0.00011 | 0.000108 | 0.000104 | 0.000107 | 0.000107 | 0.000107 | 0.000106 | 0.000089 | 0.00008 | 0.000071 | 0.000052 | 0.000251 | 0.00004 | 88 | | 0.015 | 0.015 | | |
| Vanadium (V)-Total | mg/L | 0.00096 | 0.00067 | 0.0008 | 0.00083 | 0.00086 | 0.00149 | 0.00134 | 0.00186 | 0.00132 | 0.00124 | 0.00123 | 0.00094 | 0.00113 | 0.00103 | 0.00106 | 0.00101 | 0.00065 | 0.00209 | 0.00039 | 88 | | | | | |
| Zinc (Zn)-Total | mg/L | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.003501 | 0.003 | 0.0015 | 0.0194 | 0.0031 | 88 | | | | 0.5 | |
| Zirconium (Zr)-Total | mg/L | 0.0002 | 0.00005 | 0.00005 | 0.00021 | 0.00021 | 0.0004 | 0.00031 | 0.00025 | 0.00026 | 0.0001 | 0.00021 | 0.0001 | 0.00023 | 0.00024 | 0.000213 | 0.0002195 | 0.00005 | 0.000519 | 0.0001 | 88 | | | | | |
| Aluminum (Al)-Dissolved | mg/L | 0.0433 | 0.0585 | 0.0669 | 0.0639 | 0.0685 | 0.119 | 0.0717 | 0.0787 | 0.0577 | 0.0419 | 0.0496 | 0.0408 | 0.0545 | 0.0797 | 0.06550 | 0.05025 | 0.0138 | 0.21 | 0.0476 | 88 | | | | | |
| Antimony (Sb)-Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000043 | 0.00005 | 0.000025 | 0.00005 | 0.0000 | 88 | | | | | |
| Arsenic (As)-Dissolved | mg/L | 0.0006 | 0.00071 | 0.00062 | 0.00079 | 0.00064 | 0.00127 | 0.00106 | 0.00111 | 0.00101 | 0.00092 | 0.00092 | 0.00087 | 0.00083 | 0.00083 | 0.0009538 | 0.001005 | 0.00054 | 0.0015 | 0.0003 | 88 | 0.15 | 0.01 | | | |
| Barium (Ba)-Dissolved | mg/L | 0.00714 | 0.00706 | 0.0076 | 0.00763 | 0.00761 | 0.0127 | 0.0121 | 0.0135 | 0.014 | 0.0149 | 0.0137 | 0.0122 | 0.0109 | 0.00962 | 0.0093007 | 0.008605 | 0.00665 | 0.015 | 0.0031 | 88 | | | | | |
| Beryllium (Be)-Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00004 | 0.00005 | 0.000025 | 0.00005 | 0.00002 | 88 | | | | | |
| Bismuth (Bi)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00001 | 88 | | | | | |
| Boron (B)-Dissolved | mg/L | 0.005 | 0.012 | 0.013 | 0.012 | 0.005 | 0.005 | 0.01 | 0.011 | 0.013 | 0.005 | 0.011 | 0.011 | 0.005 | 0.005 | 0.0088 | 0.01 | 0.0025 | 0.021 | 0.0042 | 88 | | | | | |
| Cadmium (Cd)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000004 | 0.0000025 | 0.0000025 | 0.0000192 | 0.00000 | 88 | 0.014 ¹ | 0.005 | | | |
| Calcium (Ca)-Dissolved | mg/L | 8.26 | 7.9 | 7.83 | 7.65 | 6.72 | 10.3 | 12 | 13.7 | 14.1 | 15.1 | 16.1 | 15.3 | 14.9 | 12.6 | 10.1 | 8.220000 | 5.14 | 21.7 | 4.72 | 88 | | | | | |
| Cesium (Cs)-Dissolved | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000013 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000004 | 0.000005 | 0.0000025 | 0.000013 | 0.000002 | 88 | | | | | |
| Chromium (Cr)-Dissolved | mg/L | 0.00025 | 0.00023 | 0.00024 | 0.00025 | 0.00027 | 0.00056 | 0.00038 | 0.00038 | 0.00035 | 0.00035 | 0.00035 | 0.00035 | 0.00035 | 0.00037 | 0.000281 | 0.00026 | 0.0001 | 0.00056 | 0.0001 | 88 | 0.369 ¹ | | | | |
| Cobalt (Co)-Dissolved | mg/L | 0.00014 | 0.00016 | 0.00015 | 0.00017 | 0.00017 | 0.0003 | 0.00027 | 0.00029 | 0.00026 | 0.00024 | 0.00023 | 0.00021 | 0.0002 | 0.00019 | 0.00013 | 0.00015 | 0.000025 | 0.0003 | 0.0001 | 88 | | | | | |
| Copper (Cu)-Dissolved | mg/L | 0.00074 | 0.00068 | 0.00076 | 0.00072 | 0.0007 | 0.00112 | 0.0147 | 0.00108 | 0.00108 | 0.00128 | 0.001 | 0.00087 | 0.00281 | 0.00091 | 0.001011 | 0.00079 | 0.00055 | 0.0147 | 0.0015 | 88 | 0.00432 ¹ | | | | |
| Iron (Fe)-Dissolved | mg/L | 0.445 | 0.532 | 0.568 | 0.591 | 0.646 | 0.947 | 0.96 | 1.01 | 0.875 | 0.762 | 0.763 | 0.629 | 0.758 | 0.895 | 0.603 | 0.592 | 0.231 | 1.01 | 0.2096 | 88 | | | | | |
| Lead (Pb)-Dissolved | mg/L | 0.000119 | 0.000132 | 0.000211 | 0.000139 | 0.000127 | 0.000167 | 0.000196 | 0.000211 | 0.000216 | 0.00017 | 0.000152 | 0.000126 | 0.000136 | 0.000176 | 0.000128 | 0.000118 | 0.000058 | 0.000462 | 0.000063 | 88 | 0.00098 ¹ | | | | |
| Lithium (Li)-Dissolved | mg/L | 0.0013 | 0.0014 | 0.0014 | 0.0013 | 0.0011 | 0.0022 | 0.0024 | 0.0024 | 0.0024 | 0.002 | 0.0025 | 0.0024 | 0.0022 | 0.0019 | 0.0018 | 0.0016 | 0.001 | 0.0037 | 0.000746 | 88 | | | | | |
| Magnesium (Mg)-Dissolved | mg/L | 3.16 | 3.22 | 3.1 | 2.91 | 2.85 | 3.65 | 4.47 | 5.87 | 6.26 | 5.95 | 7.03 | 7.16 | 6.66 | 5.6 | 4.2 | 3.235 | 1.93 | 9.95 | 2.2 | 88 | | | | | |
| Manganese (Mn)-Dissolved | mg/L | 0.0357 | 0.038 | 0.0349 | 0.036 | 0.0371 | 0.146 | 0.135 | 0.159 | 0.158 | 0.179 | 0.115 | 0.0929 | 0.0524 | 0.0401 | 0.05389 | 0.0374 | 0.0012 | 0.245 | 0.053 | 88 | | | | | |
| Mercury (Hg)-Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)-Dissolved | mg/L | 0.000081 | 0.000076 | 0.000065 | 0.000066 | 0.000058 | 0.000106 | 0.000112 | 0.000166 | 0.000142 | 0.000135 | 0.000131 | 0.000142 | 0.000128 | 0.000102 | 0.0001373 | 0.000112 | 0.000056 | 0.00038 | 0.0001 | 88 | | | | | |
| Nickel (Ni)-Dissolved | mg/L | 0.00051 | 0.00053 | 0.00058 | 0.00054 | 0.00025 | 0.00105 | 0.00107 | 0.00104 | 0.00095 | 0.00099 | 0.00093 | 0.00089 | 0.00096 | 0.00093 | 0.00072 | 0.00072 | 0.00025 | 0.00107 | 0.0003 | 88 | 0.02527 ¹ | | | | |
| Phosphorus (P)-Dissolved | mg/L | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.023 | 0.025 | 0.015 | 0.03 | 0.0085 | 88 | | | | | |
| Potassium (K)-Dissolved | mg/L | 0.745 | 0.695 | 0.714 | 0.808 | 0.75 | 0.934 | 0.988 | 1.02 | 1.02 | 1.22 | 1.14 | 1.08 | 1.13 | 1.08 | 0.69 | 0.642 | 0.299 | 1.22 | 0.29 | 88 | | | | | |
| Rubidium (Rb)-Dissolved | mg/L | 0.00163 | 0.0018 | 0.00187 | 0.00183 | 0.00169 | 0.00242 | 0.00252 | 0.00265 | 0.00252 | 0.0029 | 0.00248 | 0.00219 | 0.0022 | 0.0022 | 0.00186 | 0.001795 | 0.00111 | 0.00333 | 0.0006 | 88 | | | | | |
| Selenium (Se)-Dissolved | mg/L | 0.000131 | 0.000061 | 0.000135 | 0.000097 | 0.000101 | 0.000125 | 0.000156 | 0.000173 | 0.000107 | 0.000088 | 0.000122 | 0.000097 | 0.000105 | 0.0001 | 0.000121 | 0.0001205 | 0.000061 | 0.000207 | 0.0000 | 88 | | | | | |
| Silicon (Si)-Dissolved | mg/L | 2.52 | 2.4 | 2.47 | 2.52 | 2.52 | 3.53 | 3.11 | 3.01 | 2.88 | 2.78 | 3.49 | 3.04 | 4.03 | 3.94 | 2.15 | 2.07 | 0.561 | 4.03 | 0.96 | 88 | | | | | |
| Silver (Ag)-Dissolved | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.0000025 | 0.000025 | 0.000003 | 88 | | | | | |
| Sodium (Na)-Dissolved | mg/L | 1.31 | 1.3 | 1.23 | 1.18 | 1.23 | 1.31 | 1.48 | 1.76 | 1.79 | 1.7 | 1.92 | 1.86 | 1.85 | 1.79 | 1.37 | 1.26 | 0.908 | 2.14 | 0.46 | 88 | | | | | |
| Strontium (Sr)-Dissolved | mg/L | 0.0197 | 0.02 | 0.0206 | 0.0194 | 0.0172 | 0.0269 | 0.0295 | 0.035 | 0.037 | 0.0378 | 0.0389 | 0.0369 | 0.0331 | 0.0292 | 0.0264 | 0.02215 | 0.0139 | 0.0526 | 0.01 | 88 | | | | | |
| Sulfur (S)-Dissolved | mg/L | 0.25 | 0.25 | 0.58 | 0.59 | 0.56 | 0.25 | 0.57 | 0.73 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.37 | 0.25 | 0.25 | 1.3 | 0.23 | 88 | | | | | |



Table B-4: No Name Creek – Vanson Road (NNC-VR) Water Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|
| No Name Creek - Vanson Rd | | L1960980-5 | L1964768-3 | L1971728-4 | L1976404-3 | L1979675-5 | L1983563-3 | L1986645-3 | L1990659-3 | L21107153 | L21190893 | L21226493 | L21266383 | L21307663 | L21349393 | L21385553 | L21422554 | L21460334 | L21507174 | L21538254 | L2294147-3 | L2298725-1 | L2302403-3 | L2306799-3 |
| Analyte | Units | 7/18/2017 | 7/25/2017 | 8/8/2017 | 8/15/2017 | 8/22/2017 | 8/29/2017 | 9/5/2017 | 9/12/2017 | 6/12/2018 | 6/25/2018 | 7/3/2018 | 7/10/2018 | 7/17/2018 | 7/24/2018 | 7/31/2018 | 8/7/2018 | 8/14/2018 | 8/21/2018 | 8/27/2018 | 6/17/2019 | 6/25/2019 | 7/2/2019 | 7/9/2019 |
| Alkalinity, Total (as CaCO3) | mg/L | 208 | 178 | 201 | 214 | 225 | 221 | 229 | 235 | 187 | 211 | 237 | 254 | 261 | 273 | 280 | 279 | 294 | 316 | 309 | 191 | 183 | 209 | 215 |
| Ammonia, Total (as N) | mg/L | 0.017 | 0.072 | 0.046 | 0.064 | 0.026 | 0.032 | 0.015 | 0.061 | 0.117 | 0.033 | 0.031 | 0.032 | 0.019 | 0.02 | 0.025 | 0.033 | 0.056 | 0.032 | 0.06 | 0.023 | 0.018 | 0.018 | 0.025 |
| Bicarbonate (HCO3) | mg/L | 253 | 217 | 245 | 261 | 274 | 269 | 280 | 287 | 228 | 257 | 289 | 310 | 318 | 333 | 341 | 340 | 358 | 385 | 377 | 233 | 223 | 255 | 263 |
| Carbonate (CO3) | mg/L | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 |
| Chloride (Cl) | mg/L | 40.7 | 91.8 | 113 | 118 | 119 | 128 | 118 | 115 | 58.9 | 113 | 124 | 132 | 132 | 135 | 131 | 130 | 136 | 137 | 134 | 41.7 | 42 | 123 | 150 |
| Conductivity | umhos/cm | 531 | 935 | 1110 | 1150 | 1140 | 1140 | 1080 | 1100 | 639 | 1070 | 1160 | 1210 | 1200 | 1200 | 1210 | 1210 | 1230 | 1250 | 1220 | 557 | 528 | 1150 | 1290 |
| Cyanide, Free | mg/L | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.0005 | 0.0005 | 0.0025 | 0.0011 |
| Cyanide, Total | mg/L | 0.0012 | 0.00025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.0014 | 0.0012 | 0.0018 | 0.002 | 0.0014 | 0.0014 | 0.001 | 0.0011 | 0.00025 | 0.00025 | 0.0005 | 0.0011 | 0.0025 | 0.001 |
| Cyanide, Weak Acid Diss | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.0005 | 0.0005 | 0.0025 | 0.0005 |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 0.96 | 2.37 | 1.49 | 1.16 | 0.85 | 1.85 | 1.3 | 1.77 | 1.73 | 2.01 | 1.7 | 1.37 | 1.58 | 1.4 | 0.71 | 3.5 | | 5.24 | 2.86 | 4.6 | 5.77 | 4.74 | 3.75 |
| EC, Client Supplied | umhos/cm | 571 | 1030 | 1180 | 1230 | 1240 | 1280 | 1200 | 1180 | 800 | 1100 | 1190 | 1240 | 1280 | 1270 | 1230 | 1230 | 1260 | 292 | 1260 | 562 | 550 | 1180 | 1340 |
| Fluoride (F) | mg/L | 0.098 | 0.111 | 0.116 | 0.123 | 0.121 | 0.129 | 0.118 | 0.121 | 0.1 | 0.13 | 0.136 | 0.14 | 0.138 | 0.13 | 0.134 | 0.141 | 0.16 | 0.13 | 0.13 | 0.094 | 0.099 | 0.109 | 0.19 |
| Hardness (as CaCO3) | mg/L | 146 | 244 | 267 | 289 | 296 | 296 | 303 | 289 | 166 | 268 | 261 | 258 | 268 | 274 | 285 | 274 | 281 | 281 | 278 | 162 | 153 | 278 | 298 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 0.01 | 0.147 | 0.073 | 0.04 | 0.048 | 0.04 | 0.04 | 0.04 | 0.01 | 0.04 | 0.04 | 0.1 | 0.04 | 0.1 | 0.04 | 0.04 | 0.049 | 0.1 | 0.1 | 0.02 | 0.022 | 0.04 | 0.1 |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.147 | 0.073 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.07 | 0.07 | 0.07 | 0.11 | 0.07 | 0.11 | 0.07 | 0.07 | 0.07 | 0.11 | 0.11 | 0.035 | 0.035 | 0.035 | 0.055 |
| Nitrite (as N) | mg/L | 0.0025 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.0025 | 0.01 | 0.01 | 0.025 | 0.01 | 0.025 | 0.01 | 0.01 | 0.01 | 0.025 | 0.025 | 0.01 | 0.01 | 0.02 | 0.025 |
| pH | pH units | 7.53 | 7.39 | 7.48 | 7.48 | 7.26 | 7.43 | 7.29 | 7.43 | 7.44 | 7.65 | 7.85 | 7.72 | 7.77 | 7.61 | 7.56 | 7.67 | 7.52 | 8.27 | 7.78 | 7.55 | 8.03 | 7.75 | 7.87 |
| pH, Client Supplied | pH | 7.13 | 7.15 | 7.12 | 7.32 | 7.34 | 7.23 | 7.28 | 7.25 | 7.44 | 7.24 | 7.44 | 7.4 | 7.6 | 7.58 | 7.33 | 7.63 | 7.55 | 7.96 | 7.63 | 7.18 | 7.16 | 7.08 | 7.13 |
| Phosphorus (P)Total | mg/L | 0.101 | 0.037 | 0.029 | 0.032 | 0.039 | 0.025 | 0.033 | 0.057 | 0.175 | 0.0586 | 0.047 | 0.0418 | 0.0371 | 0.0547 | 0.0464 | 0.0612 | 0.112 | 0.0773 | 0.0755 | 0.0554 | 0.0466 | 0.0344 | 0.0294 |
| Ra226 | Bq/L | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate (SO4) | mg/L | 33.6 | 194 | 233 | 240 | 233 | 249 | 215 | 195 | 65.3 | 182 | 192 | 203 | 199 | 189 | 174 | 165 | 164 | 153 | 152 | 34.9 | 35.9 | 211 | 261 |
| TDS (Calculated) | mg/L | 325 | 609 | 729 | 773 | 746 | 774 | 748 | 708 | 381 | 658 | 725 | 770 | 783 | 774 | 758 | 736 | 743 | 759 | 728 | 316 | 302 | 711 | 837 |
| Temperature, Client Provided | Degree C | 19.2 | 21.8 | 17.7 | 18.4 | 16.7 | 18.1 | 13.8 | 15.4 | 12.8 | 21 | 19.2 | 20.4 | 17.9 | 20.1 | 18.5 | 17.9 | 18.8 | 17.6 | 15.6 | 19.7 | 20.5 | 22.2 | 22.7 |
| Total Kjeldahl Nitrogen | mg/L | 1.32 | 0.66 | 0.64 | 0.83 | 0.87 | 0.71 | 0.77 | 1.17 | 1.22 | 1.52 | 0.9 | 0.93 | 0.83 | 0.91 | 0.92 | 1.07 | 1.12 | 1.25 | 1.09 | 1.05 | 1.03 | 0.88 | 0.94 |
| Total Suspended Solids | mg/L | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 9 | 3.3 | 1 | 1 | 118 | 1 | 10.9 | 156 | 3.3 | 4.9 | 8.8 | 3.2 | 2.1 | 1 | 1 | 6.7 |
| Turbidity | NTU | 1.78 | 0.53 | 0.44 | 0.52 | 0.74 | 0.49 | 0.64 | 6.95 | 1.51 | 0.97 | 1.38 | 0.78 | 0.65 | 1.75 | 20.4 | 2.25 | 1.17 | 1.45 | 1.64 | 2.27 | 1.11 | 0.55 | 1.7 |
| Aluminum (Al)Total | mg/L | 0.0533 | 0.0075 | 0.0071 | 0.0065 | 0.0057 | 0.0255 | 0.0095 | 0.244 | 0.048 | 0.041 | 0.0521 | 0.0253 | 0.014 | 0.0262 | 0.0096 | 0.0832 | 0.0602 | 0.0465 | 0.0562 | 0.0713 | 0.031 | 0.0089 | 0.0171 |
| Antimony (Sb)Total | mg/L | 0.00011 | 0.00029 | 0.00022 | 0.00022 | 0.00015 | 0.00019 | 0.00025 | 0.00011 | 0.00013 | 0.00015 | 0.00014 | 0.00019 | 0.00015 | 0.00016 | 0.00012 | 0.00014 | 0.00014 | 0.00013 | 0.00015 | 0.00013 | 0.00012 | 0.00013 | 0.00018 |
| Arsenic (As)Total | mg/L | 0.00157 | 0.00098 | 0.00083 | 0.00112 | 0.00106 | 0.00075 | 0.00106 | 0.00102 | 0.00154 | 0.00111 | 0.00114 | 0.00109 | 0.00108 | 0.0013 | 0.00137 | 0.00163 | 0.0017 | 0.00162 | 0.00157 | 0.00138 | 0.0012 | 0.00117 | 0.00118 |
| Barium (Ba)Total | mg/L | 0.0345 | 0.0549 | 0.0571 | 0.0573 | 0.0594 | 0.0552 | 0.0542 | 0.0624 | 0.0405 | 0.0503 | 0.0487 | 0.049 | 0.0487 | 0.0462 | 0.043 | 0.0497 | 0.0494 | 0.0501 | 0.0517 | 0.0343 | 0.0281 | 0.0545 | 0.055 |
| Beryllium (Be)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Total | mg/L | 0.05 | 0.115 | 0.112 | 0.132 | 0.124 | 0.124 | 0.11 | 0.083 | 0.057 | 0.111 | 0.11 | 0.116 | 0.115 | 0.115 | 0.095 | 0.09 | 0.093 | 0.084 | 0.083 | 0.064 | 0.081 | 0.088 | 0.099 |
| Cadmium (Cd)Total | mg/L | 0.000025 | 0.000085 | 0.000025 | 0.0000100 | 0.000067 | 0.000025 | 0.000025 | 0.000078 | 0.000081 | 0.000025 | 0.000073 | 0.000025 | 0.000025 | 0.000059 | 0.000025 | 0.000065 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000078 | 0.000071 | 0.000077 |
| Calcium (Ca)Total | mg/L | 37.4 | 58.4 | 64.8 | 67.7 | 68.6 | 69.5 | 66.9 | 63.7 | 39.1 | 54.9 | 55.1 | 56.3 | 56.6 | 60 | 60.5 | 54.3 | 56.4 | 58.9 | 59.6 | 35.4 | 32.7 | 60.4 | 68.5 |
| Cesium (Cs)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000027 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00001 | 0.000025 | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.000019 |
| Chromium (Cr)Total | mg/L | 0.00021 | 0.00025 | 0.00025 | 0.00025 | 0.00031 | 0.00025 | 0.00025 | 0.00025 | 0.00024 | 0.00013 | 0.00017 | 0.00013 | 0.0001 | 0.0005 | 0.0002 | 0.00029 | 0.00023 | 0.00024 | 0.00036 | 0.00027 | 0.00027 | 0.00015 | 0.0002 |
| Cobalt (Co)Total | mg/L | 0.0004 | 0.00081 | 0.00077 | 0.00089 | 0.00083 | 0.00089 | 0.00073 | 0.00065 | 0.0005 | 0.00145 | 0.00144 | 0.00144 | 0.00158 | 0.00127 | 0.00094 | 0.00088 | 0.00074 | 0.00054 | 0.00044 | 0.00026 | 0.0002 | 0.00115 | 0.00124 |
| Copper (Cu)Total | mg/L | 0.00025 | 0.00153 | 0.00113 | 0.00095 | 0.00068 | 0.00122 | 0.00025 | 0.00084 | 0.00025 | 0.00213 | 0.00232 | 0.00226 | 0.0022 | 0.00114 | 0.00068 | 0.0006 | 0.00052 | 0.00025 | 0.00025 | 0.00067 | 0.00068 | 0.00193 | 0.00246 |
| Iron (Fe)Total | mg/L | 0.312 | 0.12 | 0.105 | 0.178 | 0.203 | 0.09 | 0.179 | 0.536 | 0.681 | 0.17 | 0.144 | 0.113 | 0.119 | 0.222 | 0.13 | 0.202 | 0.191 | 0.154 | 0.164 | 0.34 | 0.225 | 0.147 | 0.099 |
| Lead (Pb)Total | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.000348 | 0.000069 | 0.00025 | 0.00025 | 0.00025 | 0.000127 | 0.000275 | 0.000063 | 0.000083 | 0.00025 | 0.000082 | 0.000108 | 0.00018 | 0.00025 | 0.00025 | 0.00025 |
| Lithium (Li)Total | mg/L | 0.0042 | 0.0035 | 0.0037 | 0.0037 | 0.0041 | 0.0038 | 0.0034 | 0.004 | 0.0038 | 0.0037 | 0.0032 | 0.003 | 0.0028 | 0.004 | 0.0037 | 0.0038 | 0.004 | 0.0041 | 0.0044 | 0.0038 | 0.0037 | 0.0037 | 0.0034 |
| Magnesium (Mg)Total | mg/L | 17.1 | 24.5 | 28.7 | 31.6 | 28.6 | 29 | 32.3 | 30 | 18.8 | 26.3 | 30.5 | 26.8 | 30.8 | 30 | 30.4 | 33.5 | 31.8 | 33 | 27.6 | 18.9 | 17 | 31.9 | 34.8 |
| Manganese (Mn)Total | mg/L | 0.361 | 0.0496 | 0.0418 | 0.0871 | 0.171 | 0.0381 | 0.165 | 0.257 | 0.438 | 0.0 | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-4 cont'd

| <i>Less than detection limit, half value</i> | | | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | |
|--|----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| No Name Creek - Vanson Rd | | | L2311297-3 | L2315601-1 | L2319873-1 | L2323329-1 | L2328155-1 | L2332529-1 | L2338063-1 | L2340315-1 | L2344830-1 | L2349240-1 | L2353453-1 | L2357774-1 | L2362279-2 | L2365580-4 | L2369900-2 | L2373901-2 | L2377639-2 | L2380719-1 | L2384847-1 | L2387900-1 | L2391104-1 | L2459189-3 | L2465848-3 |
| Analyte | Units | 7/16/2019 | 7/23/2019 | 7/30/2019 | 8/6/2019 | 8/13/2019 | 8/20/2019 | 8/28/2019 | 9/3/2019 | 9/10/2019 | 9/17/2019 | 9/24/2019 | 10/1/2019 | 10/8/2019 | 10/15/2019 | 10/22/2019 | 10/29/2019 | 11/5/2019 | 11/12/2019 | 11/19/2019 | 11/26/2019 | 12/3/2019 | 6/10/2020 | 6/23/2020 | |
| Alkalinity, Total (as CaCO3) | mg/L | 201 | 202 | 226 | 238 | 259 | 272 | 265 | 254 | 240 | 246 | 192 | 172 | 130 | 117 | 146 | 140 | 163 | 197 | 205 | 219 | 249 | 134 | 117 | |
| Ammonia, Total (as N) | mg/L | 0.021 | 0.025 | 0.029 | 0.032 | 0.084 | 0.019 | 0.032 | 0.027 | 0.036 | 0.017 | 0.02 | 0.012 | 0.025 | 0.015 | 0.018 | 0.029 | 0.013 | 0.029 | 0.049 | 0.057 | 0.06 | 0.082 | 0.025 | |
| Bicarbonate (HCO3) | mg/L | 245 | 247 | 275 | 290 | 316 | 332 | 323 | 310 | 292 | 300 | 234 | 209 | 158 | 142 | 178 | 171 | 199 | 241 | 250 | 268 | 304 | 163 | 142 | |
| Carbonate (CO3) | mg/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | |
| Chloride (Cl) | mg/L | 119 | 131 | 146 | 146 | 146 | 150 | 148 | 156 | 140 | 138 | 106 | 67.1 | 42.4 | 79.9 | 102 | 103 | 124 | 136 | 135 | 144 | 150 | 35 | 49.6 | |
| Conductivity | umhos/cm | 1090 | 1220 | 1330 | 1320 | 1310 | 1330 | 1270 | 1260 | 1250 | 1200 | 901 | 679 | 494 | 729 | 917 | 905 | 1100 | 1260 | 1250 | 1290 | 1350 | 441 | 645 | |
| Cyanide, Free | mg/L | 0.0011 | 0.001 | 0.0012 | 0.001 | 0.0012 | 0.0012 | 0.0011 | 0.001 | 0.0013 | 0.0005 | 0.0011 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0011 | |
| Cyanide, Total | mg/L | 0.0013 | 0.0019 | 0.0045 | 0.004 | 0.0024 | 0.0016 | 0.0014 | 0.0018 | 0.0017 | 0.0015 | 0.0018 | 0.001 | 0.0012 | 0.0024 | 0.0027 | 0.0022 | 0.0029 | 0.0025 | 0.0019 | 0.0022 | 0.0023 | 0.0005 | 0.0012 | |
| Cyanide, Weak Acid Diss | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0012 | 0.001 | 0.0005 | 0.0011 | 0.0011 | 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 | 0.0005 | 0.001 | |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 2.28 | 4.31 | 3.6 | 1.84 | 4.35 | 2.81 | 3.92 | 5.99 | 6.56 | 6.6 | 3.99 | 8.03 | 6.13 | 8.41 | 8.19 | 6.13 | 9.48 | 8.87 | 7.86 | 6.7 | 5.67 | 4.82 | 4.2 | |
| EC, Client Supplied | umhos/cm | 1100 | 1190 | 1300 | 1330 | 1280 | 1330 | 1240 | 1270 | 1260 | 1150 | 925 | 692 | 483 | 719 | 909 | 928 | 1120 | 1300 | 1240 | 1260 | 1210 | 441 | 646 | |
| Fluoride (F) | mg/L | 0.142 | 0.122 | 0.13 | 0.14 | 0.17 | 0.15 | 0.13 | 0.134 | 0.114 | 0.109 | 0.085 | 0.071 | 0.089 | 0.048 | 0.104 | 0.085 | 0.108 | 0.081 | 0.107 | 0.106 | 0.11 | 0.08 | 0.079 | |
| Hardness (as CaCO3) | mg/L | 251 | 258 | 277 | 285 | 309 | 317 | 315 | 295 | 307 | 306 | 217 | 157 | 140 | 187 | 225 | 239 | 287 | 361 | 364 | 380 | 363 | 136 | 175 | |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | |
| Nitrate (as N) | mg/L | 0.04 | 0.04 | 0.1 | 0.04 | 0.1 | 0.1 | 0.1 | 0.04 | 0.02 | 0.04 | 0.04 | 0.02 | 0.02 | 0.02 | 0.04 | 0.02 | 0.145 | 0.205 | 0.04 | 0.04 | 0.1 | 0.005 | 0.005 | |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.055 | 0.035 | 0.055 | 0.055 | 0.055 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.145 | 0.205 | 0.035 | 0.035 | 0.055 | 0.035 | 0.035 | |
| Nitrite (as N) | mg/L | 0.02 | 0.02 | 0.025 | 0.02 | 0.025 | 0.025 | 0.025 | 0.02 | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.025 | 0.005 | 0.005 | |
| pH | pH units | 7.76 | 7.97 | 7.61 | 7.55 | 7.81 | 7.94 | 8.01 | 7.86 | 8.09 | 8.2 | 7.98 | 7.66 | 7.85 | 7.4 | 7.6 | 7.85 | 7.88 | 7.68 | 7.41 | 8.07 | 8 | 8.13 | 7.75 | |
| pH, Client Supplied | pH | 7.11 | 7.1 | 7.21 | 7.07 | 7.23 | 7.24 | 7.3 | 7.74 | 7.53 | 7.41 | 7.03 | 7.17 | 7.08 | 7.51 | 7.42 | 7.35 | 7.81 | 7.11 | 7.06 | 7.1 | 7.04 | 7.15 | 6.88 | |
| Phosphorus (P)Total | mg/L | 0.037 | 0.034 | 0.0332 | 0.046 | 0.0389 | 0.0407 | 0.052 | 0.036 | 0.0348 | 0.0314 | 0.0362 | 0.0282 | 0.0269 | 0.0289 | 0.0231 | 0.0202 | 0.016 | 0.0196 | 0.0217 | 0.0341 | 0.0437 | 0.0488 | 0.0351 | |
| Ra226 | Bq/L | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate (SO4) | mg/L | 204 | 218 | 236 | 232 | 223 | 222 | 222 | 220 | 198 | 193 | 138 | 95.2 | 64 | 147 | 199 | 195 | 243 | 261 | 252 | 256 | 263 | 40.6 | 130 | |
| TDS (Calculated) | mg/L | 681 | 729 | 796 | 791 | 818 | 820 | 812 | 808 | 763 | 754 | 563 | 415 | 294 | 453 | 586 | 583 | 721 | 802 | 806 | 829 | 845 | 251 | 382 | |
| Temperature, Client Provided | Degree C | 21.5 | 20.9 | 18.3 | 18.5 | 17.6 | 20.8 | 14.9 | 13.6 | 12.8 | 15.3 | 14.4 | 7.7 | 7.5 | 4.4 | 5.6 | 2.2 | 0.2 | 0.6 | 0.5 | 0.6 | 0.5 | 14.6 | 19.7 | |
| Total Kjeldahl Nitrogen | mg/L | 0.94 | 0.86 | 0.88 | 1.07 | 1.11 | 1.12 | 0.96 | 0.91 | 0.91 | 0.85 | 0.87 | 0.94 | 0.97 | 0.56 | 0.75 | 0.69 | 0.63 | 0.72 | 0.71 | 0.86 | 0.98 | 0.8 | 0.78 | |
| Total Suspended Solids | mg/L | 1 | 1 | 1 | 2.3 | 1 | 3.2 | 1 | 4 | 1 | 1 | 1 | 1 | 1 | 9.1 | 1 | 2.5 | 1 | 1 | 1 | 2.4 | 2 | 3 | 5.1 | |
| Turbidity | NTU | 0.52 | 0.46 | 0.46 | 1.07 | 0.71 | 1.05 | 0.75 | 1.29 | 0.95 | 0.72 | 0.98 | 0.99 | 1.09 | 2.48 | 1.32 | 0.97 | 1.06 | 0.87 | 1.65 | 1.68 | 1.82 | 1.28 | 0.9 | |
| Aluminum (Al)Total | mg/L | 0.0105 | 0.0078 | 0.008 | 0.0148 | 0.0092 | 0.0472 | 0.014 | 0.0495 | 0.0139 | 0.0088 | 0.0283 | 0.0612 | 0.0571 | 0.188 | 0.0559 | 0.0487 | 0.0261 | 0.0234 | 0.0385 | 0.0359 | 0.0419 | 0.0383 | 0.0426 | |
| Antimony (Sb)Total | mg/L | 0.00017 | 0.00011 | 0.00011 | 0.00014 | 0.00013 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00012 | 0.00011 | 0.00011 | 0.00015 | 0.00017 | 0.00019 | 0.00012 | 0.00013 | 0.00011 | 0.00014 | 0.00005 | |
| Arsenic (As)Total | mg/L | 0.00133 | 0.00146 | 0.00131 | 0.00156 | 0.00157 | 0.00146 | 0.00152 | 0.0013 | 0.00127 | 0.00099 | 0.00101 | 0.00103 | 0.00108 | 0.00086 | 0.00099 | 0.00099 | 0.00098 | 0.001 | 0.00085 | 0.00107 | 0.00127 | 0.00093 | 0.00116 | |
| Barium (Ba)Total | mg/L | 0.0467 | 0.0506 | 0.0475 | 0.0515 | 0.0562 | 0.0543 | 0.0589 | 0.055 | 0.0539 | 0.0541 | 0.0385 | 0.0294 | 0.0247 | 0.0326 | 0.0366 | 0.0357 | 0.0397 | 0.045 | 0.053 | 0.0576 | 0.0668 | 0.0222 | 0.0358 | |
| Beryllium (Be)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Boron (B)Total | mg/L | 0.086 | 0.084 | 0.095 | 0.072 | 0.082 | 0.067 | 0.072 | 0.082 | 0.074 | 0.068 | 0.055 | 0.067 | 0.078 | 0.058 | 0.071 | 0.073 | 0.067 | 0.072 | 0.052 | 0.057 | 0.072 | 0.058 | 0.067 | |
| Cadmium (Cd)Total | mg/L | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000070 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000074 | 0.0000097 | 0.0000025 | 0.0000072 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000061 | 0.0000134 | 0.0000050 | 0.0000067 | |
| Calcium (Ca)Total | mg/L | 47.9 | 52.9 | 58.1 | 55.5 | 66 | 61.4 | 63.8 | 65.2 | 63.5 | 62 | 40.7 | 33.3 | 28.1 | 38.7 | 46.5 | 46 | 54.4 | 62 | 61.2 | 72.3 | 69.3 | 26.4 | 39.1 | |
| Cesium (Cs)Total | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | |
| Chromium (Cr)Total | mg/L | 0.00019 | 0.00019 | 0.00011 | 0.00015 | 0.00017 | 0.00042 | 0.00025 | 0.00093 | 0.00017 | 0.00011 | 0.00033 | 0.00027 | 0.00034 | 0.00057 | 0.00029 | 0.00025 | 0.00018 | 0.00019 | 0.00005 | 0.00021 | 0.00016 | 0.0002 | 0.00018 | |
| Cobalt (Co)Total | mg/L | 0.00099 | 0.00093 | 0.00089 | 0.00085 | 0.00061 | 0.00052 | 0.00043 | 0.0004 | 0.00032 | 0.00028 | 0.00032 | 0.00023 | 0.00019 | 0.00144 | 0.00183 | 0.00177 | 0.00215 | 0.00236 | 0.00198 | 0.00196 | 0.00199 | 0.00019 | 0.00118 | |
| Copper (Cu)Total | mg/L | 0.00275 | 0.00181 | 0.00143 | 0.00181 | 0.00064 | 0.00106 | 0.00093 | 0.0015 | 0.00059 | 0.00025 | 0.00154 | 0.00441 | 0.00664 | 0.0078 | 0.00908 | 0.00944 | 0.0109 | 0.0111 | 0.00505 | 0.00362 | 0.00273 | 0.00069 | 0.00286 | |
| Iron (Fe)Total | mg/L | 0.173 | 0.129 | 0.102 | 0.159 | 0.18 | 0.162 | 0.157 | 0.157 | 0.101 | 0.104 | 0.15 | 0.142 | 0.224 | 0.291 | 0.123 | 0.108 | 0.074 | 0.081 | 0.207 | 0.439 | 0.592 | 0.24 | 0.149 | |
| Lead (Pb)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000055 | 0.000025 | 0.000054 | 0.000025 | 0.000067 | 0.000025 | 0.000025 | 0.000025 | 0.000071 | 0.00005 | 0.000162 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000072 | 0.000075 | 0.000088 | |
| Lithium (Li)Total | mg/L | 0.0025 | 0.0027 | 0.0029 | 0.0027 | 0.0036 | 0.0037 | 0.0046 | 0.0047 | 0.0044 | 0.0042 | 0.0025 | 0.0026 | 0.0024 | 0.0027 | 0.0025 | 0.0026 | 0.0028 | 0.0029 | 0.003 | 0.0033 | 0.0037 | 0.0028 | 0.0025 | |
| Magnesium (Mg)Total | mg/L | 30.1 | 33.5 | 36.6 | 36.4 | 39.9 | 37.9 | 38.3 | 37.6 | 38.4 | 36.2 | 24.2 | 20.8 | 16.5 | 23.6 | 26.5 | 30.2 | 38.6 | 41.6 | 40.4 | 46.7 | 42.9 | 14.3 | 21.3 | |
| Manganese (Mn)Total | mg/L | 0.0871 | 0.0792 | 0.0818 | 0.861 | 0.237 | 0.334 | 0.27 | 0.172 | 0.0848 | 0.0991 | 0.0757 | 0.018 | 0.0282 | 0.0213 | 0.0209 | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-4 cont'd

| <i>Less than detection limit, half value</i> | | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| No Name Creek - Vanson Rd | | L2468477-1 | L2471686-3 | L2474258-3 | L2478400-3 | L2481567-5 | L2484805-3 | L2487940-4 | L2492070-3 | L2494017-3 | L2498782-9 | L2501688-3 | L2504186-3 | L2510579-3 | L2513882-3 | L2516774-6 | L2520597-3 | L2523594-3 | L2525591-3 | L2529050-3 | L2531674-3 | L2534197-3 | L2536758-3 | L2640496-2 |
| Analyte | Units | 6/30/2020 | 7/7/2020 | 7/14/2020 | 7/21/2020 | 7/28/2020 | 8/4/2020 | 8/11/2020 | 8/18/2020 | 8/25/2020 | 9/1/2020 | 9/8/2020 | 9/15/2020 | 9/29/2020 | 10/6/2020 | 10/13/2020 | 10/20/2020 | 10/27/2020 | 11/3/2020 | 11/10/2020 | 11/17/2020 | 11/24/2020 | 12/2/2020 | 9/14/2021 |
| Alkalinity, Total (as CaCO3) | mg/L | 138 | 158 | 161 | 143 | 168 | 182 | 194 | 197 | 201 | 224 | 237 | 202 | 177 | 156 | 163 | 173 | 181 | 188 | 198 | 208 | 223 | 236 | 252 |
| Ammonia, Total (as N) | mg/L | 0.049 | 0.021 | 0.025 | 0.023 | 0.044 | 0.039 | 0.051 | 0.018 | 0.012 | 0.005 | 0.021 | 0.027 | 0.082 | 0.028 | 0.023 | 0.081 | 0.062 | 0.052 | 0.048 | 0.084 | 0.141 | 0.241 | 0.024 |
| Bicarbonate (HCO3) | mg/L | 168 | 192 | 196 | 175 | 205 | 222 | 236 | 240 | 245 | 273 | 289 | 246 | 216 | 190 | 199 | 211 | 221 | 229 | 239 | 254 | 272 | 288 | 308 |
| Carbonate (CO3) | mg/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 1.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| Chloride (Cl) | mg/L | 78.1 | 93.2 | 99.4 | 86.3 | 86.5 | 91.1 | 92.4 | 100 | 92.8 | 91.1 | 89.2 | 85.3 | 77 | 77 | 80.1 | 84.4 | 84.2 | 86.4 | 88.7 | 92.1 | 87.8 | 91 | 63.1 |
| Conductivity | umhos/cm | 885 | 1050 | 1110 | 987 | 1020 | 1010 | 1030 | 1040 | 1000 | 993 | 980 | 980 | 1030 | 1140 | 1130 | 1170 | 1190 | 1170 | 1180 | 1200 | 1200 | 1260 | 861 |
| Cyanide, Free | mg/L | 0.0014 | 0.0005 | 0.0005 | 0.0011 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0011 | 0.0005 | 0.0016 | 0.0005 | 0.0014 | 0.0014 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| Cyanide, Total | mg/L | 0.0011 | 0.0012 | 0.0026 | 0.0084 | 0.0035 | 0.0025 | 0.0019 | 0.001 | 0.0017 | 0.0005 | 0.0005 | 0.0005 | 0.0031 | 0.0052 | 0.0044 | 0.0039 | 0.0026 | 0.0018 | 0.0023 | 0.0019 | 0.0021 | 0.0022 | 0.0013 |
| Cyanide, Weak Acid Diss | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0014 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.001 | 0.0015 | 0.0011 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | | 2.85 | 3.16 | 2.4 | 2.39 | 5.19 | 6.61 | 5.95 | 2.68 | 2.16 | 2.87 | 4.06 | 4.35 | 6.04 | 6.88 | 6.69 | 6.49 | 5.53 | 5.97 | 5.2 | 3.48 | 2.99 | |
| EC, Client Supplied | umhos/cm | 902 | 1050 | 1110 | 991 | 1010 | 1010 | 1040 | 1060 | 1010 | 1000 | 983 | 978 | 1030 | 1080 | 1110 | 1130 | 1160 | 1140 | 1160 | 1190 | 1180 | 1180 | 7 |
| Fluoride (F) | mg/L | 0.111 | 0.101 | 0.102 | 0.087 | 0.097 | 0.104 | 0.104 | 0.104 | 0.11 | 0.097 | 0.092 | 0.125 | 0.079 | 0.09 | 0.088 | 0.091 | 0.09 | 0.091 | 0.101 | 0.072 | 0.091 | 0.096 | 0.111 |
| Hardness (as CaCO3) | mg/L | 263 | 284 | 295 | 263 | 250 | 273 | 310 | 291 | 264 | 279 | 265 | 280 | 319 | 323 | 348 | 344 | 341 | 370 | 369 | 369 | 390 | 406 | 283 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 0.04 | 0.04 | 0.132 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.01 |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.132 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 |
| Nitrite (as N) | mg/L | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| pH | pH units | 7.93 | 7.58 | 7.41 | 7.79 | 7.76 | 8.28 | 7.59 | 8.14 | 7.9 | 7.68 | 7.74 | 8.26 | 8.2 | 8.27 | 8.24 | 8.14 | 7.78 | 7.98 | 8.3 | 8.12 | 7.52 | 7.91 | 7.75 |
| pH, Client Supplied | pH | 6.99 | 6.87 | 6.98 | 7.25 | 6.94 | 6.94 | 7.04 | 7.28 | 6.92 | 6.84 | 6.74 | 7.13 | 6.65 | 7.04 | 6.62 | 6.64 | 6.52 | 6.48 | 6.44 | 6.7 | 6.47 | 6.94 | 6.97 |
| Phosphorus (P)Total | mg/L | 0.03 | 0.0375 | 0.0459 | 0.0368 | 0.0759 | 0.0511 | 0.064 | 0.0661 | 0.0775 | 0.0569 | 0.038 | 0.0295 | 0.0202 | 0.0158 | 0.014 | 0.0166 | 0.0215 | 0.0246 | 0.0236 | 0.0292 | 0.0456 | 0.0439 | 0.0429 |
| Ra226 | Bq/L | | | 0.0069 | | | | | | | | | | 0.0065 | | 0.007 | | | | | | | | |
| Sulfate (SO4) | mg/L | 215 | 257 | 280 | 247 | 229 | 236 | 227 | 237 | 218 | 203 | 197 | 194 | 255 | 298 | 302 | 308 | 303 | 311 | 304 | 309 | 293 | 285 | 114 |
| TDS (Calculated) | mg/L | 565 | 668 | 712 | 623 | 608 | 637 | 665 | 663 | 623 | 642 | 619 | 604 | 632 | 691 | 715 | 726 | 726 | 757 | 755 | 774 | 781 | 785 | 525 |
| Temperature, Client Provided | Degree C | 24.2 | 24.8 | 21.4 | 20 | 22.6 | 21.5 | 22.5 | 18.9 | 18.1 | 14.2 | 11.9 | 11.4 | 11.2 | 8.3 | 7 | 3 | 1.4 | 2.1 | 1.3 | 0.9 | 0.9 | 0.7 | 806 |
| Total Kjeldahl Nitrogen | mg/L | 0.83 | 0.78 | 0.81 | 0.69 | 5.1 | 4.08 | 0.84 | 0.87 | 0.87 | 0.82 | 0.82 | 0.79 | 0.79 | 0.6 | 0.56 | 0.67 | 0.59 | 0.56 | 0.93 | 0.93 | 1 | 1.01 | 1.02 |
| Total Suspended Solids | mg/L | 3.2 | 1.2 | 2.5 | 1.5 | 3.9 | 2.7 | 10.8 | 2.6 | 3.5 | 1.1 | 3.2 | 2.1 | 0.5 | 0.5 | 0.5 | 0.5 | 1 | 1.1 | 1.9 | 3.9 | 7.2 | 3.3 | 2.5 |
| Turbidity | NTU | 0.94 | 0.42 | 0.82 | 0.45 | 1 | 0.84 | 1.73 | 1.29 | 1.77 | 0.87 | 1.65 | 1.13 | 0.68 | 0.55 | 0.4 | 0.96 | 1.11 | 0.98 | 0.97 | 2.26 | 2.56 | 1.58 | 1.01 |
| Aluminum (Al)Total | mg/L | 0.0106 | 0.0087 | 0.0126 | 0.0089 | 0.0265 | 0.0428 | 0.0407 | 0.0331 | 0.0464 | 0.0209 | 0.049 | 0.0347 | 0.0128 | 0.0184 | 0.0121 | 0.0232 | 0.0304 | 0.0246 | 0.0197 | 0.0725 | 0.0831 | 0.0256 | 0.0206 |
| Antimony (Sb)Total | mg/L | 0.00011 | 0.00012 | 0.00013 | 0.00013 | 0.00012 | 0.0001 | 0.00014 | 0.00005 | 0.00012 | 0.00005 | 0.00005 | 0.00005 | 0.0001 | 0.00005 | 0.00013 | 0.0001 | 0.00014 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Arsenic (As)Total | mg/L | 0.00104 | 0.00123 | 0.00097 | 0.00114 | 0.00124 | 0.00119 | 0.0014 | 0.00138 | 0.00141 | 0.00125 | 0.001 | 0.00083 | 0.00096 | 0.00073 | 0.0007 | 0.00064 | 0.0007 | 0.00072 | 0.00058 | 0.00075 | 0.00085 | 0.00094 | 0.00113 |
| Barium (Ba)Total | mg/L | 0.0431 | 0.0534 | 0.048 | 0.0423 | 0.0488 | 0.0476 | 0.0506 | 0.051 | 0.0507 | 0.0512 | 0.0463 | 0.0472 | 0.0451 | 0.044 | 0.043 | 0.044 | 0.0514 | 0.0507 | 0.0477 | 0.0563 | 0.0602 | 0.0623 | 0.0445 |
| Beryllium (Be)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Total | mg/L | 0.072 | 0.081 | 0.078 | 0.068 | 0.072 | 0.074 | 0.073 | 0.068 | 0.071 | 0.061 | 0.06 | 0.052 | 0.05 | 0.058 | 0.067 | 0.057 | 0.062 | 0.052 | 0.041 | 0.047 | 0.044 | 0.054 | 0.063 |
| Cadmium (Cd)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.0000061 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000056 | 0.000025 | 0.000025 | 0.000069 | 0.000059 | 0.000025 |
| Calcium (Ca)Total | mg/L | 52.1 | 59 | 63.8 | 54.7 | 45.6 | 60.2 | 63.6 | 62.7 | 59.3 | 63.3 | 60.3 | 61.1 | 55.9 | 68.5 | 70.5 | 68.7 | 73.4 | 71.6 | 69.3 | 76.2 | 83.8 | 84.5 | 70 |
| Cesium (Cs)Total | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 |
| Chromium (Cr)Total | mg/L | 0.00011 | 0.0001 | 0.00005 | 0.00005 | 0.00013 | 0.00021 | 0.00023 | 0.00017 | 0.00018 | 0.00014 | 0.00015 | 0.00022 | 0.00005 | 0.00014 | 0.00012 | 0.00005 | 0.00011 | 0.00013 | 0.0001 | 0.0002 | 0.00022 | 0.00011 | 0.00019 |
| Cobalt (Co)Total | mg/L | 0.00193 | 0.00192 | 0.00218 | 0.00189 | 0.00146 | 0.00113 | 0.00091 | 0.00078 | 0.0007 | 0.00056 | 0.00051 | 0.00052 | 0.00189 | 0.00248 | 0.00254 | 0.00219 | 0.00205 | 0.00188 | 0.00158 | 0.00177 | 0.00174 | 0.00168 | 0.00022 |
| Copper (Cu)Total | mg/L | 0.00187 | 0.00111 | 0.00129 | 0.00189 | 0.00097 | 0.00025 | 0.00025 | 0.00025 | 0.00097 | 0.00025 | 0.00025 | 0.00025 | 0.00188 | 0.00451 | 0.00501 | 0.00348 | 0.00219 | 0.00154 | 0.00116 | 0.0012 | 0.00108 | 0.0009 | 0.00025 |
| Iron (Fe)Total | mg/L | 0.145 | 0.16 | 0.147 | 0.101 | 0.369 | 0.356 | 0.335 | 0.2 | 0.281 | 0.147 | 0.154 | 0.141 | 0.06 | 0.045 | 0.039 | 0.11 | 0.158 | 0.207 | 0.179 | 0.281 | 0.505 | 0.407 | 0.121 |
| Lead (Pb)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00006 | 0.000025 | 0.000025 | 0.000025 | 0.000055 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000078 | 0.000087 | 0.000053 | 0.000025 |
| Lithium (Li)Total | mg/L | 0.0016 | 0.0024 | 0.0022 | 0.0019 | 0.0029 | 0.0031 | 0.0034 | 0.0037 | 0.0034 | 0.0034 | 0.0038 | 0.0031 | 0.0025 | 0.0019 | 0.0022 | 0.0025 | 0.0032 | 0.003 | 0.0028 | 0.0031 | 0.0037 | 0.0039 | 0.0067 |
| Magnesium (Mg)Total | mg/L | 28 | 36.4 | 39.5 | 31.8 | 33 | 36 | 37.8 | 38.6 | 34 | 35.2 | 34.6 | 36.2 | 33.8 | 35.8 | 43.2 | 42 | 44.1 | 40.7 | 37.5 | 44.5 | 50.1 | 48.8 | 33.4 |
| Manganese (Mn)Total | mg/L | 0.0814 | 0.0858 | 0.0953 | 0.0479 | 0.329 | 0.205 | 0.226 | 0.236 | 0.329 | 0.0663 | 0.0535 | 0.0782</ | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-4 cont'd

