

Annual Report for MV2020L2-0002, Class B
Water Management Area Northwest Territories 01

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Introduction

MV2020L2-0002 allows for the use Water and dispose of Waste for the mining and milling associated with the mineral exploration at the Mon Gold Mine, as described in the complete application and the additional information submitted during the regulatory process, including the following:

- a. Withdrawal and use of Water from Discovery Lake;
- b. Milling facilities and infrastructure;
- c. Construction, use, and maintenance of the Sewage Treatment Plant;
- d. Construction, use, and maintenance of the Dry Stack Tailings Facility;
- e. Construction, use, and maintenance of an all-weather road to the Dry Stack Tailings Facility;
- f. Additional trailer to existing camp; and
- g. Fuel storage.

and requires additional compliance conditions. This report is prepared according to the Mackenzie Valley Land and Water Board's March 2012 Document Submission Standards.

Activities on the property in