| Less than detection limit, half value | No Name Creek - Vanson Rd | NNC-VR | | | | | | | | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | MWQSOG | MWQSOG | CCME | MDMER |
|---------------------------------------|---------------------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-------------|-----------|----------|----------|----------------|----------------|----------|-------------|---------|
| | | L2642990-5 | L2645860-2 | L2648478-3 | L2650898-2 | L2653707-2 | L2655279-2 | L2659471-4 | L2661865-2 | | | | | | | Tier II | Tier III | Chronic PAL | Sch. 4 |
| Analyte | Units | 9/22/2021 | 9/28/2021 | 10/6/2021 | 10/12/2021 | 10/19/2021 | 10/25/2021 | 11/4/2021 | 11/11/2021 | | | | | | Chronic PAL | PAL | | MAC | |
| Alkalinity, Total (as CaCO3) | mg/L | 268 | 176 | 168 | 179 | 195 | 208 | 202 | 201 | 207 | 202 | 117 | 316 | 69 | 83 | | | | |
| Ammonia, Total (as N) | mg/L | 0.024 | 0.038 | 0.084 | 0.084 | 0.098 | 0.169 | 0.117 | 0.094 | 0.046 | 0.032 | 0.005 | 0.241 | 0.04 | 83 | 2.74' | | | |
| Bicarbonate (HCO3) | mg/L | 309 | 215 | 205 | 219 | 238 | 253 | 247 | 246 | 252 | 247 | 142 | 385 | 84 | 83 | | | | |
| Carbonate (CO3) | mg/L | 8.64 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.45 | 0.30 | 0.15 | 8.64 | 0.93 | 83 | | 250 | 120 | |
| Chloride (Cl) | mg/L | 67.4 | 63.5 | 68.1 | 71.4 | 66.8 | 70 | 68.5 | 69.9 | 101.3 | 93.2 | 35 | 156 | 41 | 83 | | | | |
| Conductivity | umhos/cm | 876 | 1140 | 1200 | 1200 | 1090 | 1080 | 1080 | 1100 | 1068.0 | 1130 | 441 | 1350 | 346 | 83 | | | | |
| Cyanide, Free | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0008 | 0.0005 | 0.00025 | 0.0025 | 0.001 | 83 | 0.0052 | | | |
| Cyanide, Total | mg/L | 0.0005 | 0.0036 | 0.0031 | 0.0028 | 0.0018 | 0.0012 | 0.0005 | 0.0015 | 0.0019 | 0.0018 | 0.00025 | 0.0084 | 0.001 | 83 | | | | 1 |
| Cyanide, Weak Acid Diss | mg/L | 0.0005 | 0.0005 | 0.0012 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0006 | 0.0005 | 0.00025 | 0.0025 | 0.001 | 83 | | | | |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 8.16 | 3.58 | 3.31 | 2.35 | 5.68 | 6.14 | 6.55 | 9.39 | 4.36 | 4.13 | 0.71 | 9.48 | 2.50 | 80 | 5.5-6.5 | | | |
| EC, Client Supplied | umhos/cm | 834 | 1068 | 1140 | 1120 | 1030 | 1020 | 1020 | 1010 | 1049 | 1120 | 7 | 1340 | 368 | 83 | | | | |
| Fluoride (F) | mg/L | 0.109 | 0.09 | 0.097 | 0.099 | 0.095 | 0.103 | 0.096 | 0.086 | 0.109 | 0.104 | 0.048 | 0.19 | 0.036 | 83 | | | 0.12 | |
| Hardness (as CaCO3) | mg/L | 294 | 372 | 379 | 371 | 355 | 332 | 334 | 337 | 286 | 285 | 136 | 406 | 96 | 83 | | | | |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0 | 83 | | | | |
| Nitrate (as N) | mg/L | 0.01 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.04 | 0.005 | 0.205 | 0.04 | 83 | 2.93 | 13 | | |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.050 | 0.035 | 0.035 | 0.205 | 0.03 | 83 | 10 | | | |
| Nitrite (as N) | mg/L | 0.005 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.012 | 0.01 | 0.0025 | 0.025 | 0.008 | 83 | 0.06 | 0.06 | 0.06 | |
| pH | pH units | 8.42 | 8.09 | 7.62 | 7.86 | 7.89 | 7.5 | 7.95 | 7.91 | 7.80 | 7.78 | 7.26 | 8.42 | 2.050 | 83 | 6.5-9.0 | | | 6.0-9.5 |
| pH, Client Supplied | pH | 7.93 | 6.94 | 7.48 | 7.04 | 7.14 | 6.98 | 7.12 | 6.92 | 7.15 | 7.13 | 6.44 | 7.96 | 1.889 | 83 | 6.5-9.0 | | | 6.0-9.5 |
| Phosphorus (P)Total | mg/L | 0.0497 | 0.0423 | 0.0405 | 0.0445 | 0.0405 | 0.0296 | 0.0417 | 0.0424 | 0.0430 | 0.0380 | 0.014 | 0.175 | 0.025 | 83 | | | | |
| Ra226 | Bq/L | | | | | | | | | 0.0068 | 0.0069 | 0.0065 | 0.007 | 0.003403 | 9 | | 0.5 | | 0.37 |
| Sulfate (SO4) | mg/L | 110 | 312 | 346 | 341 | 268 | 274 | 255 | 259 | 213.15 | 222 | 33.6 | 346 | 89 | 83 | | | | |
| TDS (Calculated) | mg/L | 522 | 730 | 770 | 777 | 685 | 710 | 671 | 675 | 671.8 | 721 | 251 | 845 | 222 | 83 | | | | |
| Temperature, Client Provided | Degree C | 17.2 | 11.6 | 14 | 12.7 | 9.1 | 4.9 | 3.9 | 2.1 | 23.7 | 15.4 | 0.2 | 806 | 87.5 | 83 | | | | |
| Total Kjeldahl Nitrogen | mg/L | 1.15 | 0.94 | 0.93 | 0.88 | 0.96 | 0.93 | 0.86 | 0.9 | 1.0 | 0.88 | 0.56 | 5.1 | 0.65 | 83 | | | | |
| Total Suspended Solids | mg/L | 16 | 1.3 | 1 | 1 | 1 | 1 | 1.9 | 1.8 | 6.3 | 2.1 | 0.5 | 156 | 21.1 | 83 | +5' | | | 15 |
| Turbidity | NTU | 4.96 | 1.02 | 0.47 | 0.89 | 0.78 | 0.95 | 2.12 | 1.98 | 1.50 | 1 | 0.4 | 20.4 | 2.3 | 83 | | | | |
| Aluminum (Al)Total | mg/L | 0.267 | 0.0114 | 0.0084 | 0.0101 | 0.0121 | 0.0147 | 0.0612 | 0.048 | 0.038 | 0.026 | 0.006 | 0.267 | 0.044 | 83 | | | 0.1 | |
| Antimony (Sb)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00011 | 0.000025 | 0.00029 | 0.00006 | 83 | | | | |
| Arsenic (As)Total | mg/L | 0.00103 | 0.00096 | 0.00092 | 0.00093 | 0.00095 | 0.00082 | 0.00081 | 0.00071 | 0.00111 | 0.00107 | 0.00058 | 0.0017 | 0.00039 | 83 | | | 0.005 | 0.3 |
| Barium (Ba)Total | mg/L | 0.0435 | 0.0604 | 0.0602 | 0.0597 | 0.0536 | 0.0506 | 0.0539 | 0.0511 | 0.0486 | 0.0503 | 0.0222 | 0.0668 | 0.01528 | 83 | | | | |
| Beryllium (Be)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00004 | 0.00005 | 0.000025 | 0.00005 | 0.00002 | 83 | | | | |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0 | 83 | | | | |
| Boron (B)Total | mg/L | 0.049 | 0.063 | 0.057 | 0.065 | 0.056 | 0.055 | 0.044 | 0.04 | 0.0745 | 0.071 | 0.04 | 0.132 | 0.02863 | 83 | | 1.5 | | |
| Cadmium (Cd)Total | mg/L | 0.000182 | 0.000073 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00004 | 0.00003 | 0.00003 | 0.00018 | 0.00000 | 83 | | | 0.0008' | |
| Calcium (Ca)Total | mg/L | 60.9 | 71.5 | 70.2 | 81.3 | 72 | 75 | 66.2 | 70 | 59.5 | 61.1 | 26.4 | 84.5 | 19.6 | 83 | | | | |
| Cesium (Cs)Total | mg/L | 0.000035 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000006 | 0.000005 | 0.0000025 | 0.000035 | 0.00001 | 83 | | | | |
| Chromium (Cr)Total | mg/L | 0.00061 | 0.00005 | 0.00015 | 0.00005 | 0.00013 | 0.00005 | 0.00016 | 0.00016 | 0.001894 | 0.00017 | 0.000025 | 0.00093 | 0.00015 | 83 | | | | |
| Cobalt (Co)Total | mg/L | 0.00033 | 0.00192 | 0.00188 | 0.00185 | 0.00121 | 0.00104 | 0.0009 | 0.00088 | 0.0011477 | 0.00094 | 0.00019 | 0.00254 | 0.00070 | 83 | | | | |
| Copper (Cu)Total | mg/L | 0.00072 | 0.00263 | 0.00234 | 0.00216 | 0.00091 | 0.00125 | 0.00065 | 0.00059 | 0.0020503 | 0.0012 | 0.00025 | 0.0111 | 0.00237 | 83 | | | 0.002' | 0.3 |
| Iron (Fe)Total | mg/L | 0.464 | 0.117 | 0.138 | 0.26 | 0.331 | 0.339 | 0.241 | 0.252 | 0.2059 | 0.16 | 0.039 | 0.681 | 0.13305 | 83 | | | 0.3 | |
| Lead (Pb)Total | mg/L | 0.000251 | 0.000025 | 0.000207 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00005 | 0.000025 | 0.000025 | 0.000348 | 0.00006 | 83 | | | 0.001' | 0.2 |
| Lithium (Li)Total | mg/L | 0.0058 | 0.0028 | 0.0023 | 0.0025 | 0.0033 | 0.0035 | 0.0034 | 0.003 | 0.0033 | 0.0033 | 0.0016 | 0.0067 | 0.00118 | 83 | | | | |
| Magnesium (Mg)Total | mg/L | 32.2 | 43.9 | 45.9 | 43.3 | 43.4 | 42.3 | 43.1 | 41 | 33.85 | 34 | 14.3 | 50.1 | 11.7 | 83 | | | | |
| Manganese (Mn)Total | mg/L | 0.106 | 0.155 | 0.0798 | 0.182 | 0.211 | 0.169 | 0.157 | 0.163 | 0.1737986 | 0.0991 | 0.00919 | 1.13 | 0.20 | 83 | | | 0.380' | |
| Mercury (Hg)Total | ng/L | | | | | | | | | | | | | | | | | 26 | |
| Molybdenum (Mo)Total | mg/L | 0.00278 | 0.00668 | 0.00648 | 0.00466 | 0.00305 | 0.00231 | 0.002 | 0.00158 | 0.00571 | 0.00386 | 0.000631 | 0.0173 | 0.004 | 83 | 0.073 | | 0.073 | |
| Nickel (Ni)Total | mg/L | 0.00126 | 0.00117 | 0.0011 | 0.00101 | 0.00085 | 0.00079 | 0.00056 | 0.00069 | 0.001001 | 0.00098 | 0.00025 | 0.00215 | 0.000 | 83 | | | 0.025' | 0.5 |
| Phosphorus (P)Total | mg/L | 0.055 | 0.049 | 0.05 | 0.048 | 0.046 | 0.041 | 0.048 | 0.048 | 0.0456 | 0.041 | 0.015 | 0.168 | 0.027 | 83 | 1 ³ | | | |
| Potassium (K)Total | mg/L | 10.9 | 19.1 | 20 | 21.2 | 18.9 | 17.3 | 17.5 | 16.7 | 19.72 | 19.2 | 8.8 | 29.6 | 7.0 | 83 | | | | |
| Rubidium (Rb)Total | mg/L | 0.00259 | 0.00479 | 0.00577 | 0.00603 | 0.00439 | 0.00361 | 0.00374 | 0.00383 | 0.00523 | 0.00479 | 0.00202 | 0.00971 | 0.0024 | 83 | | | | |
| Selenium (Se)Total | mg/L | 0.00016 | 0.000205 | 0.000172 | 0.000174 | 0.000136 | 0.00014 | 0.000127 | 0.000141 | 0.00016 | 0.000149 | 0.000097 | 0.000288 | 0.00006 | 83 | | 0.001 | 0.001 | |
| Silicon (Si)Total | mg/L | 1.43 | 3.6 | 2.46 | 2.84 | 3.58 | 3.57 | 3.98 | 3.88 | 2.82 | 2.84 | 0.98 | 4.76 | 1.11 | 83 | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-4 cont'd

| <i>Less than detection limit, half value</i> | | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | | |
|--|-------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|---------|
| No Name Creek - Vanson Rd | | L1960980-5 | L1964768-3 | L1971728-4 | L1976404-3 | L1979675-5 | L1983563-3 | L1986645-3 | L1990659-3 | L21107153 | L21190893 | L21226493 | L21266383 | L21307663 | L21349393 | L21385553 | L21422554 | L21460334 | L21507174 | L21538254 | L2294147-3 | L2298725-1 | L2302403-3 | L2306799-3 | |
| Analyte | Units | 7/18/2017 | 7/25/2017 | 8/8/2017 | 8/15/2017 | 8/22/2017 | 8/29/2017 | 9/5/2017 | 9/12/2017 | 6/12/2018 | 6/25/2018 | 7/3/2018 | 7/10/2018 | 7/17/2018 | 7/24/2018 | 7/31/2018 | 8/7/2018 | 8/14/2018 | 8/21/2018 | 8/27/2018 | 6/17/2019 | 6/25/2019 | 7/2/2019 | 7/9/2019 | |
| Silver (Ag)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Sodium (Na)Total | mg/L | 58.7 | 113 | 145 | 161 | 137 | 141 | 152 | 140 | 76.9 | 130 | 154 | 142 | 178 | 169 | 162 | 160 | 154 | 164 | 146 | 59.2 | 54.3 | 137 | 165 | |
| Strontium (Sr)Total | mg/L | 0.165 | 0.355 | 0.425 | 0.478 | 0.465 | 0.488 | 0.457 | 0.425 | 0.208 | 0.389 | 0.427 | 0.504 | 0.553 | 0.527 | 0.472 | 0.45 | 0.443 | 0.419 | 0.423 | 0.187 | 0.183 | 0.447 | 0.52 | |
| Sulfur (S)Total | mg/L | 13.5 | 73.7 | 88.6 | 96.2 | 96.5 | 88.2 | 79.6 | 73.9 | 23.9 | 64.5 | 69.6 | 68.9 | 79.2 | 73.1 | 62 | 62.5 | 59.3 | 55.6 | 51.4 | 14.2 | 13 | 75.5 | 96.2 | |
| Tellurium (Te)Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | |
| Thallium (Tl)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Thorium (Th)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Tin (Sn)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Titanium (Ti)Total | mg/L | 0.00181 | 0.00045 | 0.00031 | 0.00033 | 0.00015 | 0.00055 | 0.00031 | 0.00869 | 0.00189 | 0.00174 | 0.00264 | 0.00124 | 0.00062 | 0.00115 | 0.0005 | 0.00314 | 0.00254 | 0.00264 | 0.0025 | 0.00332 | 0.00136 | 0.00036 | 0.0007 | |
| Tungsten (W)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Uranium (U)Total | mg/L | 0.000026 | 0.000093 | 0.000104 | 0.000084 | 0.000077 | 0.000125 | 0.000055 | 0.000084 | 0.000045 | 0.000118 | 0.000118 | 0.000127 | 0.000117 | 0.000082 | 0.000047 | 0.000061 | 0.000046 | 0.000053 | 0.000086 | 0.000088 | 0.000064 | 0.000086 | 0.00011 | |
| Vanadium (V)Total | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | |
| Zinc (Zn)Total | mg/L | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | |
| Zirconium (Zr)Total | mg/L | 0.000165 | 0.000084 | 0.000067 | 0.00003 | 0.000063 | 0.00003 | 0.000065 | 0.000261 | 0.000235 | 0.000125 | 0.000092 | 0.000246 | 0.00006 | 0.000122 | 0.000108 | 0.000166 | 0.000167 | 0.000198 | 0.000249 | 0.00031 | 0.00053 | 0.0001 | 0.0001 | |
| Aluminum (Al)Dissolved | mg/L | 0.0069 | 0.0033 | 0.0027 | 0.0049 | 0.0023 | 0.0019 | 0.0019 | 0.0045 | 0.008 | 0.004 | 0.0033 | 0.0044 | 0.00013 | 0.00012 | 0.00011 | 0.00025 | 0.0036 | 0.004 | 0.0072 | 0.0103 | 0.0075 | 0.0026 | 0.0028 | |
| Antimony (Sb)Dissolved | mg/L | 0.0001 | 0.00022 | 0.00015 | 0.00016 | 0.00013 | 0.00016 | 0.00025 | 0.00025 | 0.00025 | 0.00017 | 0.00015 | 0.00013 | 0.00012 | 0.00011 | 0.00011 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00005 | 0.00005 | 0.00005 | 0.0001 |
| Arsenic (As)Dissolved | mg/L | 0.00163 | 0.00102 | 0.0008 | 0.0009 | 0.00102 | 0.00076 | 0.00096 | 0.00106 | 0.00139 | 0.00119 | 0.00109 | 0.0014 | 0.00117 | 0.00132 | 0.00138 | 0.00154 | 0.00174 | 0.00165 | 0.00155 | 0.00129 | 0.00127 | 0.00115 | 0.00112 | |
| Barium (Ba)Dissolved | mg/L | 0.0333 | 0.0521 | 0.057 | 0.0564 | 0.0559 | 0.0528 | 0.0519 | 0.0589 | 0.0352 | 0.0516 | 0.0494 | 0.0574 | 0.0486 | 0.0451 | 0.0417 | 0.0453 | 0.0485 | 0.0494 | 0.0524 | 0.0329 | 0.0268 | 0.0534 | 0.0561 | |
| Beryllium (Be)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Bismuth (Bi)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Boron (B)Dissolved | mg/L | 0.051 | 0.113 | 0.102 | 0.129 | 0.115 | 0.129 | 0.107 | 0.084 | 0.065 | 0.124 | 0.102 | 0.107 | 0.118 | 0.105 | 0.11 | 0.092 | 0.1 | 0.087 | 0.08 | 0.072 | 0.079 | 0.092 | 0.102 | |
| Cadmium (Cd)Dissolved | mg/L | 0.000025 | 0.0000062 | 0.0000050 | 0.0000050 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.0000123 | 0.0000063 | 0.000025 | 0.0000137 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Calcium (Ca)Dissolved | mg/L | 33.2 | 56.2 | 60.2 | 65.2 | 65.9 | 65.5 | 68.2 | 63.8 | 36 | 63.4 | 56.9 | 51.6 | 59.4 | 61.2 | 58.9 | 56.1 | 57.4 | 57.8 | 57.8 | 34.2 | 33.3 | 60.9 | 60.2 | |
| Cesium (Cs)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Chromium (Cr)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00021 | 0.000025 | 0.000025 | 0.000025 | 0.0001 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00014 | 0.00015 | 0.00005 | 0.00005 |
| Cobalt (Co)Dissolved | mg/L | 0.00029 | 0.00076 | 0.00072 | 0.00078 | 0.00069 | 0.00084 | 0.00064 | 0.00048 | 0.00024 | 0.00145 | 0.00146 | 0.0019 | 0.00142 | 0.00109 | 0.00077 | 0.00068 | 0.00067 | 0.00049 | 0.0004 | 0.00019 | 0.00015 | 0.00112 | 0.00107 | |
| Copper (Cu)Dissolved | mg/L | 0.0001 | 0.00142 | 0.00099 | 0.00141 | 0.00055 | 0.00104 | 0.00037 | 0.00034 | 0.00028 | 0.00178 | 0.00216 | 0.00279 | 0.00171 | 0.00083 | 0.0005 | 0.00042 | 0.00034 | 0.00027 | 0.00026 | 0.00038 | 0.00048 | 0.00173 | 0.00205 | |
| Iron (Fe)Dissolved | mg/L | 0.177 | 0.082 | 0.068 | 0.101 | 0.11 | 0.06 | 0.09 | 0.139 | 0.317 | 0.098 | 0.092 | 0.067 | 0.045 | 0.054 | 0.049 | 0.047 | 0.075 | 0.078 | 0.083 | 0.185 | 0.142 | 0.101 | 0.067 | |
| Lead (Pb)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Lithium (Li)Dissolved | mg/L | 0.0045 | 0.0033 | 0.0032 | 0.0037 | 0.0034 | 0.0037 | 0.0033 | 0.004 | 0.0041 | 0.0039 | 0.0031 | 0.0028 | 0.0031 | 0.0035 | 0.0037 | 0.0036 | 0.0037 | 0.0039 | 0.0038 | 0.0034 | 0.0035 | 0.0032 | 0.0029 | |
| Magnesium (Mg)Dissolved | mg/L | 15.2 | 25 | 28.2 | 30.7 | 32 | 32.2 | 32.3 | 31.4 | 18.6 | 26.5 | 28.8 | 31.3 | 29 | 29.3 | 33.4 | 32.5 | 33.4 | 33.1 | 32.4 | 18.6 | 17 | 30.7 | 35.9 | |
| Manganese (Mn)Dissolved | mg/L | 0.128 | 0.0192 | 0.0229 | 0.0418 | 0.0274 | 0.0139 | 0.00208 | 0.0633 | 0.00996 | 0.0107 | 0.0328 | 0.00309 | 0.0002 | 0.00057 | 0.00057 | 0.00057 | 0.16 | 0.00938 | 0.0243 | 0.0751 | 0.00763 | 0.00073 | 0.00578 | |
| Mercury (Hg)Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Dissolved | mg/L | 0.000659 | 0.0166 | 0.0142 | 0.0132 | 0.00971 | 0.0142 | 0.00422 | 0.00257 | 0.00287 | 0.017 | 0.0139 | 0.0126 | 0.0123 | 0.00608 | 0.00286 | 0.00225 | 0.00197 | 0.00185 | 0.00201 | 0.00323 | 0.00209 | 0.0087 | 0.00994 | |
| Nickel (Ni)Dissolved | mg/L | 0.00086 | 0.001 | 0.00088 | 0.00079 | 0.00087 | 0.0008 | 0.00071 | 0.00075 | 0.00108 | 0.00115 | 0.00125 | 0.00145 | 0.00103 | 0.00094 | 0.00088 | 0.00081 | 0.00085 | 0.00081 | 0.00096 | 0.00107 | 0.00092 | 0.00108 | 0.00097 | |
| Phosphorus (P)Dissolved | mg/L | 0.085 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.142 | 0.059 | 0.025 | 0.057 | 0.025 | 0.054 | 0.025 | 0.055 | 0.097 | 0.075 | 0.025 | 0.04 | 0.03 | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-4 cont'd

| <i>Less than detection limit, half value</i> | | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | |
|--|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| No Name Creek - Vanson Rd | | L2311297-3 | L2315601-1 | L2319873-1 | L2323329-1 | L2328155-1 | L2332529-1 | L2338063-1 | L2340315-1 | L2344830-1 | L2349240-1 | L2353453-1 | L2357774-1 | L2362279-2 | L2365580-4 | L2369900-2 | L2373901-2 | L2377639-2 | L2380719-1 | L2384847-1 | L2387900-1 | L2391104-1 | L2459189-3 | L2465848-3 |
| Analyte | Units | 7/16/2019 | 7/23/2019 | 7/30/2019 | 8/6/2019 | 8/13/2019 | 8/20/2019 | 8/28/2019 | 9/3/2019 | 9/10/2019 | 9/17/2019 | 9/24/2019 | 10/1/2019 | 10/8/2019 | 10/15/2019 | 10/22/2019 | 10/29/2019 | 11/5/2019 | 11/12/2019 | 11/19/2019 | 11/26/2019 | 12/3/2019 | 6/10/2020 | 6/23/2020 |
| Silver (Ag)Total | mg/L | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 |
| Sodium (Na)Total | mg/L | 136 | 148 | 158 | 154 | 165 | 162 | 158 | 155 | 158 | 156 | 117 | 78.6 | 55.1 | 83.9 | 108 | 112 | 141 | 157 | 141 | 155 | 149 | 45.8 | 59.1 |
| Strontium (Sr)Total | mg/L | 0.435 | 0.476 | 0.52 | 0.479 | 0.494 | 0.467 | 0.413 | 0.422 | 0.432 | 0.404 | 0.299 | 0.261 | 0.191 | 0.278 | 0.347 | 0.378 | 0.478 | 0.552 | 0.492 | 0.511 | 0.508 | 0.145 | 0.275 |
| Sulfur (S)Total | mg/L | 71.9 | 76.7 | 80.1 | 78.8 | 80.3 | 79.3 | 68.7 | 77.4 | 74.5 | 69.7 | 46.6 | 35.4 | 21.8 | 50.6 | 68.2 | 69.3 | 92.7 | 98 | 91.6 | 92.8 | 88.8 | 14.8 | 45.8 |
| Tellurium (Te)Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.00005 | 0.00005 |
| Thallium (Tl)Total | mg/L | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 |
| Thorium (Th)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Tin (Sn)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Titanium (Ti)Total | mg/L | 0.00042 | 0.00036 | 0.00015 | 0.00054 | 0.00042 | 0.00234 | 0.00052 | 0.00209 | 0.00064 | 0.00042 | 0.00152 | 0.00215 | 0.00186 | 0.00824 | 0.00225 | 0.00196 | 0.00094 | 0.00105 | 0.0014 | 0.00149 | 0.00179 | 0.00167 | 0.00162 |
| Tungsten (W)Total | mg/L | 0.00011 | 0.00012 | 0.00039 | 0.00035 | 0.00031 | 0.00247 | 0.00049 | 0.00087 | 0.00062 | 0.00024 | 0.00199 | 0.00059 | 0.00037 | 0.00041 | 0.00013 | 0.00014 | 0.00021 | 0.00015 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Uranium (U)Total | mg/L | 0.000073 | 0.000048 | 0.00005 | 0.00004 | 0.000047 | 0.000051 | 0.00005 | 0.000096 | 0.000099 | 0.000085 | 0.000033 | 0.000053 | 0.000045 | 0.000087 | 0.000113 | 0.000143 | 0.000252 | 0.000245 | 0.00019 | 0.000159 | 0.000161 | 0.000044 | 0.000029 |
| Vanadium (V)Total | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.0006 | 0.0012 | 0.00076 | 0.00063 | 0.00025 | 0.00025 | 0.00054 | 0.0006 | 0.00096 | 0.00057 | 0.00066 | 0.00025 | 0.00056 | 0.00025 | 0.00066 | 0.00068 | 0.00025 | 0.00025 |
| Zinc (Zn)Total | mg/L | 0.0049 | 0.0069 | 0.015 | 0.0507 | 0.015 | 0.0159 | 0.0083 | 0.0393 | 0.0045 | 0.0042 | 0.0109 | 0.0782 | 0.0067 | 0.0467 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.003 | 0.006 |
| Zirconium (Zr)Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.00029 | 0.00037 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.00028 | 0.00005 | |
| Aluminum (Al)Dissolved | mg/L | 0.0035 | 0.0026 | 0.002 | 0.0017 | 0.0016 | 0.0011 | 0.0012 | 0.0021 | 0.0005 | 0.0005 | 0.0025 | 0.016 | 0.0327 | 0.0199 | 0.0122 | 0.0119 | 0.005 | 0.0052 | 0.0041 | 0.0056 | 0.0057 | 0.0127 | 0.0081 |
| Antimony (Sb)Dissolved | mg/L | 0.0001 | 0.00012 | 0.00005 | 0.00011 | 0.00005 | 0.0001 | 0.0001 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00015 | 0.00011 | 0.00005 | 0.00013 | 0.00005 | 0.00005 | 0.00013 | 0.00005 | 0.00005 |
| Arsenic (As)Dissolved | mg/L | 0.00127 | 0.00138 | 0.00134 | 0.0013 | 0.00128 | 0.0014 | 0.00141 | 0.00112 | 0.00109 | 0.00095 | 0.00096 | 0.00089 | 0.00098 | 0.00082 | 0.0008 | 0.00079 | 0.00076 | 0.00092 | 0.00083 | 0.00096 | 0.00125 | 0.00093 | 0.00093 |
| Barium (Ba)Dissolved | mg/L | 0.0452 | 0.0474 | 0.0503 | 0.0454 | 0.0516 | 0.0506 | 0.0536 | 0.0486 | 0.052 | 0.0506 | 0.0383 | 0.0272 | 0.0237 | 0.0309 | 0.0366 | 0.035 | 0.0383 | 0.0462 | 0.0515 | 0.0579 | 0.0642 | 0.0235 | 0.0378 |
| Beryllium (Be)Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Dissolved | mg/L | 0.089 | 0.085 | 0.075 | 0.09 | 0.077 | 0.069 | 0.08 | 0.076 | 0.096 | 0.069 | 0.063 | 0.062 | 0.074 | 0.057 | 0.071 | 0.068 | 0.063 | 0.07 | 0.056 | 0.065 | 0.085 | 0.059 | 0.075 |
| Cadmium (Cd)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000058 | 0.000025 | 0.000025 | 0.000068 | 0.000025 | 0.000025 | 0.000059 | 0.0000122 | 0.000025 | 0.000025 |
| Calcium (Ca)Dissolved | mg/L | 53.1 | 51.2 | 56.2 | 56.3 | 59.9 | 67 | 62.5 | 58.5 | 62.6 | 61.7 | 41.4 | 33.2 | 28.8 | 37.5 | 43.3 | 49.6 | 54.1 | 78.4 | 72.7 | 75.4 | 71.3 | 28.3 | 36.7 |
| Cesium (Cs)Dissolved | mg/L | 0.000050 | 0.000050 | 0.0000120 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 |
| Chromium (Cr)Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00014 | 0.00025 | 0.00014 | 0.00013 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00017 | 0.00013 |
| Cobalt (Co)Dissolved | mg/L | 0.00088 | 0.00084 | 0.00075 | 0.00062 | 0.00049 | 0.0004 | 0.00032 | 0.00026 | 0.00027 | 0.00022 | 0.00025 | 0.00016 | 0.00012 | 0.00126 | 0.00161 | 0.00162 | 0.00195 | 0.00211 | 0.00188 | 0.00182 | 0.00183 | 0.00018 | 0.00121 |
| Copper (Cu)Dissolved | mg/L | 0.00244 | 0.00158 | 0.00119 | 0.00142 | 0.00051 | 0.00073 | 0.0007 | 0.00113 | 0.00051 | 0.00037 | 0.00121 | 0.0039 | 0.00599 | 0.00669 | 0.0082 | 0.00778 | 0.00927 | 0.0101 | 0.00482 | 0.00327 | 0.00233 | 0.0008 | 0.00153 |
| Iron (Fe)Dissolved | mg/L | 0.129 | 0.103 | 0.052 | 0.017 | 0.029 | 0.026 | 0.031 | 0.028 | 0.023 | 0.02 | 0.051 | 0.092 | 0.148 | 0.075 | 0.068 | 0.063 | 0.037 | 0.054 | 0.078 | 0.293 | 0.378 | 0.193 | 0.111 |
| Lead (Pb)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000095 | 0.000025 |
| Lithium (Li)Dissolved | mg/L | 0.0026 | 0.0026 | 0.0022 | 0.0031 | 0.0034 | 0.0041 | 0.0044 | 0.0037 | 0.0047 | 0.004 | 0.0025 | 0.0024 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0021 | 0.0029 | 0.0031 | 0.0031 | 0.0037 | 0.0024 | 0.0022 |
| Magnesium (Mg)Dissolved | mg/L | 28.7 | 31.7 | 33.3 | 35.2 | 38.7 | 36.3 | 38.7 | 36.2 | 36.6 | 36.9 | 27.6 | 18 | 16.5 | 22.6 | 28.3 | 27.9 | 37 | 40.1 | 44.2 | 46.7 | 44.8 | 15.8 | 20.3 |
| Manganese (Mn)Dissolved | mg/L | 0.0501 | 0.0577 | 0.00033 | 0.00044 | 0.00026 | 0.00081 | 0.00068 | 0.00112 | 0.00034 | 0.00035 | 0.00028 | 0.00078 | 0.00033 | 0.00039 | 0.00061 | 0.00213 | 0.00081 | 0.0316 | 0.0904 | 0.492 | 0.875 | 0.07 | 0.0288 |
| Mercury (Hg)Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Dissolved | mg/L | 0.009 | 0.00584 | 0.0054 | 0.00327 | 0.00176 | 0.00167 | 0.00209 | 0.00365 | 0.00337 | 0.00274 | 0.00243 | 0.00469 | 0.00457 | 0.00785 | 0.00902 | 0.00819 | 0.00965 | 0.0101 | 0.00725 | 0.00524 | 0.00335 | 0.00152 | 0.00334 |
| Nickel (Ni)Dissolved | mg/L | 0.00109 | 0.00114 | 0.00105 | 0.0008 | 0.00086 | 0.0009 | 0.00073 | 0.00076 | 0.00072 | 0.0007 | 0.00058 | 0.00096 | 0.00109 | 0.00105 | 0.00112 | 0.00112 | 0.00114 | 0.0013 | 0.00104 | 0.00102 | 0.00111 | 0.00095 | 0.00093 |
| Phosphorus (P)Dissolved | mg/L | 0.03 | 0.03 | 0.035 | 0.03 | 0.03 | 0.03 | 0.041 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.034 | 0.038 | 0.033 |
| Potassium (K)Dissolved | mg/L | 23.3 | 25 | 30.9 | 24.3 | 24.9 | 24.6 | 21.5 | 21.2 | 21.4 | 20.8 | 21.7 | 16.3 | 11.6 | 14.2 | 18.4 | 19.6 | 22.3 | 26 | 24.8 | 24.4 | 24.3 | 9.47 | 12 |
| Rubidium (Rb)Dissolved | mg/L | 0.00701 | 0.00742 | 0.00886 | 0.0066 | 0.00569 | 0.00547 | 0.00475 | 0.00461 | 0.00459 | 0.00434 | 0.00544 | 0.00413 | 0.00274 | 0.0042 | 0.00653 | 0.00631 | 0.0078 | 0.0101 | 0.0075 | 0.00699 | 0.00717 | 0.00224 | 0.00331 |
| Selenium (Se)Dissolved | mg/L | 0.000188 | 0.000201 | 0.000153 | 0.000136 | 0.000158 | 0.000153 | 0.000141 | 0.000138 | 0.000127 | 0.000099 | 0.000099 | 0.000147 | 0.000219 | 0.000182 | 0.000192 | 0.000179 | 0.000184 | 0.000183 | 0.000172 | 0.000259 | 0.000186 | 0.000148 | 0.00015 |
| Silicon (Si)Dissolved | mg/L | 2.76 | 3.02 | 3.03 | 3.36 | 4 | 3.42 | 3.82 | 2.92 | 2.11 | 2.11 | 1.85 | 3.3 | 3.14 | 3.07 | 2.45 | 1.73 | 1.54 | 2.05 | 2.9 | 3.53 | 4.16 | 1.36 | 2.19 |
| Silver (Ag)Dissolved | mg/L | 0.000050 | 0.000050 | 0.000050 | 0.000050 | | | | | | | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-4 cont'd

| <i>Less than detection limit, half value</i> | | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | NNC-VR | | |
|--|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|----------|
| No Name Creek - Vanson Rd | | L2468477-1 | L2471686-3 | L2474258-3 | L2478400-3 | L2481567-5 | L2484805-3 | L2487940-4 | L2492070-3 | L2494017-3 | L2498782-9 | L2501688-3 | L2504186-3 | L2510579-3 | L2513882-3 | L2516774-6 | L2520597-3 | L2523594-3 | L2525591-3 | L2529050-3 | L2531674-3 | L2534197-3 | L2536758-3 | L2640496-2 | |
| Analyte | Units | 6/30/2020 | 7/7/2020 | 7/14/2020 | 7/21/2020 | 7/28/2020 | 8/4/2020 | 8/11/2020 | 8/18/2020 | 8/25/2020 | 9/1/2020 | 9/8/2020 | 9/15/2020 | 9/29/2020 | 10/6/2020 | 10/13/2020 | 10/20/2020 | 10/27/2020 | 11/3/2020 | 11/12/2020 | 11/17/2020 | 11/24/2020 | 12/2/2020 | 9/14/2021 | |
| Silver (Ag)Total | mg/L | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000160 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000110 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 |
| Sodium (Na)Total | mg/L | 91.3 | 109 | 114 | 101 | 99.5 | 106 | 112 | 109 | 102 | 100 | 102 | 106 | 87.5 | 95.5 | 107 | 102 | 109 | 103 | 95.4 | 111 | 116 | 117 | 81.7 | |
| Strontium (Sr)Total | mg/L | 0.422 | 0.529 | 0.553 | 0.511 | 0.456 | 0.458 | 0.472 | 0.435 | 0.416 | 0.428 | 0.399 | 0.414 | 0.498 | 0.548 | 0.579 | 0.528 | 0.509 | 0.548 | 0.49 | 0.564 | 0.53 | 0.539 | 0.308 | |
| Sulfur (S)Total | mg/L | 78.3 | 88.8 | 96.7 | 84.8 | 78.6 | 83.8 | 84.5 | 77.5 | 71.8 | 72 | 70.2 | 72.2 | 83.2 | 104 | 111 | 107 | 106 | 108 | 104 | 104 | 109 | 106 | 44.6 | |
| Tellurium (Te)Total | mg/L | 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 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | |
| Thallium (Tl)Total | mg/L | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 |
| Thorium (Th)Total | mg/L | 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 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | |
| Tin (Sn)Total | mg/L | 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 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | |
| Titanium (Ti)Total | mg/L | 0.00042 | 0.0003 | 0.00057 | 0.00037 | 0.00123 | 0.00163 | 0.00182 | 0.00133 | 0.00198 | 0.00096 | 0.00214 | 0.0015 | 0.00051 | 0.001 | 0.00047 | 0.001 | 0.00146 | 0.00118 | 0.00072 | 0.00305 | 0.00386 | 0.00112 | 0.00093 | |
| Tungsten (W)Total | mg/L | 0.00012 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00017 | 0.00005 | 0.0007 | 0.00295 | 0.0002 | 0.00024 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00019 | 0.00005 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00075 | |
| Uranium (U)Total | mg/L | 0.000038 | 0.000026 | 0.000029 | 0.000043 | 0.00004 | 0.000041 | 0.000061 | 0.000072 | 0.000046 | 0.000055 | 0.000078 | 0.000075 | 0.000042 | 0.000127 | 0.000128 | 0.000136 | 0.000128 | 0.000106 | 0.000093 | 0.000092 | 0.000094 | 0.000084 | 0.000137 | |
| Vanadium (V)Total | mg/L | 0.00025 | 0.00055 | 0.00025 | 0.00078 | 0.00059 | 0.0006 | 0.00076 | 0.00079 | 0.00056 | 0.00063 | 0.00056 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00065 | 0.00052 | 0.00052 | 0.00025 | 0.00025 | 0.0005 | 0.00025 | 0.0006 | |
| Zinc (Zn)Total | mg/L | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.0015 | |
| Zirconium (Zr)Total | mg/L | 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 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | |
| Aluminum (Al)Dissolved | mg/L | 0.0045 | 0.0034 | 0.0025 | 0.0037 | 0.0046 | 0.0059 | 0.0056 | 0.0043 | 0.0053 | 0.0047 | 0.0046 | 0.004 | 0.0056 | 0.0031 | 0.0021 | 0.0039 | 0.0031 | 0.0027 | 0.0037 | 0.0034 | 0.0037 | 0.0045 | 0.003 | |
| Antimony (Sb)Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00025 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | |
| Arsenic (As)Dissolved | mg/L | 0.00105 | 0.0015 | 0.001 | 0.00088 | 0.00113 | 0.00119 | 0.00139 | 0.00131 | 0.00171 | 0.00121 | 0.00087 | 0.00084 | 0.00082 | 0.00069 | 0.00072 | 0.00059 | 0.00062 | 0.00089 | 0.00074 | 0.00072 | 0.00101 | 0.00092 | 0.00093 | |
| Barium (Ba)Dissolved | mg/L | 0.045 | 0.0526 | 0.0485 | 0.0429 | 0.0456 | 0.0469 | 0.0472 | 0.0509 | 0.05 | 0.0501 | 0.0454 | 0.0475 | 0.0468 | 0.0447 | 0.0414 | 0.0426 | 0.0506 | 0.0505 | 0.0519 | 0.0557 | 0.0593 | 0.061 | 0.0378 | |
| Beryllium (Be)Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | |
| Bismuth (Bi)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000067 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Boron (B)Dissolved | mg/L | 0.077 | 0.075 | 0.07 | 0.066 | 0.073 | 0.069 | 0.074 | 0.06 | 0.067 | 0.057 | 0.047 | 0.047 | 0.051 | 0.055 | 0.062 | 0.06 | 0.062 | 0.054 | 0.054 | 0.062 | 0.041 | 0.047 | 0.054 | |
| Cadmium (Cd)Dissolved | mg/L | 0.0000053 | 0.0000063 | 0.0000025 | 0.0000071 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | |
| Calcium (Ca)Dissolved | mg/L | 52.5 | 55.9 | 60.8 | 53.4 | 45.4 | 54 | 61.3 | 61.5 | 53.6 | 56.8 | 56.6 | 60.7 | 66.8 | 70 | 71.4 | 67.2 | 69.1 | 71.9 | 73 | 74.7 | 79.5 | 81.3 | 62.7 | |
| Cesium (Cs)Dissolved | mg/L | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | |
| Chromium (Cr)Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | |
| Cobalt (Co)Dissolved | mg/L | 0.00178 | 0.00182 | 0.00197 | 0.0017 | 0.00134 | 0.00109 | 0.0008 | 0.00063 | 0.00062 | 0.00049 | 0.00043 | 0.00047 | 0.0019 | 0.00244 | 0.00236 | 0.00205 | 0.0019 | 0.00175 | 0.00185 | 0.00167 | 0.00161 | 0.00155 | 0.00017 | |
| Copper (Cu)Dissolved | mg/L | 0.00166 | 0.00092 | 0.001 | 0.00179 | 0.00071 | 0.00036 | 0.00032 | 0.00079 | 0.00052 | 0.0003 | 0.00087 | 0.00127 | 0.00182 | 0.00408 | 0.00463 | 0.00301 | 0.00175 | 0.00126 | 0.00101 | 0.00081 | 0.00066 | 0.00062 | 0.00056 | |
| Iron (Fe)Dissolved | mg/L | 0.116 | 0.13 | 0.105 | 0.083 | 0.221 | 0.237 | 0.232 | 0.126 | 0.153 | 0.101 | 0.087 | 0.08 | 0.055 | 0.033 | 0.027 | 0.082 | 0.108 | 0.15 | 0.161 | 0.185 | 0.316 | 0.359 | 0.065 | |
| Lead (Pb)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000061 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000055 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | |
| Lithium (Li)Dissolved | mg/L | 0.0021 | 0.0021 | 0.002 | 0.0019 | 0.0027 | 0.0027 | 0.0032 | 0.0031 | 0.0031 | 0.0031 | 0.0029 | 0.0028 | 0.0023 | 0.002 | 0.002 | 0.0022 | 0.0028 | 0.0035 | 0.0032 | 0.003 | 0.0035 | 0.0034 | 0.0054 | |
| Magnesium (Mg)Dissolved | mg/L | 32.1 | 35 | 34.8 | 31.5 | 33.2 | 33.7 | 38.2 | 33.2 | 31.6 | 33.4 | 30.1 | 31.2 | 36.9 | 36 | 41.2 | 42.8 | 40.9 | 46.2 | 45.4 | 44.4 | 46.5 | 49.3 | 30.6 | |
| Manganese (Mn)Dissolved | mg/L | 0.0735 | 0.0764 | 0.0807 | 0.0391 | 0.172 | 0.192 | 0.204 | 0.175 | 0.292 | 0.0616 | 0.0474 | 0.0689 | 0.0217 | 0.0118 | 0.00787 | 0.0718 | 0.168 | 0.201 | 0.225 | 0.342 | 0.695 | 0.81 | 0.0376 | |
| Mercury (Hg)Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Dissolved | mg/L | 0.00658 | 0.00548 | 0.00703 | 0.00821 | 0.00307 | 0.00178 | 0.00144 | 0.00205 | 0.00193 | 0.00164 | 0.0021 | 0.00274 | 0.00539 | 0.01 | 0.00933 | 0.00865 | 0.00704 | 0.00504 | 0.00345 | 0.00251 | 0.00204 | 0.00153 | 0.00303 | |
| Nickel (Ni)Dissolved | mg/L | 0.00097 | 0.00093 | 0.00085 | 0.00095 | 0.00086 | 0.00078 | 0.00078 | 0.00077 | 0.00074 | 0.0007 | 0.00056 | 0.00056 | 0.00063 | 0.00088 | 0.00091 | 0.00075 | 0.00074 | 0.0007 | 0.00072 | 0.00075 | 0.0008 | 0.00071 | 0.00076 | |
| Phosphorus (P)Dissolved | mg/L | 0.033 | 0.033 | 0.015 | 0.015 | 0.04 | 0.044 | 0.062 | 0.053 | 0.055 | 0.055 | 0.032 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | |
| Potassium (K)Dissolved | mg/L | 15 | 17.6 | 17.7 | 16.7 | 15.4 | 14.1 | 15.7 | 14.2 | 14.3 | 15.5 | 13.9 | 14.3 | 18.8 | 18.4 | 18.7 | 1 | | | | | | | | |



Table B-5: No Name Creek – Gun Range (NNC-GR) Water Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| No Name Creek - Gun Range | | L1960980-6 | L1964768-4 | L1971728-5 | L1976404-4 | L1979675-6 | L1983563-4 | L1986645-4 | L1990659-4 | L21107154 | L21190894 | L21226494 | L21266384 | L21307664 | L21349394 | L21385554 | L21422553 | L21460333 | L21507173 | L21538253 |
| Analyte | Units | 7/18/2017 | 7/25/2017 | 8/8/2017 | 8/15/2017 | 8/22/2017 | 8/29/2017 | 9/5/2017 | 9/12/2017 | 6/12/2018 | 6/25/2018 | 7/3/2018 | 7/10/2018 | 7/17/2018 | 7/24/2018 | 7/31/2018 | 8/7/2018 | 8/14/2018 | 8/21/2018 | 8/27/2018 |
| Alkalinity, Total (as CaCO3) | mg/L | 250 | 185 | 209 | 219 | 224 | 222 | 234 | 266 | 273 | 214 | 248 | 260 | 274 | 293 | 296 | 287 | 420 | 537 | 517 |
| Ammonia, Total (as N) | mg/L | 0.023 | 0.011 | 0.025 | 0.189 | 0.0025 | 0.0025 | 0.02 | 0.025 | 0.0025 | 0.024 | 0.016 | 0.021 | 0.0025 | 0.023 | 0.016 | 0.036 | 0.034 | 0.35 | 0.582 |
| Bicarbonate (HCO3) | mg/L | 305 | 225 | 255 | 267 | 273 | 271 | 286 | 325 | 333 | 261 | 302 | 317 | 334 | 358 | 361 | 350 | 512 | 629 | 630 |
| Carbonate (CO3) | mg/L | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 12.6 | 0.6 |
| Chloride (Cl) | mg/L | 41.5 | 88.7 | 106 | 119 | 118 | 128 | 117 | 109 | 60.7 | 100 | 123 | 134 | 132 | 137 | 132 | 127 | 139 | 142 | 130 |
| Conductivity | umhos/cm | 568 | 929 | 1060 | 1160 | 1130 | 1150 | 1100 | 1050 | 776 | 983 | 1150 | 1220 | 1210 | 1230 | 1200 | 1150 | 1290 | 1370 | 1270 |
| Cyanide, Free | mg/L | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Cyanide, Total | mg/L | 0.0012 | 0.00025 | 0.00025 | 0.001 | 0.0025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.0013 | 0.0016 | 0.0015 | 0.0012 | 0.0012 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Cyanide, Weak Acid Diss | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 6.69 | 3.63 | 3.93 | 4.69 | 4.9 | 4.95 | 5.88 | 5.3 | 0.88 | 3.73 | 7.91 | 1.24 | 2.36 | 2.79 | 1.94 | 0.84 | | 7.24 | 1.08 |
| EC, Client Supplied | umhos/cm | 609 | 1010 | 1120 | 1240 | 1230 | 1270 | 1200 | 1150 | 674 | 1000 | 1250 | 1230 | 1270 | 1290 | 1250 | 1150 | 1310 | 158 | 1440 |
| Fluoride (F) | mg/L | 0.125 | 0.124 | 0.113 | 0.106 | 0.129 | 0.139 | 0.122 | 0.123 | 0.127 | 0.136 | 0.146 | 0.14 | 0.14 | 0.13 | 0.14 | 0.129 | 0.16 | 0.11 | 0.11 |
| Hardness (as CaCO3) | mg/L | 180 | 251 | 273 | 297 | 298 | 297 | 283 | 302 | 268 | 263 | 276 | 279 | 281 | 288 | 282 | 265 | 318 | 365 | 372 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 0.01 | 0.04 | 0.04 | 0.04 | 0.046 | 0.043 | 0.042 | 0.04 | 0.04 | 0.04 | 0.04 | 0.1 | 0.1 | 0.1 | 0.04 | 0.04 | 0.1 | 0.1 | 0.1 |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.07 | 0.07 | 0.07 | 0.11 | 0.11 | 0.11 | 0.07 | 0.07 | 0.11 | 0.11 | 0.11 |
| Nitrite (as N) | mg/L | 0.0025 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.025 | 0.025 | 0.025 | 0.01 | 0.01 | 0.025 | 0.025 | 0.025 |
| pH | pH units | 8.04 | 7.55 | 7.63 | 7.8 | 7.61 | 7.73 | 7.66 | 7.82 | 7.7 | 7.81 | 8.01 | 7.76 | 7.8 | 7.53 | 7.58 | 7.48 | 7.63 | 8.41 | 7.76 |
| pH, Client Supplied | pH | 7.7 | 7.5 | 7.15 | 7.5 | 7.45 | 7.4 | 7.33 | 7.58 | 7.28 | 7.36 | 8.37 | 7.43 | 7.55 | 7.51 | 7.49 | 7.37 | 7.66 | 7.87 | 7.44 |
| Phosphorus (P)Total | mg/L | 0.069 | 0.045 | 0.036 | 0.035 | 0.042 | 0.032 | 0.042 | 0.048 | 0.0819 | 0.0582 | 0.0766 | 0.0952 | 0.0714 | 0.167 | 0.0397 | 0.479 | 0.705 | 2.35 | 0.238 |
| Ra226 | Bq/L | | | | | | | | | | | | | | | | | | | |
| Sulfate (SO4) | mg/L | 24.9 | 187 | 212 | 239 | 230 | 247 | 211 | 169 | 74 | 154 | 184 | 201 | 187 | 178 | 154 | 132 | 86.1 | 40.6 | 25 |
| TDS (Calculated) | mg/L | 353 | 610 | 678 | 766 | 740 | 761 | 719 | 694 | 476 | 598 | 725 | 794 | 772 | 792 | 749 | 687 | 756 | 805 | 740 |
| Temperature, Client Provided | Degree C | 15.9 | 22 | 17.2 | 17.6 | 16.5 | 18 | 12.8 | 14.3 | 15.9 | 23.3 | 18.9 | 17.8 | 15.8 | 18.5 | 19.8 | 15 | 16.9 | 16.1 | 12.7 |
| Total Kjeldahl Nitrogen | mg/L | 0.9 | 0.88 | 1.05 | 0.62 | 0.69 | 0.58 | 0.65 | 0.72 | 1.52 | 1.45 | 0.1 | 1.35 | 1.15 | 2.04 | 1.93 | 3.8 | 2.85 | 7.61 | 3.01 |
| Total Suspended Solids | mg/L | 2.5 | 2.5 | 10 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 16.3 | 1 | 105 | 39.5 | 16.7 | 297 | 67.6 | 142 | 28.4 | 143 | 177 |
| Turbidity | NTU | 1.35 | 1.02 | 3.14 | 0.59 | 0.63 | 0.6 | 0.54 | 0.95 | 6.94 | 1.18 | 14.7 | 9.68 | 1.91 | 95.7 | 16.2 | 13.1 | 12.4 | 13.9 | 146 |
| Aluminum (Al)Total | mg/L | 0.0707 | 0.0328 | 0.0141 | 0.0176 | 0.0119 | 0.0129 | 0.0239 | 0.0202 | 0.229 | 0.0235 | 0.0104 | 0.106 | 0.0512 | 0.118 | 0.17 | 1.04 | 0.0548 | 0.269 | 0.981 |
| Antimony (Sb)Total | mg/L | 0.00025 | 0.00026 | 0.00018 | 0.00019 | 0.00011 | 0.00014 | 0.00025 | 0.00025 | 0.00026 | 0.00015 | 0.00011 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00018 | 0.00021 |
| Arsenic (As)Total | mg/L | 0.00139 | 0.00105 | 0.00111 | 0.00118 | 0.00103 | 0.00083 | 0.00097 | 0.00105 | 0.00147 | 0.00119 | 0.0014 | 0.00128 | 0.00145 | 0.00161 | 0.00193 | 0.00259 | 0.00667 | 0.0111 | 0.0105 |
| Barium (Ba)Total | mg/L | 0.0256 | 0.0585 | 0.0607 | 0.056 | 0.0536 | 0.0533 | 0.0543 | 0.0537 | 0.0576 | 0.0612 | 0.054 | 0.0518 | 0.0546 | 0.0537 | 0.0588 | 0.0806 | 0.267 | 0.607 | 0.245 |
| Beryllium (Be)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Total | mg/L | 0.048 | 0.116 | 0.086 | 0.128 | 0.116 | 0.12 | 0.087 | 0.081 | 0.062 | 0.096 | 0.104 | 0.101 | 0.101 | 0.114 | 0.095 | 0.085 | 0.088 | 0.073 | 0.082 |
| Cadmium (Cd)Total | mg/L | 0.0000070 | 0.0000085 | 0.0000143 | 0.0000072 | 0.0000080 | 0.0000064 | 0.0000061 | 0.0000074 | 0.0000113 | 0.0000113 | 0.0000173 | 0.0000140 | 0.0000063 | 0.0000093 | 0.0000107 | 0.0000251 | 0.0000338 | 0.0000309 | 0.0000501 |
| Calcium (Ca)Total | mg/L | 49 | 63 | 63.7 | 67.8 | 68.2 | 70.4 | 63.8 | 68.3 | 62 | 54.7 | 58.6 | 55.6 | 57.1 | 61.6 | 60.7 | 55 | 69 | 78.4 | 81.4 |
| Cesium (Cs)Total | mg/L | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00032 | 0.00003 | 0.00003 | 0.00013 | 0.00003 | 0.00016 | 0.00023 | 0.000104 | 0.00003 | 0.00031 | 0.000121 |
| Chromium (Cr)Total | mg/L | 0.00025 | 0.00012 | 0.00131 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00054 | 0.00013 | 0.00011 | 0.00033 | 0.00027 | 0.00039 | 0.00063 | 0.00203 | 0.00033 | 0.00086 | 0.00217 |
| Cobalt (Co)Total | mg/L | 0.00026 | 0.00078 | 0.00072 | 0.00076 | 0.00061 | 0.00075 | 0.0006 | 0.00039 | 0.0005 | 0.00116 | 0.00138 | 0.00147 | 0.00149 | 0.00141 | 0.00129 | 0.00178 | 0.00271 | 0.00459 | 0.00402 |
| Copper (Cu)Total | mg/L | 0.00066 | 0.00142 | 0.00126 | 0.00086 | 0.00059 | 0.0009 | 0.00051 | 0.0009 | 0.00118 | 0.0058 | 0.00135 | 0.00154 | 0.00117 | 0.00137 | 0.00115 | 0.00288 | 0.00125 | 0.00164 | 0.00263 |
| Iron (Fe)Total | mg/L | 0.266 | 0.111 | 0.099 | 0.135 | 0.138 | 0.09 | 0.199 | 0.2 | 0.359 | 0.11 | 0.1 | 0.24 | 0.156 | 0.323 | 0.377 | 1.53 | 1.28 | 5.61 | 4.77 |
| Lead (Pb)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000056 | 0.000167 | 0.000025 | 0.000025 | 0.000233 | 0.00008 | 0.000483 | 0.000351 | 0.000749 | 0.000188 | 0.000482 | 0.00138 |
| Lithium (Li)Total | mg/L | 0.0058 | 0.0043 | 0.0045 | 0.004 | 0.0043 | 0.004 | 0.0039 | 0.0047 | 0.0087 | 0.0047 | 0.0037 | 0.0032 | 0.0033 | 0.0044 | 0.0044 | 0.0054 | 0.0052 | 0.0056 | 0.0068 |
| Magnesium (Mg)Total | mg/L | 20.9 | 26.4 | 27.7 | 31.8 | 29.1 | 27.4 | 28.8 | 31.5 | 30.3 | 26.8 | 31.3 | 25.5 | 30.6 | 31.7 | 29.6 | 31.2 | 36.6 | 42.1 | 36 |
| Manganese (Mn)Total | mg/L | 0.177 | 0.0519 | 0.177 | 0.0835 | 0.0962 | 0.0512 | 0.171 | 0.281 | 0.612 | 0.519 | 0.257 | 0.4 | 0.349 | 0.314 | 0.818 | 1.59 | 18.1 | 20.2 | 15.3 |
| Mercury (Hg)Total | ng/L | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Total | mg/L | 0.00175 | 0.0147 | 0.00805 | 0.0135 | 0.00956 | 0.012 | 0.00456 | 0.00408 | 0.00426 | 0.0101 | 0.0116 | 0.0125 | 0.0106 | 0.00729 | 0.0042 | 0.003 | 0.00315 | 0.00318 | 0.00536 |
| Nickel (Ni)Total | mg/L | 0.00138 | 0.00119 | 0.00158 | 0.00101 | 0.00092 | 0.00089 | 0.00089 | 0.00119 | 0.00187 | 0.00131 | 0.0012 | 0.00145 | 0.00086 | 0.00107 | 0.00131 | 0.00272 | 0.00195 | 0.00424 | 0.00566 |
| Phosphorus (P)Total | mg/L | 0.071 | 0.051 | 0.025 | 0.025 | 0.025 | 0.025 | 0.056 | 0.066 | 0.078 | 0.055 | 0.117 | 0.071 | 0.063 | 0.214 | 0.261 | 0.421 | 0.86 | 2.05 | 1.25 |
| Potassium (K)Total | mg/L | 10.2 | 19.7 | 18.3 | 26.2 | 23.9 | 23 | 23.7 | 22.2 | 14.7 | 20.9 | 26.5 | 25.4 | 29.3 | 29 | 26.8 | 23.7 | 24.1 | 23.6 | 23.8 |
| Rubidium (Rb)Total | mg/L | 0.002 | 0.00536 | 0.00392 | 0.00719 | 0.00711 | 0.00743 | 0.00663 | 0.00521 | 0.00241 | 0.00399 | 0.00573 | 0.00739 | 0.00767 | 0.00791 | 0.00692 | 0.00685 | 0.00481 | 0.00483 | 0.00594 |
| Selenium (Se)Total | mg/L | 0.000147 | 0.000145 | 0.000145 | 0.000105 | 0.000103 | 0.000115 | 0.000092 | 0.000111 | 0.000177 | 0.000154 | 0.000162 | 0.000153 | 0.000176 | 0.000195 | 0.00013 | 0.00015 | 0.000265 | 0.000348 | 0.000314 |
| Silicon (Si)Total | mg/L | 4.49 | 3.91 | 3.6 | 2.53 | 3.24 | 2.46 | 3.35 | 5.08 | 18.7 | 6.96 | 8.45 | 3.73 | 6.69 | 5.78 | 6.12 | 9.67 | 10.4 | 13.2 | 13.6 |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-5 cont'd

| <i>Less than detection limit, half value</i> | | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR |
|--|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| No Name Creek - Gun Range | | L2294147-4 | L2298725-2 | L2302403-4 | L2306799-4 | L2311297-4 | L2315601-2 | L2319873-2 | L2323329-2 | L2328155-2 | L2332529-2 | L2338063-2 | L2340315-2 | L2344830-2 | L2349240-2 | L2353453-2 | L2357774-2 | L2362279-3 | L2365580-5 | L2369900-3 |
| Analyte | Units | 6/17/2019 | 6/25/2019 | 7/2/2019 | 7/9/2019 | 7/16/2019 | 7/23/2019 | 7/30/2019 | 8/6/2019 | 8/13/2019 | 8/20/2019 | 8/28/2019 | 9/3/2019 | 9/10/2019 | 9/17/2019 | 9/24/2019 | 10/1/2019 | 10/8/2019 | 10/15/2019 | 10/22/2019 |
| Alkalinity, Total (as CaCO3) | mg/L | 228 | 249 | 210 | 219 | 206 | 213 | 228 | 246 | 274 | 293 | 259 | 276 | 284 | 261 | 187 | 160 | 142 | 119 | 150 |
| Ammonia, Total (as N) | mg/L | 0.019 | 0.021 | 0.016 | 0.015 | 0.027 | 0.044 | 0.021 | 0.033 | 0.056 | 0.014 | 0.021 | 0.029 | 0.021 | 0.021 | 0.02 | 0.01 | 0.024 | 0.02 | 0.011 |
| Bicarbonate (HCO3) | mg/L | 278 | 299 | 256 | 267 | 251 | 260 | 279 | 300 | 335 | 357 | 315 | 337 | 346 | 318 | 229 | 195 | 173 | 145 | 183 |
| Carbonate (CO3) | mg/L | 0.3 | 2.52 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Chloride (Cl) | mg/L | 45.1 | 56 | 118 | 144 | 115 | 127 | 142 | 143 | 143 | 158 | 139 | 132 | 131 | 128 | 65.5 | 60.9 | 42.3 | 60.7 | 99.4 |
| Conductivity | umhos/cm | 658 | 663 | 1100 | 1260 | 1070 | 1190 | 1310 | 1330 | 1310 | 1310 | 1250 | 1210 | 1200 | 1150 | 861 | 643 | 506 | 604 | 875 |
| Cyanide, Free | mg/L | 0.0005 | 0.0011 | 0.0025 | 0.0005 | 0.0005 | 0.0012 | 0.0012 | 0.0005 | 0.0012 | 0.001 | 0.0016 | 0.0005 | 0.0011 | 0.001 | 0.001 | 0.0005 | 0.0005 | 0.0019 | 0.0005 |
| Cyanide, Total | mg/L | 0.001 | 0.0013 | 0.0025 | 0.001 | 0.0005 | 0.0016 | 0.0038 | 0.0031 | 0.0024 | 0.0012 | 0.0084 | 0.0017 | 0.0014 | 0.0012 | 0.0016 | 0.0005 | 0.0012 | 0.0023 | 0.0024 |
| Cyanide, Weak Acid Diss | mg/L | 0.0005 | 0.0011 | 0.0025 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0013 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0017 | 0.0005 |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | 21.2 | |
| Dissolved Oxygen, Client Supplied | mg/L | 7.6 | 3.42 | 4.56 | 5.56 | 3.04 | 3.98 | 3.7 | 1.86 | 2.3 | 1.84 | 5.55 | 4.44 | 2.88 | 4.9 | 5.55 | 8.64 | 7.16 | 9.57 | 8.99 |
| EC, Client Supplied | umhos/cm | 661 | 685 | 1120 | 1300 | 1090 | 1160 | 1280 | 1300 | 1270 | 1330 | 1250 | 1210 | 1210 | 1130 | 875 | 632 | 491 | 607 | 875 |
| Fluoride (F) | mg/L | 0.107 | 0.135 | 0.115 | 0.151 | 0.148 | 0.12 | 0.13 | 0.139 | 0.16 | 0.25 | 0.117 | 0.137 | 0.12 | 0.118 | 0.055 | 0.069 | 0.096 | 0.075 | 0.101 |
| Hardness (as CaCO3) | mg/L | 221 | 228 | 275 | 292 | 262 | 257 | 276 | 289 | 324 | 336 | 328 | 320 | 349 | 336 | 218 | 139 | 152 | 174 | 227 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 0.02 | 0.02 | 0.04 | 0.04 | 0.04 | 0.04 | 0.1 | 0.216 | 0.1 | 0.1 | 0.04 | 0.04 | 0.02 | 0.04 | 0.04 | 0.02 | 0.02 | 0.02 | 0.02 |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.055 | 0.216 | 0.055 | 0.055 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 |
| Nitrite (as N) | mg/L | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.025 | 0.02 | 0.025 | 0.025 | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| pH | pH units | 8.05 | 8.33 | 7.85 | 7.97 | 7.9 | 8.06 | 7.8 | 7.63 | 8.05 | 8.05 | 7.96 | 7.76 | 7.9 | 8.2 | 8.06 | 7.82 | 8.03 | 7.59 | 7.69 |
| pH, Client Supplied | pH | 7.76 | 7.23 | 7.26 | 7.36 | 7.26 | 7.3 | 7.27 | 7.44 | 7.24 | 7.29 | 7.33 | 7.37 | 7.31 | 7.34 | 7.45 | 7.3 | 7.15 | 7.22 | 7.52 |
| Phosphorus (P)Total | mg/L | 0.0338 | 0.0459 | 0.0427 | 0.0377 | 0.0492 | 0.0446 | 0.0453 | 0.0639 | 0.0506 | 0.0861 | 0.0493 | 0.0411 | 0.0491 | 0.0385 | 0.0376 | 0.0313 | 0.0304 | 0.0207 | 0.0199 |
| Ra226 | Bq/L | | | | | | | | | | | | | | | | | | 0.0033 | |
| Sulfate (SO4) | mg/L | 45.7 | 43.4 | 198 | 242 | 191 | 206 | 227 | 222 | 209 | 214 | 225 | 181 | 166 | 172 | 87 | 87.5 | 61.6 | 110 | 185 |
| TDS (Calculated) | mg/L | 373 | 392 | 684 | 807 | 663 | 716 | 779 | 775 | 803 | 843 | 799 | 744 | 738 | 713 | 457 | 385 | 304 | 371 | 564 |
| Temperature, Client Provided | Degree C | 21.2 | 17.2 | 22.3 | 21 | 21.5 | 21.6 | 17.1 | 17.3 | 15 | 14.8 | 14.2 | 11.4 | 11.6 | 17.3 | 16.2 | 7.2 | 7.6 | 4.1 | 5.4 |
| Total Kjeldahl Nitrogen | mg/L | 1.03 | 1.04 | 0.8 | 0.88 | 0.92 | 0.72 | 0.73 | 0.95 | 0.96 | 1.4 | 0.83 | 0.86 | 0.74 | 0.82 | 0.74 | 0.96 | 0.88 | 0.56 | 0.65 |
| Total Suspended Solids | mg/L | 3.3 | 1 | 1 | 9.2 | 1 | 1 | 1 | 3.9 | 1 | 17.1 | 2.1 | 2.3 | 4.1 | 4.9 | 1 | 1 | 1 | 1 | 1 |
| Turbidity | NTU | 3.67 | 1.99 | 0.71 | 2.88 | 0.59 | 0.43 | 0.36 | 2.17 | 0.78 | 5.4 | 0.98 | 1.4 | 1.61 | 5.28 | 0.86 | 1.35 | 1.12 | 1.21 | 1.2 |
| Aluminum (Al)Total | mg/L | 0.0374 | 0.0382 | 0.0247 | 0.0325 | 0.0165 | 0.0099 | 0.0095 | 0.0321 | 0.0141 | 0.318 | 0.0192 | 0.0998 | 0.0239 | 0.115 | 0.0254 | 0.0705 | 0.0746 | 0.0556 | 0.0507 |
| Antimony (Sb)Total | mg/L | 0.00013 | 0.00012 | 0.00012 | 0.00013 | 0.00014 | 0.00005 | 0.0001 | 0.00014 | 0.0001 | 0.00011 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00014 | 0.00005 | 0.00005 |
| Arsenic (As)Total | mg/L | 0.00102 | 0.00129 | 0.00126 | 0.0012 | 0.00145 | 0.00146 | 0.00135 | 0.0017 | 0.00153 | 0.00199 | 0.0013 | 0.0012 | 0.00126 | 0.0011 | 0.00091 | 0.00088 | 0.00095 | 0.00072 | 0.00069 |
| Barium (Ba)Total | mg/L | 0.0393 | 0.0408 | 0.0572 | 0.057 | 0.0507 | 0.0521 | 0.0494 | 0.0547 | 0.0567 | 0.0727 | 0.0584 | 0.0575 | 0.0609 | 0.0618 | 0.0404 | 0.0293 | 0.0269 | 0.029 | 0.0372 |
| Beryllium (Be)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Total | mg/L | 0.06 | 0.072 | 0.089 | 0.099 | 0.083 | 0.081 | 0.089 | 0.07 | 0.07 | 0.066 | 0.079 | 0.067 | 0.063 | 0.062 | 0.06 | 0.056 | 0.068 | 0.051 | 0.071 |
| Cadmium (Cd)Total | mg/L | 0.000025 | 0.0000261 | 0.0000085 | 0.0000078 | 0.0000088 | 0.0000073 | 0.0000025 | 0.0000095 | 0.0000069 | 0.0000095 | 0.0000067 | 0.0000059 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000060 | 0.0000113 | 0.0000062 | 0.0000056 |
| Calcium (Ca)Total | mg/L | 47.4 | 47.8 | 60.3 | 69.9 | 49.4 | 54 | 59.4 | 56.2 | 65.2 | 66.1 | 67.2 | 71.5 | 72.4 | 67.8 | 41.5 | 32.8 | 29.3 | 34.1 | 47.3 |
| Cesium (Cs)Total | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000019 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000040 | 0.000005 | 0.000005 | 0.000005 | 0.000012 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 |
| Chromium (Cr)Total | mg/L | 0.00017 | 0.00041 | 0.00014 | 0.00013 | 0.00012 | 0.00019 | 0.00011 | 0.00018 | 0.00019 | 0.00077 | 0.00037 | 0.00068 | 0.00025 | 0.00029 | 0.00021 | 0.00035 | 0.00039 | 0.00026 | 0.00026 |
| Cobalt (Co)Total | mg/L | 0.00021 | 0.00028 | 0.00108 | 0.0011 | 0.00085 | 0.0008 | 0.00078 | 0.00069 | 0.0005 | 0.00078 | 0.00039 | 0.00042 | 0.00041 | 0.00035 | 0.00028 | 0.00022 | 0.0002 | 0.00094 | 0.00168 |
| Copper (Cu)Total | mg/L | 0.00076 | 0.0007 | 0.00141 | 0.00156 | 0.00163 | 0.00114 | 0.00097 | 0.00095 | 0.00109 | 0.00193 | 0.00095 | 0.00289 | 0.00053 | 0.00066 | 0.00124 | 0.00202 | 0.00423 | 0.00446 | 0.00651 |
| Iron (Fe)Total | mg/L | 0.13 | 0.183 | 0.156 | 0.13 | 0.157 | 0.124 | 0.111 | 0.175 | 0.13 | 0.63 | 0.17 | 0.281 | 0.176 | 0.194 | 0.124 | 0.161 | 0.266 | 0.125 | 0.123 |
| Lead (Pb)Total | mg/L | 0.000061 | 0.000447 | 0.000025 | 0.000057 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000271 | 0.000025 | 0.000127 | 0.000025 | 0.000072 | 0.000025 | 0.000051 | 0.000065 | 0.000025 | 0.000062 |
| Lithium (Li)Total | mg/L | 0.0066 | 0.0066 | 0.0041 | 0.0038 | 0.0029 | 0.0029 | 0.0032 | 0.0029 | 0.004 | 0.0049 | 0.0057 | 0.0067 | 0.0072 | 0.0062 | 0.0032 | 0.003 | 0.0032 | 0.003 | 0.0029 |
| Magnesium (Mg)Total | mg/L | 26.2 | 25.9 | 32.1 | 33.9 | 30.3 | 33.2 | 35.7 | 36.4 | 40.4 | 40.1 | 40.3 | 39.6 | 41.3 | 39 | 24 | 20.6 | 17.8 | 21.8 | 25.7 |
| Manganese (Mn)Total | mg/L | 0.0957 | 0.21 | 0.0763 | 0.0453 | 0.0855 | 0.0696 | 0.0725 | 0.663 | 0.417 | 1.05 | 0.226 | 0.361 | 0.616 | 0.372 | 0.0213 | 0.0313 | 0.0226 | 0.0129 | 0.0138 |
| Mercury (Hg)Total | ng/L | | | | | | | | | | | | | | | | | | 0.00218 | |
| Molybdenum (Mo)Total | mg/L | 0.00521 | 0.00463 | 0.00944 | 0.0087 | 0.0091 | 0.00595 | 0.00494 | 0.00374 | 0.00226 | 0.0023 | 0.00349 | 0.00201 | 0.00194 | 0.00265 | 0.00304 | 0.00395 | 0.00398 | 0.00512 | 0.0079 |
| Nickel (Ni)Total | mg/L | 0.00136 | 0.00173 | 0.00111 | 0.00113 | 0.00127 | 0.00122 | 0.00116 | 0.00123 | 0.00125 | 0.00198 | 0.00157 | 0.00338 | 0.00159 | 0.00157 | 0.00105 | 0.00124 | 0.00131 | 0.00136 | 0.00136 |
| Phosphorus (P)Total | mg/L | 0.03 | 0.039 | 0.052 | 0.047 | 0.052 | 0.048 | 0.038 | 0.061 | 0.061 | 0.116 | 0.06 | 0.05 | 0.051 | 0.034 | 0.03 | 0.037 | 0.031 | 0.03 | 0.03 |
| Potassium (K)Total | mg/L | 10.9 | 10.2 | 21.2 | 25.9 | 22.5 | 23.5 | 24.9 | 23.6 | 22.6 | 22.7 | 20.6 | 17.5 | 16.2 | 17 | 17.9 | 14.4 | 11 | 11 | 16.9 |
| Rubidium (Rb)Total | mg/L | 0.00215 | 0.00206 | 0.00476 | 0.00678 | 0.00608 | 0.00678 | 0.00663 | 0.00605 | 0.00514 | 0.00483 | 0.00404 | 0.0031 | 0.00266 | 0.00278 | 0.00422 | 0.00351 | 0.00261 | 0.00315 | 0.00553 |
| Selenium (Se)Total | mg/L | 0.000146 | 0.000174 | 0.000209 | 0.000177 | 0.000207 | 0.000145 | 0.000191 | 0.000146 | 0.000222 | 0.000143 | 0.000138 | 0.000157 | 0.000147 | 0.00012 | 0.000099 | 0.000165 | 0.000235 | 0.000164 | 0.000164 |
| Silicon (Si)Total | mg/L | 2.9 | 3.54 | 3.99 | 3.74 | 3.48 | 3.71 | 3.51 | 4.1 | 4.6 | 4.76 | 5.41 | 5.52 | 5.26 | 3.48 | 2.98 | 3.24 | 3.54 | 3.69 | 2.85 |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-5 cont'd

| <i>Less than detection limit, half value</i> | | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|
| No Name Creek - Gun Range | | L2373901-3 | L2377639-3 | L2459189-4 | L2465848-4 | L2468477-2 | L2471686-2 | L2474258-4 | L2478400-4 | L2481567-6 | L2484805-4 | L2487940-3 | L2492070-4 | L2494017-4 | L2498782-10 | L2501688-4 | L2504186-4 | L2510579-4 | L2513882-4 | L2516774-4 |
| Analyte | Units | 10/29/2019 | 11/5/2019 | 6/10/2020 | 6/23/2020 | 6/30/2020 | 7/7/2020 | 7/14/2020 | 7/21/2020 | 7/28/2020 | 8/4/2020 | 8/11/2020 | 8/18/2020 | 8/25/2020 | 9/1/2020 | 9/8/2020 | 9/15/2020 | 9/29/2020 | 10/6/2020 | 10/13/2020 |
| Alkalinity, Total (as CaCO3) | mg/L | 140 | 167 | 194 | 125 | 146 | 161 | 163 | 149 | 204 | 187 | 210 | 226 | 240 | 213 | 224 | 236 | 176 | 156 | 162 |
| Ammonia, Total (as N) | mg/L | 0.01 | 0.022 | 0.037 | 0.014 | 0.025 | 0.011 | 0.005 | 0.013 | 0.033 | 0.033 | 0.056 | 0.057 | 0.012 | 0.028 | 0.015 | 0.016 | 0.023 | 0.005 | 0.02 |
| Bicarbonate (HCO3) | mg/L | 171 | 204 | 234 | 153 | 179 | 196 | 199 | 182 | 249 | 221 | 256 | 275 | 293 | 259 | 273 | 280 | 215 | 190 | 198 |
| Carbonate (CO3) | mg/L | 0.3 | 0.3 | 1.68 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 3.84 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 3.72 | 0.3 | 0.3 | 0.3 |
| Chloride (Cl) | mg/L | 101 | 124 | 36.7 | 44.9 | 73.8 | 91.3 | 97.9 | 85.2 | 86 | 90.3 | 92.7 | 99.1 | 93.4 | 89.2 | 88.3 | 85.4 | 78 | 80.5 | 80.7 |
| Conductivity | umhos/cm | 875 | 1080 | 538 | 604 | 851 | 1040 | 1090 | 983 | 1020 | 1010 | 1020 | 1030 | 1020 | 1010 | 996 | 983 | 1050 | 1130 | 1130 |
| Cyanide, Free | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0011 | 0.0017 | 0.001 | 0.005 | 0.005 | 0.0011 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0011 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| Cyanide, Total | mg/L | 0.0022 | 0.0025 | 0.0005 | 0.0005 | 0.0011 | 0.0012 | 0.005 | 0.0062 | 0.0022 | 0.0022 | 0.0017 | 0.001 | 0.0014 | 0.0005 | 0.0005 | 0.0005 | 0.0025 | 0.0039 | 0.0038 |
| Cyanide, Weak Acid Diss | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.005 | 0.005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0011 | 0.0005 | 0.0011 |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 11 | | 6.85 | 3.6 | 3.54 | 3.09 | 3.3 | 3.67 | 5.68 | 5.61 | 7.86 | 10.9 | 6.8 | 6.94 | 7.17 | 8.2 | 6.06 | 7.71 | 8.52 |
| EC, Client Supplied | umhos/cm | 909 | 920 | 534 | 603 | 864 | 103 | 1110 | 989 | 1010 | 998 | 1030 | 1030 | 1020 | 1000 | 988 | 980 | 1030 | 1070 | 1100 |
| Fluoride (F) | mg/L | 0.084 | 0.105 | 0.109 | 0.083 | 0.104 | 0.102 | 0.095 | 0.085 | 0.102 | 0.109 | 0.114 | 0.111 | 0.105 | 0.107 | 0.092 | 0.102 | 0.043 | 0.093 | 0.09 |
| Hardness (as CaCO3) | mg/L | 237 | 298 | 204 | 166 | 256 | 293 | 296 | 260 | 260 | 281 | 317 | 303 | 293 | 312 | 277 | 298 | 326 | 325 | 341 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 0.02 | 0.083 | 0.027 | 0.005 | 0.04 | 0.04 | 0.049 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.157 | 0.106 | 0.04 | 0.04 | 0.04 |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.083 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.157 | 0.106 | 0.035 | 0.035 | 0.035 |
| Nitrite (as N) | mg/L | 0.01 | 0.02 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| pH | pH units | 7.91 | 7.9 | 8.32 | 7.88 | 8.05 | 7.69 | 7.6 | 7.92 | 8.05 | 8.43 | 7.88 | 8.25 | 8.1 | 7.96 | 7.91 | 8.35 | 8.23 | 8.28 | 8.26 |
| pH, Client Supplied | pH | 7.41 | 7.38 | 7.22 | 6.97 | 7.01 | 7.32 | 7.11 | 7.06 | 7.08 | 7.12 | 7.25 | 7.29 | 7.09 | 7.07 | 6.73 | 7.07 | 6.57 | 6.66 | 6.91 |
| Phosphorus (P)Total | mg/L | 0.0201 | 0.0302 | 0.106 | 0.0389 | 0.0462 | 0.0467 | 0.0444 | 0.0379 | 0.0656 | 0.0624 | 0.0762 | 0.0726 | 0.0862 | 0.0542 | 0.0763 | 0.0497 | 0.0262 | 0.0178 | 0.0137 |
| Ra226 | Bq/L | | | | | 0.015 | | 0.0082 | | | | | | | | | | 0.0025 | | 0.0097 |
| Sulfate (SO4) | mg/L | 186 | 239 | 43.4 | 111 | 198 | 247 | 272 | 240 | 207 | 221 | 211 | 209 | 201 | 187 | 199 | 176 | 265 | 306 | 306 |
| TDS (Calculated) | mg/L | 573 | 714 | 315 | 352 | 542 | 650 | 701 | 613 | 609 | 626 | 655 | 651 | 636 | 609 | 614 | 603 | 671 | 703 | 716 |
| Temperature, Client Provided | Degree C | 1.6 | 0.1 | 13.2 | 18.8 | 24.6 | 23.9 | 20.8 | 21.1 | 21.3 | 19.5 | 21.1 | 20 | 17.5 | 14.2 | 11 | 10.5 | 11.9 | 8.8 | 6.9 |
| Total Kjeldahl Nitrogen | mg/L | 0.64 | 0.81 | 0.93 | 0.77 | 0.73 | 0.67 | 0.67 | 0.56 | 0.87 | 0.69 | 0.72 | 0.77 | 0.71 | 0.68 | 0.75 | 0.63 | 0.74 | 0.53 | 0.49 |
| Total Suspended Solids | mg/L | 1 | 16.9 | 1.7 | 2.6 | 0.5 | 3.4 | 1.3 | 1.7 | 2.6 | 4.2 | 7.8 | 1.2 | 4 | 2.4 | 8.4 | 0.5 | 2.2 | 0.5 | 0.5 |
| Turbidity | NTU | 1.39 | 3.31 | 0.81 | 0.9 | 0.75 | 1.04 | 0.67 | 0.65 | 1.09 | 0.74 | 0.92 | 0.85 | 1.2 | 0.57 | 3.23 | 0.39 | 0.81 | 0.59 | 0.46 |
| Aluminum (Al)Total | mg/L | 0.0456 | 0.0878 | 0.0394 | 0.0479 | 0.0269 | 0.035 | 0.0162 | 0.0197 | 0.0126 | 0.0165 | 0.024 | 0.0233 | 0.0279 | 0.0125 | 0.12 | 0.0104 | 0.0375 | 0.0229 | 0.0193 |
| Antimony (Sb)Total | mg/L | 0.00014 | 0.00015 | 0.00011 | 0.00005 | 0.00005 | 0.00011 | 0.00011 | 0.00012 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.0001 | 0.00005 | 0.00005 | 0.00005 | 0.00015 |
| Arsenic (As)Total | mg/L | 0.00089 | 0.00078 | 0.00106 | 0.00118 | 0.00128 | 0.00133 | 0.00106 | 0.00118 | 0.00155 | 0.00123 | 0.00147 | 0.00144 | 0.00127 | 0.00107 | 0.00112 | 0.00084 | 0.00098 | 0.00055 | 0.00061 |
| Barium (Ba)Total | mg/L | 0.0364 | 0.0435 | 0.029 | 0.0366 | 0.0465 | 0.0536 | 0.0537 | 0.0483 | 0.0483 | 0.0443 | 0.0412 | 0.0404 | 0.0406 | 0.0399 | 0.0464 | 0.0398 | 0.0505 | 0.0466 | 0.0462 |
| Beryllium (Be)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Total | mg/L | 0.068 | 0.064 | 0.049 | 0.067 | 0.073 | 0.078 | 0.077 | 0.068 | 0.07 | 0.071 | 0.069 | 0.063 | 0.068 | 0.054 | 0.06 | 0.048 | 0.054 | 0.059 | 0.061 |
| Cadmium (Cd)Total | mg/L | 0.0000066 | 0.0000069 | 0.0000062 | 0.0000083 | 0.0000072 | 0.0000086 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000055 | 0.0000025 | 0.0000058 | 0.0000025 | 0.0000093 | 0.0000025 | 0.0000096 | 0.0000025 | 0.0000025 |
| Calcium (Ca)Total | mg/L | 45.5 | 55.6 | 40 | 39 | 51.6 | 59.6 | 62.9 | 55.4 | 47.9 | 60.9 | 63.8 | 63.2 | 65.5 | 65.9 | 62 | 66 | 58 | 71.2 | 68.9 |
| Cesium (Cs)Total | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000014 | 0.000005 | 0.000005 | 0.000005 | 0.000005 |
| Chromium (Cr)Total | mg/L | 0.00023 | 0.00034 | 0.00019 | 0.00017 | 0.00015 | 0.00013 | 0.00005 | 0.00013 | 0.00011 | 0.00018 | 0.00022 | 0.00015 | 0.00018 | 0.00014 | 0.0003 | 0.00019 | 0.00013 | 0.00005 | 0.00012 |
| Cobalt (Co)Total | mg/L | 0.00168 | 0.00216 | 0.00031 | 0.00104 | 0.00171 | 0.00176 | 0.0019 | 0.00164 | 0.00105 | 0.00077 | 0.00059 | 0.00042 | 0.00037 | 0.00037 | 0.00061 | 0.00032 | 0.002 | 0.00233 | 0.00254 |
| Copper (Cu)Total | mg/L | 0.00734 | 0.00897 | 0.00083 | 0.00153 | 0.00143 | 0.00088 | 0.00082 | 0.00121 | 0.00069 | 0.00058 | 0.00054 | 0.00055 | 0.00052 | 0.00051 | 0.00139 | 0.00025 | 0.00186 | 0.00325 | 0.00398 |
| Iron (Fe)Total | mg/L | 0.113 | 0.19 | 0.38 | 0.164 | 0.191 | 0.162 | 0.105 | 0.099 | 0.156 | 0.14 | 0.171 | 0.141 | 0.155 | 0.094 | 0.42 | 0.099 | 0.079 | 0.045 | 0.042 |
| Lead (Pb)Total | mg/L | 0.000025 | 0.000084 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000107 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Lithium (Li)Total | mg/L | 0.0027 | 0.003 | 0.006 | 0.003 | 0.002 | 0.0026 | 0.0025 | 0.0022 | 0.0038 | 0.0038 | 0.0041 | 0.0047 | 0.005 | 0.0048 | 0.005 | 0.0044 | 0.0027 | 0.002 | 0.0023 |
| Magnesium (Mg)Total | mg/L | 28.7 | 37.7 | 23.4 | 21 | 27.6 | 34.6 | 39 | 31.6 | 34.2 | 36.3 | 38.1 | 39.9 | 37.6 | 36.9 | 36.3 | 38 | 34.6 | 36.1 | 41.7 |
| Manganese (Mn)Total | mg/L | 0.0183 | 0.0516 | 0.325 | 0.0467 | 0.155 | 0.116 | 0.0661 | 0.0445 | 0.236 | 0.125 | 0.194 | 0.189 | 0.221 | 0.078 | 0.254 | 0.161 | 0.0179 | 0.0103 | 0.00928 |
| Mercury (Hg)Total | ng/L | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Total | mg/L | 0.00741 | 0.00905 | 0.00211 | 0.00336 | 0.00718 | 0.00578 | 0.00583 | 0.00652 | 0.00288 | 0.00188 | 0.00196 | 0.00156 | 0.00186 | 0.00195 | 0.00319 | 0.0018 | 0.00619 | 0.00964 | 0.0098 |
| Nickel (Ni)Total | mg/L | 0.00093 | 0.00137 | 0.00126 | 0.00104 | 0.0011 | 0.001 | 0.00088 | 0.00094 | 0.00106 | 0.00092 | 0.00101 | 0.00101 | 0.00105 | 0.00098 | 0.00106 | 0.00084 | 0.00087 | 0.00089 | 0.00092 |
| Phosphorus (P)Total | mg/L | 0.03 | 0.03 | 0.091 | 0.039 | 0.057 | 0.056 | 0.044 | 0.04 | 0.063 | 0.075 | 0.093 | 0.087 | 0.082 | 0.057 | 0.085 | 0.051 | 0.015 | 0.015 | 0.015 |
| Potassium (K)Total | mg/L | 16.8 | 21.5 | 8 | 10.1 | 14.7 | 17.5 | 17.7 | 15.9 | 14.7 | 14.4 | 14.6 | 14.9 | 13.5 | 13.3 | 14.7 | 13.6 | 16.6 | 17.9 | 18.9 |
| Rubidium (Rb)Total | mg/L | 0.00563 | 0.00729 | 0.00189 | 0.00301 | 0.00399 | 0.00425 | 0.00408 | 0.00361 | 0.00322 | 0.00311 | 0.00297 | 0.00279 | 0.00278 | 0.00259 | 0.00295 | 0.00223 | 0.00416 | 0.00461 | 0.00481 |
| Selenium (Se)Total | mg/L | 0.000127 | 0.000175 | 0.000137 | 0.000127 | 0.00016 | 0.000182 | 0.000209 | 0.000176 | 0.000177 | 0.000139 | 0.000138 | 0.000123 | 0.000132 | 0.000106 | 0.000157 | 0.000128 | 0.000143 | 0.000179 | 0.000176 |
| Silicon (Si)Total | mg/L | 1.87 | 1.99 | 3.32 | 2.36 | 2.45 | 3.08 | 2.43 | 2.14 | 3.77 | 4.16 | 5.02 | 5.69 | 6.02 | 5.51 | 4.52 | 4.89 | 2.26 | 1.55 | 0.98 |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-5 cont'd

| Less than detection limit, half value No Name Creek - Gun Range | Units | NNC-GR | | | | | | | | | | | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | MWQSOG | MWQSOG | CCME | MDMER |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-----------|----------|---------|----------------|-------------------|----------|---------------------|---------|
| | | L2520597-4 | L2523594-4 | L2525591-4 | L2640496-4 | L2642990-3 | L2645860-4 | L2648478-4 | L2650898-5 | L2653707-4 | L2655279-4 | L2659471-2 | | | | | | | Tier II | Tier III | Chronic PAL | Sch. 4 |
| | | 10/20/2020 | 10/27/2020 | 11/3/2020 | 9/14/2021 | 9/22/2021 | 9/28/2021 | 10/6/2021 | 10/12/2021 | 10/20/2021 | 10/25/2021 | 11/4/2021 | | | | | | | Chronic PAL | PAL | | MAC |
| Alkalinity, Total (as CaCO3) | mg/L | 176 | 194 | 197 | 238 | 245 | 175 | 170 | 179 | 202 | 213 | 207 | 225 | 214 | 119 | 537 | 94 | 74 | | | | |
| Ammonia, Total (as N) | mg/L | 0.03 | 0.042 | 0.023 | 0.022 | 0.013 | 0.013 | 0.005 | 0.04 | 0.033 | 0.088 | 0.046 | 0.039 | 0.021 | 0.0025 | 0.582 | 0.08 | 74 | 2.74 ¹ | | | |
| Bicarbonate (HCO3) | mg/L | 215 | 237 | 240 | 290 | 289 | 213 | 207 | 218 | 246 | 260 | 252 | 274 | 261 | 145 | 630 | 113 | 74 | | | | |
| Carbonate (CO3) | mg/L | 0.3 | 0.3 | 0.3 | 0.3 | 5.04 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.73 | 0.30 | 0.15 | 12.6 | 1.64 | 74 | | 250 | 120 | |
| Chloride (Cl) | mg/L | 83.3 | 83.7 | 87 | 66.6 | 65.8 | 65.2 | 67.4 | 72.5 | 66.8 | 70.4 | 69.2 | 98 | 93 | 36.7 | 158 | 40 | 74 | | | | |
| Conductivity | umhos/cm | 1170 | 1180 | 1160 | 1330 | 1370 | 1110 | 1200 | 1200 | 1100 | 1080 | 1070 | 1058 | 1100 | 506 | 1370 | 355 | 74 | | | | |
| Cyanide, Free | mg/L | 0.0015 | 0.0005 | 0.001 | 0.0005 | 0.001 | 0.0005 | 0.0011 | 0.0011 | 0.0005 | 0.001 | 0.0005 | 0.0010 | 0.0005 | 0.00025 | 0.0050 | 0.001 | 74 | 0.0052 | | | |
| Cyanide, Total | mg/L | 0.0026 | 0.0021 | 0.0014 | 0.0012 | 0.0011 | 0.0028 | 0.0028 | 0.0019 | 0.0017 | 0.0011 | 0.002 | 0.0017 | 0.0014 | 0.00025 | 0.0084 | 0.001 | 74 | | | | 1 |
| Cyanide, Weak Acid Diss | mg/L | 0.0013 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0012 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0008 | 0.0005 | 0.00025 | 0.005 | 0.001 | 74 | | | | |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | 21.2 | 21.2 | 21.2 | 21.2 | | 7 | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 11 | 10.5 | 10.2 | | 8.42 | 5.32 | 5.19 | 7.82 | 12.2 | 13 | 11.2 | 5.80 | 5.55 | 0.84 | 13 | 3.29 | 71 | 5.5-6.5 | | | |
| EC, Client Supplied | umhos/cm | 1120 | 1150 | 1110 | 10.6 | 1250 | 1050 | 1110 | 1130 | 1040 | 1020 | 1000 | 1009 | 1080 | 10.6 | 1440 | 393 | 74 | | | | |
| Fluoride (F) | mg/L | 0.095 | 0.091 | 0.091 | 0.123 | 0.108 | 0.091 | 0.099 | 0.103 | 0.097 | 0.097 | 0.097 | 0.114 | 0.1095 | 0.043 | 0.25 | 0.041 | 74 | | | 0.12 | |
| Hardness (as CaCO3) | mg/L | 348 | 351 | 381 | 572 | 569 | 373 | 377 | 361 | 370 | 340 | 373 | 297 | 293 | 139 | 572 | 107 | 74 | | | | |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0 | 74 | | | | |
| Nitrate (as N) | mg/L | 0.04 | 0.047 | 0.06 | 0.04 | 0.04 | 0.04 | 0.04 | 0.01 | 0.079 | 0.115 | 0.109 | 0.05 | 0.04 | 0.005 | 0.216 | 0.04 | 74 | 2.93 | 13 | | |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.079 | 0.115 | 0.109 | 0.054 | 0.035 | 0.035 | 0.216 | 0.04 | 74 | 10 | | | |
| Nitrite (as N) | mg/L | 0.005 | 0.005 | 0.005 | 0.01 | 0.01 | 0.01 | 0.01 | 0.005 | 0.01 | 0.01 | 0.01 | 0.012 | 0.01 | 0.0025 | 0.025 | 0.008 | 74 | 0.06 | 0.06 | 0.06 | |
| pH | pH units | 8.26 | 8.06 | 8.22 | 8.1 | 8.33 | 8.19 | 7.87 | 8.13 | 8.12 | 7.86 | 8.22 | 7.95 | 7.92 | 7.48 | 8.43 | 2.196 | 74 | 6.5-9.0 | | | 6.0-9.5 |
| pH, Client Supplied | pH | 6.74 | 6.5 | 6.46 | 7.29 | 7.27 | 7.19 | 7.31 | 7.38 | 7.49 | 7.51 | 8.11 | 7.29 | 7.305 | 6.46 | 8.37 | 2.028 | 74 | 6.5-9.0 | | | 6.0-9.5 |
| Phosphorus (P)Total | mg/L | 0.0183 | 0.0307 | 0.0244 | 0.0288 | 0.0325 | 0.0335 | 0.0313 | 0.0254 | 0.0222 | 0.0224 | 0.0264 | 0.0999 | 0.0436 | 0.0137 | 2.35 | 0.283 | 74 | | | | |
| Ra226 | Bq/L | | | | | | | | | | | | 0.0077 | 0.0082 | 0.0025 | 0.015 | 0.00517 | 11 | | 0.5 | | 0.37 |
| Sulfate (SO4) | mg/L | 301 | 288 | 298 | 416 | 409 | 307 | 341 | 346 | 269 | 271 | 257 | 199.06 | 203.5 | 24.9 | 416 | 99 | 74 | | | | |
| TDS (Calculated) | mg/L | 721 | 719 | 751 | 938 | 905 | 724 | 763 | 778 | 691 | 701 | 678 | 662.5 | 701 | 304 | 938 | 227 | 74 | | | | |
| Temperature, Client Provided | Degree C | 2 | 1 | 2.5 | 1270 | 13.4 | 15.5 | 13.9 | 11.8 | 4.8 | 2.8 | 1.8 | 32.9 | 15.9 | 0.1 | 1270 | 146.3 | 74 | | | | |
| Total Kjeldahl Nitrogen | mg/L | 0.55 | 0.54 | 0.63 | 0.86 | 1.06 | 0.78 | 0.75 | 0.75 | 0.77 | 0.76 | 0.8 | 1.0 | 0.77 | 0.1 | 7.61 | 1 | 74 | | | | |
| Total Suspended Solids | mg/L | 1.6 | 4.6 | 0.5 | 1 | 5.1 | 1 | 1.8 | 2.2 | 2.4 | 1.4 | 1 | 17.7 | 2.5 | 0.5 | 297 | 46.8 | 74 | +5 ² | | | 15 |
| Turbidity | NTU | 0.67 | 1.86 | 0.65 | 1 | 2.14 | 0.77 | 0.38 | 0.96 | 0.68 | 0.66 | 0.62 | 5.96 | 1.01 | 0.36 | 146 | 20.1 | 74 | | | | |
| Aluminum (Al)Total | mg/L | 0.0209 | 0.0577 | 0.0143 | 0.0191 | 0.0582 | 0.0152 | 0.0136 | 0.0094 | 0.0147 | 0.0101 | 0.0269 | 0.077 | 0.026 | 0.009 | 1.04 | 0.168 | 74 | | | 0.1 | |
| Antimony (Sb)Total | mg/L | 0.00012 | 0.00012 | 0.00005 | 0.00005 | 0.00013 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00010 | 0.00011 | 0.000025 | 0.00026 | 0.00006 | 74 | | | | |
| Arsenic (As)Total | mg/L | 0.00063 | 0.00073 | 0.00066 | 0.00119 | 0.00109 | 0.00086 | 0.00085 | 0.0008 | 0.00074 | 0.0007 | 0.00075 | 0.00151 | 0.00118 | 0.00055 | 0.0111 | 0.00177 | 74 | | | 0.005 | 0.3 |
| Barium (Ba)Total | mg/L | 0.0452 | 0.0507 | 0.0493 | 0.0603 | 0.0644 | 0.0558 | 0.0612 | 0.0557 | 0.0444 | 0.0417 | 0.0405 | 0.0638 | 0.05195 | 0.0256 | 0.607 | 0.07513 | 74 | | | | |
| Beryllium (Be)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00004 | 0.00005 | 0.000025 | 0.00005 | 0.00002 | 74 | | | | |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00001 | 74 | | | | |
| Boron (B)Total | mg/L | 0.056 | 0.058 | 0.05 | 0.118 | 0.082 | 0.067 | 0.059 | 0.058 | 0.049 | 0.049 | 0.043 | 0.0743 | 0.0695 | 0.043 | 0.128 | 0.02803 | 74 | | 1.5 | | |
| Cadmium (Cd)Total | mg/L | 0.0000062 | 0.0000063 | 0.0000061 | 0.0000055 | 0.0000061 | 0.0000329 | 0.0000083 | 0.0000071 | 0.0000078 | 0.0000064 | 0.0000057 | 0.000009 | 0.000007 | 0.000003 | 0.000050 | 0.00001 | 74 | | | 0.0008 ¹ | |
| Calcium (Ca)Total | mg/L | 70.1 | 74.2 | 71.3 | 143 | 116 | 74.4 | 68.6 | 79.9 | 71.5 | 78.2 | 67.2 | 62.7 | 63.1 | 29.3 | 143 | 23.4 | 74 | | | | |
| Cesium (Cs)Total | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000010 | 0.000005 | 0.000025 | 0.000121 | 0.00002 | 74 | | | | |
| Chromium (Cr)Total | mg/L | 0.0001 | 0.0002 | 0.00005 | 0.00012 | 0.0002 | 0.00015 | 0.00005 | 0.00005 | 0.00005 | 0.00012 | 0.00012 | 0.000285809 | 0.00018 | 0.000025 | 0.00217 | 0.00038 | 74 | | | | |
| Cobalt (Co)Total | mg/L | 0.00202 | 0.00177 | 0.00158 | 0.00024 | 0.00021 | 0.00178 | 0.00186 | 0.0017 | 0.00103 | 0.0009 | 0.00084 | 0.001119559 | 0.000845 | 0.0002 | 0.00459 | 0.00088 | 74 | | | | |
| Copper (Cu)Total | mg/L | 0.00278 | 0.00196 | 0.0014 | 0.00091 | 0.00126 | 0.0024 | 0.00165 | 0.00172 | 0.00095 | 0.00088 | 0.00073 | 0.001742059 | 0.001245 | 0.00025 | 0.00897 | 0.00165 | 74 | | | 0.002 ¹ | 0.3 |
| Iron (Fe)Total | mg/L | 0.09 | 0.21 | 0.12 | 0.041 | 0.093 | 0.053 | 0.069 | 0.068 | 0.15 | 0.126 | 0.175 | 0.3497 | 0.1525 | 0.041 | 5.61 | 0.85168 | 74 | | | 0.3 | |
| Lead (Pb)Total | mg/L | 0.000025 | 0.00006 | 0.000025 | 0.000025 | 0.000065 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00010 | 0.000025 | 0.000025 | 0.00138 | 0.00020 | 74 | | | 0.001 ¹ | 0.2 |
| Lithium (Li)Total | mg/L | 0.0028 | 0.0038 | 0.0035 | 0.0147 | 0.0117 | 0.0031 | 0.0027 | 0.0024 | 0.0039 | 0.0041 | 0.0041 | 0.0044 | 0.004 | 0.002 | 0.0147 | 0.00234 | 74 | | | | |
| Magnesium (Mg)Total | mg/L | 42.4 | 44.6 | 41.2 | 67.1 | 62 | 43.1 | 46.2 | 42.9 | 43.3 | 44.7 | 43.8 | 34.62 | 34.6 | 17.8 | 67.1 | 12.6 | 74 | | | | |
| Manganese (Mn)Total | mg/L | 0.0749 | 0.247 | 0.142 | 0.0396 | 0.0527 | 0.01 | 0.0281 | 0.0252 | 0.196 | 0.145 | 0.116 | 0.991246765 | 0.1435 | 0.00928 | 20.2 | 3.54 | 74 | | | 0.380 ¹ | |
| Mercury (Hg)Total | ng/L | | | | | | | | | | | | 0.0021800 | 0.0021800 | 0.0021800 | | | 7 | | | 26 | |
| Molybdenum (Mo)Total | mg/L | 0.00883 | 0.00685 | 0.00515 | 0.00717 | 0.00745 | 0.0062 | 0.00609 | 0.00512 | 0.00381 | 0.00303 | 0.00269 | 0.00568 | 0.00512 | 0.00156 | 0.0147 | 0.003 | 74 | 0.073 | | 0.073 | |
| Nickel (Ni)Total | mg/L | 0.00071 | 0.00098 | 0.00078 | 0.00186 | 0.00192 | 0.00119 | 0.00109 | 0.00101 | 0.00094 | 0.00094 | 0.00071 | 0.001350 | 0.001145 | 0.00071 | 0.00566 | 0.001 | 74 | | | 0.025 ¹ | 0.5 |
| Phosphorus (P)Total | mg/L | 0.015 | 0.038 | 0.015 | 0.03 | 0.03 | 0.043 | 0.035 | 0.015 | 0.015 | 0.015 | 0.039 | 0.1176 | 0.049 | 0.015 | 2.05 | 0.289 | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-5 cont'd

| <i>Less than detection limit, half value</i> | | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | NNC-GR | |
|--|-------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| No Name Creek - Gun Range | | L1960980-6 | L1964768-4 | L1971728-5 | L1976404-4 | L1979675-6 | L1983563-4 | L1986645-4 | L1990659-4 | L21107154 | L21190894 | L21226494 | L21266384 | L21307664 | L21349394 | L21385554 | L21422553 | L21460333 | L21507173 | L21538253 | |
| Analyte | Units | 7/18/2017 | 7/25/2017 | 8/8/2017 | 8/15/2017 | 8/22/2017 | 8/29/2017 | 9/5/2017 | 9/12/2017 | 6/12/2018 | 6/25/2018 | 7/3/2018 | 7/10/2018 | 7/17/2018 | 7/24/2018 | 7/31/2018 | 8/7/2018 | 8/14/2018 | 8/21/2018 | 8/27/2018 | |
| Silver (Ag)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Sodium (Na)Total | mg/L | 56.9 | 114 | 125 | 160 | 134 | 133 | 134 | 131 | 75.5 | 113 | 153 | 141 | 173 | 178 | 161 | 146 | 150 | 155 | 134 | |
| Strontium (Sr)Total | mg/L | 0.174 | 0.332 | 0.321 | 0.462 | 0.437 | 0.474 | 0.416 | 0.408 | 0.257 | 0.324 | 0.388 | 0.422 | 0.47 | 0.499 | 0.458 | 0.4 | 0.515 | 0.548 | 0.535 | |
| Sulfur (S)Total | mg/L | 10.5 | 75.1 | 77.6 | 94.1 | 92.6 | 86.9 | 73.7 | 63.3 | 26.8 | 53.4 | 70.6 | 65.6 | 74.4 | 69.8 | 56.6 | 46 | 33 | 17 | 13.4 | |
| Tellurium (Te)Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| Thallium (Tl)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Thorium (Th)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Tin (Sn)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Titanium (Ti)Total | mg/L | 0.00309 | 0.00136 | 0.00052 | 0.00071 | 0.0006 | 0.00044 | 0.0011 | 0.0009 | 0.00977 | 0.00107 | 0.00065 | 0.00417 | 0.00222 | 0.0045 | 0.0078 | 0.0365 | 0.0025 | 0.0124 | 0.0403 | |
| Tungsten (W)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Uranium (U)Total | mg/L | 0.000146 | 0.000182 | 0.000256 | 0.000159 | 0.000152 | 0.00017 | 0.000127 | 0.000195 | 0.000196 | 0.000173 | 0.000147 | 0.000186 | 0.000146 | 0.000107 | 0.000079 | 0.000102 | 0.000186 | 0.000274 | 0.000573 | |
| Vanadium (V)Total | mg/L | 0.00068 | 0.00061 | 0.00073 | 0.0006 | 0.00056 | 0.00025 | 0.00025 | 0.00025 | 0.00097 | 0.00025 | 0.00025 | 0.00051 | 0.00025 | 0.00058 | 0.00068 | 0.00282 | 0.00187 | 0.00432 | 0.00536 | |
| Zinc (Zn)Total | mg/L | 0.0015 | 0.0015 | 0.0073 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.004 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0035 | 0.0037 | 0.0083 | 0.0054 | 0.0105 | 0.0103 | |
| Zirconium (Zr)Total | mg/L | 0.000269 | 0.000139 | 0.000231 | 0.00009 | 0.000112 | 0.000091 | 0.000121 | 0.000197 | 0.00034 | 0.000143 | 0.00011 | 0.00016 | 0.000098 | 0.000131 | 0.000427 | 0.00048 | 0.000522 | 0.000612 | 0.00134 | |
| Aluminum (Al)Dissolved | mg/L | 0.0041 | 0.0035 | 0.0029 | 0.0021 | 0.0022 | 0.0025 | 0.0024 | 0.0023 | 0.0023 | 0.0027 | 0.0019 | 0.004 | 0.0016 | 0.0027 | 0.0022 | 0.0011 | 0.0056 | 0.0037 | 0.0175 | |
| Antimony (Sb)Dissolved | mg/L | 0.000025 | 0.00018 | 0.000025 | 0.00013 | 0.0001 | 0.00012 | 0.000025 | 0.000025 | 0.00011 | 0.00015 | 0.00013 | 0.00012 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00018 | 0.00017 | 0.00016 | |
| Arsenic (As)Dissolved | mg/L | 0.0015 | 0.00102 | 0.00114 | 0.00091 | 0.00099 | 0.00083 | 0.00106 | 0.00107 | 0.00135 | 0.00123 | 0.00128 | 0.00147 | 0.00142 | 0.00152 | 0.00161 | 0.00156 | 0.00617 | 0.0101 | 0.00762 | |
| Barium (Ba)Dissolved | mg/L | 0.0244 | 0.0531 | 0.0585 | 0.0577 | 0.0529 | 0.053 | 0.0524 | 0.0515 | 0.0517 | 0.0588 | 0.0539 | 0.053 | 0.0523 | 0.0554 | 0.0482 | 0.0535 | 0.102 | 0.245 | 0.155 | |
| Beryllium (Be)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Bismuth (Bi)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Dissolved | mg/L | 0.048 | 0.106 | 0.083 | 0.124 | 0.109 | 0.128 | 0.082 | 0.08 | 0.069 | 0.111 | 0.101 | 0.098 | 0.107 | 0.108 | 0.105 | 0.088 | 0.096 | 0.079 | 0.063 | |
| Cadmium (Cd)Dissolved | mg/L | 0.000025 | 0.0000076 | 0.0000064 | 0.0000072 | 0.000008 | 0.0000054 | 0.000005 | 0.0000058 | 0.0000079 | 0.0000056 | 0.0000064 | 0.0000108 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000151 | 0.0000085 | 0.0000107 | |
| Calcium (Ca)Dissolved | mg/L | 41.3 | 56.9 | 62.3 | 68.1 | 66.6 | 66.2 | 62.7 | 68.4 | 59 | 61.5 | 62.8 | 56.1 | 63 | 64.3 | 59.5 | 55.6 | 66.5 | 76 | 78.4 | |
| Cesium (Cs)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Chromium (Cr)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.0002 | 0.00021 | 0.00019 | |
| Cobalt (Co)Dissolved | mg/L | 0.00022 | 0.00071 | 0.00054 | 0.0007 | 0.00062 | 0.00076 | 0.00059 | 0.00032 | 0.00021 | 0.00104 | 0.00133 | 0.00151 | 0.00122 | 0.00107 | 0.00077 | 0.00059 | 0.00152 | 0.00299 | 0.00226 | |
| Copper (Cu)Dissolved | mg/L | 0.0004 | 0.0013 | 0.00082 | 0.00073 | 0.0006 | 0.00088 | 0.00047 | 0.00083 | 0.00073 | 0.00483 | 0.00126 | 0.00151 | 0.00085 | 0.00072 | 0.00051 | 0.00048 | 0.00066 | 0.00041 | 0.00066 | |
| Iron (Fe)Dissolved | mg/L | 0.123 | 0.055 | 0.035 | 0.079 | 0.103 | 0.059 | 0.123 | 0.083 | 0.035 | 0.042 | 0.064 | 0.045 | 0.029 | 0.036 | 0.031 | 0.023 | 0.658 | 2.29 | 1.19 | |
| Lead (Pb)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000067 | 0.000063 | 0.000159 | |
| Lithium (Li)Dissolved | mg/L | 0.0062 | 0.0038 | 0.0042 | 0.004 | 0.0036 | 0.0041 | 0.0037 | 0.0048 | 0.0092 | 0.0053 | 0.0039 | 0.0031 | 0.0037 | 0.004 | 0.0041 | 0.0043 | 0.0048 | 0.0051 | 0.0051 | |
| Magnesium (Mg)Dissolved | mg/L | 18.8 | 26.4 | 28.4 | 30.7 | 32 | 32 | 30.6 | 32 | 29.2 | 26.7 | 28.9 | 33.8 | 29.9 | 30.9 | 32.5 | 30.7 | 37 | 42.7 | 42.7 | |
| Manganese (Mn)Dissolved | mg/L | 0.13 | 0.0041 | 0.0473 | 0.0569 | 0.0768 | 0.0315 | 0.105 | 0.152 | 0.00764 | 0.00677 | 0.102 | 0.00262 | 0.00065 | 0.001 | 0.00111 | 0.0107 | 16.4 | 18.4 | 14.4 | |
| Mercury (Hg)Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Dissolved | mg/L | 0.00167 | 0.0136 | 0.00788 | 0.0123 | 0.00952 | 0.0121 | 0.00487 | 0.00412 | 0.0044 | 0.0106 | 0.0122 | 0.0119 | 0.0095 | 0.00666 | 0.00379 | 0.00269 | 0.00344 | 0.0034 | 0.00592 | |
| Nickel (Ni)Dissolved | mg/L | 0.00131 | 0.00117 | 0.00148 | 0.00087 | 0.0009 | 0.00079 | 0.0009 | 0.00107 | 0.00145 | 0.00123 | 0.00126 | 0.00134 | 0.00095 | 0.00091 | 0.00079 | 0.00074 | 0.00216 | 0.00278 | 0.0033 | |
| Phosphorus (P)Dissolved | mg/L | 0.066 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.061 | 0.025 | 0.144 | 0.124 | 0.079 | 0.518 | 1.23 | 0.489 | |
| Potassium (K)Dissolved | mg/L | 9.27 | 19 | 18.2 | 26.3 | 25.8 | 27.4 | 24.8 | 22.2 | 15.4 | 21.8 | 24.7 | 34.1 | 29.2 | 30 | 28 | 25.5 | 23.8 | 24.1 | 23 | |
| Rubidium (Rb)Dissolved | mg/L | 0.00184 | 0.00499 | 0.00377 | 0.00685 | 0.00688 | 0.00754 | 0.00671 | 0.00507 | 0.00207 | 0.00409 | 0.00568 | 0.00891 | 0.0075 | 0.0074 | 0.0061 | 0.00464 | 0.00485 | 0.00423 | 0.00347 | |
| Selenium (Se)Dissolved | mg/L | 0.000164 | 0.000151 | 0.00017 | 0.00012 | 0.000131 | 0.00015 | 0.000099 | 0.000121 | 0.000197 | 0.000159 | 0.000174 | 0.000228 | 0.000153 | 0.000133 | 0.000161 | 0.000153 | 0.000333 | 0.000372 | 0.000274 | |
| Silicon (Si)Dissolved | mg/L | 4.51 | 3.57 | 3.63 | 2.38 | 3.22 | 2.74 | 3.4 | 5 | 18.8 | 7.55 | 7.96 | 4.02 | 6.47 | 5.39 | 6.36 | 7.81 | 9.75 | 12.2 | 12.7 | |
| Silver (Ag)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Sodium (Na)Dissolved | mg/L | 59.1 | 113 | 128 | 152 | 151 | 162 | 146 | 134 | 73.7 | 117 | 149 | 179 | 162 | 168 | 165 | 149 | 156 | 154 | 148 | |
| Strontium (Sr)Dissolved | mg/L | 0.165 | 0.32 | 0.32 | 0.432 | 0.44 | 0.467 | 0.446 | 0.423 | 0.267 | 0.343 | 0.409 | 0.418 | 0.456 | 0.484 | 0.439 | 0.412 | 0.516 | 0.548 | 0.506 | |
| Sulfur (S)Dissolved | mg/L | 10.2 | 71.4 | 75.3 | 89.3 | 89.8 | 97.7 | 77.8 | 63.3 | 27.1 | 59.7 | 66.7 | 78 | 70.9 | 65.9 | 60.2 | 50.9 | 32.8 | 16.6 | 14.9 | |
| Tellurium (Te)Dissolved | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| Thallium (Tl)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Thorium (Th)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Tin (Sn)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.00 | | | | | | | | | | | | | | | | |



Table B-6: Wanipigow River – Downstream (WR-DS) Water Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | |
|--|--------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Wanipigow River - Downstream | | L1960980-4 | L1964768-2 | L1971728-3 | L1976404-2 | L1979675-4 | L1983563-2 | L1986645-2 | L1990659-2 | L21107152 | L21190892 | L21226492 | L21266382 | L21307662 | L21349392 | L21385551 | L21422551 | L21460331 | L21507171 | L21538251 | L21599161 | L21622401 | L21663851 |
| Analyte | Units | 7/18/2017 | 7/25/2017 | 8/8/2017 | 8/15/2017 | 8/22/2017 | 8/29/2017 | 9/5/2017 | 9/12/2017 | 6/12/2018 | 6/25/2018 | 7/3/2018 | 7/10/2018 | 7/17/2018 | 7/24/2018 | 7/31/2018 | 8/7/2018 | 8/14/2018 | 8/21/2018 | 8/27/2018 | 9/5/2018 | 9/11/2018 | 9/18/2018 |
| Alkalinity, Total (as CaCO3) | mg/L | 58.3 | 54.4 | 42.9 | 87.7 | 93.3 | 84.9 | 113 | 104 | 35.9 | 51.9 | 69 | 87.3 | 113 | 131 | 126 | 117 | 109 | 112 | 109 | 111 | 112 | 66.5 |
| Ammonia, Total (as N) | mg/L | 0.066 | 0.023 | 0.021 | 0.015 | 0.022 | 0.0025 | 0.0025 | 0.0025 | 0.026 | 0.0025 | 0.0025 | 0.012 | 0.011 | 0.017 | 0.033 | 0.408 | 0.015 | 0.015 | 0.018 | 0.014 | 0.01 | 0.027 |
| Bicarbonate (HCO3) | mg/L | 71.1 | 66.4 | 52.3 | 107 | 114 | 104 | 137 | 127 | 43.8 | 63.3 | 84.2 | 107 | 138 | 160 | 153 | 142 | 133 | 132 | 133 | 136 | 137 | 81.1 |
| Carbonate (CO3) | mg/L | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 2.4 | 0.6 | 0.6 | 0.6 | 0.6 |
| Chloride (Cl) | mg/L | 0.72 | 3.67 | 1.78 | 25.7 | 18.7 | 12.7 | 30.3 | 16.6 | 0.85 | 4.47 | 15.8 | 25.1 | 35.7 | 45.5 | 37.1 | 27 | 18.7 | 16.4 | 14.7 | 13.3 | 11.7 | 2.49 |
| Conductivity | umhos/cm | 105 | 130 | 87.2 | 330 | 280 | 232 | 376 | 298 | 70.2 | 119 | 229 | 317 | 410 | 497 | 454 | 363 | 304 | 280 | 271 | 265 | 257 | 140 |
| Cyanide, Free | mg/L | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Cyanide, Total | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Cyanide, Weak Acid Diss | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.0025 | 0.0025 | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 5.75 | 6.4 | 6.14 | 6.98 | 5.34 | 6.41 | 6.17 | 7.77 | 7.97 | 5.7 | 5.85 | 6.31 | 5.86 | 6.29 | 6.98 | 6.38 | | 2.95 | 6.15 | | 6.37 | 6.77 |
| EC, Client Supplied | umhos/cm | 112 | 130 | 91.1 | 362 | 305 | 239 | 424 | 306 | 56.7 | 123 | 69.3 | 334 | 441 | 530 | 467 | 373 | 309 | 292 | 281 | | 263 | 138 |
| Fluoride (F) | mg/L | 0.064 | 0.065 | 0.058 | 0.072 | 0.078 | 0.075 | 0.086 | 0.081 | 0.049 | 0.06 | 0.071 | 0.078 | 0.089 | 0.092 | 0.091 | 0.092 | 0.089 | 0.091 | 0.085 | 0.093 | 0.092 | 0.07 |
| Hardness (as CaCO3) | mg/L | 53.7 | 57.6 | 46 | 111 | 101 | 90.8 | 127 | 112 | 39.4 | 55.9 | 76.9 | 98.2 | 116 | 134 | 131 | 115 | 110 | 106 | 103 | 106 | 107 | 70.3 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 0.01 | 0.033 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Nitrite (as N) | mg/L | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 |
| pH | pH units | 7.57 | 7.43 | 7.36 | 7.71 | 7.45 | 7.63 | 7.59 | 7.89 | 7.39 | 7.57 | 7.77 | 7.83 | 7.92 | 7.93 | 7.89 | 7.84 | 7.74 | 8.37 | 7.89 | 7.77 | 7.85 | 7.51 |
| pH, Client Supplied | pH | 7.31 | 7.54 | 7.34 | 7.71 | 7.55 | 7.6 | 7.19 | 7.5 | 7.34 | 7.38 | 7.54 | 7.41 | 7.86 | 7.97 | 7.92 | 7.67 | 7.65 | 7.73 | 7.54 | 7.37 | 8.19 | 7.55 |
| Phosphorus (P)Total | mg/L | 0.055 | 0.056 | 0.056 | 0.039 | 0.049 | 0.04 | 0.041 | 0.033 | 0.0396 | 0.0489 | 0.0487 | 0.0438 | 0.047 | 0.0464 | 0.0374 | 0.0373 | 0.0411 | 0.0408 | 0.0402 | 0.0408 | 0.0402 | 0.0467 |
| Ra226 | Bq/L | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate (SO4) | mg/L | 0.71 | 6.07 | 2.05 | 51.4 | 35.4 | 22.2 | 56.4 | 28.3 | 0.74 | 3.95 | 23.5 | 37 | 51.1 | 64 | 49.9 | 33.7 | 21.2 | 17.5 | 15.9 | 13.2 | 11.1 | 2.34 |
| TDS (Calculated) | mg/L | 59.7 | 70.3 | 49.5 | 204 | 169 | 133 | 237 | 169 | 38.6 | 64.6 | 130 | 186 | 246 | 295 | 261 | 208 | 166 | 160 | 147 | 149 | 143 | 73.1 |
| Temperature, Client Provided | Degree C | 22.4 | 23.3 | 20.4 | 23.7 | 19.7 | 20 | 16.9 | 18.8 | 19.1 | 22.7 | 22.2 | 23.5 | 21.7 | 23.4 | 22.2 | 19.3 | 20.4 | 17.3 | 17.3 | 16 | 15.3 | 12.9 |
| Total Kjeldahl Nitrogen | mg/L | 0.67 | 0.78 | 0.91 | 0.97 | 0.71 | 0.7 | 0.71 | 0.82 | 0.72 | 0.83 | 0.74 | 0.74 | 0.73 | 0.69 | 0.61 | 0.66 | 0.7 | 0.61 | 0.62 | 0.56 | 0.66 | |
| Total Suspended Solids | mg/L | 8 | 15 | 11 | 6 | 8 | 6 | 2.5 | 8 | 10.7 | 9.6 | 6.4 | 6.3 | 8.5 | 1 | 3.2 | 3.2 | 4.3 | 3.2 | 4.1 | 29.9 | 4 | |
| Turbidity | NTU | 11.1 | 13.7 | 11.9 | 6.17 | 9.19 | 7.02 | 7 | 4.91 | 7.56 | 11.5 | 10.8 | 7.97 | 7.89 | 6.45 | 4.49 | 5.86 | 5.46 | 5.78 | 6.26 | 6.23 | 6.73 | 6.27 |
| Aluminum (Al)Total | mg/L | 0.425 | 0.42 | 0.545 | 0.232 | 0.339 | 0.238 | 0.213 | 0.169 | 0.285 | 0.378 | 0.357 | 0.25 | 0.265 | 0.205 | 0.13 | 0.175 | 0.143 | 0.194 | 0.181 | 0.217 | 0.193 | 0.248 |
| Antimony (Sb)Total | mg/L | 0.00025 | 0.00016 | 0.0001 | 0.00012 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00014 | 0.00025 | 0.00025 | 0.00025 | 0.00011 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Arsenic (As)Total | mg/L | 0.00147 | 0.0015 | 0.00146 | 0.00154 | 0.00168 | 0.0013 | 0.00158 | 0.00126 | 0.00122 | 0.00149 | 0.00157 | 0.00148 | 0.00194 | 0.00174 | 0.00181 | 0.00191 | 0.00175 | 0.0019 | 0.00198 | 0.00183 | 0.00193 | 0.00123 |
| Barium (Ba)Total | mg/L | 0.0163 | 0.0186 | 0.0152 | 0.0261 | 0.0251 | 0.0176 | 0.0296 | 0.023 | 0.0123 | 0.0172 | 0.0217 | 0.0255 | 0.0305 | 0.0317 | 0.0273 | 0.0258 | 0.0206 | 0.021 | 0.0199 | 0.0209 | 0.0216 | 0.0158 |
| Beryllium (Be)Total | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Bismuth (Bi)Total | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Boron (B)Total | mg/L | 0.011 | 0.013 | 0.011 | 0.029 | 0.026 | 0.017 | 0.028 | 0.021 | 0.0025 | 0.011 | 0.019 | 0.025 | 0.036 | 0.043 | 0.033 | 0.03 | 0.025 | 0.021 | 0.021 | 0.021 | 0.02 | 0.014 |
| Cadmium (Cd)Total | mg/L | 0.0000105 | 0.0000137 | 0.0000131 | 0.0000096 | 0.0000147 | 0.0000078 | 0.000007 | 0.0000085 | 0.0000121 | 0.0000131 | 0.0000128 | 0.00001 | 0.0000098 | 0.000009 | 0.0000107 | 0.0000088 | 0.0000068 | 0.000005 | 0.0000058 | 0.000007 | 0.0000055 | 0.0000059 |
| Calcium (Ca)Total | mg/L | 15 | 15 | 11.1 | 25.9 | 23.9 | 23.5 | 30.5 | 26.1 | 9.86 | 12.5 | 17.5 | 20.8 | 25 | 30.9 | 25.9 | 25.1 | 22.6 | 22.3 | 20.8 | 23.2 | 22.7 | 16.4 |
| Cesium (Cs)Total | mg/L | 0.00005 | 0.000048 | 0.000056 | 0.000024 | 0.000045 | 0.00003 | 0.000023 | 0.00002 | 0.000041 | 0.000052 | 0.000046 | 0.000031 | 0.000036 | 0.000026 | 0.000012 | 0.000019 | 0.000018 | 0.000021 | 0.000028 | 0.000025 | 0.000023 | 0.00003 |
| Chromium (Cr)Total | mg/L | 0.00089 | 0.00093 | 0.00115 | 0.00061 | 0.00078 | 0.0006 | 0.00055 | 0.00025 | 0.00067 | 0.00084 | 0.00081 | 0.00058 | 0.00093 | 0.00063 | 0.00047 | 0.00048 | 0.00034 | 0.00075 | 0.00044 | 0.0005 | 0.00044 | 0.00076 |
| Cobalt (Co)Total | mg/L | 0.00047 | 0.0005 | 0.0005 | 0.00051 | 0.00058 | 0.0004 | 0.00056 | 0.00038 | 0.00037 | 0.00047 | 0.00056 | 0.00055 | 0.00072 | 0.00075 | 0.00054 | 0.00045 | 0.0003 | 0.00034 | 0.00035 | 0.00033 | 0.00032 | 0.00034 |
| Copper (Cu)Total | mg/L | 0.00146 | 0.00154 | 0.00142 | 0.00138 | 0.00142 | 0.00122 | 0.0013 | 0.00162 | 0.00136 | 0.0017 | 0.00164 | 0.00157 | 0.00185 | 0.00169 | 0.00138 | 0.00127 | 0.00116 | 0.00115 | 0.00128 | 0.00097 | 0.00101 | 0.00133 |
| Iron (Fe)Total | mg/L | 1.26 | 1.34 | 1.45 | 1.01 | 1.27 | 0.974 | 0.998 | 0.909 | 0.995 | 1.14 | 1.1 | 0.848 | 1.03 | 0.877 | 0.748 | 0.86 | 0.812 | 0.798 | 0.767 | 0.842 | 0.845 | 0.996 |
| Lead (Pb)Total | mg/L | 0.000356 | 0.000443 | 0.000405 | 0.000289 | 0.000418 | 0.0003 | 0.000319 | 0.000423 | 0.000299 | 0.000421 | 0.000378 | 0.000357 | 0.00058 | 0.000398 | 0.00029 | 0.00033 | 0.00032 | 0.000311 | 0.000348 | 0.0003 | 0.000305 | 0.000245 |
| Lithium (Li)Total | mg/L | 0.0028 | 0.0029 | 0.0026 | 0.0033 | 0.0042 | 0.0037 | 0.0036 | 0.0037 | 0.0018 | 0.0025 | 0.0027 | 0.0026 | 0.0029 | 0.0038 | 0.0032 | 0.0039 | 0.0037 | 0.0037 | 0.0036 | 0.0041 | 0.004 | 0.0036 |
| Magnesium (Mg)Total | mg/L | 6.14 | 6.12 | 4.93 | 11.3 | 9.86 | 8.47 | 13 | 11.7 | 3.94 | 5.52 | 8.26 | 8.49 | 12.6 | 8.49 | 13.2 | 12.7 | 11.5 | 11.7 | 9.76 | 11.6 | 11.6 | 7.58 |
| Manganese (Mn)Total | mg/L | 0.212 | 0.16 | 0.136 | 0.23 | 0.306 | 0.146 | 0.324 | 0.189 | 0.121 | 0.227 | 0.22 | 0.222 | 0.394 | 0.386 | 0.319 | 0.396 | 0.236 | 0.333 | 0.376 | 0.354 | 0.356 | 0.133 |
| Mercury (Hg)Total | ng/L | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Total | mg/L | 0.000231 | 0.000478 | 0.000202 | 0.00227 | 0.00164 | 0.000812 | 0.00188 | 0.00107 | 0.000151 | 0.000392 | 0.00147 | 0.00227 | 0.00339 | 0.00397 | 0.00249 | 0.00 | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-6 cont'd

| <i>Less than detection limit, half value</i> | | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | |
|--|----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Wanipigow River - Downstream | | L21704731 | L21744711 | L2294147-6 | L2298725-4 | L2302403-6 | L2306799-6 | L2311297-6 | L2315601-4 | L2319873-4 | L2323329-4 | L2328155-4 | L2332529-4 | L2338063-4 | L2340315-4 | L2344830-4 | L2349240-4 | L2353453-4 | L2357774-4 | L2362279-5 | L2365580-7 | L2369900-5 | L2373901-5 |
| Analyte | Units | 9/25/2018 | 10/2/2018 | 6/18/2019 | 6/25/2019 | 7/2/2019 | 7/9/2019 | 7/16/2019 | 7/23/2019 | 7/30/2019 | 8/6/2019 | 8/13/2019 | 8/20/2019 | 8/28/2019 | 9/3/2019 | 9/10/2019 | 9/17/2019 | 9/24/2019 | 10/1/2019 | 10/8/2019 | 10/15/2019 | 10/22/2019 | 10/29/2019 |
| Alkalinity, Total (as CaCO3) | mg/L | 52.2 | 32 | 31.7 | 34.1 | 53.5 | 67.6 | 34.3 | 32.6 | 36.7 | 39.4 | 41.1 | 46.4 | 53.6 | 51 | 50.6 | 56.8 | 27.5 | 27.2 | 23.9 | 22 | 19.6 | 15.8 |
| Ammonia, Total (as N) | mg/L | 0.0025 | 0.0025 | 0.014 | 0.015 | 0.013 | 0.011 | 0.055 | 0.026 | 0.066 | 0.032 | 0.018 | 0.011 | 0.066 | 0.041 | 0.02 | 0.036 | 0.022 | 0.031 | 0.028 | 0.02 | 0.013 | 0.01 |
| Bicarbonate (HCO3) | mg/L | 63.7 | 39 | 38.7 | 41.6 | 65.3 | 82.5 | 41.8 | 39.8 | 44.8 | 48.1 | 50.1 | 56.6 | 65.4 | 62.2 | 61.7 | 69.3 | 33.6 | 33.2 | 29.2 | 26.8 | 23.9 | 19.3 |
| Carbonate (CO3) | mg/L | 0.6 | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Chloride (Cl) | mg/L | 1.7 | 1.46 | 0.71 | 0.72 | 6.03 | 18.6 | 2.9 | 4.14 | 6.81 | 3.39 | 1.93 | 1.67 | 1.74 | 2.54 | 2.02 | 2.19 | 1.17 | 1.77 | 0.81 | 0.76 | 1.04 | 1.37 |
| Conductivity | umhos/cm | 107 | 71.7 | 64.5 | 68.7 | 139 | 243 | 85.8 | 94.9 | 124 | 101 | 87.4 | 93.6 | 106 | 109 | 107 | 114 | 62.1 | 63.7 | 50.6 | 48.9 | 46.1 | 45.5 |
| Cyanide, Free | mg/L | 0.00025 | 0.00025 | 0.0005 | 0.0005 | 0.0025 | 0.0011 | 0.0012 | 0.001 | 0.0005 | 0.0005 | 0.0005 | 0.0011 | 0.0011 | 0.0012 | 0.0011 | 0.0014 | 0.0017 | 0.0018 | 0.0005 | 0.001 | 0.0005 | 0.0005 |
| Cyanide, Total | mg/L | 0.00025 | 0.00025 | 0.0005 | 0.0005 | 0.0025 | 0.0005 | 0.0016 | 0.0015 | 0.0012 | 0.0013 | 0.0005 | 0.0005 | 0.0027 | 0.0017 | 0.0019 | 0.0018 | 0.002 | 0.0017 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| Cyanide, Weak Acid Diss | mg/L | 0.00025 | 0.00025 | 0.0005 | 0.0005 | 0.0025 | 0.0005 | 0.0011 | 0.0011 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0011 | 0.0012 | 0.0005 | 0.0005 | 0.0014 | 0.0018 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 9.02 | 10.1 | 7.61 | 6.36 | 5.57 | 6.36 | 6.23 | 6.74 | 6.72 | 5.8 | 6.8 | 5.38 | 5.32 | 6.43 | 6.46 | 7.66 | 8.47 | 11.2 | 11 | 12.1 | 11.3 | 12.7 |
| EC, Client Supplied | umhos/cm | 107 | 71.9 | 65 | 69.7 | 142 | 248 | 86.1 | 94 | 122 | 101 | 85.8 | 94.7 | 107 | 108 | 108 | 113 | 63.5 | 62.9 | 50.1 | 48.3 | 45.8 | 47.4 |
| Fluoride (F) | mg/L | 0.061 | 0.045 | 0.042 | 0.038 | 0.056 | 0.054 | 0.054 | 0.04 | 0.056 | 0.057 | 0.055 | 0.059 | 0.058 | 0.064 | 0.057 | 0.056 | 0.041 | 0.036 | 0.043 | 0.041 | 0.044 | 0.035 |
| Hardness (as CaCO3) | mg/L | 59.8 | 35.3 | 35.2 | 37.2 | 57.2 | 83.7 | 41.7 | 41.2 | 48.4 | 46.4 | 45.3 | 50.9 | 56.4 | 55.9 | 61.1 | 63.7 | 37.6 | 32.6 | 33.1 | 29.8 | 26.2 | 27.6 |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Nitrate (as N) | mg/L | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Nitrate and Nitrite as N | mg/L | 0.07 | 0.07 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 |
| Nitrite (as N) | mg/L | 0.0025 | 0.0025 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| pH | pH units | 7.48 | 7.37 | 7.36 | 7.52 | 7.63 | 7.75 | 7.43 | 7.43 | 7.4 | 7.33 | 7.52 | 7.55 | 7.54 | 7.48 | 7.56 | 7.68 | 7.24 | 7.14 | 7.25 | 7.01 | 6.97 | 7.08 |
| pH, Client Supplied | pH | 7.34 | 6.64 | 6.93 | 7.21 | 7.06 | 7.13 | 6.75 | 6.82 | 6.92 | 6.9 | 6.91 | 6.88 | 6.99 | 7.12 | 7.03 | 7.42 | 6.72 | 7.19 | 6.74 | 7.29 | 6.32 | 6.93 |
| Phosphorus (P)Total | mg/L | 0.0328 | 0.0284 | 0.0256 | 0.0434 | 0.0509 | 0.0519 | 0.0421 | 0.0416 | 0.0441 | 0.0422 | 0.0413 | 0.0423 | 0.0529 | 0.0394 | 0.0385 | 0.0432 | 0.0454 | 0.034 | 0.0271 | 0.0413 | 0.0284 | 0.0265 |
| Ra226 | Bq/L | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate (SO4) | mg/L | 1.74 | 1.81 | 0.64 | 0.82 | 8.57 | 31.4 | 4.67 | 6.48 | 9.93 | 4.79 | 1.84 | 1.45 | 1.71 | 2.15 | 1.43 | 1.66 | 1.2 | 2.04 | 0.72 | 0.99 | 1.68 | 2.19 |
| TDS (Calculated) | mg/L | 57.6 | 36.7 | 34.9 | 36.9 | 76.2 | 144 | 47.6 | 50.9 | 64.4 | 52 | 47.5 | 51.3 | 58.6 | 58.9 | 57.4 | 63.4 | 34.1 | 36.2 | 28.9 | 26.9 | 25.5 | 25.3 |
| Temperature, Client Provided | Degree C | 8.6 | 6.3 | 17.9 | 21.7 | 23.9 | 22 | 23.1 | 21.8 | 21.1 | 23.5 | 20 | 20.8 | 17.1 | 15.9 | 14.8 | 16 | 14.1 | 7.3 | 7.4 | 3.9 | 5.9 | 2.3 |
| Total Kjeldahl Nitrogen | mg/L | 0.81 | 0.75 | 0.73 | 0.7 | 0.8 | 0.93 | 1.12 | 0.97 | 0.98 | 0.94 | 0.88 | 0.89 | 0.84 | 1.03 | 0.86 | 0.7 | 1.09 | 0.95 | 0.85 | 0.63 | 0.86 | 0.71 |
| Total Suspended Solids | mg/L | 4 | 2.1 | 4.9 | 7.3 | 9.6 | 6.5 | 13.9 | 9.9 | 8 | 6.8 | 3.5 | 5.9 | 6.3 | 3.2 | 3.5 | 3.7 | 19.9 | 12.5 | 6.4 | 21.5 | 10 | 4.5 |
| Turbidity | NTU | 5.1 | 5.3 | 6.22 | 5.8 | 9.04 | 7.55 | 10.1 | 6.07 | 5.98 | 6.07 | 6.13 | 7.13 | 7.6 | 5.48 | 5.26 | 5.43 | 10.3 | 7.69 | 5.25 | 8.68 | 6.18 | 4.07 |
| Aluminum (Al)Total | mg/L | 0.317 | 0.328 | 0.215 | 0.156 | 0.296 | 0.241 | 0.411 | 0.346 | 0.269 | 0.417 | 0.147 | 0.283 | 0.268 | 0.19 | 0.292 | 0.228 | 0.463 | 0.542 | 0.396 | 0.541 | 0.449 | 0.326 |
| Antimony (Sb)Total | mg/L | 0.000025 | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Arsenic (As)Total | mg/L | 0.00104 | 0.00081 | 0.00108 | 0.00116 | 0.00143 | 0.00192 | 0.00147 | 0.00153 | 0.00161 | 0.00182 | 0.00161 | 0.0019 | 0.00195 | 0.00141 | 0.00159 | 0.00118 | 0.001 | 0.00105 | 0.00098 | 0.00092 | 0.0008 | 0.00092 |
| Barium (Ba)Total | mg/L | 0.0135 | 0.0106 | 0.0106 | 0.0109 | 0.0175 | 0.0224 | 0.0145 | 0.0137 | 0.0131 | 0.0123 | 0.0102 | 0.0128 | 0.0157 | 0.0131 | 0.0144 | 0.0137 | 0.0155 | 0.0144 | 0.0121 | 0.0131 | 0.0114 | 0.00982 |
| Beryllium (Be)Total | mg/L | 0.000025 | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Total | mg/L | 0.01 | 0.01 | 0.011 | 0.01 | 0.011 | 0.018 | 0.01 | 0.01 | 0.012 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.012 | 0.012 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Cadmium (Cd)Total | mg/L | 0.0000086 | 0.0000064 | 0.000021 | 0.0000261 | 0.0000252 | 0.0000286 | 0.0000185 | 0.0000115 | 0.0000086 | 0.0000082 | 0.0000101 | 0.0000079 | 0.0000094 | 0.0000054 | 0.0000054 | 0.0000053 | 0.0000145 | 0.0000114 | 0.0000155 | 0.0000143 | 0.0000091 | 0.0000076 |
| Calcium (Ca)Total | mg/L | 13.9 | 8.89 | 8.67 | 9.16 | 14.2 | 21.1 | 9.58 | 9.76 | 11 | 9.83 | 10.5 | 11.3 | 13.2 | 13.6 | 13.6 | 14.9 | 7.89 | 8.65 | 7.7 | 7.49 | 6.54 | 6.25 |
| Cesium (Cs)Total | mg/L | 0.000027 | 0.000024 | 0.000027 | 0.00002 | 0.00004 | 0.000034 | 0.000053 | 0.000038 | 0.000031 | 0.000054 | 0.000013 | 0.000033 | 0.000032 | 0.000016 | 0.000028 | 0.000023 | 0.000037 | 0.000056 | 0.000023 | 0.000052 | 0.000035 | 0.000023 |
| Chromium (Cr)Total | mg/L | 0.00068 | 0.00075 | 0.00066 | 0.00064 | 0.00071 | 0.0011 | 0.00095 | 0.00118 | 0.00076 | 0.00098 | 0.00049 | 0.00078 | 0.00078 | 0.00103 | 0.00082 | 0.00068 | 0.00102 | 0.00114 | 0.00084 | 0.00114 | 0.00092 | 0.00081 |
| Cobalt (Co)Total | mg/L | 0.00024 | 0.0002 | 0.00029 | 0.00032 | 0.00046 | 0.00048 | 0.00042 | 0.00039 | 0.00036 | 0.0004 | 0.00028 | 0.00041 | 0.00044 | 0.00033 | 0.00032 | 0.00027 | 0.00042 | 0.00037 | 0.00028 | 0.00043 | 0.0003 | 0.00024 |
| Copper (Cu)Total | mg/L | 0.00119 | 0.00106 | 0.00131 | 0.00132 | 0.00186 | 0.00205 | 0.00153 | 0.00116 | 0.00103 | 0.00132 | 0.00105 | 0.00155 | 0.00139 | 0.00145 | 0.00121 | 0.00113 | 0.00188 | 0.00142 | 0.00109 | 0.00137 | 0.00122 | 0.00109 |
| Iron (Fe)Total | mg/L | 0.921 | 0.715 | 0.856 | 0.87 | 1.07 | 0.942 | 1.13 | 1.27 | 1.37 | 1.48 | 1.19 | 1.49 | 1.53 | 1.28 | 1.42 | 1.15 | 1.18 | 1.28 | 1.05 | 1.18 | 0.946 | 0.827 |
| Lead (Pb)Total | mg/L | 0.000231 | 0.000195 | 0.000258 | 0.000345 | 0.000394 | 0.000412 | 0.000333 | 0.000263 | 0.000244 | 0.000306 | 0.000276 | 0.000372 | 0.000381 | 0.000262 | 0.000281 | 0.000218 | 0.000265 | 0.000302 | 0.000251 | 0.000337 | 0.000259 | 0.000184 |
| Lithium (Li)Total | mg/L | 0.0029 | 0.0021 | 0.0017 | 0.0018 | 0.0028 | 0.0027 | 0.0022 | 0.002 | 0.0022 | 0.0019 | 0.0019 | 0.0024 | 0.0029 | 0.003 | 0.0029 | 0.0029 | 0.0019 | 0.0021 | 0.002 | 0.0021 | 0.0018 | 0.0017 |
| Magnesium (Mg)Total | mg/L | 5.54 | 3.85 | 3.7 | 3.8 | 6.22 | 8.61 | 4.57 | 4.62 | 5.2 | 5.02 | 5.04 | 5.5 | 6.14 | 5.95 | 6.33 | 6.8 | 3.71 | 3.97 | 3.64 | 3.5 | 2.73 | 2.96 |
| Manganese (Mn)Total | mg/L | 0.0481 | 0.0252 | 0.0809 | 0.121 | 0.193 | 0.183 | 0.0696 | 0.0716 | 0.0805 | 0.126 | 0.104 | 0.198 | 0.256 | 0.099 | 0.111 | 0.0535 | 0.0559 | 0.0375 | 0.0303 | 0.0451 | 0.0286 | 0.026 |
| Mercury (Hg)Total | ng/L | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Total | mg/L | 0.000162 | 0.000125 | 0.00013 | 0.000144 | 0.000586 | 0.000969 | 0.000302 | 0.000363 | 0.000347 | 0.000254 | 0.000125 | 0.000169 | 0.000187 | 0.000 | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-6 cont'd

| Less than detection limit, half value Wanipigow River - Downstream Analyte | Units | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | MWQSOG | MWQSOG | CCME | MDMER | |
|--|----------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|-------------------------|--------------------------|------------------------|----------|-------------|----------|----------|---------|-----------------|-----------------|-------------|---------------|-------|---------|
| | | L2520597-1 10/20/2020 | L2523594-1 10/27/2020 | L2525591-2 11/3/2020 | L2529050-1 11/12/2020 | L2531674-1 11/17/2020 | L2534197-1 11/24/2020 | L2536758-1 12/2/2020 | L2640496-1 9/14/2021 | L2642990-4 9/22/2021 | L2645860-1 9/28/2021 | L2648478-1 10/4/2021 | L2650898-3 10/12/2021 | L2653707-1 10/19/2021 | L2655279-1 10/25/2021 | L2659471-1 11/4/2021 | L2661865-1 11/11/2021 | Tier II Chronic PAL | | | | | | | Tier III PAL | Chronic PAL | Sch. 4 MAC | | |
| Alkalinity, Total (as CaCO3) | mg/L | 47.7 | 40.9 | 35.8 | 34.9 | 36.7 | 44.4 | 37.5 | 36.8 | 40.9 | 48.5 | 113 | 128 | 131 | 83.6 | 64.5 | 56.4 | 56 | 44 | 15.8 | 131 | 34 | 88 | | | | | | |
| Ammonia, Total (as N) | mg/L | 0.025 | 0.015 | 0.005 | 0.033 | 0.056 | 0.043 | 0.064 | 0.053 | 0.036 | 0.065 | 0.055 | 0.074 | 0.034 | 0.034 | 0.047 | 0.065 | 0.032 | 0.022 | 0.0025 | 0.408 | 0.05 | 88 | 2.74' | | | | | |
| Bicarbonate (HCO3) | mg/L | 58.2 | 49.9 | 43.7 | 42.6 | 44.8 | 54.2 | 45.8 | 44.9 | 49.9 | 59.2 | 138 | 156 | 160 | 102 | 78.7 | 68.8 | 68.2 | 53 | 19.3 | 160 | 42 | 88 | | | | | | |
| Carbonate (CO3) | mg/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.37 | 0.30 | 0.15 | 2.4 | 0.27 | 88 | | 250 | 120 | | | |
| Chloride (Cl) | mg/L | 7.34 | 2.18 | 1.5 | 1.46 | 1.43 | 1.18 | 1.37 | 0.89 | 1 | 1.18 | 31.7 | 39.4 | 38.7 | 12.2 | 3.68 | 2.72 | 8.04 | 2.19 | 0.55 | 45.5 | 11 | 88 | | | | | | |
| Conductivity | umhos/cm | 179 | 105 | 83.9 | 84.2 | 86.1 | 91.7 | 90.9 | 82.3 | 95.9 | 108 | 598 | 729 | 754 | 303 | 161 | 137 | 166.0 | 103 | 45.5 | 754 | 149 | 88 | | | | | | |
| Cyanide, Free | mg/L | 0.001 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0014 | 0.0011 | 0.0011 | 0.0013 | 0.001 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.00081 | 0.0005 | 0.00025 | 0.0050 | 0.001 | 88 | 0.0052 | | | | | |
| Cyanide, Total | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0015 | 0.0005 | 0.0005 | 0.0005 | 0.0017 | 0.0013 | 0.0005 | 0.0014 | 0.0005 | 0.0014 | 0.0005 | 0.0015 | 0.004 | 0.00086159 | 0.0005 | 0.00025 | 0.0050 | 0.001 | 88 | | | | | 1 | |
| Cyanide, Weak Acid Diss | mg/L | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0011 | 0.0005 | 0.0005 | 0.0011 | 0.0005 | 0.0005 | 0.0005 | 0.0031 | 0.000707 | 0.0005 | 0.00025 | 0.0050 | 0.0008 | 88 | | | | | | |
| Dissolved Organic Carbon | mg/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 11.9 | 11.3 | 11.4 | 11.9 | 11.5 | 10.4 | 10.7 | | 6.8 | 6.19 | 6.34 | 6.23 | 8.42 | 10.2 | 10.2 | 11.3 | 8.11 | 6.99 | 2.95 | 14.6 | 3.16 | 85 | 5.5-6.5 | | | | | |
| EC, Client Supplied | umhos/cm | 166 | 96.3 | 81.4 | 79.5 | 81 | 88.7 | 83.2 | 77 | 88.1 | 99.7 | 562 | 692 | 702 | 286 | 146 | 122 | 162 | 94.7 | 45.8 | 702 | 149 | 87 | | | | | | |
| Fluoride (F) | mg/L | 0.051 | 0.047 | 0.047 | 0.047 | 0.047 | 0.047 | 0.045 | 0.046 | 0.051 | 0.056 | 0.079 | 0.087 | 0.082 | 0.072 | 0.063 | 0.056 | 0.058 | 0.054 | 0.035 | 0.093 | 0.022 | 88 | | | 0.12 | | | |
| Hardness (as CaCO3) | mg/L | 65.2 | 45.4 | 43 | 41.1 | 41 | 45.5 | 42.7 | 44 | 51 | 61 | 198 | 238 | 254 | 112 | 82 | 68.1 | 66.1 | 47.4 | 26.2 | 254 | 45 | 88 | | | | | | |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0 | 88 | | | | | | |
| Nitrate (as N) | mg/L | 0.005 | 0.005 | 0.029 | 0.042 | 0.051 | 0.056 | 0.061 | 0.01 | 0.024 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.027 | 0.016 | 0.01 | 0.005 | 0.061 | 0.01 | 88 | 2.93 | 13 | | | | |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.042 | 0.035 | 0.035 | 0.07 | 0.02 | 88 | 10 | | | | | |
| Nitrite (as N) | mg/L | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.006 | 0.005 | 0.0025 | 0.01 | 0.003 | 88 | 0.06 | 0.06 | 0.06 | | | |
| pH | pH units | 7.8 | 7.65 | 7.62 | 7.65 | 7.72 | 7.43 | 7.67 | 7.17 | 7.59 | 7.76 | 7.75 | 8.02 | 8.03 | 7.09 | 7.78 | 7.72 | 7.55 | 7.56 | 6.97 | 8.37 | 1.931 | 88 | 6.5-9.0 | | | | | 6.0-9.5 |
| pH, Client Supplied | pH | 7.25 | 6.66 | 6.8 | 6.64 | 6.84 | 6.42 | 6.91 | 7.2 | 7.47 | 7.09 | 7.26 | 7.3 | 7.46 | 6.91 | 7.21 | 7.24 | 7.14 | 7.115 | 6.32 | 8.19 | 1.849 | 88 | 6.5-9.0 | | | | | 6.0-9.5 |
| Phosphorus (P)Total | mg/L | 0.0254 | 0.0251 | 0.0253 | 0.0248 | 0.0268 | 0.0298 | 0.0272 | 0.0514 | 0.0566 | 0.0484 | 0.0411 | 0.0355 | 0.025 | 0.022 | 0.0269 | 0.0299 | 0.0374 | 0.0395 | 0.0175 | 0.0566 | 0.013 | 88 | | | | | | |
| Ra226 | Bq/L | | | | | | | | | | | | | | | | | 0.0064 | 0.00755 | 0.0025 | 0.008 | 0.004 | 10 | | | 0.5 | | | 0.37 |
| Sulfate (SO4) | mg/L | 25.1 | 5.16 | 2.93 | 2.81 | 2.61 | 2.42 | 2.38 | 0.78 | 1.01 | 0.94 | 134 | 187 | 183 | 49.8 | 9.08 | 5.23 | 17.37 | 2.87 | 0.64 | 187 | 33 | 88 | | | | | | |
| TDS (Calculated) | mg/L | 93.8 | 50.8 | 43.5 | 41.7 | 43 | 48 | 44.8 | 43.5 | 46.3 | 54.6 | 351 | 453 | 461 | 170 | 85.3 | 69.4 | 93.7 | 51.65 | 25.3 | 461 | 90 | 88 | | | | | | |
| Temperature, Client Provided | Degree C | 1.7 | 0.7 | 1.5 | 0.2 | 0.1 | 0.1 | 0.2 | 16.2 | 15.7 | 12.9 | 14.2 | 13.4 | 9.3 | 5 | 3.1 | 2 | 14.4 | 16.3 | 0 | 25 | 8.6 | 88 | | | | | | |
| Total Kjeldahl Nitrogen | mg/L | 0.56 | 0.59 | 0.55 | 0.77 | 0.69 | 0.78 | 0.86 | 0.99 | 1.12 | 0.93 | 0.98 | 0.87 | 0.77 | 0.82 | 0.77 | 0.91 | 0.8 | 0.77 | 0.55 | 1.12 | 0.24 | 88 | | | | | | |
| Total Suspended Solids | mg/L | 3.6 | 5.8 | 6.4 | 5.9 | 5.2 | 5.2 | 6.6 | 10.9 | 8.4 | 8.5 | 7 | 6.9 | 4.5 | 2.9 | 4.1 | 3.8 | 7.5 | 6.4 | 1 | 29.9 | 5.2 | 88 | +5 ² | | | | | 15 |
| Turbidity | NTU | 6.8 | 7.81 | 7.31 | 6.72 | 6.45 | 7.53 | 7.96 | 13.6 | 12.8 | 12.6 | 8.23 | 7.41 | 5.88 | 6.37 | 8.13 | 7.97 | 7.07 | 6.45 | 2.7 | 13.7 | 2.9 | 88 | | | | | | |
| Aluminum (Al)Total | mg/L | 0.207 | 0.265 | 0.238 | 0.232 | 0.239 | 0.202 | 0.266 | 0.592 | 0.447 | 0.393 | 0.249 | 0.232 | 0.168 | 0.168 | 0.264 | 0.244 | 0.283 | 0.252 | 0.130 | 0.592 | 0.121 | 88 | | | 0.1 | | | |
| Antimony (Sb)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00016 | 0.00003 | 88 | | | | | | |
| Arsenic (As)Total | mg/L | 0.00076 | 0.0008 | 0.00072 | 0.00073 | 0.00071 | 0.00071 | 0.00077 | 0.00161 | 0.00149 | 0.00148 | 0.00111 | 0.00097 | 0.00095 | 0.00103 | 0.00098 | 0.00089 | 0.00128 | 0.00130 | 0.00071 | 0.00198 | 0.00049 | 88 | | | 0.005 | | | 0.3 |
| Barium (Ba)Total | mg/L | 0.0122 | 0.0105 | 0.00938 | 0.00977 | 0.00979 | 0.0101 | 0.0111 | 0.0176 | 0.016 | 0.0167 | 0.0462 | 0.0535 | 0.0484 | 0.0214 | 0.0142 | 0.0125 | 0.0166 | 0.0137 | 0.00935 | 0.0535 | 0.00917 | 88 | | | | | | |
| Beryllium (Be)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00004 | 0.00005 | 0.000025 | 0.00005 | 0.00002 | 88 | | | | | | |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0 | 88 | | | | | | |
| Boron (B)Total | mg/L | 0.012 | 0.01 | 0.005 | 0.005 | 0.005 | 0.014 | 0.016 | 0.011 | 0.01 | 0.013 | 0.033 | 0.04 | 0.045 | 0.029 | 0.011 | 0.005 | 0.0161 | 0.011 | 0.0025 | 0.16 | 0.01844 | 88 | | | 1.5 | | | |
| Cadmium (Cd)Total | mg/L | 0.000064 | 0.000025 | 0.000069 | 0.000064 | 0.000063 | 0.000058 | 0.000078 | 0.000091 | 0.000104 | 0.000097 | 0.000088 | 0.000066 | 0.000066 | 0.000076 | 0.000061 | 0.000122 | 0.00010 | 0.00009 | 0.000025 | 0.000286 | 0.000005 | 88 | | | 0.0008' | | | |
| Calcium (Ca)Total | mg/L | 14.7 | 11.3 | 9.71 | 10.8 | 9.88 | 10.6 | 11 | 12.6 | 12.2 | 14.3 | 39.9 | 55 | 54.2 | 26.9 | 18 | 15.7 | 15.2 | 11.4 | 6.25 | 55 | 9.8 | 88 | | | | | | |
| Cesium (Cs)Total | mg/L | 0.000024 | 0.000036 | 0.00003 | 0.000033 | 0.000029 | 0.000022 | 0.000034 | 0.000069 | 0.000057 | 0.000041 | 0.000029 | 0.00003 | 0.000019 | 0.000016 | 0.000029 | 0.000028 | 0.000031 | 0.00003 | 0.000011 | 0.000069 | 0.00001 | 88 | | | | | | |
| Chromium (Cr)Total | mg/L | 0.00054 | 0.00064 | 0.00059 | 0.00059 | 0.00059 | 0.00047 | 0.00061 | 0.00133 | 0.0012 | 0.00098 | 0.00062 | 0.00055 | 0.00044 | 0.00057 | 0.00064 | 0.00072 | 0.00073348 | 0.0007 | 0.000025 | 0.00133 | 0.00029 | 88 | | | | | | |
| Cobalt (Co)Total | mg/L | 0.0004 | 0.00029 | 0.00024 | 0.00026 | 0.00023 | 0.00021 | 0.00026 | | | | | | | | | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-6 cont'd

| <i>Less than detection limit, half value</i> | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS |
|--|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Wanipigow River - Downstream | L1960980-4 | L1964768-2 | L1971728-3 | L1976404-2 | L1979675-4 | L1983563-2 | L1986645-2 | L1990659-2 | L21107152 | L21190892 | L21226492 | L21266382 | L21307662 | L21349392 | L21385551 | L21422551 | L21460331 | L21507171 | L21538251 | L21599161 | L21622401 | L21663851 |
| Analyte | 7/18/2017 | 7/25/2017 | 8/8/2017 | 8/15/2017 | 8/22/2017 | 8/29/2017 | 9/5/2017 | 9/12/2017 | 6/12/2018 | 6/25/2018 | 7/3/2018 | 7/10/2018 | 7/17/2018 | 7/24/2018 | 7/31/2018 | 8/7/2018 | 8/14/2018 | 8/21/2018 | 8/27/2018 | 9/5/2018 | 9/11/2018 | 9/18/2018 |
| | Units | | | | | | | | | | | | | | | | | | | | | |
| Silver (Ag)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Sodium (Na)Total | mg/L | 1.51 | 5.55 | 3.04 | 32.5 | 21.8 | 13.4 | 34.2 | 20.5 | 1.55 | 5.81 | 19.8 | 27.7 | 47 | 56.6 | 46.2 | 33.6 | 23 | 21.1 | 17.4 | 17.4 | 3.21 |
| Strontium (Sr)Total | mg/L | 0.0336 | 0.0392 | 0.0317 | 0.0949 | 0.0832 | 0.0726 | 0.116 | 0.0869 | 0.0243 | 0.0347 | 0.0588 | 0.088 | 0.13 | 0.162 | 0.121 | 0.111 | 0.0969 | 0.0854 | 0.0828 | 0.0805 | 0.0804 |
| Sulfur (S)Total | mg/L | 0.25 | 2.5 | 1.13 | 19.2 | 13.2 | 7.52 | 18.4 | 9.85 | 0.25 | 1.42 | 8.45 | 12.3 | 19.6 | 24.1 | 21.6 | 12.6 | 7.94 | 6.3 | 5.38 | 4.94 | 3.97 |
| Tellurium (Te)Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| Thallium (Tl)Total | mg/L | 0.000025 | 0.00001 | 0.000025 | 0.0000100 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.0000120 | 0.000025 | 0.000025 | 0.0000120 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Thorium (Th)Total | mg/L | 0.000025 | 0.00014 | 0.00016 | 0.0001 | 0.00013 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00011 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Tin (Sn)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Titanium (Ti)Total | mg/L | 0.013 | 0.0143 | 0.0165 | 0.00784 | 0.0119 | 0.00763 | 0.00842 | 0.00649 | 0.00906 | 0.0147 | 0.0132 | 0.0102 | 0.00967 | 0.00777 | 0.00502 | 0.00636 | 0.00574 | 0.00809 | 0.00658 | 0.00843 | 0.00743 |
| Tungsten (W)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Uranium (U)Total | mg/L | 0.00014 | 0.000179 | 0.000154 | 0.000226 | 0.000283 | 0.000227 | 0.000301 | 0.000312 | 0.000107 | 0.000118 | 0.00014 | 0.000193 | 0.000339 | 0.000392 | 0.000323 | 0.000305 | 0.000281 | 0.000269 | 0.000294 | 0.00027 | 0.000272 |
| Vanadium (V)Total | mg/L | 0.00197 | 0.00214 | 0.00215 | 0.00187 | 0.00208 | 0.00145 | 0.00153 | 0.00149 | 0.00151 | 0.00191 | 0.00197 | 0.00166 | 0.002 | 0.0019 | 0.00152 | 0.0018 | 0.00188 | 0.00169 | 0.00146 | 0.00212 | 0.00156 |
| Zinc (Zn)Total | mg/L | 0.0015 | 0.0055 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0031 | 0.0042 | 0.0015 | 0.0015 | 0.0038 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0098 | 0.0015 | 0.0015 | 0.0015 |
| Zirconium (Zr)Total | mg/L | 0.00045 | 0.000537 | 0.000587 | 0.000392 | 0.000524 | 0.000384 | 0.000371 | 0.000401 | 0.000302 | 0.000364 | 0.000333 | 0.000392 | 0.000344 | 0.000314 | 0.000227 | 0.000284 | 0.000263 | 0.000271 | 0.000289 | 0.00031 | 0.000274 |
| Aluminum (Al)Dissolved | mg/L | 0.0634 | 0.0864 | 0.13 | 0.0563 | 0.06 | 0.054 | 0.0359 | 0.0367 | 0.0431 | 0.0587 | 0.0475 | 0.0605 | 0.0239 | 0.022 | 0.0163 | 0.0221 | 0.0284 | 0.0264 | 0.031 | 0.0291 | 0.0253 |
| Antimony (Sb)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Arsenic (As)Dissolved | mg/L | 0.00131 | 0.0012 | 0.00131 | 0.00119 | 0.00152 | 0.00118 | 0.00134 | 0.0011 | 0.00103 | 0.00136 | 0.00122 | 0.00154 | 0.00151 | 0.0015 | 0.00146 | 0.00151 | 0.00164 | 0.00159 | 0.0017 | 0.00187 | 0.00146 |
| Barium (Ba)Dissolved | mg/L | 0.0126 | 0.0133 | 0.0107 | 0.0239 | 0.02 | 0.0154 | 0.026 | 0.0207 | 0.00896 | 0.013 | 0.0193 | 0.0244 | 0.0245 | 0.0275 | 0.023 | 0.02 | 0.0175 | 0.017 | 0.0186 | 0.0175 | 0.0184 |
| Beryllium (Be)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Bismuth (Bi)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Dissolved | mg/L | 0.011 | 0.015 | 0.01 | 0.028 | 0.025 | 0.018 | 0.029 | 0.02 | 0.0025 | 0.014 | 0.019 | 0.025 | 0.034 | 0.04 | 0.038 | 0.031 | 0.024 | 0.022 | 0.021 | 0.021 | 0.024 |
| Cadmium (Cd)Dissolved | mg/L | 0.0000149 | 0.0000067 | 0.0000086 | 0.0000025 | 0.0000091 | 0.0000064 | 0.0000063 | 0.0000025 | 0.0000051 | 0.0000066 | 0.0000080 | 0.0000078 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 |
| Calcium (Ca)Dissolved | mg/L | 12.8 | 13.5 | 10.7 | 25.7 | 22.9 | 20.8 | 29.5 | 25.7 | 9.26 | 13.8 | 18.3 | 20.5 | 27.3 | 31 | 28.6 | 25.1 | 23.2 | 23 | 22.2 | 23 | 23.1 |
| Cesium (Cs)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Chromium (Cr)Dissolved | mg/L | 0.0003 | 0.00028 | 0.00041 | 0.0003 | 0.0003 | 0.00029 | 0.00019 | 0.00019 | 0.00019 | 0.00023 | 0.00018 | 0.0002 | 0.00013 | 0.0001 | 0.00012 | 0.00012 | 0.00013 | 0.00012 | 0.00012 | 0.00012 | 0.00014 |
| Cobalt (Co)Dissolved | mg/L | 0.00017 | 0.00019 | 0.00022 | 0.00028 | 0.00029 | 0.0002 | 0.00034 | 0.00019 | 0.00025 | 0.00014 | 0.00035 | 0.00038 | 0.00035 | 0.00042 | 0.00029 | 0.0002 | 0.00015 | 0.00014 | 0.0002 | 0.00012 | 0.00016 |
| Copper (Cu)Dissolved | mg/L | 0.00116 | 0.00117 | 0.00103 | 0.00114 | 0.00121 | 0.00101 | 0.00109 | 0.00106 | 0.00101 | 0.0012 | 0.0013 | 0.0016 | 0.00125 | 0.00131 | 0.00115 | 0.00102 | 0.00087 | 0.00087 | 0.0008 | 0.00073 | 0.001 |
| Iron (Fe)Dissolved | mg/L | 0.697 | 0.739 | 0.76 | 0.58 | 0.752 | 0.697 | 0.664 | 0.589 | 0.475 | 0.558 | 0.54 | 0.471 | 0.3 | 0.255 | 0.288 | 0.345 | 0.457 | 0.378 | 0.423 | 0.374 | 0.537 |
| Lead (Pb)Dissolved | mg/L | 0.000241 | 0.000209 | 0.000169 | 0.000147 | 0.000212 | 0.000177 | 0.000186 | 0.0002 | 0.000141 | 0.000254 | 0.00023 | 0.000206 | 0.000129 | 0.000113 | 0.000113 | 0.000131 | 0.000198 | 0.000164 | 0.000191 | 0.000187 | 0.00017 |
| Lithium (Li)Dissolved | mg/L | 0.0026 | 0.0023 | 0.0021 | 0.0032 | 0.0033 | 0.0035 | 0.0033 | 0.0035 | 0.0017 | 0.0023 | 0.0025 | 0.0025 | 0.003 | 0.0031 | 0.0034 | 0.0045 | 0.0036 | 0.0035 | 0.0036 | 0.0036 | 0.004 |
| Magnesium (Mg)Dissolved | mg/L | 5.28 | 5.78 | 4.69 | 11.3 | 10.6 | 9.45 | 13 | 11.5 | 3.95 | 5.23 | 7.56 | 11.4 | 11.7 | 13.7 | 14.3 | 12.8 | 12.6 | 11.8 | 11.6 | 11.7 | 7.67 |
| Manganese (Mn)Dissolved | mg/L | 0.138 | 0.0727 | 0.0797 | 0.0762 | 0.193 | 0.0951 | 0.237 | 0.0873 | 0.0332 | 0.106 | 0.182 | 0.0642 | 0.00199 | 0.00195 | 0.00196 | 0.00231 | 0.0166 | 0.144 | 0.322 | 0.186 | 0.248 |
| Mercury (Hg)Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Dissolved | mg/L | 0.000242 | 0.000472 | 0.00021 | 0.00209 | 0.00146 | 0.000866 | 0.00199 | 0.00105 | 0.000164 | 0.000412 | 0.00149 | 0.00226 | 0.00308 | 0.00357 | 0.00271 | 0.00195 | 0.00142 | 0.00121 | 0.00108 | 0.000933 | 0.000868 |
| Nickel (Ni)Dissolved | mg/L | 0.00086 | 0.00109 | 0.00115 | 0.00113 | 0.00122 | 0.00107 | 0.00111 | 0.00102 | 0.00073 | 0.001 | 0.00104 | 0.00123 | 0.00082 | 0.00092 | 0.00089 | 0.00078 | 0.0009 | 0.00083 | 0.00079 | 0.00078 | 0.00092 |
| Phosphorus (P)Dissolved | mg/L | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 |
| Potassium (K)Dissolved | mg/L | 0.58 | 1.03 | 0.705 | 4.84 | 3.67 | 2.56 | 5.48 | 3.38 | 0.725 | 1.19 | 2.92 | 5.75 | 7.17 | 8.94 | 7.55 | 5.71 | 4.24 | 3.74 | 3.39 | 3.31 | 3.22 |
| Rubidium (Rb)Dissolved | mg/L | 0.00173 | 0.0017 | 0.00136 | 0.00251 | 0.00238 | 0.00183 | 0.00279 | 0.00195 | 0.00191 | 0.00235 | 0.00211 | 0.00283 | 0.00275 | 0.00321 | 0.00264 | 0.00224 | 0.00203 | 0.00193 | 0.00186 | 0.002 | 0.00184 |
| Selenium (Se)Dissolved | mg/L | 0.000133 | 0.000164 | 0.000166 | 0.000137 | 0.000107 | 0.000133 | 0.000113 | 0.000115 | 0.000119 | 0.000097 | 0.000153 | 0.000116 | 0.000126 | 0.000095 | 0.000142 | 0.000155 | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-6 cont'd

| <i>Less than detection limit, half value</i> | | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | |
|--|--------------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Wanipigow River - Downstream | | L21704731 | L21744711 | L2294147-6 | L2298725-4 | L2302403-6 | L2306799-6 | L2311297-6 | L2315601-4 | L2319873-4 | L2323329-4 | L2328155-4 | L2332529-4 | L2338063-4 | L2340315-4 | L2344830-4 | L2349240-4 | L2353453-4 | L2357774-4 | L2362279-5 | L2365580-7 | L2369900-5 | L2373901-5 |
| Analyte | Units | 9/25/2018 | 10/2/2018 | 6/18/2019 | 6/25/2019 | 7/2/2019 | 7/9/2019 | 7/16/2019 | 7/23/2019 | 7/30/2019 | 8/6/2019 | 8/13/2019 | 8/20/2019 | 8/28/2019 | 9/3/2019 | 9/10/2019 | 9/17/2019 | 9/24/2019 | 10/1/2019 | 10/8/2019 | 10/15/2019 | 10/22/2019 | 10/29/2019 |
| Silver (Ag)Total | mg/L | 0.000025 | 0.000025 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000011 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 |
| Sodium (Na)Total | mg/L | 1.95 | 1.69 | 1.51 | 1.3 | 7.56 | 20.4 | 4.24 | 5.2 | 7.99 | 4.28 | 2.72 | 2.59 | 2.7 | 3.17 | 2.86 | 2.85 | 1.87 | 2.51 | 1.58 | 1.59 | 1.69 | 2.17 |
| Strontium (Sr)Total | mg/L | 0.0367 | 0.0239 | 0.0221 | 0.0252 | 0.0431 | 0.0751 | 0.0324 | 0.0347 | 0.0446 | 0.0378 | 0.0337 | 0.0343 | 0.0375 | 0.0367 | 0.0395 | 0.0387 | 0.022 | 0.0255 | 0.0206 | 0.0185 | 0.0179 | 0.0187 |
| Sulfur (S)Total | mg/L | 0.54 | 0.81 | 0.25 | 0.25 | 3.07 | 10.3 | 1.66 | 2.07 | 3.6 | 1.6 | 0.92 | 0.86 | 0.84 | 1.02 | 0.25 | 0.97 | 0.59 | 0.84 | 0.25 | 0.52 | 0.78 | 0.99 |
| Tellurium (Te)Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| Thallium (Tl)Total | mg/L | 0.000025 | 0.000025 | 0.000005 | 0.000005 | 0.000013 | 0.000012 | 0.000027 | 0.000005 | 0.000005 | 0.000011 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000011 | 0.000005 | 0.000011 | 0.000005 | 0.000005 |
| Thorium (Th)Total | mg/L | 0.000025 | 0.000025 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.00014 | 0.0001 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.00011 | 0.00014 | 0.000005 | 0.000013 | 0.00011 | 0.000005 |
| Tin (Sn)Total | mg/L | 0.000025 | 0.000025 | 0.00014 | 0.00005 | 0.00012 | 0.00025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Titanium (Ti)Total | mg/L | 0.00901 | 0.0092 | 0.0077 | 0.00521 | 0.0113 | 0.00976 | 0.0119 | 0.0105 | 0.00854 | 0.0135 | 0.0044 | 0.00971 | 0.00917 | 0.00553 | 0.00882 | 0.00697 | 0.0112 | 0.0159 | 0.0077 | 0.015 | 0.0119 | 0.00774 |
| Tungsten (W)Total | mg/L | 0.000025 | 0.000025 | 0.000005 | 0.000005 | 0.00042 | 0.00031 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00028 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Uranium (U)Total | mg/L | 0.000167 | 0.0001 | 0.00009 | 0.000106 | 0.000137 | 0.000152 | 0.000128 | 0.000102 | 0.0001 | 0.000104 | 0.000104 | 0.000124 | 0.000142 | 0.000141 | 0.000148 | 0.000146 | 0.000099 | 0.000123 | 0.000086 | 0.000099 | 0.000077 | 0.000072 |
| Vanadium (V)Total | mg/L | 0.0012 | 0.00109 | 0.00131 | 0.00124 | 0.00161 | 0.00158 | 0.00171 | 0.00153 | 0.00153 | 0.00181 | 0.00136 | 0.00187 | 0.0027 | 0.00152 | 0.00196 | 0.00124 | 0.0015 | 0.0016 | 0.0011 | 0.00162 | 0.00119 | 0.00123 |
| Zinc (Zn)Total | mg/L | 0.0015 | 0.0098 | 0.0067 | 0.0042 | 0.0061 | 0.0355 | 0.0038 | 0.0043 | 0.0015 | 0.0032 | 0.0015 | 0.0114 | 0.0015 | 0.0121 | 0.0015 | 0.0051 | 0.0044 | 0.0042 | 0.0091 | 0.0052 | 0.0053 | 0.0031 |
| Zirconium (Zr)Total | mg/L | 0.000424 | 0.000421 | 0.00029 | 0.0003 | 0.00034 | 0.00036 | 0.00067 | 0.00054 | 0.00044 | 0.00044 | 0.00038 | 0.00046 | 0.00043 | 0.00043 | 0.00048 | 0.00042 | 0.00055 | 0.00061 | 0.0005 | 0.00058 | 0.00045 | 0.00038 |
| Aluminum (Al)Dissolved | mg/L | 0.125 | 0.126 | 0.0569 | 0.0468 | 0.049 | 0.0415 | 0.147 | 0.119 | 0.0896 | 0.0752 | 0.073 | 0.0736 | 0.061 | 0.0824 | 0.0821 | 0.0872 | 0.189 | 0.236 | 0.221 | 0.185 | 0.185 | 0.188 |
| Antimony (Sb)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.00021 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Arsenic (As)Dissolved | mg/L | 0.00087 | 0.00062 | 0.00096 | 0.00111 | 0.00117 | 0.0012 | 0.00117 | 0.00134 | 0.00143 | 0.00149 | 0.00139 | 0.00161 | 0.00154 | 0.00126 | 0.00125 | 0.00107 | 0.00091 | 0.00086 | 0.00085 | 0.00076 | 0.00071 | 0.00064 |
| Barium (Ba)Dissolved | mg/L | 0.0112 | 0.00784 | 0.00844 | 0.0086 | 0.0132 | 0.0187 | 0.0117 | 0.011 | 0.00889 | 0.00811 | 0.00964 | 0.0102 | 0.0109 | 0.0119 | 0.0116 | 0.0123 | 0.0108 | 0.0101 | 0.00919 | 0.0091 | 0.00872 | 0.00872 |
| Beryllium (Be)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 |
| Bismuth (Bi)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Dissolved | mg/L | 0.0025 | 0.0025 | 0.01 | 0.01 | 0.015 | 0.019 | 0.01 | 0.01 | 0.014 | 0.01 | 0.01 | 0.01 | 0.01 | 0.012 | 0.018 | 0.011 | 0.01 | 0.01 | 0.014 | 0.01 | 0.01 | 0.01 |
| Cadmium (Cd)Dissolved | mg/L | 0.000025 | 0.0000124 | 0.0000119 | 0.0000125 | 0.000025 | 0.0000109 | 0.0000148 | 0.0000072 | 0.0000053 | 0.0000052 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.0000090 | 0.0000092 | 0.0000070 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Calcium (Ca)Dissolved | mg/L | 13.7 | 8.37 | 8.26 | 8.75 | 13.6 | 19.1 | 9.9 | 9.32 | 10.5 | 10.5 | 10 | 12.1 | 12.7 | 12.6 | 13.6 | 14.5 | 8.63 | 7.33 | 7.39 | 6.67 | 6.2 | 6.43 |
| Cesium (Cs)Dissolved | mg/L | 0.000025 | 0.0000150 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 |
| Chromium (Cr)Dissolved | mg/L | 0.00036 | 0.00033 | 0.00026 | 0.00027 | 0.00023 | 0.00021 | 0.00045 | 0.00044 | 0.0004 | 0.00036 | 0.00036 | 0.00031 | 0.00029 | 0.0004 | 0.00038 | 0.00037 | 0.00056 | 0.00055 | 0.00051 | 0.00049 | 0.00051 | 0.0005 |
| Cobalt (Co)Dissolved | mg/L | 0.000025 | 0.0001 | 0.00012 | 0.00005 | 0.00012 | 0.0002 | 0.0002 | 0.00017 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Copper (Cu)Dissolved | mg/L | 0.00101 | 0.00075 | 0.00095 | 0.00112 | 0.00142 | 0.00129 | 0.00123 | 0.00086 | 0.0009 | 0.00106 | 0.00092 | 0.0012 | 0.00106 | 0.00125 | 0.00098 | 0.00095 | 0.00131 | 0.00096 | 0.00088 | 0.00105 | 0.00097 | 0.00082 |
| Iron (Fe)Dissolved | mg/L | 0.577 | 0.388 | 0.496 | 0.565 | 0.53 | 0.51 | 0.617 | 0.74 | 0.838 | 0.849 | 0.826 | 0.994 | 0.88 | 0.901 | 0.839 | 0.681 | 0.606 | 0.659 | 0.516 | 0.493 | 0.45 | 0.437 |
| Lead (Pb)Dissolved | mg/L | 0.0001 | 0.000086 | 0.000134 | 0.000152 | 0.000214 | 0.000182 | 0.000122 | 0.000112 | 0.000112 | 0.00017 | 0.000163 | 0.000229 | 0.000202 | 0.000153 | 0.000138 | 0.000116 | 0.000088 | 0.000108 | 0.000093 | 0.000089 | 0.000091 | 0.000073 |
| Lithium (Li)Dissolved | mg/L | 0.0023 | 0.0021 | 0.0014 | 0.0016 | 0.0021 | 0.0024 | 0.0019 | 0.0018 | 0.0017 | 0.0019 | 0.0018 | 0.0023 | 0.0025 | 0.0026 | 0.0031 | 0.0027 | 0.0019 | 0.0018 | 0.0017 | 0.0016 | 0.0015 | 0.0014 |
| Magnesium (Mg)Dissolved | mg/L | 6.21 | 3.5 | 3.54 | 3.72 | 5.67 | 8.76 | 4.12 | 4.35 | 5.4 | 4.87 | 4.94 | 5.01 | 6.01 | 5.94 | 6.57 | 6.7 | 3.9 | 3.48 | 3.56 | 3.2 | 2.59 | 2.81 |
| Manganese (Mn)Dissolved | mg/L | 0.0117 | 0.0193 | 0.0388 | 0.0319 | 0.00352 | 0.0441 | 0.0378 | 0.0344 | 0.00448 | 0.00554 | 0.00609 | 0.0144 | 0.00535 | 0.00541 | 0.00407 | 0.00386 | 0.00282 | 0.00616 | 0.00175 | 0.00133 | 0.00285 | 0.00489 |
| Mercury (Hg)Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Dissolved | mg/L | 0.000164 | 0.00009 | 0.000121 | 0.000138 | 0.000545 | 0.00103 | 0.000308 | 0.000269 | 0.000312 | 0.000218 | 0.000167 | 0.00016 | 0.000167 | 0.000148 | 0.000146 | 0.00015 | 0.000116 | 0.00012 | 0.000121 | 0.000097 | 0.000108 | 0.000117 |
| Nickel (Ni)Dissolved | mg/L | 0.00084 | 0.00067 | 0.00076 | 0.00082 | 0.00089 | 0.00088 | 0.00118 | 0.0012 | 0.00112 | 0.00108 | 0.00095 | 0.00101 | 0.00083 | 0.00107 | 0.00102 | 0.00101 | 0.00121 | 0.00109 | 0.00098 | 0.00089 | 0.00082 | 0.00073 |
| Phosphorus (P)Dissolved | mg/L | 0.025 | 0.025 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.035 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| Potassium (K)Dissolved | mg/L | 0.84 | 0.803 | 0.639 | 0.565 | 1.6 | 2.95 | 0.953 | 1.15 | 1.51 | 1.01 | 0.787 | 0.922 | 0.864 | 0.86 | 0.836 | 0.916 | 1.07 | 0.973 | 0.581 | 0.619 | 0.604 | 0.777 |
| Rubidium (Rb)Dissolved | mg/L | 0.00186 | 0.00164 | 0.00204 | 0.00178 | 0.00243 | 0.00225 | 0.0019 | 0.00211 | 0.00221 | 0.00185 | 0.00192 | 0.00209 | 0.002 | 0.00193 | 0.00198 | 0.00217 | 0.00298 | 0.00226 | 0.00178 | 0.00165 | 0.00156 | 0.00161 |
| Selenium (Se)Dissolved | mg/L | 0.000158 | 0.000109 | 0.000122 | 0.000111 | 0.000154 | 0.00017 | 0.000166 | 0.000133 | 0.000156 | 0.000175 | 0.000118 | 0.000163 | 0.000142 | 0.000151 | 0.000135 | 0.000119 | 0.000124 | 0.000153 | 0.00015 | 0.000153 | 0.000136 | 0.000105 |
| Silicon (Si)Dissolved | mg/L | 2.93 | 2.59 | 0.743 | 0.815 | 1.21 | 1.43 | 2.92 | 2.32 | 2.41 | 2.35 | 2.51 | 2.19 | 2.09 | 2.91 | 3.4 | 3.34 | 3.83 | 3.17 | 3.1 | 3.56 | 3.26 | 3.42 |
| Silver (Ag)Dissolved | mg/L | 0.000025 | 0.000025 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 |
| Sodium (Na)Dissolved | mg/L | 2.12 | 1.59 | 1.3 | | | | | | | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-6 cont'd

| <i>Less than detection limit, half value</i> | | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | WR-DS | |
|--|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Wanipigow River - Downstream | | L2377639-5 | L2380719-3 | L2384847-3 | L2387900-3 | L2391104-3 | L2459189-2 | L2465848-2 | L2468477-4 | L2471686-1 | L2474258-2 | L2478400-1 | L2481567-3 | L2484805-1 | L2487940-1 | L2492070-2 | L2494017-1 | L2498782-7 | L2501688-1 | L2504186-1 | L2510579-1 | L2513882-1 | L2516774-1 |
| Analyte | Units | 11/5/2019 | 11/12/2019 | 11/19/2019 | 11/26/2019 | 12/3/2019 | 6/10/2020 | 6/23/2020 | 6/30/2020 | 7/7/2020 | 7/14/2020 | 7/21/2020 | 7/28/2020 | 8/4/2020 | 8/11/2020 | 8/18/2020 | 8/25/2020 | 9/1/2020 | 9/8/2020 | 9/15/2020 | 9/29/2020 | 10/6/2020 | 10/13/2020 |
| Silver (Ag)Total | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 |
| Sodium (Na)Total | mg/L | 2.63 | 3.46 | 1.38 | 1.58 | 1.47 | 1.35 | 1.39 | 1.97 | 3.77 | 6.88 | 3.4 | 1.2 | 1.29 | 1.3 | 1.33 | 2.05 | 1.62 | 2.06 | 1.63 | 14.8 | 14.8 | 15 |
| Strontium (Sr)Total | mg/L | 0.0236 | 0.0254 | 0.0194 | 0.0199 | 0.0218 | 0.021 | 0.0186 | 0.0231 | 0.0335 | 0.0445 | 0.034 | 0.0216 | 0.0221 | 0.0302 | 0.0239 | 0.0283 | 0.0303 | 0.0289 | 0.0274 | 0.0839 | 0.088 | 0.0921 |
| Sulfur (S)Total | mg/L | 1.03 | 1.93 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 1.02 | 2.04 | 4.64 | 2.71 | 0.25 | 0.65 | 0.63 | 0.25 | 0.58 | 0.85 | 0.65 | 0.53 | 11.5 | 14.2 | 13.7 |
| Tellurium (Te)Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Thallium (Tl)Total | mg/L | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000011 | 0.000005 | 0.00001 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 |
| Thorium (Th)Total | mg/L | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.0001 | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Tin (Sn)Total | mg/L | 0.00005 | 0.00005 | 0.00039 | 0.00106 | 0.00871 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Titanium (Ti)Total | mg/L | 0.00693 | 0.00615 | 0.00441 | 0.00457 | 0.00494 | 0.00814 | 0.0144 | 0.00844 | 0.00572 | 0.00822 | 0.0145 | 0.00796 | 0.00884 | 0.00842 | 0.00859 | 0.00764 | 0.00733 | 0.00764 | 0.00789 | 0.00734 | 0.00847 | 0.00765 |
| Tungsten (W)Total | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00012 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00021 | 0.00005 | 0.00005 |
| Uranium (U)Total | mg/L | 0.000081 | 0.000078 | 0.000079 | 0.000087 | 0.000095 | 0.000094 | 0.000087 | 0.000102 | 0.000087 | 0.000096 | 0.000109 | 0.000072 | 0.000074 | 0.000094 | 0.000093 | 0.000096 | 0.000102 | 0.0001 | 0.000108 | 0.000123 | 0.000107 | 0.000126 |
| Vanadium (V)Total | mg/L | 0.0009 | 0.00105 | 0.00075 | 0.00094 | 0.00092 | 0.0011 | 0.00151 | 0.00134 | 0.00137 | 0.00127 | 0.00209 | 0.00132 | 0.00151 | 0.00168 | 0.00175 | 0.0013 | 0.00148 | 0.00115 | 0.00113 | 0.00109 | 0.00094 | 0.00125 |
| Zinc (Zn)Total | mg/L | 0.0045 | 0.0034 | 0.0015 | 0.0015 | 0.0036 | 0.0035 | 0.0086 | 0.0032 | 0.003 | 0.003 | 0.0038 | 0.003 | 0.003 | 0.003 | 0.0038 | 0.003 | 0.0047 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| Zirconium (Zr)Total | mg/L | 0.00037 | 0.00033 | 0.00027 | 0.00027 | 0.00027 | 0.00033 | 0.0005 | 0.00041 | 0.00035 | 0.00039 | 0.00046 | 0.00035 | 0.00031 | 0.00031 | 0.00029 | 0.00024 | 0.00023 | 0.00024 | 0.00025 | 0.00025 | 0.00028 | 0.00023 |
| Aluminum (Al)Dissolved | mg/L | 0.14 | 0.162 | 0.143 | 0.138 | 0.133 | 0.0767 | 0.112 | 0.0987 | 0.0911 | 0.0742 | 0.0889 | 0.108 | 0.0844 | 0.071 | 0.0536 | 0.0324 | 0.0431 | 0.045 | 0.0402 | 0.0295 | 0.0347 | 0.0298 |
| Antimony (Sb)Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Arsenic (As)Dissolved | mg/L | 0.00062 | 0.00071 | 0.00069 | 0.00065 | 0.00064 | 0.00083 | 0.00077 | 0.0012 | 0.00132 | 0.00126 | 0.00101 | 0.00114 | 0.00119 | 0.00111 | 0.00112 | 0.00143 | 0.001 | 0.00084 | 0.00083 | 0.00077 | 0.00073 | 0.00072 |
| Barium (Ba)Dissolved | mg/L | 0.00796 | 0.0108 | 0.00841 | 0.00842 | 0.0088 | 0.00862 | 0.00858 | 0.00964 | 0.0109 | 0.0124 | 0.00985 | 0.00956 | 0.00829 | 0.00872 | 0.00943 | 0.00926 | 0.00917 | 0.00959 | 0.00892 | 0.0171 | 0.0152 | 0.0147 |
| Beryllium (Be)Dissolved | mg/L | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 |
| Bismuth (Bi)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 |
| Boron (B)Dissolved | mg/L | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.005 | 0.011 | 0.005 | 0.005 | 0.011 | 0.014 | 0.005 | 0.032 | 0.012 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.016 | 0.013 | 0.012 |
| Cadmium (Cd)Dissolved | mg/L | 0.0000025 | 0.0000082 | 0.0000070 | 0.0000077 | 0.0000068 | 0.0000025 | 0.0000025 | 0.0000075 | 0.0000082 | 0.0000050 | 0.0000065 | 0.0000058 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000072 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 |
| Calcium (Ca)Dissolved | mg/L | 6.21 | 8.59 | 7.56 | 7.71 | 7.84 | 8.12 | 7.67 | 6.66 | 8.43 | 10.4 | 9.04 | 6.94 | 6.72 | 7.99 | 8.82 | 9.11 | 10.1 | 10.2 | 10.1 | 17.9 | 17.5 | 18.3 |
| Cesium (Cs)Dissolved | mg/L | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 |
| Chromium (Cr)Dissolved | mg/L | 0.0004 | 0.00034 | 0.00036 | 0.0004 | 0.0004 | 0.00029 | 0.00037 | 0.00037 | 0.00036 | 0.00031 | 0.00037 | 0.00041 | 0.00035 | 0.00032 | 0.00029 | 0.00019 | 0.00025 | 0.00025 | 0.0002 | 0.00017 | 0.0002 | 0.0002 |
| Cobalt (Co)Dissolved | mg/L | 0.00005 | 0.00015 | 0.00005 | 0.00018 | 0.00017 | 0.00015 | 0.00016 | 0.00019 | 0.00023 | 0.00027 | 0.00018 | 0.00017 | 0.00015 | 0.00017 | 0.00017 | 0.00014 | 0.00016 | 0.00014 | 0.00013 | 0.00033 | 0.00043 | 0.00041 |
| Copper (Cu)Dissolved | mg/L | 0.00089 | 0.00121 | 0.00129 | 0.00141 | 0.00117 | 0.00087 | 0.00079 | 0.0008 | 0.00069 | 0.00071 | 0.00077 | 0.00073 | 0.00064 | 0.00075 | 0.00079 | 0.00133 | 0.00152 | 0.00087 | 0.00077 | 0.00089 | 0.00095 | 0.00099 |
| Iron (Fe)Dissolved | mg/L | 0.424 | 0.532 | 0.502 | 0.548 | 0.555 | 0.562 | 0.417 | 0.574 | 0.756 | 0.755 | 0.576 | 0.748 | 0.712 | 0.749 | 0.736 | 0.51 | 0.656 | 0.608 | 0.562 | 0.497 | 0.496 | 0.468 |
| Lead (Pb)Dissolved | mg/L | 0.000065 | 0.000108 | 0.000081 | 0.000099 | 0.00017 | 0.000171 | 0.000094 | 0.000128 | 0.000135 | 0.000143 | 0.000115 | 0.000159 | 0.000134 | 0.000147 | 0.000174 | 0.000121 | 0.000134 | 0.00012 | 0.000139 | 0.000103 | 0.000123 | 0.000099 |
| Lithium (Li)Dissolved | mg/L | 0.0011 | 0.0017 | 0.0014 | 0.0013 | 0.0015 | 0.0014 | 0.0016 | 0.0012 | 0.0014 | 0.0015 | 0.0016 | 0.0015 | 0.0016 | 0.0018 | 0.0016 | 0.0017 | 0.0019 | 0.0017 | 0.0015 | 0.0021 | 0.0015 | 0.0018 |
| Magnesium (Mg)Dissolved | mg/L | 3.14 | 3.45 | 3.1 | 3.24 | 3.19 | 3.73 | 3.04 | 3.3 | 3.82 | 4.68 | 3.79 | 2.73 | 2.9 | 3.53 | 3.31 | 4.04 | 4.46 | 4.13 | 3.84 | 9.1 | 7.82 | 8.68 |
| Manganese (Mn)Dissolved | mg/L | 0.00375 | 0.0231 | 0.0169 | 0.0362 | 0.0355 | 0.0412 | 0.0271 | 0.0547 | 0.0568 | 0.0668 | 0.0299 | 0.0414 | 0.0427 | 0.0527 | 0.0493 | 0.0542 | 0.0515 | 0.0436 | 0.0428 | 0.0448 | 0.044 | 0.0392 |
| Mercury (Hg)Dissolved | ng/L | | | | | | | | | | | | | | | | | | | | | | |
| Molybdenum (Mo)Dissolved | mg/L | 0.000153 | 0.000182 | 0.000084 | 0.000076 | 0.000085 | 0.000108 | 0.000105 | 0.000156 | 0.000204 | 0.000424 | 0.000272 | 0.000095 | 0.000095 | 0.000099 | 0.000097 | 0.000128 | 0.000118 | 0.000119 | 0.00011 | 0.000226 | 0.001 | 0.00104 |
| Nickel (Ni)Dissolved | mg/L | 0.00067 | 0.00093 | 0.0007 | 0.00068 | 0.0007 | 0.00074 | 0.00083 | 0.00098 | 0.00092 | 0.00087 | 0.00094 | 0.00095 | 0.00079 | 0.00081 | 0.00077 | 0.00066 | 0.00075 | 0.00058 | 0.00062 | 0.00057 | 0.0006 | 0.00068 |
| Phosphorus (P)Dissolved | mg/L | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 |
| Potassium (K)Dissolved | mg/L | 0.683 | 0.961 | 0.571 | 0.597 | 0.658 | 0.661 | 0.453 | 0.643 | 0.872 | 1.22 | 0.731 | 0.643 | 0.534 | 0.48 | 0.499 | 0.824 | 0.767 | 0.874 | 0.763 | 3.6 | 3.36 | 3.03 |
| Rubidium (Rb)Dissolved | mg/L | 0.00153 | 0.00175 | 0.00149 | 0.00159 | 0.0017 | 0.00194 | 0.0012 | 0.00178 | 0.00177 | 0.00174 | 0.00126 | 0.00129 | 0.00133 | 0.00148 | 0.00159 | 0.00181 | 0.00199 | 0.00187 | 0.00183 | 0.00244 | 0.0023 | 0.00215 |
| Selenium (Se)Dissolved | mg/L | 0.000082 | 0.000093 | 0.000111 | 0.000207 | 0.000163 | 0.000136 | 0.000198 | 0.000124 | 0.000157 | 0.000092 | 0.000143 | 0.000107 | 0.00014 | 0.000135 | 0.000113 | 0.000154 | 0.000116 | 0.000087 | 0.000102 | 0.000148 | 0.000095 | 0.000133 |
| Silicon (Si)Dissolved | mg/L | 2.96 | 3.26 | 3.34 | 3.39 | 3.63 | 1.6 | 2.24 | 1.99 | 2.31 | 2.18 | 2.71 | 2.24 | 2.39 | 2.21 | 1.76 | 1.86 | 2.13 | 2.27 | 2.07 | 2.02 | 1.77 | 1.76 |
| Silver (Ag)Dissolved | mg/L | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 | 0.0000050 |
| Sodium (Na)Dissolved | mg/L | 2.57 | 3.61 | | | | | | | | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-7: Quesnel Lake Road Creek – Reference (QL-Ref) Water Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | MWQSOG Tier II | MWQSOG Tier III | CCME Chronic PAL | MDMER Sch. 4 |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|----------|-------------|-----------|----------|----------|----------------|----------------|-----------------|------------------|--------------|
| Quesnel Lake Road Creek - Reference | | L1964798-2 | L1976418-2 | L2119066-2 | L2124324-2 | L2130740-2 | L2298698-2 | L2315653-2 | L2360489-2 | L2365580-8 | L2468487-5 | L2474258-6 | L2510579-8 | L2516774-3 | L2645848-1 | L2648504-1 | | | | | | | Chronic PAL | PAL | | MAC |
| Analyte | Units | 7/25/2017 | 8/15/2017 | 6/26/2018 | 7/5/2018 | 7/17/2018 | 6/25/2019 | 7/23/2019 | 10/4/2019 | 10/15/2019 | 6/30/2020 | 7/14/2020 | 9/29/2020 | 10/13/2020 | 9/28/2021 | 10/4/2021 | | | | | | | | | | |
| Alkalinity, Total (as CaCO3) | mg/L | 177 | 192 | 198 | | 221 | 157 | 132 | 89.8 | 71.5 | 125 | 142 | 164 | 157 | 218 | 214 | 161 | 161 | 71.5 | 221 | 46 | 14 | | | | |
| Ammonia, Total (as N) | mg/L | 0.015 | 0.016 | 0.031 | | 0.035 | 0.015 | 0.017 | 0.017 | 0.013 | 0.011 | 0.005 | 0.011 | 0.013 | 0.029 | 0.024 | 0.018 | 0.0155 | 0.005 | 0.035 | 0.01 | 14 | 2.74' | | | |
| Bicarbonate (HCO3) | mg/L | 215 | 234 | 241 | | 270 | 192 | 161 | 110 | 87.2 | 153 | 173 | 200 | 187 | 256 | 260 | 195.7 | 196 | 87.2 | 270 | 55 | 14 | | | | |
| Carbonate (CO3) | mg/L | 0.15 | 0.15 | 0.6 | | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 1.8 | 4.56 | 0.3 | 0.73 | 0.30 | 0.15 | 4.56 | 1.18 | 14 | | 250 | 120 | |
| Chloride (Cl) | mg/L | 0.25 | 0.25 | 0.25 | | 0.25 | 0.51 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.51 | 0.5 | 0.305 | 0.25 | 0.25 | 0.51 | 0.11 | 14 | | | | |
| Conductivity | umhos/cm | 278 | 294 | 329 | | 356 | 262 | 239 | 171 | 133 | 204 | 247 | 270 | 269 | 388 | 394 | 273.9 | 269.5 | 133 | 394 | 76 | 14 | | | | |
| Cyanide, Free | mg/L | 0.0025 | 0.00025 | 0.00025 | | 0.00025 | 0.0011 | 0.0011 | 0.0019 | 0.0012 | 0.0017 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0012 | 0.00096 | 0.0008 | 0.00025 | 0.0025 | 0.001 | 14 | 0.0052 | | | |
| Cyanide, Total | mg/L | 0.00025 | 0.00025 | 0.00025 | | 0.00025 | 0.0013 | 0.0012 | 0.0015 | 0.0012 | 0.0005 | 0.001 | 0.0012 | 0.0005 | 0.0005 | 0.0013 | 0.0008 | 0.00075 | 0.00025 | 0.0015 | 0.000 | 14 | | | | 1 |
| Cyanide, Weak Acid Diss | mg/L | 0.00025 | 0.00025 | 0.00025 | | 0.00025 | 0.0013 | 0.001 | 0.0015 | 0.0011 | 0.0016 | 0.0005 | 0.0011 | 0.0005 | 0.0014 | 0.0013 | 0.000879 | 0.00105 | 0.00025 | 0.0016 | 0.001 | 14 | | | | |
| Dissolved Organic Carbon | mg/L | | | | | 23.7 | 27.4 | 31.1 | 26.5 | | | | | | 27.8 | 28.7 | 27.5 | 27.6 | 23.7 | 31.1 | 2.45 | 6 | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 7.53 | 8.22 | | 1.73 | 2.1 | 9.51 | 6.32 | 6.23 | 7.22 | 7.65 | 5.25 | 8.21 | 9.64 | 8.05 | 10.8 | 7.03 | 7.59 | 1.73 | 10.8 | 2.61 | 14 | 5.5-6.5 | | | |
| EC, Client Supplied | umhos/cm | 311 | 328 | 319 | 331 | 357 | 273 | 242 | 165 | 126 | 218 | 243 | 266 | 266 | 362 | 374 | 279 | 273 | 126 | 374 | 72 | 15 | | | | |
| Fluoride (F) | mg/L | 0.109 | 0.119 | 0.103 | | 0.116 | 0.088 | 0.094 | 0.069 | 0.06 | 0.075 | 0.086 | 0.09 | 0.089 | 0.128 | 0.14 | 0.098 | 0.092 | 0.06 | 0.14 | 0.023 | 14 | | | 0.12 | |
| Hardness (as CaCO3) | mg/L | 174 | 185 | 191 | | 221 | 153 | 139 | 103 | 76.6 | 128 | 131 | 164 | 148 | 225 | 221 | 161.4 | 158.5 | 76.6 | 225 | 45 | 14 | | | | |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0 | 14 | | | | |
| Nitrate (as N) | mg/L | 0.022 | 0.01 | 0.01 | | 0.01 | 0.135 | 0.02 | 0.02 | 0.02 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.01 | 0.0205 | 0.01 | 0.005 | 0.135 | 0.03 | 14 | 2.93 | 13 | | |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.07 | | 0.07 | 0.146 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.048 | 0.035 | 0.035 | 0.146 | 0.03 | 14 | 10 | | | |
| Nitrite (as N) | mg/L | 0.0025 | 0.0025 | 0.0025 | | 0.0025 | 0.011 | 0.01 | 0.01 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.006 | 0.005 | 0.0025 | 0.011 | 0.003 | 14 | 0.06 | 0.06 | 0.06 | |
| pH | pH units | 7.88 | 8.09 | 7.26 | | 7.01 | 8.19 | 8.05 | 7.61 | 7.4 | 8.06 | 7.61 | 8.25 | 8.29 | 8.37 | 8.21 | 7.88 | 8.06 | 7.01 | 8.37 | 0.427 | 14 | 6.5-9.0 | | | 6.0-9.5 |
| pH, Client Supplied | pH | 7.71 | 7.95 | 7 | 6.88 | 6.91 | 7.65 | 7.48 | 7.08 | 6.91 | 7.14 | 7.04 | 6.67 | 6.69 | 7.65 | 8.23 | 7.27 | 7.08 | 6.67 | 8.23 | 0.478 | 15 | 6.5-9.0 | | | 6.0-9.5 |
| Phosphorus (P)-Total | mg/L | 0.052 | 0.042 | 0.414 | | 0.732 | 0.0372 | 0.0346 | 0.0571 | 0.0265 | 0.0277 | 0.0373 | 0.0317 | 0.0265 | 0.0967 | 0.0576 | 0.1195 | 0.0397 | 0.0265 | 0.732 | 0.203 | 14 | | | | |
| Ra-226 | Bq/L | 0.0036 | 0.0037 | 0.0083 | | 0.0051 | 0.009 | 0.00254 | 0.0091 | 0.0074 | 0.0075 | 0.0066 | 0.0083 | 0.0093 | 0.0035 | 0.0072 | 0.0065 | 0.0073 | 0.00254 | 0.0093 | 0.002362 | 14 | | 0.5 | | 0.37 |
| Sulfate (SO4) | mg/L | 0.15 | 0.15 | 0.3 | | 0.3 | 0.81 | 0.3 | 1.1 | 0.84 | 0.3 | 0.3 | 0.3 | 0.3 | 2.31 | 2.53 | 0.71 | 0.3 | 0.15 | 2.53 | 0.8 | 14 | | | | |
| TDS (Calculated) | mg/L | 165 | 182 | 192 | | 211 | 151 | 128 | 92.2 | 70.8 | 119 | 133 | 152 | 146 | 214 | 210 | 154.7 | 151.5 | 70.8 | 214 | 44 | 14 | | | | |
| Temperature, Client Provided | Degree C | 25.1 | 25.9 | 17.8 | 13.9 | 11.7 | 20.8 | 21.8 | 8.5 | 4.4 | 28.6 | 23.6 | 13.8 | 7.7 | 13 | 17.4 | 16.9 | 17.4 | 4.4 | 28.6 | 7.3 | 15 | | | | |
| Total Kjeldahl Nitrogen | mg/L | 1.12 | 1.29 | 5.66 | | 6.98 | 1.39 | 1.4 | 1.32 | 0.75 | 1.05 | 1.13 | 1.12 | 0.97 | 1.86 | 1.74 | 2.0 | 1.305 | 0.75 | 6.98 | 1.88 | 14 | | | | |
| Total Suspended Solids | mg/L | 9.4 | 5 | 84.3 | | 189 | 4.3 | 3.2 | 1 | 1 | 4.9 | 3.1 | 3.4 | 2 | 11.8 | 4 | 23.3 | 4.2 | 1 | 189 | 52.3 | 14 | +5' | | | 15 |
| Turbidity | NTU | 8.17 | 6.93 | 21.6 | | 67.6 | 1.81 | 1.52 | 2.74 | 1.58 | 1.55 | 2.14 | 1.72 | 1.72 | 6.06 | 4.15 | 9.24 | 2.44 | 1.52 | 67.6 | 17.6 | 14 | | | | |
| Aluminum (Al)-Total | mg/L | 0.409 | 0.349 | 0.121 | | 0.151 | 0.0752 | 0.055 | 0.182 | 0.151 | 0.0432 | 0.0707 | 0.0753 | 0.0638 | 0.16 | 0.142 | 0.146 | 0.132 | 0.043 | 0.409 | 0.109 | 14 | | | 0.1 | |
| Antimony (Sb)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00005 | 0.00005 | 0.00005 | 0.0001 | 0.00012 | 0.00006 | 0.00005 | 0.000025 | 0.00012 | 0.00003 | 14 | | | | |
| Arsenic (As)-Total | mg/L | 0.00157 | 0.00196 | 0.00136 | | 0.00171 | 0.00137 | 0.00157 | 0.00117 | 0.00064 | 0.0015 | 0.0013 | 0.00105 | 0.00083 | 0.00178 | 0.00188 | 0.00141 | 0.00144 | 0.00064 | 0.00196 | 0.00039 | 14 | | | 0.005 | 0.3 |
| Barium (Ba)-Total | mg/L | 0.0283 | 0.0286 | 0.0468 | | 0.0654 | 0.0239 | 0.0151 | 0.0191 | 0.0138 | 0.0185 | 0.0179 | 0.0195 | 0.0187 | 0.0298 | 0.03 | 0.0268 | 0.0217 | 0.0138 | 0.0654 | 0.01402 | 14 | | | | |
| Beryllium (Be)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00004 | 0.00005 | 0.000025 | 0.00005 | 0.00001 | 14 | | | | |
| Bismuth (Bi)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00000 | 14 | | | | |
| Boron (B)-Total | mg/L | 0.011 | 0.0025 | 0.031 | | 0.041 | 0.01 | 0.022 | 0.021 | 0.015 | 0.021 | 0.028 | 0.025 | 0.021 | 0.041 | 0.032 | 0.0230 | 0.0215 | 0.0025 | 0.041 | 0.01121 | 14 | | 1.5 | | |
| Cadmium (Cd)-Total | mg/L | 0.0000078 | 0.0000067 | 0.000156 | | 0.000201 | 0.0000089 | 0.0000106 | 0.0000118 | 0.0000086 | 0.0000064 | 0.0000054 | 0.0000055 | 0.0000025 | 0.0000079 | 0.000006 | 0.000032 | 0.000008 | 0.0000025 | 0.000201 | 0.00006 | 14 | | | 0.0008' | |
| Calcium (Ca)-Total | mg/L | 31.3 | 34.3 | 34.8 | | 39.9 | 28.6 | 27.8 | 18.6 | 12.9 | 21.6 | 23.4 | 26.6 | 25.6 | 34.4 | 32.1 | 28.0 | 28.2 | 12.9 | 39.9 | 7.2 | 14 | | | | |
| Cesium (Cs)-Total | mg/L | 0.000052 | 0.000039 | 0.000028 | | 0.000047 | 0.000005 | 0.000005 | 0.000012 | 0.000005 | 0.000014 | 0.000005 | 0.000005 | 0.000005 | 0.00002 | 0.000015 | 0.000018 | 0.000013 | 0.000005 | 0.000052 | 0.00002 | 14 | | | | |
| Chromium (Cr)-Total | mg/L | 0.0007 | 0.00059 | 0.00031 | | 0.00037 | 0.00029 | 0.00029 | 0.00061 | 0.00046 | 0.00028 | 0.00026 | 0.00023 | 0.00019 | 0.00035 | 0.00035 | 0.00038 | 0.00033 | 0.00019 | 0.0007 | 0.00015 | 14 | | | | |
| Cobalt (Co)-Total | mg/L | 0.00033 | 0.00032 | 0.00081 | | 0.00122 | 0.00025 | 0.00023 | 0.00024 | 0.00011 | 0.00018 | 0.00023 | 0.00018 | 0.00014 | 0.00029 | 0.00025 | 0.00034 | 0.000245 | 0.00011 | 0.00122 | 0.00030 | 14 | | | | |
| Copper (Cu)-Total | mg/L | 0.00106 | 0.00137 | 0.00174 | | 0.00281 | 0.00121 | 0.0009 | 0.00196 | 0.00195 | 0.00078 | 0.00062 | 0.00099 | 0.00069 | 0.00122 | 0.00107 | 0.00131 | 0.00114 | 0.00062 | 0.00281 | 0.00061 | 14 | | | 0.002' | 0.3 |
| Iron (Fe)-Total | mg/L | 0.486 | 0.405 | 0.366 | | 0.581 | 0.191 | 0.351 | 0.367 | 0.144 | 0.29 | 0.317 | 0.143 | 0.088 | 0.235 | 0.19 | 0.2967 | 0.3035 | 0.088 | 0.581 | 0.14099 | 14 | | | 0.3 | |
| Lead (Pb)-Total | mg/L | 0.000237 | 0.000219 | 0.000259 | | 0.000398 | 0.000074 | 0.000121 | 0.000107 | 0.000051 | 0.000074 | 0.00007 | 0.000053 | 0.000025 | 0.000153 | 0.000113 | 0.00014 | 0.00011 | 0.000025 | 0.000398 | 0.00010 | 14 | | | 0.001' | 0.2 |
| Lithium (Li)-Total | mg/L | 0.0129 | 0.0118 | 0.0159 | | 0.0173 | 0.0103 | 0.0119 | 0.0078 | 0.0043 | 0.0082 | 0.0093 | 0.0104 | 0.0094 | 0.0167 | 0.0158 | 0.0116 | 0.0111 | 0.0043 | 0.0173 | 0.00381 | 14 | | | | |
| Magnesium (Mg)-Total | mg/L | 25 | 27.2 | 29.1 | | 31.9 | 20.4 | 17.5 | 14.5 | 10.9 | 18.5 | 20.6 | 21.9 | 21.6 | 32.1 | 31.1 | 23.02 | 21.75 | 10.9 | 32.1 | 6.6 | 14 | | | | |
| Manganese (Mn)-Total | mg/L | 0.0243 | 0.0334 | 0.278 | | 0.462 | 0.0155 | 0.0185 | 0.016 | 0.004 | 0.0229 | 0.0386 | 0.0218 | 0.0116 | 0.0402 | 0.0247 | 0.07225 | 0.0236 | 0.004 | 0.462 | 0.13 | 14 | | | 0.380' | |
| Mercury (Hg)-Total | ng/L | | 0.6 | | 0.9 | 1 | 0.0027 | 0.0 | | | | | | | | | | | | | | | | | | |



True North Mine
Request for Alignment of Discharge Monitoring Requirements

Table B-7 cont'd

| Analyte | Units | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | QL-REF | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | MWQSOG | MWQSOG | CCME | MDMER | |
|-------------------------------------|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-------------|-----------|----------|----------|----------------|----------------------|----------|-------------|--------|--|
| | | L1964798-2 | L1976418-2 | L2119066-2 | L2124324-2 | L2130740-2 | L2298698-2 | L2315653-2 | L2360489-2 | L2365580-8 | L2468487-5 | L2474258-6 | L2510579-8 | L2516774-3 | L2645848-1 | L2648504-1 | | | | | | | Tier II | Tier III | Chronic PAL | Sch. 4 | |
| Quesnel Lake Road Creek - Reference | | 7/25/2017 | 8/15/2017 | 6/26/2018 | 7/5/2018 | 7/17/2018 | 6/25/2019 | 7/23/2019 | 10/4/2019 | 10/15/2019 | 6/30/2020 | 7/14/2020 | 9/29/2020 | 10/13/2020 | 9/28/2021 | 10/4/2021 | | | | | | | | | | | |
| Silver (Ag)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000004 | 0.000005 | 0.0000025 | 0.000005 | 0.0000 | 14 | | 0.0001 | 0.00025 | | |
| Sodium (Na)-Total | mg/L | 4.57 | 4.64 | 5.28 | | 5.31 | 4.38 | 3.58 | 3.84 | 2.46 | 3.35 | 3.43 | 3.61 | 4.13 | 8.88 | 8.74 | 4.73 | 4.26 | 2.46 | 8.88 | 1.9 | 14 | | | | | |
| Strontium (Sr)-Total | mg/L | 0.0958 | 0.102 | 0.116 | | 0.141 | 0.082 | 0.0802 | 0.0567 | 0.0401 | 0.0688 | 0.0738 | 0.0798 | 0.0746 | 0.111 | 0.111 | 0.0881 | 0.0811 | 0.0401 | 0.141 | 0.026 | 14 | | | | | |
| Sulfur (S)-Total | mg/L | 0.25 | 0.25 | 0.69 | | 0.8 | 0.72 | 0.68 | 0.89 | 0.86 | 0.25 | 0.25 | 0.25 | 0.25 | 2.47 | 1.82 | 0.745 | 0.685 | 0.25 | 2.47 | 0.7 | 14 | | | | | |
| Tellurium (Te)-Total | mg/L | 0.0001 | 0.0001 | 0.0001 | | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.0001 | 0.0001 | 0.000086 | 0.0001 | 0.00005 | 0.0001 | 0.00002 | 14 | | | | | |
| Thallium (Tl)-Total | mg/L | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000004 | 0.000005 | 0.000025 | 0.000005 | 0.000001 | 14 | | 0.0008 | 0.00008 | | |
| Thorium (Th)-Total | mg/L | 0.00025 | 0.00025 | 0.00025 | | 0.00025 | 0.00005 | 0.00005 | 0.00011 | 0.00012 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000052 | 0.00005 | 0.000025 | 0.00012 | 0.00003 | 14 | | | | | |
| Tin (Sn)-Total | mg/L | 0.00025 | 0.00025 | 0.00025 | | 0.00025 | 0.00017 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000051 | 0.00005 | 0.000025 | 0.00017 | 0.000036 | 14 | | | | | |
| Titanium (Ti)-Total | mg/L | 0.0144 | 0.0115 | 0.00351 | | 0.00388 | 0.00388 | 0.00229 | 0.00512 | 0.00347 | 0.00188 | 0.00281 | 0.00276 | 0.00208 | 0.00559 | 0.00547 | 0.00490 | 0.00370 | 0.00188 | 0.0144 | 0.00365 | 14 | | | | | |
| Tungsten (W)-Total | mg/L | 0.00013 | 0.00025 | 0.00057 | | 0.00025 | 0.00005 | 0.00005 | 0.00005 | 0.00012 | 0.00005 | 0.00005 | 0.00267 | 0.00005 | 0.00005 | 0.000074 | 0.00033 | 0.00005 | 0.000025 | 0.00267 | 0.00071 | 14 | | | | | |
| Uranium (U)-Total | mg/L | 0.000659 | 0.000848 | 0.00026 | | 0.000328 | 0.00122 | 0.000608 | 0.000771 | 0.000438 | 0.000379 | 0.000314 | 0.000918 | 0.00108 | 0.00268 | 0.00265 | 0.00094 | 0.000715 | 0.00026 | 0.00268 | 0.00079 | 14 | | 0.015 | 0.015 | | |
| Vanadium (V)-Total | mg/L | 0.00173 | 0.00223 | 0.00066 | | 0.00075 | 0.00103 | 0.00094 | 0.00177 | 0.00087 | 0.00097 | 0.00076 | 0.00062 | 0.00074 | 0.00187 | 0.00135 | 0.00116 | 0.000955 | 0.00062 | 0.00223 | 0.00053 | 14 | | | | | |
| Zinc (Zn)-Total | mg/L | 0.0015 | 0.0025 | 0.0227 | | 0.0295 | 0.0015 | 0.0065 | 0.007 | 0.0186 | 0.0049 | 0.003 | 0.003 | 0.0015 | 0.0054 | 0.007829 | 0.00395 | 0.0015 | 0.0295 | 0.0090 | | 14 | | | | 0.5 | |
| Zirconium (Zr)-Total | mg/L | 0.000412 | 0.000348 | 0.000121 | | 0.000127 | 0.00089 | 0.00038 | 0.00073 | 0.0007 | 0.00045 | 0.00032 | 0.00005 | 0.00005 | 0.00026 | 0.00028 | 0.00366 | 0.000334 | 0.00005 | 0.00089 | 0.0003 | 14 | | | | | |
| Aluminum (Al)-Dissolved | mg/L | 0.018 | 0.0156 | 0.0032 | | 0.0691 | 0.0059 | 0.0152 | 0.0563 | 0.0883 | 0.013 | 0.009 | 0.0058 | 0.006 | 0.0151 | 0.0171 | 0.02411 | 0.01515 | 0.0032 | 0.0883 | 0.0267 | 14 | | | | | |
| Antimony (Sb)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000043 | 0.00005 | 0.000025 | 0.00005 | 0.0000 | 14 | | | | | |
| Arsenic (As)-Dissolved | mg/L | 0.00155 | 0.00181 | 0.00104 | | 0.00125 | 0.021 | 0.00152 | 0.00102 | 0.00062 | 0.00136 | 0.00128 | 0.00097 | 0.00088 | 0.00173 | 0.00184 | 0.002705 | 0.00132 | 0.00062 | 0.021 | 0.0053 | 14 | 0.15 | 0.01 | | | |
| Barium (Ba)-Dissolved | mg/L | 0.0248 | 0.0248 | 0.0276 | | 0.0544 | 0.022 | 0.0153 | 0.0179 | 0.0126 | 0.0176 | 0.0167 | 0.0188 | 0.0185 | 0.0285 | 0.0265 | 0.0232857 | 0.0204 | 0.0126 | 0.0544 | 0.0102 | 14 | | | | | |
| Beryllium (Be)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000051 | 0.00005 | 0.000025 | 0.00005 | 0.00001 | 14 | | | | | |
| Bismuth (Bi)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00000 | 14 | | | | | |
| Boron (B)-Dissolved | mg/L | 0.0025 | 0.0025 | 0.027 | | 0.037 | 0.01 | 0.012 | 0.024 | 0.017 | 0.031 | 0.028 | 0.029 | 0.02 | 0.042 | 0.044 | 0.0233 | 0.0255 | 0.0025 | 0.044 | 0.0133 | 14 | | | | | |
| Cadmium (Cd)-Dissolved | mg/L | 0.000025 | 0.000025 | 0.0000262 | | 0.000147 | 0.0000076 | 0.0000053 | 0.0000057 | 0.0000071 | 0.0000061 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.000016 | 0.0000039 | 0.000025 | 0.000147 | 0.00004 | 14 | 0.014 ¹ | 0.005 | | | |
| Calcium (Ca)-Dissolved | mg/L | 30.2 | 32.9 | 37 | | 42.5 | 27.5 | 23.5 | 17.2 | 12.6 | 22 | 22 | 26.5 | 25.5 | 35.7 | 34.3 | 27.8 | 27.0 | 12.6 | 42.5 | 8.20 | 14 | | | | | |
| Cesium (Cs)-Dissolved | mg/L | 0.000036 | 0.000025 | 0.000025 | | 0.000038 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000015 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000010 | 0.000005 | 0.000025 | 0.000038 | 0.000012 | 14 | | | | | |
| Chromium (Cr)-Dissolved | mg/L | 0.00011 | 0.0001 | 0.00018 | | 0.00024 | 0.00015 | 0.00019 | 0.00032 | 0.0003 | 0.00019 | 0.00019 | 0.00011 | 0.00005 | 0.00012 | 0.00012 | 0.000169 | 0.000165 | 0.00005 | 0.00032 | 0.0001 | 14 | 0.369 ¹ | | | | |
| Cobalt (Co)-Dissolved | mg/L | 0.00012 | 0.00016 | 0.0001 | | 0.00089 | 0.00011 | 0.00017 | 0.00005 | 0.00005 | 0.00014 | 0.00012 | 0.0001 | 0.00005 | 0.00022 | 0.0002 | 0.00018 | 0.00012 | 0.00005 | 0.00089 | 0.0002 | 14 | | | | | |
| Copper (Cu)-Dissolved | mg/L | 0.00074 | 0.00087 | 0.00062 | | 0.00162 | 0.00107 | 0.00086 | 0.00163 | 0.00179 | 0.00072 | 0.00045 | 0.0013 | 0.00062 | 0.00089 | 0.00088 | 0.001004 | 0.000875 | 0.00045 | 0.00179 | 0.0004 | 14 | 0.00432 ¹ | | | | |
| Iron (Fe)-Dissolved | mg/L | 0.078 | 0.048 | 0.038 | | 0.386 | 0.052 | 0.265 | 0.177 | 0.085 | 0.203 | 0.175 | 0.048 | 0.033 | 0.052 | 0.052 | 0.121 | 0.065 | 0.033 | 0.386 | 0.1061 | 14 | | | | | |
| Lead (Pb)-Dissolved | mg/L | 0.000057 | 0.000025 | 0.000025 | | 0.00032 | 0.000025 | 0.000059 | 0.000025 | 0.000055 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000053 | 0.000025 | 0.000025 | 0.00032 | 0.000078 | 14 | 0.00098 ¹ | | | | |
| Lithium (Li)-Dissolved | mg/L | 0.0117 | 0.0129 | 0.0169 | | 0.0203 | 0.0103 | 0.01 | 0.0069 | 0.0043 | 0.0082 | 0.0085 | 0.0101 | 0.0092 | 0.018 | 0.0154 | 0.0116 | 0.0102 | 0.0043 | 0.0203 | 0.004555 | 14 | | | | | |
| Magnesium (Mg)-Dissolved | mg/L | 23.9 | 25 | 23.9 | | 27.8 | 20.5 | 19.5 | 14.7 | 11 | 17.7 | 18.4 | 23.8 | 20.6 | 32.9 | 32.9 | 22.3 | 22.2 | 11 | 32.9 | 6.2 | 14 | | | | | |
| Manganese (Mn)-Dissolved | mg/L | 0.00118 | 0.00293 | 0.0128 | | 0.358 | 0.00039 | 0.00605 | 0.00028 | 0.00005 | 0.0112 | 0.0135 | 0.00497 | 0.00361 | 0.0105 | 0.0103 | 0.03113 | 0.00551 | 0.00005 | 0.358 | 0.094 | 14 | | | | | |
| Mercury (Hg)-Dissolved | ng/L | 1.2 | 0.5 | | 2.4 | 1.7 | 0.00082 | 0.00025 | 0.0024 | 0.00482 | | | | | 0.00025 | 0.00025 | 0.58088 | 0.00361 | 0.00025 | 2.4 | 0.879762 | 10 | | | | | |
| Molybdenum (Mo)-Dissolved | mg/L | 0.000078 | 0.000078 | 0.000452 | | 0.0001 | 0.000471 | 0.000334 | 0.000482 | 0.00029 | 0.000307 | 0.000129 | 0.000025 | 0.000025 | 0.000562 | 0.000543 | 0.0002769 | 0.0002985 | 0.000025 | 0.000562 | 0.0002 | 14 | | | | | |
| Nickel (Ni)-Dissolved | mg/L | 0.00188 | 0.00212 | 0.00121 | | 0.00187 | 0.00212 | 0.00246 | 0.00241 | 0.00176 | 0.00204 | 0.00193 | 0.00157 | 0.0014 | 0.00248 | 0.00265 | 0.00199 | 0.00199 | 0.00121 | 0.00265 | 0.0004 | 14 | 0.02527 ¹ | | | | |
| Phosphorus (P)-Dissolved | mg/L | 0.059 | 0.025 | 0.241 | | 0.467 | 0.086 | 0.03 | 0.03 | 0.03 | 0.015 | 0.015 | 0.015 | 0.015 | 0.035 | 0.035 | 0.078 | 0.03 | 0.015 | 0.467 | 0.1264 | 14 | | | | | |
| Potassium (K)-Dissolved | mg/L | 0.519 | 0.43 | 3.35 | | 2.64 | 1.06 | 0.216 | 1.71 | 1.21 | 0.86 | 0.598 | 1.37 | 2 | 2.65 | 2.58 | 1.51 | 1.29 | 0.216 | 3.35 | 0.99 | 14 | | | | | |
| Rubidium (Rb)-Dissolved | mg/L | 0.00048 | 0.00037 | 0.00417 | | 0.00548 | 0.00068 | 0.0003 | 0.00156 | 0.00134 | 0.00103 | 0.00071 | 0.00102 | 0.00113 | 0.00103 | 0.00098 | 0.00145 | 0.001025 | 0 | | | | | | | | |



Table B-8: No Name Creek – Exposure (NNC-EXP) Water Quality Results, 2017-2022

| Less than detection limit, half value | No Name Creek - Exposure | NNC-EXP | | | | | | | | | | | | | | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | MWQSOG | MWQSOG | CCME | MDMER |
|---------------------------------------|--------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|----------|----------|---------|-------------------|---------|---------------------|-------------|---------|
| | | L1964798-1 | L1976418-1 | L2119066-1 | L2130740-1 | L2298698-1 | L2315653-1 | L2360489-1 | L2465848-7 | L2468487-4 | L2474258-5 | L2510579-7 | L2516774-5 | L2645848-2 | L2648504-2 | | | | | | | Tier II | Tier III | Chronic PAL | Sch. 4 |
| Analyte | Units | 7/25/2017 | 8/15/2017 | 6/26/2018 | 7/17/2018 | 6/25/2019 | 7/23/2019 | 8/15/2019 | 6/23/2020 | 6/30/2020 | 7/14/2020 | 9/29/2020 | 10/13/2020 | 9/28/2021 | 10/6/2021 | Chronic PAL | PAL | | | | | | | | |
| Alkalinity, Total (as CaCO3) | mg/L | 186 | 221 | 221 | 270 | 313 | 248 | 146 | 128 | 176 | 182 | 164 | 189 | 180 | 202 | 186 | 128 | 313 | 51 | 13 | | | | | |
| Ammonia, Total (as N) | mg/L | 0.045 | 0.091 | 0.031 | 0.074 | 0.025 | 0.026 | 0.012 | 0.017 | 0.022 | 0.005 | 0.005 | 0.01 | 0.005 | 0.028 | 0.022 | 0.005 | 0.091 | 0.03 | 13 | 2.74 ¹ | | | | |
| Bicarbonate (HCO3) | mg/L | 227 | 269 | 269 | 330 | 382 | 303 | 178 | 156 | 215 | 223 | 201 | 227 | 220 | 246.2 | 227 | 156 | 382 | 63 | 13 | | | | | |
| Carbonate (CO3) | mg/L | 0.15 | 0.15 | 0.6 | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 1.68 | 0.3 | 0.43 | 0.30 | 0.15 | 1.68 | 0.40 | 13 | | 250 | 120 | | |
| Chloride (Cl) | mg/L | 83.2 | 119 | 111 | 130 | 49 | 88.2 | 49.1 | 38.6 | 89 | 78.3 | 80.5 | 64.7 | 67.6 | 80.6 | 80.5 | 38.6 | 130 | 28 | 13 | | | | | |
| Conductivity | umhos/cm | 888 | 1160 | 1050 | 1190 | 706 | 896 | 572 | 541 | 999 | 1030 | 1130 | 1130 | 1190 | 960.2 | 1030 | 541 | 1190 | 227 | 13 | | | | | |
| Cyanide, Free | mg/L | 0.0025 | 0.00025 | 0.00025 | 0.00025 | 0.0005 | 0.0012 | 0.0013 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.00071 | 0.0005 | 0.00025 | 0.0025 | 0.001 | 13 | 0.0052 | | | | |
| Cyanide, Total | mg/L | 0.0012 | 0.001 | 0.0011 | 0.0012 | 0.0013 | 0.0018 | 0.0015 | 0.001 | 0.0016 | 0.0031 | 0.0034 | 0.002 | 0.0022 | 0.001723077 | 0.0015 | 0.001 | 0.0034 | 0.001 | 13 | | | | 1 | |
| Cyanide, Weak Acid Diss | mg/L | 0.001 | 0.00025 | 0.00025 | 0.00025 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.001 | 0.0005 | 0.0011 | 0.0012 | 0.000619 | 0.0005 | 0.00025 | 0.0012 | 0.0003 | 13 | | | | | |
| Dissolved Organic Carbon | mg/L | | | | | 24.1 | 24.4 | 24.9 | | | | | 15.4 | 13.3 | 20.4 | 24.1 | 13.3 | 24.9 | 5.60 | 5 | | | | | |
| Dissolved Oxygen, Client Supplied | mg/L | 7.81 | 2.79 | | 2.28 | 1.35 | 3.09 | 8.98 | 6.85 | 6.31 | 3.16 | 8.35 | 10 | 7.37 | 5.78 | 6.75 | 10 | 2.87 | 13 | 13 | 5.5-6.5 | | | | |
| EC, Client Supplied | umhos/cm | 973 | 1240 | 1090 | 1260 | 733 | 876 | 550 | 543 | 758 | 1020 | 1010 | 1090 | 1040 | 950 | 1015 | 543 | 1260 | 228 | 14 | | | | | |
| Fluoride (F) | mg/L | 0.125 | 0.121 | 0.135 | 0.13 | 0.114 | 0.129 | 0.084 | 0.087 | | 0.114 | 0.087 | 0.094 | 0.091 | 0.109 | 0.114 | 0.084 | 0.135 | 0.019 | 13 | | | 0.12 | | |
| Hardness (as CaCO3) | mg/L | 251 | 299 | 272 | 292 | 239 | 264 | 157 | 158 | 288 | 325 | 338 | 374 | 381 | 280 | 288 | 157 | 381 | 69 | 13 | | | | | |
| Hydroxide (OH) | mg/L | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0 | 13 | | | | | |
| Nitrate (as N) | mg/L | 0.04 | 0.04 | 0.04 | 0.1 | 0.027 | 0.04 | 0.02 | 0.005 | 0.04 | 0.04 | 0.04 | 0.063 | 0.04 | 0.04 | 0.04 | 0.005 | 0.1 | 0.02 | 13 | 2.93 | 13 | | | |
| Nitrate and Nitrite as N | mg/L | 0.035 | 0.035 | 0.07 | 0.11 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.043 | 0.035 | 0.035 | 0.11 | 0.02 | 13 | 10 | | | | |
| Nitrite (as N) | mg/L | 0.01 | 0.01 | 0.01 | 0.025 | 0.01 | 0.02 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.01 | 0.010 | 0.01 | 0.005 | 0.025 | 0.006 | 13 | 0.06 | 0.06 | 0.06 | | |
| pH | pH units | 7.81 | 7.71 | 7.81 | 7.6 | 8.09 | 8.12 | 7.86 | 7.99 | | 7.65 | 8.25 | 8.25 | 8.28 | 8.01 | 7.96 | 7.99 | 7.6 | 8.28 | 0.234 | 13 | 6.5-9.0 | | | 6.0-9.5 |
| pH, Client Supplied | pH | 7.69 | 7.52 | 7.5 | 7.49 | 7.36 | 7.16 | 7.91 | 7.09 | 7.1 | 7.13 | 6.67 | 7.14 | 7.45 | 7.35 | 7.405 | 6.67 | 7.91 | 0.319 | 14 | 6.5-9.0 | | | | 6.0-9.5 |
| Phosphorus (P)Total | mg/L | 0.083 | 0.041 | 0.0672 | 0.609 | 0.234 | 0.119 | 0.0272 | 0.0489 | | 0.0743 | 0.0378 | 0.0218 | 0.0515 | 0.0566 | 0.1132 | 0.0566 | 0.0218 | 0.609 | 0.159 | 13 | | | | |
| Ra226 | Bq/L | 0.0045 | 0.004 | 0.0032 | 0.09 | 0.0044 | 0.0037 | 0.0042 | | 0.012 | 0.0062 | 0.0076 | 0.0085 | 0.0035 | 0.0127 | 0.0045 | 0.0032 | 0.09 | 0.023 | 13 | | 0.5 | | 0.37 | |
| Sulfate (SO4) | mg/L | 174 | 238 | 177 | 189 | 19.6 | 96 | 69.4 | 90.1 | | 236 | 254 | 302 | 293 | 190 | 189 | 19.6 | 335 | 98 | 13 | | | | | |
| TDS (Calculated) | mg/L | 576 | 772 | 664 | 761 | 411 | 519 | 334 | 319 | | 644 | 636 | 711 | 712 | 602 | 644 | 319 | 772 | 160 | 13 | | | | | |
| Temperature, Client Provided | Degree C | 23.7 | 17.2 | 20 | 16.3 | 23.6 | 21 | 5.9 | 19.8 | 24.9 | 21.3 | 11.9 | 6.6 | 13.5 | 17.1 | 18.5 | 5.9 | 24.9 | 6.1 | 14 | | | | | |
| Total Kjeldahl Nitrogen | mg/L | 1.05 | 0.67 | 1.02 | 2.84 | 1.03 | 1.09 | 0.87 | 0.75 | | 0.81 | 0.65 | 0.51 | 0.72 | 1.0 | 0.81 | 0.51 | 2.84 | 1 | 13 | | | | | |
| Total Suspended Solids | mg/L | 1 | 1 | 127 | 2830 | 20.1 | 3.3 | 1 | 9 | | 9.7 | 20.2 | 9.1 | 26.2 | 28.5 | 9.4 | 1 | 127 | 42.7 | 13 | +5 ² | | | 15 | |
| Turbidity | NTU | 1.17 | 1.09 | 14.7 | 101 | 24.8 | 1.74 | 1.14 | 0.89 | | 2.93 | 4.5 | 2.93 | 6.59 | 14.16 | 2.93 | 0.89 | 101 | 27.3 | 13 | | | | | |
| Aluminum (Al)Total | mg/L | 0.0352 | 0.0145 | 0.0211 | 0.656 | 0.71 | 0.0167 | 0.0475 | 0.0331 | | 0.0679 | 0.225 | 0.142 | 0.205 | 0.201 | 0.068 | 0.015 | 0.710 | 0.246 | 13 | | | 0.1 | | |
| Antimony (Sb)Total | mg/L | 0.00018 | 0.00014 | 0.00011 | 0.00016 | 0.00013 | 0.00005 | 0.00005 | 0.00005 | | 0.00011 | 0.00005 | 0.00011 | 0.0001 | 0.00010 | 0.00011 | 0.00005 | 0.00018 | 0.00005 | 13 | | | | | |
| Arsenic (As)Total | mg/L | 0.00112 | 0.00115 | 0.00124 | 0.00572 | 0.00314 | 0.00221 | 0.00096 | 0.00119 | | 0.00121 | 0.00112 | 0.00067 | 0.00108 | 0.00168 | 0.00115 | 0.00067 | 0.00572 | 0.00137 | 13 | | | 0.005 | 0.3 | |
| Barium (Ba)Total | mg/L | 0.0511 | 0.0604 | 0.0572 | 0.224 | 0.0754 | 0.0421 | 0.0266 | 0.0317 | | 0.0561 | 0.0552 | 0.0515 | 0.0635 | 0.0668 | 0.0561 | 0.0266 | 0.224 | 0.04930 | 13 | | | | | |
| Beryllium (Be)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00004 | 0.00005 | 0.000025 | 0.00005 | 0.00001 | 13 | | | | | |
| Bismuth (Bi)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0 | 13 | | | | | |
| Boron (B)Total | mg/L | 0.111 | 0.115 | 0.105 | 0.085 | 0.055 | 0.053 | 0.07 | 0.063 | | 0.072 | 0.053 | 0.06 | 0.08 | 0.0757 | 0.07 | 0.053 | 0.115 | 0.02209 | 13 | | 1.5 | | | |
| Cadmium (Cd)Total | mg/L | 0.000010 | 0.000012 | 0.000011 | 0.000076 | 0.000017 | 0.000003 | 0.000008 | 0.000005 | | 0.000010 | 0.000006 | 0.000007 | 0.000012 | 0.000015 | 0.000010 | 0.000003 | 0.000076 | 0.00002 | 13 | | | 0.0008 ¹ | | |
| Calcium (Ca)Total | mg/L | 59.1 | 69.5 | 57.7 | 60.9 | 57.2 | 57.9 | 32.3 | 36 | | 63.2 | 58 | 71.9 | 78.3 | 59.8 | 59.1 | 32.3 | 78.3 | 13.5 | 13 | | | | | |
| Cesium (Cs)Total | mg/L | 0.0000025 | 0.0000025 | 0.0000025 | 0.000068 | 0.000066 | 0.000005 | 0.000005 | 0.000005 | | 0.000005 | 0.000035 | 0.000012 | 0.000025 | 0.000022 | 0.000005 | 0.000003 | 0.000068 | 0.00003 | 13 | | | | | |
| Chromium (Cr)Total | mg/L | 0.00014 | 0.00025 | 0.00017 | 0.00144 | 0.00135 | 0.0002 | 0.00031 | 0.00016 | | 0.0002 | 0.00045 | 0.00029 | 0.00043 | 0.000461154 | 0.00029 | 0.00025 | 0.00144 | 0.00046 | 13 | | | | | |
| Cobalt (Co)Total | mg/L | 0.00068 | 0.00075 | 0.00129 | 0.00781 | 0.00153 | 0.00037 | 0.00019 | 0.00077 | | 0.00153 | 0.00186 | 0.00244 | 0.00155 | 0.001738462 | 0.00153 | 0.00019 | 0.00781 | 0.00194 | 13 | | | | | |
| Copper (Cu)Total | mg/L | 0.00127 | 0.00126 | 0.0014 | 0.00344 | 0.00132 | 0.00055 | 0.004 | 0.00128 | | 0.001 | 0.00169 | 0.00341 | 0.00221 | 0.001934615 | 0.0014 | 0.00055 | 0.004 | 0.00107 | 13 | | | 0.002 ¹ | 0.3 | |
| Iron (Fe)Total | mg/L | 0.11 | 0.105 | 0.105 | 6.27 | 1.47 | 0.14 | 0.189 | 0.117 | | 0.098 | 0.289 | 0.172 | 0.232 | 0.7553 | 0.172 | 0.098 | 6.27 | 1.69827 | 13 | | | 0.3 | | |
| Lead (Pb)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.00195 | 0.000602 | 0.000025 | 0.000025 | 0.000025 | | 0.000056 | 0.000126 | 0.000066 | 0.000125 | 0.00026 | 0.000056 | 0.000025 | 0.00195 | 0.00053 | 13 | | | 0.001 ¹ | 0.2 | |
| Lithium (Li)Total | mg/L | 0.0054 | 0.0037 | 0.0045 | 0.0042 | 0.0058 | 0.0055 | 0.0035 | 0.0033 | | 0.0047 | 0.0036 | 0.0029 | 0.0054 | 0.0044 | 0.0044 | 0.0029 | 0.0058 | 0.00094 | 13 | | | | | |
| Magnesium (Mg)Total | mg/L | 26 | 31.8 | 28.5 | 30.9 | 23.2 | 29 | 19 | 19.7 | | 37.3 | 34.2 | 42.9 | 43.7 | 31.8 | 30.9 | 19 | 46.7 | 8.9 | 13 | | | | | |
| Manganese (Mn)Total | mg/L | 0.0912 | 0.154 | 0.111 | 10.6 | 3.41 | 0.461 | 0.0225 | 0.0546 | | 0.0419 | 0.0467 | 0.0284 | 0.0 | | | | | | | | | | | |



True North Mine
Request for Alignment of Discharge Monitoring Requirements

Table B-8 cont'd

| No Name Creek - Exposure Analyte | Units | Less than detection limit, half value | | | | | | | | | | | | | | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | MWQSOG | MWQSOG | CCME | MDMER | | |
|----------------------------------|-------|---------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-----------|----------|----------|----------------|----------------------|----------|-------------|--------|-----|-------|
| | | L1964798-1 | L1976418-1 | L2119066-1 | L2130740-1 | L2298698-1 | L2315653-1 | L2360489-1 | L2465848-7 | L2468487-4 | L2474258-5 | L2510579-7 | L2516774-5 | L2645848-2 | L2648504-2 | | | | | | | Tier II | Tier III | Chronic PAL | Sch. 4 | | |
| | | 7/25/2017 | 8/15/2017 | 6/26/2018 | 7/17/2018 | 6/25/2019 | 7/23/2019 | 10/4/2019 | 6/23/2020 | 6/30/2020 | 7/14/2020 | 9/29/2020 | 10/13/2020 | 9/28/2021 | 10/6/2021 | | | | | | | | | Chronic PAL | PAL | | MAMMC |
| Silver (Ag)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000011 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000011 | 0.000002 | 13 | | 0.0001 | 0.00025 | | | |
| Sodium (Na)Total | mg/L | 105 | 155 | 133 | 157 | 64.9 | 88.2 | 68.4 | 48 | | 98.8 | 86.2 | 103 | 100 | 107 | 101.12 | 100.00 | 48 | 157 | 32.5 | 13 | | | | | | |
| Strontium (Sr)Total | mg/L | 0.274 | 0.435 | 0.341 | 0.41 | 0.227 | 0.243 | 0.208 | 0.207 | | 0.425 | 0.452 | 0.53 | 0.469 | 0.499 | 0.3631 | 0.41 | 0.207 | 0.53 | 0.118 | 13 | | | | | | |
| Sulfur (S)Total | mg/L | 66.7 | 92.4 | 68.3 | 70 | 7.88 | 32.1 | 25.7 | 31.3 | | 82.2 | 83.2 | 113 | 109 | 124 | 69.67538462 | 70 | 7.88 | 124 | 36.4 | 13 | | | | | | |
| Tellurium (Te)Total | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.00005 | | 0.00005 | 0.00005 | 0.00005 | 0.0001 | 0.0001 | 0.000085 | 0.0001 | 0.00005 | 0.0001 | 0.000024 | 13 | | | | | | |
| Thallium (Tl)Total | mg/L | 0.000003 | 0.000003 | 0.000003 | 0.000003 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000005 | 0.000004 | 0.000005 | 0.0000025 | 0.000005 | 0.000001 | 13 | | 0.0008 | 0.00008 | | | |
| Thorium (Th)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.00011 | 0.00013 | 0.00005 | 0.00005 | 0.00005 | | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00017 | 0.000064 | 0.00005 | 0.000025 | 0.00017 | 0.000044 | 13 | | | | | | |
| Tin (Sn)Total | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00017 | 0.00005 | 0.00005 | 0.00005 | | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000052 | 0.00005 | 0.000025 | 0.00017 | 0.000037 | 13 | | | | | | |
| Titanium (Ti)Total | mg/L | 0.00114 | 0.00046 | 0.00096 | 0.0265 | 0.0195 | 0.00072 | 0.00175 | 0.00124 | | 0.0265 | 0.0113 | 0.00703 | 0.00919 | 0.0205 | 0.00793 | 0.00280 | 0.00046 | 0.0265 | 0.00895 | 13 | | | | | | |
| Tungsten (W)Total | mg/L | 0.00025 | 0.00025 | 0.00025 | 0.00015 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000025 | 0.00015 | 0.00003 | 13 | | | | | | |
| Uranium (U)Total | mg/L | 0.000201 | 0.000158 | 0.000234 | 0.000234 | 0.000488 | 0.000392 | 0.000131 | 0.0001 | | 0.000239 | 0.000175 | 0.000195 | 0.000385 | 0.000343 | 0.00025 | 0.000234 | 0.0001 | 0.000488 | 0.00012 | 13 | | 0.015 | 0.015 | | | |
| Vanadium (V)Total | mg/L | 0.00089 | 0.00059 | 0.00069 | 0.00326 | 0.00271 | 0.00071 | 0.001 | 0.00076 | | 0.00111 | 0.00124 | 0.00099 | 0.00243 | 0.00247 | 0.00145 | 0.001 | 0.00059 | 0.00326 | 0.00092 | 13 | | | | | | |
| Zinc (Zn)Total | mg/L | 0.0015 | 0.0076 | 0.0015 | 0.0112 | 0.006 | 0.0088 | 0.0113 | 0.0048 | | 0.003 | 0.003 | 0.003 | 0.0015 | 0.0015 | 0.004977 | 0.003 | 0.0015 | 0.0113 | 0.0037 | 13 | | | | | 0.5 | |
| Zirconium (Zr)Total | mg/L | 0.000138 | 0.000091 | 0.000137 | 0.000516 | 0.00079 | 0.00025 | 0.00031 | 0.00005 | | 0.00023 | 0.0003 | 0.00028 | 0.00033 | 0.00063 | 0.000312 | 0.00028 | 0.00005 | 0.00079 | 0.0002 | 13 | | | | | | |
| Aluminum (Al)Dissolved | mg/L | 0.0047 | 0.0021 | 0.0025 | 0.0025 | 0.0081 | 0.0033 | 0.0177 | 0.0093 | | 0.0044 | 0.0032 | 0.002 | 0.0034 | 0.0032 | 0.00493 | 0.0033 | 0.00025 | 0.0177 | 0.0045 | 13 | | | | | | |
| Antimony (Sb)Dissolved | mg/L | 0.00017 | 0.0001 | 0.00012 | 0.00025 | 0.00012 | 0.00005 | 0.00005 | 0.00005 | | 0.00005 | 0.00005 | 0.00005 | 0.00011 | 0.00005 | 0.000077 | 0.00005 | 0.000025 | 0.00017 | 0.00004 | 13 | | | | | | |
| Arsenic (As)Dissolved | mg/L | 0.00131 | 0.00116 | 0.00114 | 0.00158 | 0.023 | 0.00208 | 0.00089 | 0.001 | | 0.0013 | 0.00089 | 0.00066 | 0.00095 | 0.00081 | 0.0028462 | 0.00114 | 0.00066 | 0.023 | 0.0061 | 13 | 0.15 | 0.01 | | | | |
| Barium (Ba)Dissolved | mg/L | 0.0492 | 0.0591 | 0.0507 | 0.0418 | 0.029 | 0.0414 | 0.0252 | 0.0332 | | 0.055 | 0.0536 | 0.0502 | 0.0626 | 0.0643 | 0.047330769 | 0.0502 | 0.0252 | 0.0643 | 0.0125 | 13 | | | | | | |
| Beryllium (Be)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00004 | 0.00005 | 0.000025 | 0.00005 | 0.00001 | 13 | | | | | | |
| Bismuth (Bi)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0 | 13 | | | | | |
| Boron (B)Dissolved | mg/L | 0.098 | 0.123 | 0.11 | 0.094 | 0.053 | 0.048 | 0.072 | 0.071 | | 0.067 | 0.052 | 0.054 | 0.082 | 0.074 | 0.0768 | 0.072 | 0.048 | 0.123 | 0.0236 | 13 | | | | | | |
| Cadmium (Cd)Dissolved | mg/L | 0.000060 | 0.000079 | 0.000061 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000072 | | 0.000105 | 0.000056 | 0.000051 | 0.000053 | 0.000051 | 0.000053 | 0.000053 | 0.000025 | 0.000105 | 0.00002 | 13 | 0.014 ¹ | 0.005 | | | | |
| Calcium (Ca)Dissolved | mg/L | 57.9 | 67.3 | 67.9 | 68.2 | 54.7 | 55.7 | 31.3 | 32.9 | | 59.8 | 68.8 | 68.4 | 76 | 77.9 | 60.5 | 67.30 | 31.3 | 77.9 | 14.47 | 13 | | | | | | |
| Cesium (Cs)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000050 | 0.000042 | 0.000050 | 0.000025 | 0.000050 | 0.00001 | 13 | | | | | | |
| Chromium (Cr)Dissolved | mg/L | 0.00025 | 0.00025 | 0.00014 | 0.00011 | 0.00013 | 0.0001 | 0.00017 | 0.00013 | | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.00005 | 0.000083 | 0.00005 | 0.000025 | 0.00017 | 0.00005 | 13 | 0.369 ¹ | | | | | |
| Cobalt (Co)Dissolved | mg/L | 0.00063 | 0.0007 | 0.00109 | 0.00098 | 0.00016 | 0.00031 | 0.00013 | 0.00077 | | 0.00141 | 0.00174 | 0.00221 | 0.00138 | 0.00157 | 0.00101 | 0.00098 | 0.00013 | 0.00221 | 0.0006 | 13 | | | | | | |
| Copper (Cu)Dissolved | mg/L | 0.00121 | 0.00071 | 0.00134 | 0.00116 | 0.00067 | 0.00046 | 0.00344 | 0.00124 | | 0.00078 | 0.00147 | 0.00335 | 0.00186 | 0.00151 | 0.001477 | 0.00124 | 0.00046 | 0.00344 | 0.0009 | 13 | 0.00432 ¹ | | | | | |
| Iron (Fe)Dissolved | mg/L | 0.037 | 0.06 | 0.033 | 0.025 | 0.029 | 0.039 | 0.115 | 0.076 | | 0.036 | 0.03 | 0.019 | 0.012 | 0.015 | 0.039 | 0.033 | 0.0025 | 0.115 | 0.0301 | 13 | | | | | | |
| Lead (Pb)Dissolved | mg/L | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0 | 13 | 0.00098 ¹ | | | | | |
| Lithium (Li)Dissolved | mg/L | 0.0045 | 0.0039 | 0.0054 | 0.0043 | 0.0053 | 0.0055 | 0.003 | 0.0028 | | 0.0044 | 0.0031 | 0.0025 | 0.0051 | 0.0037 | 0.0041 | 0.0043 | 0.0025 | 0.0055 | 0.001042 | 13 | | | | | | |
| Magnesium (Mg)Dissolved | mg/L | 25.8 | 31.8 | 24.9 | 29.6 | 24.9 | 30.3 | 19.2 | 18.5 | | 33.6 | 37.1 | 40.6 | 44.8 | 45.3 | 31.3 | 30.3 | 18.5 | 45.3 | 8.8 | 13 | | | | | | |
| Manganese (Mn)Dissolved | mg/L | 0.00185 | 0.00671 | 0.00077 | 0.00037 | 0.00092 | 0.207 | 0.00031 | 0.0393 | | 0.0314 | 0.0303 | 0.0206 | 0.0076 | 0.00974 | 0.03210 | 0.00974 | 0.00031 | 0.207 | 0.1 | 13 | | | | | | |
| Mercury (Hg)Dissolved | ng/L | 3.8 | 2.1 | 5 | 0.00306 | 0.00144 | 0.00226 | | | | | | | 0.00236 | 0.00244 | 1.36395 | 0.00275 | 0.00144 | 5 | 2.03 | 8 | | | | | | |
| Molybdenum (Mo)Dissolved | mg/L | 0.0117 | 0.0115 | 0.0135 | 0.00522 | 0.0029 | 0.00195 | 0.00406 | 0.00271 | | 0.00438 | 0.00468 | 0.00798 | 0.00547 | 0.00584 | 0.006299231 | 0.00522 | 0.00195 | 0.0135 | 0.0037 | 13 | | | | | | |
| Nickel (Ni)Dissolved | mg/L | 0.00121 | 0.00097 | 0.00125 | 0.00091 | 0.00148 | 0.00183 | 0.00121 | 0.00112 | | 0.0011 | 0.00085 | 0.00095 | 0.00131 | 0.00128 | 0.00119 | 0.00121 | 0.00085 | 0.00183 | 0.0003 | 13 | 0.02527 ¹ | | | | | |
| Phosphorus (P)Dissolved | mg/L | 0.06 | 0.025 | 0.059 | 0.246 | 0.128 | 0.097 | 0.03 | 0.053 | | 0.059 | 0.015 | 0.015 | 0.036 | 0.015 | 0.064 | 0.053 | 0.015 | 0.246 | 0.0640 | 13 | | | | | | |
| Potassium (K)Dissolved | mg/L | 17 | 26.1 | 22.8 | 25.6 | 9.55 | 11 | 13 | 9.35 | | 14.2 | 17.5 | 17.8 | 17.6 | 18.6 | 16.93 | 17.5 | 9.35 | 26.1 | 5.54 | 13 | | | | | | |
| Rubidium (Rb)Dissolved | mg/L | 0.00392 | 0.00661 | 0.00495 | 0.0052 | 0.00135 | 0.00191 | 0.00312 | 0.00248 | | 0.00293 | 0.0034 | 0.00413 | 0.00307 | 0.00358 | 0.00359 | 0.0034 | 0.00135 | 0.00661 | 0.0014 | 13 | | | | | | |
| Selenium (Se)Dissolved | mg/L | 0.00018 | 0.000113 | 0.00011 | 0.000225 | 0.000183 | 0.00019 | 0.000179 | 0.000145 | | 0.000172 | 0.00019 | 0.000217 | 0.000226 | 0.000149 | 0.000175308 | 0.00018 | 0.00011 | 0.000226 | 0.00004 | 13 | | | | | | |
| Silicon (Si)Dissolved | mg/L | 3.82 | 2.33 | 3.88 | 4.32 | 4.86 | 5.12 | 3.3 | 2.11 | | | | | | | | | | | | | | | | | | |



Table B-9: No Name Creek – Discharge Point (NNC-DP) Sediment Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | | | | | | | | | | | | | | | | | | | | | |
|--|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| No Name Creek - Discharge Point | | NNC-DP A | NNC-DP B | NNC-DP C | NNC-DP D | NNC-DP E | NNC-DP A | NNC-DP B | NNC-DP C | NNC-DP D | NNC-DP E | NNC-DP A | NNC-DP B | NNC-DP C | NNC-DP D | NNC-DP E | NNC-DP A | NNC-DP B | NNC-DP C | NNC-DP D | NNC-DP E |
| | | L1990536-1 | L1990536-2 | L1990536-3 | L1990536-4 | L1990536-5 | L2138537-1 | L2138537-2 | L2138537-3 | L2138537-4 | L2138537-5 | L2338584-1 | L2338584-2 | L2338584-3 | L2338584-4 | L2338584-5 | L2384830-1 | L2384830-2 | L2384830-3 | L2384830-4 | L2384830-5 |
| Analyte | Units | 2017-09-12 | 2017-09-12 | 2017-09-12 | 2017-09-12 | 2017-09-12 | 2018-07-29 | 2018-07-29 | 2018-07-29 | 2018-07-29 | 2018-07-29 | 2019-08-28 | 2019-08-28 | 2019-08-28 | 2019-08-28 | 2019-08-28 | 2019-11-19 | 2019-11-19 | 2019-11-19 | 2019-11-19 | 2019-11-19 |
| % Moisture | % | 90.6 | 83.1 | 74.4 | 80.9 | 81.4 | 29.1 | 26.3 | 35.4 | 31.3 | 26.3 | 72.5 | 74.1 | 71.4 | 68.1 | 71.9 | 88.5 | 91.5 | 83.2 | 82.4 | 62 |
| pH (1:2 soil:water) | pH | 7.62 | 7.51 | 7.71 | 7.61 | 7.63 | 7.53 | 7.56 | 7.51 | 7.6 | 7.41 | 7.36 | 7.27 | 7.42 | 6.45 | 6.61 | 7.38 | 7.33 | 6.49 | 6.54 | 6.57 |
| Inorganic Carbon | % | 0.52 | 0.553 | 0.641 | 0.603 | 0.552 | 0.113 | 0.082 | 0.132 | 0.101 | 0.086 | 0.225 | 0.186 | 0.301 | 0.62 | 0.21 | 0.329 | 0.355 | 0.283 | 0.252 | 0.179 |
| Inorganic Carbon (as CaCO3 Equivalent) | % | | | | | | 0.94 | 0.68 | 1.1 | 0.84 | 0.72 | 1.87 | 1.55 | 2.51 | 5.16 | 1.75 | 2.74 | 2.96 | 2.36 | 2.1 | 1.49 |
| Total Carbon by Combustion | % | 5.62 | 5.52 | 5.03 | 4.93 | 4.39 | 1.71 | 1 | 2.69 | 1.35 | 1.53 | 11.2 | 9.05 | 12 | 8.39 | 7.48 | 21.2 | 24.4 | 16.6 | 10.5 | 4.14 |
| Total Organic Carbon | % | | | | | | 1.6 | 0.915 | 2.56 | 1.25 | 1.44 | 11 | 8.86 | 11.7 | 7.77 | 7.27 | 20.9 | 24 | 16.3 | 10.2 | 3.96 |
| Aluminum (Al) | ug/g | 16500 | 15400 | 16400 | 15200 | 15700 | 19000 | 20800 | 19600 | 19100 | 20400 | 20600 | 19500 | 20900 | 22000 | 24800 | 11600 | 11700 | 13000 | 16000 | 27500 |
| Antimony (Sb) | ug/g | 0.25 | 0.23 | 0.2 | 0.2 | 0.2 | 0.05 | 0.05 | 0.14 | 0.05 | 0.05 | 0.21 | 0.17 | 0.22 | 0.16 | 0.21 | 0.22 | 0.31 | 0.25 | 0.23 | 0.18 |
| Arsenic (As) | ug/g | 3.43 | 3.69 | 3.67 | 3.64 | 3.42 | 2 | 2.14 | 3.29 | 2.75 | 2.03 | 4.77 | 3.47 | 4.01 | 3.56 | 5.68 | 3.94 | 4.01 | 4.13 | 3.98 | 4.29 |
| Barium (Ba) | ug/g | 129 | 127 | 123 | 122 | 125 | 119 | 128 | 124 | 118 | 120 | 139 | 135 | 161 | 165 | 167 | 97.4 | 101 | 101 | 131 | 203 |
| Beryllium (Be) | ug/g | 0.81 | 0.77 | 0.79 | 0.8 | 0.81 | 0.68 | 0.76 | 0.83 | 0.82 | 0.79 | 0.73 | 0.73 | 0.79 | 0.86 | 0.87 | 0.31 | 0.49 | 0.52 | 0.68 | 1.07 |
| Bismuth (Bi) | ug/g | 0.23 | 0.22 | 0.22 | 0.21 | 0.21 | 0.171 | 0.19 | 0.226 | 0.203 | 0.186 | 0.182 | 0.178 | 0.201 | 0.209 | 0.209 | 0.098 | 0.127 | 0.132 | 0.18 | 0.25 |
| Boron (B) | ug/g | 16.4 | 13.6 | 13 | 12.5 | 11.3 | 5 | 5 | 5 | 11 | 5 | 15 | 14 | 18 | 15 | 14 | 22 | 30 | 17 | 17 | 10 |
| Cadmium (Cd) | ug/g | 0.137 | 0.148 | 0.134 | 0.116 | 0.127 | 0.031 | 0.048 | 0.073 | 0.049 | 0.037 | 0.25 | 0.158 | 0.224 | 0.144 | 0.153 | 0.359 | 0.347 | 0.286 | 0.258 | 0.133 |
| Calcium (Ca) | ug/g | 21100 | 21700 | 25800 | 24700 | 25000 | 4450 | 4630 | 5210 | 4870 | 4480 | 11600 | 8650 | 14400 | 23600 | 11200 | 7740 | 9400 | 11200 | 9860 | 9220 |
| Chromium (Cr) | ug/g | 32.9 | 30.8 | 32.3 | 31.5 | 32.6 | 32.8 | 36.5 | 36.6 | 34.7 | 35.1 | 32.5 | 31.9 | 35.6 | 39 | 38 | 17.8 | 19.1 | 20.1 | 25.7 | 44.9 |
| Cobalt (Co) | ug/g | 9.19 | 9.26 | 9.22 | 9.29 | 9.07 | 6.74 | 7.44 | 8.67 | 7.57 | 6.91 | 10.3 | 9.22 | 10.5 | 11.3 | 12.1 | 12.5 | 12.9 | 8.73 | 8.73 | 11.8 |
| Copper (Cu) | ug/g | 55.9 | 54.1 | 36.3 | 30.8 | 31.7 | 17.5 | 18.3 | 33.3 | 22.3 | 16.6 | 45.6 | 49.2 | 74.4 | 46.5 | 77.2 | 100 | 103 | 56 | 81.4 | 51.9 |
| Iron (Fe) | ug/g | 20700 | 20800 | 21300 | 21200 | 20900 | 21900 | 23900 | 24400 | 23400 | 23200 | 20300 | 20200 | 23300 | 26500 | 25800 | 12200 | 14100 | 14800 | 16600 | 27700 |
| Lead (Pb) | ug/g | 12.1 | 12 | 12 | 11.8 | 15.2 | 10.6 | 11.6 | 12.8 | 12 | 11.9 | 11.5 | 10.7 | 11.5 | 11.4 | 11.9 | 6.03 | 8.53 | 9.17 | 10.2 | 14 |
| Lithium (Li) | ug/g | 16 | 16.3 | 16.4 | 16.3 | 17.5 | | | | | | | | | | | | | | | |
| Magnesium (Mg) | ug/g | 12800 | 12800 | 15600 | 14700 | 13900 | 6410 | 6720 | 7030 | 6720 | 6760 | 6930 | 6790 | 9090 | 14000 | 8610 | 4760 | 4700 | 4530 | 5640 | 8880 |
| Manganese (Mn) | ug/g | 519 | 515 | 415 | 401 | 411 | 326 | 393 | 440 | 315 | 310 | 256 | 239 | 353 | 359 | 405 | 810 | 830 | 303 | 293 | 262 |
| Molybdenum (Mo) | ug/g | 3.2 | 3.12 | 1.61 | 1.47 | 1.66 | 0.68 | 0.89 | 0.97 | 0.71 | 0.61 | 5.45 | 6.26 | 4.8 | 2.37 | 3.8 | 19.2 | 26.4 | 11.6 | 10.5 | 2.96 |
| Nickel (Ni) | ug/g | 27.7 | 26.5 | 26.5 | 25.9 | 26 | 17.4 | 19.4 | 21.7 | 19.3 | 17.9 | 24.4 | 23.8 | 29.3 | 29.8 | 30.4 | 19.4 | 19.8 | 17.5 | 22.5 | 35.2 |
| Phosphorus (P) | ug/g | 438 | 458 | 441 | 390 | 442 | 160 | 160 | 260 | 200 | 150 | 430 | 380 | 510 | 430 | 510 | 570 | 510 | 430 | 480 | 340 |
| Potassium (K) | ug/g | 2470 | 2340 | 2410 | 2370 | 2260 | 2480 | 2860 | 3170 | 2720 | 2590 | 2120 | 1910 | 2080 | 2380 | 1930 | 1690 | 1700 | 1630 | 1730 | 2510 |
| Selenium (Se) | ug/g | 0.35 | 0.34 | 0.28 | 0.22 | 0.24 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.62 | 0.25 | 0.64 | 0.25 | 0.58 | 0.68 | 0.82 | 0.58 | 0.83 | 0.25 |
| Silver (Ag) | ug/g | 0.21 | 0.2 | 0.18 | 0.17 | 0.2 | 0.18 | 0.21 | 0.22 | 0.19 | 0.2 | 0.19 | 0.18 | 0.29 | 0.2 | 0.24 | 0.27 | 0.34 | 0.21 | 0.26 | 0.23 |
| Sodium (Na) | ug/g | 630 | 555 | 478 | 519 | 488 | 331 | 387 | 568 | 464 | 273 | 829 | 574 | 599 | 570 | 692 | 1080 | 1140 | 742 | 793 | 611 |
| Strontium (Sr) | ug/g | 74.2 | 67.6 | 59.7 | 57.1 | 59.1 | 30.4 | 35.3 | 42.3 | 31.6 | 30.2 | 54.9 | 47.8 | 65.9 | 69.7 | 51.5 | 55.1 | 66.1 | 61.9 | 55.8 | 58 |
| Sulfur (S) | ug/g | | | | | | | | | | | | | | | | | | | | |
| Thallium (Tl) | ug/g | 0.222 | 0.21 | 0.209 | 0.204 | 0.255 | 0.21 | 0.22 | 0.25 | 0.22 | 0.22 | 0.19 | 0.19 | 0.19 | 0.19 | 0.21 | 0.11 | 0.14 | 0.14 | 0.16 | 0.23 |
| Tin (Sn) | ug/g | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Titanium (Ti) | ug/g | 174 | 173 | 183 | 187 | 167 | 222 | 295 | 276 | 258 | 238 | 178 | 166 | 207 | 252 | 238 | 110 | 121 | 147 | 121 | 205 |
| Tungsten (W) | ug/g | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | | | | | | | | | | | | | | | |
| Uranium (U) | ug/g | 0.933 | 0.959 | 0.947 | 0.852 | 0.909 | 0.588 | 0.65 | 0.931 | 0.701 | 0.61 | 2.22 | 2.22 | 1.97 | 1.14 | 1.85 | 1.82 | 2.42 | 1.91 | 2.54 | 1.14 |
| Vanadium (V) | ug/g | 43 | 42.4 | 43.5 | 40.8 | 41.3 | 40.1 | 45.2 | 49.9 | 45.9 | 42.8 | 49.4 | 45.1 | 52.7 | 53.4 | 62.3 | 35.3 | 34 | 35.2 | 44 | 60.8 |
| Zinc (Zn) | ug/g | 54.3 | 53.3 | 52.4 | 51.7 | 51.7 | 57 | 65 | 61 | 57 | 59 | 65 | 62 | 70 | 76 | 69 | 68 | 74 | 51 | 58 | 82 |
| Zirconium (Zr) | ug/g | 8.1 | 7.9 | 9 | 8.9 | 9.2 | | | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-9 cont'd

| <i>Less than detection limit, half value</i> | | NNC-DP A | NNC-DP B | NNC-DP C | NNC-DP D | NNC-DP E | NNC-DP A | NNC-DP B | NNC-DP C | NNC-DP D | NNC-DP E | NNC-DP A | NNC-DP B | NNC-DP C | NNC-DP D | NNC-DP E | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples |
|--|-------|-------------|-------------|------------|-------------|------------|-------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|----------|----------|---------|----------------|
| No Name Creek - Discharge Point | | L2487944-1 | L2487944-2 | L2487944-3 | L2487944-4 | L2487944-5 | L2520599-1 | L2520599-2 | L2520599-3 | L2520599-4 | L2520599-5 | L2653701-11 | L2653701-12 | L2653701-13 | L2653701-14 | L2653701-15 | | | | | | |
| Analyte | Units | 2020-08-11 | 2020-08-11 | 2020-08-11 | 2020-08-11 | 2020-08-11 | 2020-10-21 | 2020-10-21 | 2020-10-21 | 2020-10-21 | 2020-10-21 | 2021-10-19 | 2021-10-19 | 2021-10-19 | 2021-10-19 | 2021-10-19 | | | | | | |
| % Moisture | % | 55.6 | 52.3 | 72.1 | 73.6 | 76.2 | 44.7 | 65.2 | 56.8 | 41.9 | 75.6 | 49.7 | 71.3 | 57.7 | 51.4 | 55.8 | 64 | 71 | 26.3 | 91.5 | 23 | 37 |
| pH (1:2 soil:water) | pH | 6.86 | 6.76 | 6.37 | 6.54 | 6.47 | 7.25 | 6.96 | 7.17 | 7.16 | 6.69 | 7.27 | 7.27 | 6.43 | 7.01 | 6.75 | 7.09 | 7.25 | 6.37 | 7.71 | 1.68 | 37 |
| Inorganic Carbon | % | 0.178 | 0.132 | 0.239 | 0.265 | 0.231 | 0.134 | 0.198 | 0.16 | 0.105 | 0.274 | 0.149 | 0.119 | 0.152 | 0.125 | 0.145 | 0.255 | 0.198 | 0.082 | 0.641 | 0.17 | 37 |
| Inorganic Carbon (as CaCO3 Equivalent) | % | 1.48 | 1.1 | 1.99 | 2.21 | 1.93 | 1.11 | 1.65 | 1.33 | 0.87 | 2.28 | 1.24 | 0.99 | 1.27 | 1.04 | 1.21 | 1.68 | 1.49 | 0.68 | 5.16 | 0.96 | 32 |
| Total Carbon by Combustion | % | 6.9 | 4.07 | 12.4 | 13.7 | 9.72 | 2.15 | 5.63 | 3.55 | 2.37 | 9.3 | 5.24 | 4.34 | 6.6 | 5.04 | 6.1 | 7.31 | 5.62 | 1.00 | 24.4 | 5.52 | 37 |
| Total Organic Carbon | % | 6.72 | 3.94 | 12.2 | 13.4 | 9.49 | 2.02 | 5.43 | 3.39 | 2.27 | 9.03 | 5.09 | 4.22 | 6.45 | 4.92 | 5.96 | 7.48 | 6.21 | 0.92 | 24.0 | 5.81 | 32 |
| Aluminum (Al) | ug/g | 19500 | 17900 | 11800 | 11600 | 13900 | 18500 | 18000 | 19000 | 18000 | 13300 | 15100 | 15900 | 13900 | 13700 | 14400 | 17149 | 16500 | 11600 | 27500 | 5366 | 37 |
| Antimony (Sb) | ug/g | 0.14 | 0.13 | 0.2 | 0.18 | 0.17 | 0.11 | 0.11 | 0.12 | 0.1 | 0.18 | 0.12 | 0.22 | 0.14 | 0.11 | 0.15 | 0.16 | 0.17 | 0.05 | 0.31 | 0.07 | 37 |
| Arsenic (As) | ug/g | 3.06 | 3.38 | 3.69 | 2.88 | 3.32 | 2.95 | 3.07 | 3 | 2.94 | 3.32 | 3.27 | 4.3 | 3.08 | 2.66 | 3.35 | 3.43 | 3.38 | 2.00 | 5.68 | 1.06 | 37 |
| Barium (Ba) | ug/g | 110 | 113 | 83.8 | 74.9 | 93.8 | 76.5 | 92.9 | 96.3 | 76.4 | 86.6 | 72.8 | 102 | 98.8 | 68.5 | 89.8 | 113 | 113 | 68.5 | 203 | 39 | 37 |
| Beryllium (Be) | ug/g | 0.75 | 0.77 | 0.49 | 0.55 | 0.54 | 0.69 | 0.7 | 0.7 | 0.64 | 0.58 | 0.51 | 0.54 | 0.56 | 0.46 | 0.5 | 0.68 | 0.70 | 0.31 | 1.07 | 0.22 | 37 |
| Bismuth (Bi) | ug/g | 0.166 | 0.171 | 0.132 | 0.125 | 0.139 | 0.159 | 0.162 | 0.163 | 0.154 | 0.143 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.17 | 0.17 | 0.10 | 0.25 | 0.06 | 37 |
| Boron (B) | ug/g | 5 | 5 | 13 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 7.1 | 8.1 | 8.5 | 5.6 | 6.2 | 10.4 | 8.5 | 5 | 30 | 6.3 | 37 |
| Cadmium (Cd) | ug/g | 0.129 | 0.108 | 0.241 | 0.269 | 0.256 | 0.065 | 0.139 | 0.094 | 0.068 | 0.261 | 0.108 | 0.228 | 0.198 | 0.092 | 0.153 | 0.16 | 0.14 | 0.03 | 0.36 | 0.09 | 37 |
| Calcium (Ca) | ug/g | 8740 | 7430 | 9600 | 12400 | 9480 | 6280 | 9360 | 7840 | 6130 | 12900 | 7470 | 9740 | 8560 | 6250 | 7920 | 11112 | 9360 | 4450 | 25800 | 6629 | 37 |
| Chromium (Cr) | ug/g | 32.1 | 31 | 18.9 | 17.7 | 21.5 | 31.4 | 30.1 | 32.2 | 30.9 | 20.7 | 26.6 | 25.8 | 25.8 | 24.5 | 23.8 | 29.5 | 31.4 | 17.7 | 44.9 | 9.37 | 37 |
| Cobalt (Co) | ug/g | 9.05 | 8.69 | 9.8 | 8.76 | 10.3 | 8.83 | 9.99 | 9.28 | 7.63 | 9.64 | 8.16 | 10.3 | 8.93 | 8.13 | 9.21 | 9.4 | 9.2 | 6.74 | 12.9 | 2.58 | 37 |
| Copper (Cu) | ug/g | 82.8 | 64.6 | 395 | 262 | 246 | 61.1 | 122 | 76.1 | 54.3 | 214 | 81.9 | 199 | 73.3 | 70.9 | 121 | 89 | 65 | 16.6 | 395 | 82 | 37 |
| Iron (Fe) | ug/g | 22500 | 22800 | 15100 | 14100 | 16100 | 23100 | 22600 | 23100 | 21800 | 16700 | 18500 | 18300 | 18600 | 17500 | 18800 | 20366 | 20900 | 12200 | 27700 | 5936 | 37 |
| Lead (Pb) | ug/g | 10.1 | 10.3 | 8.22 | 8.42 | 9.36 | 9.66 | 10.3 | 10.4 | 9.38 | 11.1 | 8.9 | 9.92 | 9.49 | 8.17 | 9.26 | 11 | 10 | 6.03 | 15.2 | 3.0 | 37 |
| Lithium (Li) | ug/g | | | | | | | | | | | 13 | 12.7 | 11.7 | 11.1 | 10.4 | 14 | 15 | 10.4 | 17.5 | 6.0 | 12 |
| Magnesium (Mg) | ug/g | 6880 | 5970 | 4920 | 5180 | 5290 | 6480 | 6800 | 6930 | 6180 | 6080 | 5890 | 5910 | 5940 | 5060 | 5070 | 7599 | 6720 | 4530 | 15600 | 3527 | 37 |
| Manganese (Mn) | ug/g | 465 | 506 | 749 | 766 | 1000 | 459 | 1110 | 527 | 361 | 1110 | 1020 | 1260 | 615 | 779 | 1100 | 571 | 459 | 239 | 1260 | 314 | 37 |
| Molybdenum (Mo) | ug/g | 0.82 | 0.67 | 3.71 | 2.13 | 2.97 | 0.55 | 1.09 | 0.81 | 0.58 | 2.28 | 0.98 | 1.57 | 1.45 | 0.94 | 1.25 | 3.7 | 1.6 | 0.55 | 26.4 | 5.4 | 37 |
| Nickel (Ni) | ug/g | 26.9 | 23.7 | 37 | 32.2 | 31.4 | 25.1 | 31.2 | 27.7 | 23.1 | 32.5 | 23.8 | 29.2 | 22.9 | 21.8 | 25.7 | 26 | 26 | 17.4 | 37 | 7.6 | 37 |
| Phosphorus (P) | ug/g | 470 | 430 | 520 | 470 | 540 | 470 | 520 | 490 | 390 | 570 | 488 | 732 | 528 | 490 | 584 | 439 | 470 | 150 | 732 | 159 | 37 |
| Potassium (K) | ug/g | 1920 | 1740 | 1350 | 1160 | 1310 | 1840 | 1820 | 1860 | 1760 | 1570 | 1580 | 1610 | 1830 | 1450 | 1520 | 1991 | 1860 | 1160 | 3170 | 648 | 37 |
| Selenium (Se) | ug/g | 0.25 | 0.25 | 0.98 | 0.94 | 0.81 | 0.25 | 0.25 | 0.25 | 0.25 | 0.88 | 0.48 | 0.95 | 0.46 | 0.32 | 0.58 | 0.46 | 0.32 | 0.22 | 0.98 | 0.27 | 37 |
| Silver (Ag) | ug/g | 0.2 | 0.17 | 0.49 | 0.35 | 0.4 | 0.14 | 0.22 | 0.18 | 0.15 | 0.36 | 0.2 | 0.71 | 0.19 | 0.16 | 0.24 | 0.24 | 0.20 | 0.14 | 0.71 | 0.12 | 37 |
| Sodium (Na) | ug/g | 210 | 126 | 255 | 110 | 305 | 269 | 392 | 338 | 250 | 589 | 217 | 349 | 288 | 201 | 276 | 471 | 464 | 110 | 1140 | 264 | 37 |
| Strontium (Sr) | ug/g | 72.8 | 63.3 | 77.3 | 111 | 74.8 | 58 | 85.8 | 68.7 | 55 | 105 | 63 | 81.3 | 59.3 | 51.8 | 64.9 | 62 | 60 | 30.2 | 111 | 22 | 37 |
| Sulfur (S) | ug/g | | | | | | | | | | | 500 | 1200 | 2000 | 500 | 500 | 940 | 500 | 500 | 2000 | 711 | 7 |
| Thallium (Tl) | ug/g | 0.17 | 0.16 | 0.11 | 0.05 | 0.14 | 0.16 | 0.16 | 0.16 | 0.16 | 0.12 | 0.133 | 0.151 | 0.156 | 0.125 | 0.137 | 0.17 | 0.16 | 0.05 | 0.26 | 0.06 | 37 |
| Tin (Sn) | ug/g | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 1 | 1 | 1 | 1 | 1 | 2.00 | 2.50 | 0.50 | 2.50 | 0.91 | 37 |
| Titanium (Ti) | ug/g | 114 | 117 | 68.8 | 50.7 | 81.5 | 136 | 60.9 | 104 | 154 | 74.7 | 200 | 187 | 217 | 191 | 154 | 167 | 173 | 50.7 | 295 | 72 | 37 |
| Tungsten (W) | ug/g | | | | | | | | | | | 0.25 | 0.69 | 0.25 | 0.25 | 0.25 | 0.29 | 0.25 | 0.25 | 0.69 | 0.17 | 12 |
| Uranium (U) | ug/g | 1.33 | 1 | 1.07 | 1.42 | 1.39 | 0.669 | 1.04 | 0.969 | 0.718 | 1.56 | 0.889 | 1.27 | 0.997 | 0.743 | 1.06 | 1.24 | 1.04 | 0.59 | 2.54 | 0.60 | 37 |
| Vanadium (V) | ug/g | 45.2 | 44.7 | 28.2 | 28.7 | 32.8 | 42.4 | 40.1 | 44.2 | 43.4 | 33.1 | 38.2 | 38.7 | 37.8 | 34 | 35.3 | 42 | 42 | 28.2 | 62.3 | 12.2 | 37 |
| Zinc (Zn) | ug/g | 60 | 56 | 48 | 44 | 50 | 57 | 58 | 57 | 54 | 49 | 46.4 | 53.5 | 53.1 | 43.3 | 46.2 | 58 | 57 | 43.3 | 82 | 15.9 | 37 |
| Zirconium (Zr) | ug/g | | | | | | | | | | | 5.3 | 2.9 | 6.1 | 4.8 | 4.8 | 6.7 | 7.0 | 2.9 | 9.2 | 3.2 | 37 |



Table B-10: No Name Creek – Vanson Road (NNC-VR) Sediment Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | | | | | | | | | | | | | | | | | | | | | |
|--|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|-------------|
| No Name Creek - Vanson Road | | | | | | | | | | | | | | | | | | | | | |
| Analyte | Units | 2017-09-12 | 2017-09-12 | 2017-09-12 | 2017-09-12 | 2017-09-12 | 2018-07-29 | 2018-07-29 | 2018-07-29 | 2018-07-29 | 2018-07-29 | 2019-08-28 | 2019-08-28 | 2019-08-28 | 2019-08-28 | 2019-08-28 | 2019-11-19 | 2019-11-19 | 2019-11-19 | 2019-11-19 | 2019-11-19 |
| | | L1990536-11 | L1990536-12 | L1990536-13 | L1990536-14 | L1990536-15 | L2138537-11 | L2138537-12 | L2138537-13 | L2138537-14 | L2138537-15 | L2338584-6 | L2338584-7 | L2338584-8 | L2338584-9 | L2338584-10 | L2384830-6 | L2384830-7 | L2384830-8 | L2384830-9 | L2384830-10 |
| % Moisture | % | 82.9 | 93.9 | 91.3 | 74.5 | 89.3 | 62.9 | 55.7 | 60.6 | 51.7 | 50.2 | 57.4 | 45.5 | 38.9 | 59.7 | 62.9 | 57 | 58.9 | 63.3 | 54.3 | 48.2 |
| pH (1:2 soil:water) | pH | 7.31 | 7.18 | 7.61 | 6.95 | 7.15 | 6.65 | 6.67 | 6.69 | 6.73 | 6.2 | 7.83 | 8.13 | 8.32 | 7.67 | 7.32 | 7.36 | 7.39 | 7.23 | 7.44 | 8.03 |
| Inorganic Carbon | % | 0.386 | 0.403 | 0.484 | 0.271 | 0.279 | 0.238 | 0.248 | 0.237 | 0.236 | 0.197 | 0.852 | 0.623 | 0.688 | 0.236 | 0.245 | 0.373 | 0.366 | 0.307 | 0.274 | 0.655 |
| Inorganic Carbon (as CaCO3 Equivalent) | % | | | | | | 1.98 | 2.07 | 1.97 | 1.97 | 1.64 | 7.1 | 5.19 | 5.73 | 1.96 | 2.04 | 3.1 | 3.05 | 2.56 | 2.28 | 5.46 |
| Total Carbon by Combustion | % | 5.68 | 6.59 | 4.15 | 6.89 | 7.05 | 8.8 | 9.4 | 8.72 | 7.99 | 8.47 | 4.55 | 3.42 | 2.79 | 7.13 | 7.28 | 7.72 | 7.05 | 8.5 | 5.59 | 3.63 |
| Total Organic Carbon | % | | | | | | 8.56 | 9.15 | 8.48 | 7.75 | 8.27 | 3.7 | 2.8 | 2.1 | 6.89 | 7.04 | 7.35 | 6.68 | 8.19 | 5.32 | 2.98 |
| Aluminum (Al) | ug/g | 13400 | 12600 | 12300 | 13600 | 14900 | 17300 | 17500 | 16500 | 17500 | 18400 | 16600 | 17400 | 15400 | 16200 | 15800 | 14000 | 16100 | 16700 | 17100 | 16900 |
| Antimony (Sb) | ug/g | 0.17 | 0.19 | 0.19 | 0.18 | 0.2 | 0.2 | 0.2 | 0.19 | 0.19 | 0.21 | 0.19 | 0.17 | 0.17 | 0.14 | 0.15 | 0.15 | 0.19 | 0.18 | 0.16 | 0.17 |
| Arsenic (As) | ug/g | 3.92 | 2.96 | 3.36 | 2.78 | 3.13 | 3.17 | 3.09 | 3.31 | 3.44 | 2.97 | 3.06 | 2.67 | 2.29 | 2.51 | 3.06 | 2.86 | 3.25 | 3.18 | 2.97 | 2.49 |
| Barium (Ba) | ug/g | 110 | 90.7 | 93.8 | 105 | 119 | 134 | 127 | 120 | 131 | 127 | 112 | 119 | 103 | 109 | 114 | 108 | 120 | 124 | 130 | 119 |
| Beryllium (Be) | ug/g | 0.59 | 0.53 | 0.53 | 0.65 | 0.69 | 0.75 | 0.79 | 0.73 | 0.81 | 0.81 | 0.63 | 0.66 | 0.59 | 0.63 | 0.62 | 0.61 | 0.64 | 0.72 | 0.69 | 0.67 |
| Bismuth (Bi) | ug/g | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.205 | 0.209 | 0.199 | 0.213 | 0.21 | 0.19 | 0.193 | 0.181 | 0.187 | 0.186 | 0.186 | 0.213 | 0.201 | 0.204 | 0.192 |
| Boron (B) | ug/g | 10.2 | 9.3 | 10.8 | 11.7 | 11.9 | 17 | 15 | 15 | 13 | 15 | 13 | 12 | 12 | 12 | 12 | 10 | 5 | 11 | 5 | 10 |
| Cadmium (Cd) | ug/g | 0.247 | 0.246 | 0.186 | 0.276 | 0.306 | 0.434 | 0.405 | 0.378 | 0.34 | 0.316 | 0.239 | 0.196 | 0.155 | 0.277 | 0.293 | 0.302 | 0.342 | 0.357 | 0.297 | 0.21 |
| Calcium (Ca) | ug/g | 14900 | 17900 | 17200 | 12100 | 12200 | 13000 | 12100 | 12900 | 11900 | 10700 | 22900 | 19900 | 20500 | 9930 | 10500 | 11600 | 12300 | 20900 | 11300 | 17200 |
| Chromium (Cr) | ug/g | 40.4 | 259 | 103 | 32.8 | 33 | 33.3 | 34.2 | 32.2 | 34.2 | 35.9 | 31.8 | 33.2 | 29.5 | 30.9 | 30.1 | 27.7 | 31.5 | 32.2 | 35.6 | 32.8 |
| Cobalt (Co) | ug/g | 8.31 | 10.6 | 7.88 | 7.72 | 8.56 | 10 | 10.3 | 10.3 | 10.3 | 10.4 | 9.1 | 9.01 | 8.17 | 9.25 | 9.41 | 8.44 | 9.58 | 9.56 | 9.69 | 8.89 |
| Copper (Cu) | ug/g | 17.9 | 26.4 | 17.7 | 17.8 | 19 | 23.5 | 23.3 | 22.4 | 23.1 | 22.3 | 23.7 | 20.9 | 21.4 | 19.6 | 20.3 | 18.8 | 22.5 | 21.9 | 20.7 | 19.3 |
| Iron (Fe) | ug/g | 19400 | 22700 | 17500 | 18200 | 19500 | 22900 | 23800 | 23800 | 23000 | 24100 | 21600 | 22900 | 19700 | 20800 | 21300 | 19400 | 21700 | 21800 | 22600 | 22800 |
| Lead (Pb) | ug/g | 10 | 9.12 | 8.89 | 11.1 | 11.5 | 11.8 | 11.6 | 11.1 | 11.8 | 11.6 | 10 | 10.3 | 9.62 | 10.2 | 10.2 | 10.4 | 11.1 | 11 | 11.4 | 10.7 |
| Lithium (Li) | ug/g | 16.3 | 12.6 | 17.6 | 16.2 | 16.4 | | | | | | | | | | | | | | | |
| Magnesium (Mg) | ug/g | 9140 | 8680 | 10300 | 7380 | 7720 | 8620 | 8570 | 9000 | 8870 | 8120 | 15900 | 14800 | 15800 | 8230 | 8230 | 8110 | 9280 | 8700 | 8590 | 12100 |
| Manganese (Mn) | ug/g | 450 | 539 | 382 | 355 | 349 | 359 | 390 | 374 | 347 | 382 | 344 | 338 | 269 | 305 | 354 | 308 | 247 | 487 | 333 | 328 |
| Molybdenum (Mo) | ug/g | 1.71 | 11.2 | 4.1 | 1.42 | 1.81 | 2.14 | 2.27 | 5.48 | 2.51 | 2.65 | 1 | 0.67 | 0.73 | 1.75 | 2.01 | 1.8 | 3.22 | 2.09 | 1.78 | 1.01 |
| Nickel (Ni) | ug/g | 28.2 | 133 | 56.8 | 22.1 | 22.8 | 24.8 | 25.8 | 25 | 25.7 | 25.7 | 25.4 | 24.6 | 23 | 22.4 | 22.8 | 20.5 | 23.6 | 23.3 | 24.2 | 22.9 |
| Phosphorus (P) | ug/g | 628 | 513 | 538 | 525 | 519 | 660 | 670 | 710 | 670 | 630 | 540 | 550 | 500 | 550 | 570 | 520 | 570 | 680 | 600 | 540 |
| Potassium (K) | ug/g | 2660 | 2100 | 2400 | 2510 | 2800 | 3130 | 3270 | 3200 | 3270 | 3500 | 2950 | 3100 | 2970 | 2910 | 2760 | 2710 | 3180 | 3130 | 3200 | 3170 |
| Selenium (Se) | ug/g | 0.25 | 0.3 | 0.21 | 0.36 | 0.37 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| Silver (Ag) | ug/g | 0.05 | 0.11 | 0.05 | 0.11 | 0.12 | 0.15 | 0.15 | 0.14 | 0.15 | 0.14 | 0.11 | 0.11 | 0.05 | 0.12 | 0.12 | 0.1 | 0.12 | 0.12 | 0.11 | 0.1 |
| Sodium (Na) | ug/g | 715 | 1020 | 982 | 649 | 1160 | 928 | 997 | 971 | 785 | 758 | 492 | 557 | 448 | 663 | 640 | 534 | 737 | 817 | 643 | 554 |
| Strontium (Sr) | ug/g | 38.4 | 56.3 | 39.5 | 46.7 | 55.5 | 59 | 65.2 | 57.7 | 54 | 53.7 | 53.3 | 48.2 | 41.9 | 56.1 | 53.4 | 51.7 | 69.8 | 73.9 | 57.3 | 54.8 |
| Sulfur (S) | ug/g | | | | | | | | | | | | | | | | | | | | |
| Thallium (Tl) | ug/g | 0.216 | 0.182 | 0.22 | 0.224 | 0.238 | 0.24 | 0.24 | 0.22 | 0.24 | 0.25 | 0.23 | 0.24 | 0.23 | 0.21 | 0.21 | 0.22 | 0.23 | 0.23 | 0.23 | 0.23 |
| Tin (Sn) | ug/g | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Titanium (Ti) | ug/g | 316 | 226 | 332 | 254 | 226 | 211 | 190 | 186 | 199 | 226 | 294 | 269 | 350 | 194 | 206 | 188 | 192 | 202 | 216 | 271 |
| Tungsten (W) | ug/g | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | | | | | | | | | | | | | | | |
| Uranium (U) | ug/g | 1.13 | 0.964 | 0.974 | 1.1 | 1.29 | 1.27 | 1.15 | 1.16 | 1.24 | 1.13 | 1.07 | 0.975 | 0.886 | 1.04 | 1.1 | 1.02 | 1.21 | 1.24 | 1.15 | 1.07 |
| Vanadium (V) | ug/g | 38.3 | 33.6 | 34.9 | 36.3 | 37.3 | 44 | 44.8 | 42.1 | 44.5 | 46.1 | 43.3 | 44.2 | 41.7 | 38.9 | 38.8 | 37.5 | 42.9 | 43.1 | 42.1 | 42 |
| Zinc (Zn) | ug/g | 65.9 | 68 | 57.5 | 71.7 | 79.2 | 91 | 89 | 86 | 86 | 88 | 73 | 77 | 58 | 80 | 83 | 73 | 83 | 85 | 90 | 75 |
| Zirconium (Zr) | ug/g | 7 | 6.5 | 7.4 | 8.2 | 8.1 | | | | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-10 cont'd

| <i>Less than detection limit, half value</i> | | NNC-VR A | NNC-VR B | NNC-VR C | NNC-VR D | NNC-VR E | NNC-VR A | NNC-VR B | NNC-VR C | NNC-VR D | NNC-VR E | NNC-VR A | NNC-VR B | NNC-VR C | NNC-VR D | NNC-VR E | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples |
|--|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|----------|----------|---------|----------------|
| No Name Creek - Vanson Road | | L2487944-11 | L2487944-12 | L2487944-13 | L2487944-14 | L2487944-15 | L2520599-11 | L2520599-12 | L2520599-13 | L2520599-14 | L2520599-15 | L2653701-6 | L2653701-7 | L2653701-8 | L2653701-9 | L2653701-10 | | | | | | |
| Analyte | Units | 2020-08-11 | 2020-08-11 | 2020-08-11 | 2020-08-11 | 2020-08-11 | 2020-10-21 | 2020-10-21 | 2020-10-21 | 2020-10-21 | 2020-10-21 | 2021-10-19 | 2021-10-19 | 2021-10-19 | 2021-10-19 | 2021-10-19 | | | | | | |
| % Moisture | % | 69.1 | 51.1 | 56.2 | 45.9 | 64.8 | 29.8 | 70.4 | 40.6 | 65.2 | 25.8 | 63.9 | 65.7 | 64.3 | 59.2 | 69.4 | 60 | 59 | 25.8 | 93.9 | 20 | 36 |
| pH (1:2 soil:water) | pH | 7.26 | 7.38 | 7.35 | 7.18 | 7.17 | 7.61 | 6.76 | 7.99 | 7.05 | 7.85 | 7.01 | 6.85 | 6.91 | 7.16 | 6.87 | 7.28 | 7.25 | 6.2 | 8.32 | 1.75 | 36 |
| Inorganic Carbon | % | 0.285 | 0.228 | 0.279 | 0.252 | 0.312 | 0.405 | 0.38 | 0.916 | 0.384 | 0.433 | 0.28 | 0.246 | 0.259 | 0.253 | 0.272 | 0.368 | 0.283 | 0.197 | 0.916 | 0.19 | 36 |
| Inorganic Carbon (as CaCO3 Equivalent) | % | 2.37 | 1.9 | 2.32 | 2.1 | 2.6 | 3.38 | 3.16 | 7.63 | 3.2 | 3.6 | 2.33 | 2.05 | 2.15 | 2.11 | 2.26 | 3.07 | 2.33 | 1.64 | 7.63 | 1.72 | 31 |
| Total Carbon by Combustion | % | 6.74 | 5.59 | 6.14 | 5.67 | 7.99 | 1.83 | 7.62 | 3.16 | 7.05 | 1.55 | 9.01 | 8.96 | 7.91 | 6.34 | 8.19 | 6.38 | 6.97 | 1.55 | 9.4 | 2.55 | 36 |
| Total Organic Carbon | % | 6.46 | 5.36 | 5.86 | 5.42 | 7.68 | 1.43 | 7.24 | 2.24 | 6.67 | 1.12 | 8.73 | 8.71 | 7.65 | 6.09 | 7.92 | 6.07 | 6.68 | 1.12 | 9.2 | 2.77 | 31 |
| Aluminum (Al) | ug/g | 17300 | 18300 | 18000 | 18000 | 17800 | 12000 | 16300 | 18600 | 15300 | 12300 | 12800 | 13300 | 16300 | 14900 | 14000 | 15806 | 16300 | 12000 | 18600 | 4158 | 36 |
| Antimony (Sb) | ug/g | 0.15 | 0.11 | 0.12 | 0.11 | 0.16 | 0.13 | 0.14 | 0.19 | 0.16 | 0.13 | 0.18 | 0.2 | 0.25 | 0.16 | 0.17 | 0.17 | 0.17 | 0.11 | 0.25 | 0.05 | 36 |
| Arsenic (As) | ug/g | 3.25 | 2.79 | 2.63 | 2.42 | 2.77 | 3.15 | 3.04 | 2.35 | 2.93 | 3.69 | 2.83 | 3.64 | 3.77 | 2.81 | 2.94 | 3.02 | 3.01 | 2.29 | 3.92 | 0.80 | 36 |
| Barium (Ba) | ug/g | 121 | 124 | 124 | 111 | 115 | 56.1 | 116 | 122 | 104 | 51.6 | 107 | 123 | 130 | 101 | 111 | 112 | 118 | 51.6 | 134 | 32 | 36 |
| Beryllium (Be) | ug/g | 0.67 | 0.75 | 0.7 | 0.66 | 0.68 | 0.36 | 0.69 | 0.77 | 0.65 | 0.36 | 0.52 | 0.61 | 0.82 | 0.57 | 0.55 | 0.65 | 0.66 | 0.36 | 0.82 | 0.18 | 36 |
| Bismuth (Bi) | ug/g | 0.182 | 0.173 | 0.178 | 0.172 | 0.185 | 0.103 | 0.178 | 0.203 | 0.171 | 0.106 | <i>0.1</i> | <i>0.1</i> | 0.23 | <i>0.1</i> | <i>0.1</i> | 0.17 | 0.18 | 0.10 | 0.23 | 0.06 | 36 |
| Boron (B) | ug/g | <i>5</i> | <i>5</i> | <i>5</i> | <i>5</i> | <i>5</i> | <i>5</i> | <i>5</i> | 10 | 10 | <i>5</i> | 10.9 | 12.2 | 14.9 | 10 | 12.1 | 10.0 | 10.5 | 5 | 17 | 4.3 | 36 |
| Cadmium (Cd) | ug/g | 0.392 | 0.275 | 0.263 | 0.26 | 0.362 | 0.094 | 0.337 | 0.177 | 0.327 | 0.077 | 0.323 | 0.388 | 0.414 | 0.329 | 0.369 | 0.29 | 0.30 | 0.08 | 0.43 | 0.11 | 36 |
| Calcium (Ca) | ug/g | 11500 | 9910 | 10700 | 10000 | 11700 | 11000 | 12600 | 23600 | 12400 | 13000 | 11500 | 14000 | 18700 | 12100 | 13500 | 13960 | 12250 | 9910 | 23600 | 5000 | 36 |
| Chromium (Cr) | ug/g | 31.6 | 33.1 | 33.1 | 32.8 | 32.4 | 22.6 | 30.2 | 35.3 | 27.5 | 22.5 | 25.5 | 31.6 | 30.7 | 28.6 | 28.2 | 40.3 | 32.3 | 22.5 | 259 | 40.60 | 36 |
| Cobalt (Co) | ug/g | 9.7 | 9.87 | 9.18 | 9.48 | 9.89 | 7.99 | 9.2 | 9.46 | 8.51 | 8.3 | 7.7 | 9.57 | 10.1 | 8.36 | 8.29 | 9.2 | 9.3 | 7.7 | 10.6 | 2.29 | 36 |
| Copper (Cu) | ug/g | 21.4 | 19.6 | 19 | 18.6 | 21.5 | 16.3 | 21.1 | 22.9 | 20.9 | 18.8 | 19.7 | 22.3 | 23.7 | 19.7 | 21.3 | 21 | 21 | 16.3 | 26.4 | 5 | 36 |
| Iron (Fe) | ug/g | 21300 | 22400 | 22100 | 22100 | 20800 | 24700 | 20500 | 22600 | 19200 | 24800 | 17300 | 19800 | 21400 | 19200 | 18700 | 21403 | 21650 | 17300 | 24800 | 5326 | 36 |
| Lead (Pb) | ug/g | 10.5 | 10.3 | 10.2 | 10.2 | 10.3 | 6.76 | 10.6 | 10.9 | 10.1 | 6.84 | 9.58 | 10.2 | 12.9 | 9.42 | 9.97 | 10 | 10 | 6.76 | 12.9 | 2.7 | 36 |
| Lithium (Li) | ug/g | | | | | | | | | | | 11.1 | 13.2 | 17.3 | 12.4 | 13.1 | 15 | 16 | 11.1 | 17.6 | 6.4 | 11 |
| Magnesium (Mg) | ug/g | 8850 | 8490 | 8900 | 8600 | 9280 | 8800 | 9300 | 18200 | 9010 | 10200 | 7620 | 8790 | 10900 | 8670 | 8760 | 9757 | 8825 | 7380 | 18200 | 3378 | 36 |
| Manganese (Mn) | ug/g | 381 | 327 | 302 | 308 | 366 | 243 | 343 | 272 | 338 | 311 | 469 | 480 | 578 | 469 | 512 | 366 | 348 | 243 | 578 | 114 | 36 |
| Molybdenum (Mo) | ug/g | 2.12 | 1.25 | 0.94 | 1.44 | 2.29 | 0.97 | 1.42 | 1.23 | 2.31 | 0.6 | 2.12 | 2.28 | 2.44 | 1.49 | 2.39 | 2.2 | 1.8 | 0.6 | 11.2 | 1.9 | 36 |
| Nickel (Ni) | ug/g | 23.6 | 23.8 | 23 | 23 | 24.2 | 17.7 | 22.7 | 26.2 | 21.3 | 19 | 19.8 | 24.2 | 23.8 | 20.1 | 21.3 | 28 | 24 | 17.7 | 133 | 20.1 | 36 |
| Phosphorus (P) | ug/g | 600 | 520 | 510 | 490 | 570 | 440 | 590 | 500 | 610 | 440 | 521 | 644 | 692 | 529 | 615 | 569 | 550 | 440 | 710 | 149 | 36 |
| Potassium (K) | ug/g | 2840 | 3000 | 2960 | 2870 | 3000 | 1780 | 2640 | 3480 | 2520 | 1660 | 2240 | 2600 | 2660 | 2640 | 2540 | 2818 | 2890 | 1660 | 3500 | 776 | 36 |
| Selenium (Se) | ug/g | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | 0.42 | 0.47 | 0.48 | 0.4 | 0.44 | 0.28 | 0.25 | 0.21 | 0.48 | 0.09 | 36 |
| Silver (Ag) | ug/g | 0.12 | 0.11 | 0.12 | 0.11 | 0.12 | 0.1 | 0.12 | 0.12 | 0.12 | <i>0.05</i> | 0.1 | 0.12 | 0.14 | <i>0.05</i> | 0.11 | 0.11 | 0.12 | 0.05 | 0.15 | 0.04 | 36 |
| Sodium (Na) | ug/g | 505 | 381 | 397 | 444 | 568 | 226 | 537 | 393 | 508 | 210 | 438 | 483 | 528 | 418 | 461 | 620 | 556 | 210 | 1160 | 267 | 36 |
| Strontium (Sr) | ug/g | 60.8 | 47.8 | 48 | 54.1 | 59 | 38.8 | 49.1 | 55.6 | 57.7 | 41.3 | 54.8 | 60.7 | 75.1 | 57.5 | 57 | 54 | 55 | 38.4 | 75.1 | 15 | 36 |
| Sulfur (S) | ug/g | | | | | | | | | | | 4700 | 4400 | 6000 | 3600 | 5000 | 4675 | 4550 | 3600 | 6000 | 2535 | 6 |
| Thallium (Tl) | ug/g | 0.21 | 0.22 | 0.22 | 0.22 | 0.22 | 0.13 | 0.21 | 0.25 | 0.2 | 0.13 | 0.187 | 0.19 | 0.245 | 0.186 | 0.192 | 0.22 | 0.22 | 0.13 | 0.25 | 0.06 | 36 |
| Tin (Sn) | ug/g | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>1</i> | <i>1</i> | <i>1</i> | <i>1</i> | <i>1</i> | 2.03 | 2.50 | 0.50 | 2.50 | 0.91 | 36 |
| Titanium (Ti) | ug/g | 133 | 130 | 132 | 125 | 151 | 228 | 134 | 205 | 145 | 298 | 221 | 228 | 231 | 223 | 231 | 216 | 214 | 125 | 350 | 76 | 36 |
| Tungsten (W) | ug/g | | | | | | | | | | | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | 0.25 | 0.25 | 0.25 | 0.25 | 0.10 | 11 |
| Uranium (U) | ug/g | 1.19 | 0.997 | 0.998 | 0.938 | 1.01 | 0.552 | 1.09 | 0.96 | 1.11 | 0.551 | 1.12 | 1.14 | 1.36 | 0.988 | 1.11 | 1.06 | 1.10 | 0.55 | 1.36 | 0.30 | 36 |
| Vanadium (V) | ug/g | 43 | 43 | 41.9 | 40.7 | 43.4 | 33.8 | 40 | 47.7 | 37.9 | 35.8 | 35.6 | 40.8 | 42.8 | 38 | 39 | 41 | 42 | 33.6 | 47.7 | 10.1 | 36 |
| Zinc (Zn) | ug/g | 85 | 81 | 84 | 90 | 90 | 172 | 79 | 66 | 77 | 89 | 71.3 | 75.5 | 80.9 | 74 | 72.4 | 82 | 80 | 57.5 | 172 | 26.0 | 36 |
| Zirconium (Zr) | ug/g | | | | | | | | | | | 7.6 | 9.7 | 10.4 | 7.7 | 8.4 | 8.1 | 7.7 | 6.5 | 10.4 | 3.6 | 36 |



Table B-11: No Name Creek – Gun Range (NNC-GR) Sediment Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | | | | | | | | | | | | | | | | | | |
|--|--------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|------------|
| No Name Creek - Gun Range | | | | | | | | | | | | | | | | | | |
| | | NNC-GR A | NNC-GR B | NNC-GR C | NNC-GR D | NNC-GR E | NNC-GR A | NNC-GR B | NNC-GR C | NNC-GR D | NNC-GR E | NNC-GR A | NNC-GR B | NNC-GR C | NNC-GR D | NNC-GR E | NNC-GR A | NNC-GR B |
| | | L1990536-6 | L1990536-7 | L1990536-8 | L1990536-9 | L1990536-10 | L2138537-6 | L2138537-7 | L2138537-8 | L2138537-9 | L2138537-10 | L2338584-11 | L2338584-12 | L2338584-13 | L2338584-14 | L2338584-15 | L2487944-6 | L2487944-7 |
| Analyte | Units | 2017-09-12 | 2017-09-12 | 2017-09-12 | 2017-09-12 | 2017-09-12 | 2018-07-30 | 2018-07-30 | 2018-07-30 | 2018-07-30 | 2018-07-30 | 2019-08-29 | 2019-08-29 | 2019-08-29 | 2019-08-29 | 2019-08-29 | 2020-08-11 | 2020-08-11 |
| % Moisture | % | 73.4 | 82.1 | 93.8 | 85.2 | 90.7 | 31.6 | 34.7 | 35.7 | 33 | 35.4 | 66.4 | 66.1 | 49.1 | 75.7 | 46.3 | 37.1 | 35.6 |
| pH (1:2 soil:water) | pH | 7.31 | 6.88 | 7.52 | 7.05 | 7.47 | 6.43 | 6.67 | 6.33 | 6.29 | 6.33 | 7.58 | 6.99 | 8.01 | 7.16 | 7.92 | 8 | 8.11 |
| Inorganic Carbon | % | 0.294 | 0.426 | 0.322 | 0.325 | 0.229 | 0.097 | 0.106 | 0.108 | 0.102 | 0.104 | 0.544 | 0.373 | 0.239 | 0.229 | 0.461 | 0.229 | 0.237 |
| Inorganic Carbon (as CaCO3 Equivalent) | % | | | | | | 0.81 | 0.88 | 0.9 | 0.85 | 0.86 | 4.53 | 3.11 | 1.99 | 1.91 | 3.84 | 1.91 | 1.98 |
| Total Carbon by Combustion | % | 2.29 | 5.31 | 4.06 | 2.99 | 2.78 | 2.51 | 2.57 | 4.06 | 3.22 | 3.61 | 6.78 | 6.08 | 1.39 | 7.41 | 2.15 | 2.06 | 1.52 |
| Total Organic Carbon | % | | | | | | 2.41 | 2.46 | 3.95 | 3.12 | 3.51 | 6.24 | 5.71 | 1.15 | 7.18 | 1.69 | 1.83 | 1.28 |
| Aluminum (Al) | ug/g | 15400 | 14300 | 15300 | 15000 | 15700 | 26800 | 26500 | 22600 | 25400 | 23600 | 15700 | 16600 | 13500 | 16800 | 14000 | 19200 | 18700 |
| Antimony (Sb) | ug/g | 0.16 | 0.19 | 0.17 | 0.18 | 0.19 | 0.11 | 0.12 | 0.12 | 0.12 | 0.12 | 0.21 | 0.16 | 0.12 | 0.14 | 0.13 | 0.11 | 0.1 |
| Arsenic (As) | ug/g | 3.47 | 7.24 | 4.91 | 4.33 | 3.58 | 3.23 | 3.32 | 3.19 | 3.33 | 3.37 | 6.63 | 3.29 | 2.88 | 2.8 | 2.44 | 2.59 | 2.66 |
| Barium (Ba) | ug/g | 113 | 155 | 124 | 140 | 123 | 162 | 154 | 151 | 158 | 157 | 265 | 138 | 110 | 108 | 106 | 108 | 100 |
| Beryllium (Be) | ug/g | 0.76 | 0.65 | 0.71 | 0.69 | 0.75 | 1.02 | 0.97 | 0.88 | 0.99 | 0.93 | 0.62 | 0.69 | 0.5 | 0.64 | 0.54 | 0.7 | 0.7 |
| Bismuth (Bi) | ug/g | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.27 | 0.256 | 0.242 | 0.26 | 0.254 | 0.179 | 0.186 | 0.158 | 0.174 | 0.151 | 0.175 | 0.185 |
| Boron (B) | ug/g | 9.4 | 11.8 | 10.5 | 9.7 | 10.3 | 5 | 11 | 5 | 5 | 5 | 16 | 14 | 17 | 10 | 5 | 5 | 5 |
| Cadmium (Cd) | ug/g | 0.12 | 0.253 | 0.152 | 0.153 | 0.174 | 0.09 | 0.111 | 0.143 | 0.096 | 0.121 | 0.303 | 0.244 | 0.463 | 0.167 | 0.179 | 0.136 | 0.08 |
| Calcium (Ca) | ug/g | 13200 | 17000 | 13700 | 14200 | 11400 | 6320 | 6680 | 6490 | 6320 | 6700 | 20000 | 13700 | 11200 | 11900 | 25500 | 9900 | 8790 |
| Chromium (Cr) | ug/g | 32.9 | 29.3 | 32.3 | 31.8 | 33 | 49.4 | 48.6 | 40.6 | 47.3 | 42.3 | 29.4 | 31.4 | 24.2 | 31.6 | 26.3 | 34.7 | 34 |
| Cobalt (Co) | ug/g | 9.47 | 11.6 | 10.1 | 9.71 | 9.52 | 13.1 | 12.3 | 11.4 | 12.8 | 12 | 13.2 | 10.4 | 8.27 | 9.65 | 9 | 9.71 | 9.9 |
| Copper (Cu) | ug/g | 15.4 | 16.3 | 16.4 | 15.9 | 16.7 | 16.1 | 17.6 | 20.4 | 16.8 | 17.3 | 18.1 | 18.8 | 17.7 | 18 | 20 | 17.2 | 16.1 |
| Iron (Fe) | ug/g | 21800 | 24200 | 22300 | 22800 | 21900 | 29700 | 28900 | 25000 | 29300 | 26400 | 27600 | 22200 | 17000 | 20800 | 17800 | 22800 | 23500 |
| Lead (Pb) | ug/g | 10.9 | 10 | 10.5 | 10.5 | 10.6 | 15 | 15.3 | 16.6 | 15.2 | 15.3 | 9.39 | 9.48 | 9.89 | 9.39 | 8.3 | 10 | 10.5 |
| Lithium (Li) | ug/g | 17.1 | 15.4 | 16.7 | 15.8 | 16.9 | | | | | | | | | | | | |
| Magnesium (Mg) | ug/g | 9890 | 10800 | 9570 | 9690 | 8140 | 8870 | 8680 | 7110 | 8620 | 7470 | 11400 | 10400 | 6570 | 9970 | 14000 | 9430 | 9140 |
| Manganese (Mn) | ug/g | 831 | 1300 | 1040 | 1150 | 991 | 431 | 428 | 521 | 450 | 490 | 5780 | 814 | 517 | 356 | 718 | 305 | 365 |
| Molybdenum (Mo) | ug/g | 0.42 | 0.85 | 0.72 | 0.46 | 0.41 | 0.22 | 0.27 | 0.27 | 0.22 | 0.26 | 1.21 | 1.26 | 2.57 | 0.7 | 0.36 | 0.23 | 0.17 |
| Nickel (Ni) | ug/g | 28.2 | 25.8 | 27.3 | 26.5 | 29.7 | 28.5 | 27.1 | 24.3 | 28 | 25.7 | 24.4 | 25.3 | 20.4 | 25.4 | 25 | 27.9 | 27.5 |
| Phosphorus (P) | ug/g | 680 | 1010 | 711 | 826 | 718 | 250 | 310 | 340 | 280 | 340 | 1040 | 710 | 730 | 660 | 560 | 540 | 550 |
| Potassium (K) | ug/g | 2260 | 2280 | 2390 | 2310 | 2390 | 3920 | 3990 | 3180 | 3650 | 3230 | 2630 | 2850 | 2310 | 2230 | 2060 | 2990 | 2960 |
| Selenium (Se) | ug/g | 0.1 | 0.32 | 0.1 | 0.22 | 0.1 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.5 | 0.25 | 0.51 | 0.25 | 0.25 | 0.25 | 0.25 |
| Silver (Ag) | ug/g | 0.12 | 0.1 | 0.11 | 0.12 | 0.12 | 0.23 | 0.22 | 0.25 | 0.22 | 0.23 | 0.1 | 0.12 | 0.12 | 0.12 | 0.1 | 0.11 | 0.1 |
| Sodium (Na) | ug/g | 424 | 527 | 723 | 574 | 726 | 227 | 412 | 352 | 244 | 256 | 571 | 623 | 661 | 366 | 311 | 303 | 336 |
| Strontium (Sr) | ug/g | 30.2 | 34.6 | 34.8 | 34.8 | 36.4 | 27.8 | 29.9 | 26 | 27.1 | 27.2 | 65.5 | 55.3 | 52 | 33.6 | 32.9 | 49.3 | 48.4 |
| Sulfur (S) | ug/g | | | | | | | | | | | | | | | | | |
| Thallium (Tl) | ug/g | 0.23 | 0.201 | 0.216 | 0.217 | 0.228 | 0.32 | 0.3 | 0.23 | 0.3 | 0.26 | 0.18 | 0.2 | 0.16 | 0.19 | 0.17 | 0.22 | 0.23 |
| Tin (Sn) | ug/g | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Titanium (Ti) | ug/g | 264 | 274 | 281 | 253 | 283 | 453 | 539 | 329 | 424 | 385 | 261 | 312 | 230 | 266 | 211 | 205 | 184 |
| Tungsten (W) | ug/g | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | | | | | | | | | | | | |
| Uranium (U) | ug/g | 0.71 | 0.729 | 0.714 | 0.719 | 0.712 | 1.02 | 1.04 | 1.07 | 1.05 | 1.08 | 0.824 | 0.951 | 1.14 | 0.772 | 0.717 | 0.726 | 0.674 |
| Vanadium (V) | ug/g | 40.8 | 39.3 | 39.6 | 40.3 | 46.6 | 59 | 61.3 | 49.6 | 58.1 | 54.7 | 41.4 | 42.3 | 33.6 | 52.3 | 33.3 | 44.3 | 42.3 |
| Zinc (Zn) | ug/g | 63.2 | 62 | 61.9 | 60.9 | 61.2 | 73 | 70 | 67 | 71 | 66 | 73 | 71 | 72 | 64 | 55 | 73 | 71 |
| Zirconium (Zr) | ug/g | 6.2 | 3 | 4.8 | 5 | 5.2 | | | | | | | | | | | | |

True North Mine
Request for Alignment of Discharge Monitoring Requirements



Table B-11 cont'd

| <i>Less than detection limit, half value</i> | | NNC-GR C | NNC-GR D | NNC-GR E | NNC-GR A | NNC-GR B | NNC-GR C | NNC-GR D | NNC-GR E | NNC-GR A | NNC-GR B | NNC-GR C | NNC-GR D | NNC-GR E | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples |
|--|--------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|----------|----------|---------|----------------|
| No Name Creek - Gun Range | | L2487944-8 | L2487944-9 | L2487944-10 | L2520599-6 | L2520599-7 | L2520599-8 | L2520599-9 | L2520599-10 | L2653701-21 | L2653701-22 | L2653701-23 | L2653701-24 | L2653701-25 | | | | | | |
| Analyte | Units | 2020-08-11 | 2020-08-11 | 2020-08-11 | 2020-10-21 | 2020-10-21 | 2020-10-21 | 2020-10-21 | 2020-10-21 | 2021-10-20 | 2021-10-20 | 2021-10-20 | 2021-10-20 | 2021-10-20 | | | | | | |
| % Moisture | % | 33.5 | 39.8 | 35.9 | 56.1 | 66.5 | 41.1 | 39.6 | 40.4 | 56 | 38.7 | 62.5 | 71.1 | 71.1 | 54 | 48 | 31.6 | 93.8 | 23 | 32 |
| pH (1:2 soil:water) | pH | 7.97 | 7.9 | 7.84 | 7.37 | 7.24 | 7.69 | 7.56 | 7.34 | 7.7 | 7.67 | 7.65 | 7.37 | 7.3 | 7.36 | 7.42 | 6.29 | 8.11 | 1.88 | 32 |
| Inorganic Carbon | % | 0.239 | 0.233 | 0.225 | 0.353 | 0.327 | 0.275 | 0.273 | 0.312 | 0.222 | 0.301 | 0.24 | 0.272 | 0.372 | 0.269 | 0.256 | 0.097 | 0.544 | 0.12 | 32 |
| Inorganic Carbon (as CaCO3 Equivalent) | % | 1.99 | 1.94 | 1.88 | 2.94 | 2.72 | 2.29 | 2.27 | 2.6 | 1.85 | 2.51 | 2 | 2.27 | 3.1 | 2.16 | 1.99 | 0.81 | 4.53 | 1.06 | 27 |
| Total Carbon by Combustion | % | 1.61 | 2.48 | 1.67 | 5.56 | 6.1 | 2.63 | 2.85 | 5.61 | 5.51 | 2.86 | 6.37 | 10.3 | 9.79 | 4.14 | 3.11 | 1.39 | 10.3 | 2.51 | 32 |
| Total Organic Carbon | % | 1.37 | 2.25 | 1.45 | 5.21 | 5.77 | 2.36 | 2.58 | 5.3 | 5.29 | 2.56 | 6.13 | 10 | 9.42 | 4.01 | 3.12 | 1.15 | 10.0 | 2.63 | 27 |
| Aluminum (Al) | ug/g | 19100 | 19500 | 18400 | 17300 | 16500 | 20200 | 19600 | 16800 | 15300 | 16000 | 17300 | 13300 | 13500 | 17930 | 16800 | 13300 | 26800 | 5730 | 32 |
| Antimony (Sb) | ug/g | 0.1 | <i>0.05</i> | 0.1 | 0.13 | 0.11 | 0.12 | 0.11 | 0.12 | 0.15 | 0.14 | 0.14 | 0.24 | 0.22 | 0.14 | 0.13 | 0.05 | 0.24 | 0.05 | 32 |
| Arsenic (As) | ug/g | 2.82 | 2.74 | 2.81 | 2.65 | 2.65 | 2.5 | 2.67 | 2.65 | 2.52 | 3.12 | 3.14 | 3.41 | 4.2 | 3.37 | 3.13 | 2.44 | 7.24 | 1.37 | 32 |
| Barium (Ba) | ug/g | 98.1 | 105 | 91.9 | 113 | 103 | 113 | 110 | 110 | 105 | 101 | 109 | 108 | 123 | 125 | 112 | 91.9 | 265 | 45 | 32 |
| Beryllium (Be) | ug/g | 0.71 | 0.74 | 0.73 | 0.7 | 0.68 | 0.77 | 0.71 | 0.65 | 0.57 | 0.58 | 0.6 | 0.54 | 0.52 | 0.71 | 0.70 | 0.50 | 1.02 | 0.22 | 32 |
| Bismuth (Bi) | ug/g | 0.179 | 0.192 | 0.181 | 0.185 | 0.165 | 0.193 | 0.181 | 0.177 | <i>0.1</i> | <i>0.1</i> | <i>0.1</i> | <i>0.1</i> | <i>0.1</i> | 0.16 | 0.18 | 0.10 | 0.27 | 0.07 | 32 |
| Boron (B) | ug/g | <i>5</i> | <i>5</i> | <i>5</i> | 11 | <i>5</i> | 12 | <i>5</i> | <i>5</i> | 9.7 | 9.3 | 11.1 | 10.6 | 11.3 | 8.7 | 9.6 | 5 | 17 | 4.1 | 32 |
| Cadmium (Cd) | ug/g | 0.088 | 0.133 | 0.101 | 0.417 | 0.361 | 0.165 | 0.166 | 0.34 | 0.398 | 0.165 | 0.391 | 0.29 | 0.286 | 0.21 | 0.17 | 0.08 | 0.46 | 0.12 | 32 |
| Calcium (Ca) | ug/g | 9260 | 9270 | 8980 | 12500 | 11600 | 10100 | 9820 | 11400 | 10100 | 14800 | 11400 | 11100 | 14400 | 11591 | 11300 | 6320 | 25500 | 4915 | 32 |
| Chromium (Cr) | ug/g | 34.7 | 35.5 | 34.4 | 31.8 | 30.3 | 36.3 | 35 | 31 | 29.6 | 31.3 | 33.8 | 26.5 | 27.7 | 33.9 | 32.6 | 24.2 | 49.4 | 10.28 | 32 |
| Cobalt (Co) | ug/g | 9.56 | 9.89 | 9.68 | 8.98 | 8.61 | 9.85 | 9.81 | 8.93 | 8.1 | 9.29 | 9.7 | 8.76 | 9.49 | 10.1 | 9.7 | 8.1 | 13.2 | 2.83 | 32 |
| Copper (Cu) | ug/g | 16.5 | 17.5 | 15.8 | 20.8 | 19 | 18.2 | 18 | 19.2 | 20.8 | 18.3 | 21 | 18.3 | 19.6 | 18 | 18 | 15.4 | 21 | 5 | 32 |
| Iron (Fe) | ug/g | 20300 | 23800 | 23600 | 19800 | 19000 | 23300 | 23000 | 19500 | 17700 | 20900 | 20600 | 18600 | 20400 | 22483 | 22250 | 17000 | 29700 | 6427 | 32 |
| Lead (Pb) | ug/g | 9.96 | 10.8 | 10.1 | 10.8 | 10.1 | 10.9 | 10.6 | 10.4 | 10.6 | 8.99 | 10.6 | 8.73 | 8.14 | 11 | 11 | 8.14 | 16.6 | 3.4 | 32 |
| Lithium (Li) | ug/g | | | | | | | | | 11.7 | 12.6 | 12.8 | 11 | 11.4 | 14 | 14 | 11 | 17.1 | 5.9 | 12 |
| Magnesium (Mg) | ug/g | 9340 | 9490 | 9160 | 9780 | 9060 | 9520 | 9490 | 9230 | 8410 | 11600 | 9050 | 7570 | 10200 | 9388 | 9385 | 6570 | 14000 | 2691 | 32 |
| Manganese (Mn) | ug/g | 315 | 322 | 424 | 465 | 410 | 323 | 458 | 429 | 272 | 801 | 763 | 692 | 615 | 759 | 478 | 272 | 5780 | 972 | 32 |
| Molybdenum (Mo) | ug/g | 0.19 | 0.25 | 0.17 | 0.47 | 0.49 | 0.34 | 0.34 | 0.98 | 0.83 | 0.32 | 0.71 | 0.75 | 2 | 0.6 | 0.4 | 0.17 | 2.57 | 0.6 | 32 |
| Nickel (Ni) | ug/g | 27 | 27.6 | 26.8 | 26.1 | 24.9 | 28.7 | 28.4 | 25.6 | 26.2 | 30.4 | 29 | 25.1 | 22.1 | 26 | 27 | 20.4 | 30.4 | 6.8 | 32 |
| Phosphorus (P) | ug/g | 540 | 590 | 570 | 670 | 600 | 590 | 610 | 630 | 567 | 611 | 706 | 631 | 668 | 608 | 611 | 250 | 1040 | 231 | 32 |
| Potassium (K) | ug/g | 2920 | 3030 | 2860 | 2780 | 2650 | 3190 | 2990 | 2760 | 2650 | 2630 | 3030 | 2370 | 2600 | 2803 | 2770 | 2060 | 3990 | 831 | 32 |
| Selenium (Se) | ug/g | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | 0.53 | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | 0.5 | 0.22 | 0.51 | 0.38 | 0.42 | 0.29 | 0.25 | 0.10 | 0.53 | 0.14 | 32 |
| Silver (Ag) | ug/g | 0.11 | 0.11 | 0.11 | 0.13 | 0.12 | 0.12 | 0.12 | 0.12 | 0.14 | 0.11 | 0.13 | 0.11 | 0.1 | 0.13 | 0.12 | 0.10 | 0.25 | 0.05 | 32 |
| Sodium (Na) | ug/g | 278 | 320 | 267 | 489 | 425 | 393 | 383 | 426 | 359 | 303 | 412 | 412 | 493 | 420 | 403 | 227 | 726 | 170 | 32 |
| Strontium (Sr) | ug/g | 48.4 | 50.6 | 48.6 | 64.1 | 60.1 | 54.8 | 53.8 | 57.4 | 54.6 | 42 | 67.6 | 52.6 | 52.9 | 45 | 49 | 26 | 67.6 | 17 | 32 |
| Sulfur (S) | ug/g | | | | | | | | | <i>500</i> | <i>500</i> | <i>500</i> | <i>500</i> | 1100 | 620 | 500 | 500 | 1100 | 374 | 7 |
| Thallium (Tl) | ug/g | 0.22 | 0.23 | 0.21 | 0.2 | 0.19 | 0.23 | 0.23 | 0.2 | 0.205 | 0.182 | 0.177 | 0.156 | 0.158 | 0.21 | 0.21 | 0.16 | 0.32 | 0.07 | 32 |
| Tin (Sn) | ug/g | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>1</i> | <i>1</i> | <i>1</i> | <i>1</i> | <i>1</i> | 1.92 | 2.50 | 0.50 | 2.50 | 0.95 | 32 |
| Titanium (Ti) | ug/g | 235 | 193 | 226 | 212 | 165 | 275 | 199 | 146 | 270 | 333 | 320 | 293 | 298 | 277 | 268 | 146 | 539 | 108 | 32 |
| Tungsten (W) | ug/g | | | | | | | | | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | 0.25 | 0.25 | 0.25 | 0.25 | 0.10 | 12 |
| Uranium (U) | ug/g | 0.676 | 0.737 | 0.666 | 1.39 | 1.23 | 0.826 | 0.795 | 1.11 | 1.39 | 0.683 | 0.922 | 0.769 | 0.779 | 0.89 | 0.79 | 0.67 | 1.39 | 0.30 | 32 |
| Vanadium (V) | ug/g | 45.3 | 44.8 | 42.9 | 42.5 | 38.6 | 46.6 | 43 | 38 | 40.7 | 41.7 | 43.4 | 37.5 | 38.6 | 44 | 42 | 33.3 | 61.3 | 12.8 | 32 |
| Zinc (Zn) | ug/g | 71 | 77 | 70 | 73 | 71 | 75 | 75 | 73 | 66.4 | 58.3 | 68.7 | 57.5 | 59.9 | 68 | 70 | 55 | 77 | 17.6 | 32 |
| Zirconium (Zr) | ug/g | | | | | | | | | 6.6 | 4.8 | 5.4 | 5.5 | 5.6 | 5.2 | 5.3 | 3.0 | 6.6 | 2.5 | 32 |

Table B-12: Wanipigow River – Upstream (WR-US) Sediment Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | | WR-US A | WR-US B | WR-US C | WR-US D | WR-US E | WR-US A | WR-US B | WR-US C | WR-US D | WR-US E | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|----------|----------|---------|----------------|
| Wanipigow River - Upstream | | L2138537-16 | L2138537-17 | L2138537-18 | L2138537-19 | L2138537-20 | L2653701-16 | L2653701-17 | L2653701-18 | L2653701-19 | L2653701-20 | | | | | | |
| Analyte | Units | 2018-07-30 | 2018-07-30 | 2018-07-30 | 2018-07-30 | 2018-07-30 | 2021-10-20 | 2021-10-20 | 2021-10-20 | 2021-10-20 | 2021-10-20 | | | | | | |
| % Moisture | % | 20.6 | 21.3 | 21.7 | 21.8 | 20.1 | 19.4 | 23 | 22 | 17.9 | 23.1 | 21 | 22 | 17.9 | 23.1 | 2 | 10 |
| pH (1:2 soil:water) | pH | 7.36 | 7.38 | 7.27 | 7.33 | 7.42 | 6.84 | 7.37 | 7.94 | 7.57 | 7.55 | 7.40 | 7.38 | 6.84 | 7.94 | 0.28 | 10 |
| Inorganic Carbon | % | <i>0.025</i> | <i>0.025</i> | <i>0.025</i> | <i>0.025</i> | <i>0.025</i> | <i>0.025</i> | <i>0.025</i> | <i>0.025</i> | <i>0.025</i> | <i>0.025</i> | 0.025 | 0.025 | 0.025 | 0.025 | 0.00 | 10 |
| Inorganic Carbon (as CaCO3 Equivalent) | % | <i>0.2</i> | <i>0.2</i> | <i>0.2</i> | <i>0.2</i> | <i>0.2</i> | <i>0.2</i> | <i>0.2</i> | <i>0.2</i> | <i>0.2</i> | <i>0.2</i> | 0.20 | 0.20 | 0.20 | 0.20 | 0.00 | 10 |
| Total Carbon by Combustion | % | 0.13 | 0.08 | 0.1 | 0.11 | 0.1 | 0.26 | 0.19 | 0.28 | 0.23 | 0.19 | 0.17 | 0.16 | 0.08 | 0.3 | 0.07 | 10 |
| Total Organic Carbon | % | 0.129 | 0.079 | 0.096 | 0.112 | 0.103 | 0.261 | 0.191 | 0.284 | 0.234 | 0.186 | 0.17 | 0.16 | 0.08 | 0.3 | 0.07 | 10 |
| Aluminum (Al) | ug/g | 1540 | 1540 | 1570 | 1770 | 1660 | 4840 | 3080 | 3380 | 2080 | 1980 | 2344 | 1875 | 1540 | 4840 | 1092 | 10 |
| Antimony (Sb) | ug/g | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | 0.05 | 0.05 | 0.05 | 0.05 | 0.00 | 10 |
| Arsenic (As) | ug/g | 0.43 | 0.43 | 0.5 | 0.49 | 0.47 | 4.42 | 1.63 | 2.14 | 0.89 | 0.75 | 1.22 | 0.63 | 0.43 | 4.42 | 1.27 | 10 |
| Barium (Ba) | ug/g | 6.05 | 6.46 | 6.76 | 7.76 | 7.67 | 22.7 | 17.8 | 23.3 | 12 | 11.7 | 12 | 10 | 6.05 | 23.3 | 7 | 10 |
| Beryllium (Be) | ug/g | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | 0.1 | <i>0.05</i> | 0.1 | <i>0.05</i> | <i>0.05</i> | 0.06 | 0.05 | 0.05 | 0.10 | 0.02 | 10 |
| Bismuth (Bi) | ug/g | <i>0.01</i> | <i>0.1</i> | <i>0.1</i> | 0.022 | 0.024 | <i>0.1</i> | <i>0.1</i> | <i>0.1</i> | <i>0.1</i> | <i>0.1</i> | 0.08 | 0.10 | 0.01 | 0.10 | 0.04 | 10 |
| Boron (B) | ug/g | <i>5</i> | <i>5</i> | <i>5</i> | <i>5</i> | <i>5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | 3.8 | 3.8 | 2.5 | 5 | 1.3 | 10 |
| Cadmium (Cd) | ug/g | <i>0.01</i> | <i>0.01</i> | <i>0.01</i> | <i>0.01</i> | <i>0.01</i> | 0.022 | 0.033 | 0.04 | 0.022 | <i>0.01</i> | 0.02 | 0.01 | 0.01 | 0.04 | 0.01 | 10 |
| Calcium (Ca) | ug/g | 1150 | 1140 | 1430 | 1190 | 1380 | 2010 | 2020 | 3260 | 1640 | 1550 | 1677 | 1490 | 1140 | 3260 | 642 | 10 |
| Chromium (Cr) | ug/g | 7.8 | 7.1 | 8.1 | 6.4 | 7.4 | 33.6 | 12.1 | 12.9 | 8.68 | 10 | 11.4 | 8.4 | 6.4 | 33.6 | 8.08 | 10 |
| Cobalt (Co) | ug/g | 1.51 | 1.44 | 1.51 | 1.62 | 1.54 | 5.34 | 2.56 | 3.11 | 1.67 | 1.7 | 2.2 | 1.6 | 1.44 | 5.34 | 1.23 | 10 |
| Copper (Cu) | ug/g | 2 | 1.8 | 2.4 | 2.3 | 2.6 | 11.8 | 8.21 | 9.46 | 2.63 | 2.47 | 5 | 3 | 1.8 | 11.8 | 4 | 10 |
| Iron (Fe) | ug/g | 4310 | 3670 | 5800 | 4110 | 4630 | 14700 | 7580 | 8000 | 5140 | 5830 | 6377 | 5470 | 3670 | 14700 | 3254 | 10 |
| Lead (Pb) | ug/g | 1.18 | 1.12 | 1.32 | 1.23 | 1.28 | 4.76 | 4.28 | 3.49 | 2.07 | 1.68 | 2 | 2 | 1.12 | 4.76 | 1.4 | 10 |
| Lithium (Li) | ug/g | | | | | | 5.5 | 3.7 | 3.6 | <i>1</i> | <i>1</i> | 3 | 4 | 1 | 5.5 | 1.9 | 5 |
| Magnesium (Mg) | ug/g | 1130 | 1030 | 982 | 1200 | 1050 | 3770 | 1750 | 2450 | 1220 | 1200 | 1578 | 1200 | 982 | 3770 | 891 | 10 |
| Manganese (Mn) | ug/g | 34.8 | 41.1 | 42.5 | 35.2 | 33.3 | 230 | 86.6 | 119 | 43.8 | 45.1 | 71 | 43 | 33.3 | 230 | 62 | 10 |
| Molybdenum (Mo) | ug/g | <i>0.05</i> | 0.17 | 0.1 | 0.1 | <i>0.05</i> | 0.19 | 0.18 | 0.22 | 0.12 | <i>0.05</i> | 0.1 | 0.1 | 0.05 | 0.22 | 0.1 | 10 |
| Nickel (Ni) | ug/g | 3.67 | 3.51 | 3.25 | 3.62 | 3.49 | 13.4 | 6.67 | 7.55 | 4.02 | 3.96 | 5 | 4 | 3.25 | 13.4 | 3.2 | 10 |
| Phosphorus (P) | ug/g | 210 | 210 | 280 | 220 | 310 | 419 | 387 | 458 | 321 | 320 | 314 | 315 | 210 | 458 | 87 | 10 |
| Potassium (K) | ug/g | 150 | 163 | 158 | 204 | 185 | 500 | 380 | 430 | 230 | 230 | 263 | 217 | 150 | 500 | 126 | 10 |
| Selenium (Se) | ug/g | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.1</i> | 0.45 | 1.05 | <i>0.1</i> | <i>0.1</i> | 0.31 | 0.25 | 0.10 | 1.05 | 0.28 | 10 |
| Silver (Ag) | ug/g | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | 0.05 | 0.05 | 0.05 | 0.05 | 0.00 | 10 |
| Sodium (Na) | ug/g | 31 | 33 | 35 | 33 | 35 | 62 | 52 | 60 | <i>25</i> | <i>25</i> | 39 | 34 | 25 | 62 | 14 | 10 |
| Strontium (Sr) | ug/g | 4.37 | 4.73 | 5.47 | 4.79 | 4.63 | 8.34 | 8.33 | 9.38 | 6.48 | 5.86 | 6 | 6 | 4.37 | 9.38 | 2 | 10 |
| Sulfur (S) | ug/g | | | | | | <i>500</i> | <i>500</i> | <i>500</i> | <i>500</i> | <i>500</i> | 500 | 500 | 500 | 500 | 0 | 5 |
| Thallium (Tl) | ug/g | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.05</i> | <i>0.025</i> | <i>0.025</i> | 0.054 | <i>0.025</i> | <i>0.025</i> | 0.04 | 0.05 | 0.03 | 0.05 | 0.01 | 10 |
| Tin (Sn) | ug/g | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>2.5</i> | <i>1</i> | <i>1</i> | <i>1</i> | <i>1</i> | <i>1</i> | 1.75 | 1.75 | 1.00 | 2.50 | 0.79 | 10 |
| Titanium (Ti) | ug/g | 232 | 265 | 324 | 221 | 214 | 519 | 428 | 375 | 364 | 311 | 325 | 318 | 214 | 519 | 99 | 10 |
| Tungsten (W) | ug/g | | | | | | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | <i>0.25</i> | 0.25 | 0.25 | 0.25 | 0.25 | 0.00 | 5 |
| Uranium (U) | ug/g | 0.336 | 0.37 | 0.361 | 0.334 | 0.449 | 0.561 | 0.568 | 0.671 | 0.364 | 0.335 | 0.43 | 0.37 | 0.33 | 0.67 | 0.12 | 10 |
| Vanadium (V) | ug/g | 7.93 | 6.72 | 11.1 | 7.75 | 8.39 | 23.2 | 14.8 | 16.3 | 10.7 | 11.3 | 12 | 11 | 6.72 | 23.2 | 5.1 | 10 |
| Zinc (Zn) | ug/g | <i>5</i> | <i>5</i> | <i>5</i> | <i>5</i> | <i>5</i> | 21.2 | 13.4 | 15.6 | 9.2 | 8.4 | 9 | 7 | 5 | 21.2 | 5.7 | 10 |
| Zirconium (Zr) | ug/g | | | | | | 1.8 | 2.6 | 1.8 | 1.8 | 1.8 | 2.0 | 1.8 | 1.8 | 2.6 | 1.1 | 10 |

Table B-13: Wanipigow River – Downstream (WR-DS) Sediment Quality Results, 2017-2022

| <i>Less than detection limit, half value</i> | WR-US A | WR-US B | WR-US C | WR-US D | WR-US E | WR-US A | WR-US B | WR-US C | WR-US D | WR-US E | 5-Yr Avg | 5-Yr Median | 5-Yr Min | 5-Yr Max | Std Dev | No. of Samples | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|-------------|----------|----------|---------|----------------|----------------------------|
| | | | | | | | | | | | | | | | | | Wanipigow River - Upstream |
| | L2138537-16 | L2138537-17 | L2138537-18 | L2138537-19 | L2138537-20 | L2653701-16 | L2653701-17 | L2653701-18 | L2653701-19 | L2653701-20 | | | | | | | |
| | 2018-07-30 | 2018-07-30 | 2018-07-30 | 2018-07-30 | 2018-07-30 | 2021-10-20 | 2021-10-20 | 2021-10-20 | 2021-10-20 | 2021-10-20 | | | | | | | |
| % Moisture | 20.6 | 21.3 | 21.7 | 21.8 | 20.1 | 19.4 | 23 | 22 | 17.9 | 23.1 | 21 | 22 | 17.9 | 23.1 | 2 | 10 | |
| pH (1:2 soil:water) | 7.36 | 7.38 | 7.27 | 7.33 | 7.42 | 6.84 | 7.37 | 7.94 | 7.57 | 7.55 | 7.40 | 7.38 | 6.84 | 7.94 | 0.28 | 10 | |
| Inorganic Carbon | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.00 | 10 | |
| Inorganic Carbon (as CaCO3 Equivalent) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.20 | 0.20 | 0.20 | 0.20 | 0.00 | 10 | |
| Total Carbon by Combustion | 0.13 | 0.08 | 0.1 | 0.11 | 0.1 | 0.26 | 0.19 | 0.28 | 0.23 | 0.19 | 0.17 | 0.16 | 0.08 | 0.3 | 0.07 | 10 | |
| Total Organic Carbon | 0.129 | 0.079 | 0.096 | 0.112 | 0.103 | 0.261 | 0.191 | 0.284 | 0.234 | 0.186 | 0.17 | 0.16 | 0.08 | 0.3 | 0.07 | 10 | |
| Aluminum (Al) | 1540 | 1540 | 1570 | 1770 | 1660 | 4840 | 3080 | 3380 | 2080 | 1980 | 2344 | 1875 | 1540 | 4840 | 1092 | 10 | |
| Antimony (Sb) | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.00 | 10 | |
| Arsenic (As) | 0.43 | 0.43 | 0.5 | 0.49 | 0.47 | 4.42 | 1.63 | 2.14 | 0.89 | 0.75 | 1.22 | 0.63 | 0.43 | 4.42 | 1.27 | 10 | |
| Barium (Ba) | 6.05 | 6.46 | 6.76 | 7.76 | 7.67 | 22.7 | 17.8 | 23.3 | 12 | 11.7 | 12 | 10 | 6.05 | 23.3 | 7 | 10 | |
| Beryllium (Be) | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.1 | 0.05 | 0.1 | 0.05 | 0.05 | 0.06 | 0.05 | 0.05 | 0.10 | 0.02 | 10 | |
| Bismuth (Bi) | 0.01 | 0.1 | 0.1 | 0.022 | 0.024 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.08 | 0.10 | 0.01 | 0.10 | 0.04 | 10 | |
| Boron (B) | 5 | 5 | 5 | 5 | 5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 3.8 | 3.8 | 2.5 | 5 | 1.3 | 10 | |
| Cadmium (Cd) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.022 | 0.033 | 0.04 | 0.022 | 0.01 | 0.02 | 0.01 | 0.01 | 0.04 | 0.01 | 10 | |
| Calcium (Ca) | 1150 | 1140 | 1430 | 1190 | 1380 | 2010 | 2020 | 3260 | 1640 | 1550 | 1677 | 1490 | 1140 | 3260 | 642 | 10 | |
| Chromium (Cr) | 7.8 | 7.1 | 8.1 | 6.4 | 7.4 | 33.6 | 12.1 | 12.9 | 8.68 | 10 | 11.4 | 8.4 | 6.4 | 33.6 | 8.08 | 10 | |
| Cobalt (Co) | 1.51 | 1.44 | 1.51 | 1.62 | 1.54 | 5.34 | 2.56 | 3.11 | 1.67 | 1.7 | 2.2 | 1.6 | 1.44 | 5.34 | 1.23 | 10 | |
| Copper (Cu) | 2 | 1.8 | 2.4 | 2.3 | 2.6 | 11.8 | 8.21 | 9.46 | 2.63 | 2.47 | 5 | 3 | 1.8 | 11.8 | 4 | 10 | |
| Iron (Fe) | 4310 | 3670 | 5800 | 4110 | 4630 | 14700 | 7580 | 8000 | 5140 | 5830 | 6377 | 5470 | 3670 | 14700 | 3254 | 10 | |
| Lead (Pb) | 1.18 | 1.12 | 1.32 | 1.23 | 1.28 | 4.76 | 4.28 | 3.49 | 2.07 | 1.68 | 2 | 2 | 1.12 | 4.76 | 1.4 | 10 | |
| Lithium (Li) | | | | | | 5.5 | 3.7 | 3.6 | 1 | 1 | 3 | 4 | 1 | 5.5 | 1.9 | 5 | |
| Magnesium (Mg) | 1130 | 1030 | 982 | 1200 | 1050 | 3770 | 1750 | 2450 | 1220 | 1200 | 1578 | 1200 | 982 | 3770 | 891 | 10 | |
| Manganese (Mn) | 34.8 | 41.1 | 42.5 | 35.2 | 33.3 | 230 | 86.6 | 119 | 43.8 | 45.1 | 71 | 43 | 33.3 | 230 | 62 | 10 | |
| Molybdenum (Mo) | 0.05 | 0.17 | 0.1 | 0.1 | 0.05 | 0.19 | 0.18 | 0.22 | 0.12 | 0.05 | 0.1 | 0.1 | 0.05 | 0.22 | 0.1 | 10 | |
| Nickel (Ni) | 3.67 | 3.51 | 3.25 | 3.62 | 3.49 | 13.4 | 6.67 | 7.55 | 4.02 | 3.96 | 5 | 4 | 3.25 | 13.4 | 3.2 | 10 | |
| Phosphorus (P) | 210 | 210 | 280 | 220 | 310 | 419 | 387 | 458 | 321 | 320 | 314 | 315 | 210 | 458 | 87 | 10 | |
| Potassium (K) | 150 | 163 | 158 | 204 | 185 | 500 | 380 | 430 | 230 | 230 | 263 | 217 | 150 | 500 | 126 | 10 | |
| Selenium (Se) | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.1 | 0.45 | 1.05 | 0.1 | 0.1 | 0.31 | 0.25 | 0.10 | 1.05 | 0.28 | 10 | |
| Silver (Ag) | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.00 | 10 | |
| Sodium (Na) | 31 | 33 | 35 | 33 | 35 | 62 | 52 | 60 | 25 | 25 | 39 | 34 | 25 | 62 | 14 | 10 | |
| Strontium (Sr) | 4.37 | 4.73 | 5.47 | 4.79 | 4.63 | 8.34 | 8.33 | 9.38 | 6.48 | 5.86 | 6 | 6 | 4.37 | 9.38 | 2 | 10 | |
| Sulfur (S) | | | | | | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 0 | 5 | |
| Thallium (Tl) | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.025 | 0.025 | 0.054 | 0.025 | 0.025 | 0.04 | 0.05 | 0.03 | 0.05 | 0.01 | 10 | |
| Tin (Sn) | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 1 | 1 | 1 | 1 | 1 | 1.75 | 1.75 | 1.00 | 2.50 | 0.79 | 10 | |
| Titanium (Ti) | 232 | 265 | 324 | 221 | 214 | 519 | 428 | 375 | 364 | 311 | 325 | 318 | 214 | 519 | 99 | 10 | |
| Tungsten (W) | | | | | | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.00 | 5 | |
| Uranium (U) | 0.336 | 0.37 | 0.361 | 0.334 | 0.449 | 0.561 | 0.568 | 0.671 | 0.364 | 0.335 | 0.43 | 0.37 | 0.33 | 0.67 | 0.12 | 10 | |
| Vanadium (V) | 7.93 | 6.72 | 11.1 | 7.75 | 8.39 | 23.2 | 14.8 | 16.3 | 10.7 | 11.3 | 12 | 11 | 6.72 | 23.2 | 5.1 | 10 | |
| Zinc (Zn) | 5 | 5 | 5 | 5 | 5 | 21.2 | 13.4 | 15.6 | 9.2 | 8.4 | 9 | 7 | 5 | 21.2 | 5.7 | 10 | |
| Zirconium (Zr) | | | | | | 1.8 | 2.6 | 1.8 | 1.8 | 1.8 | 2.0 | 1.8 | 1.8 | 2.6 | 1.1 | 10 | |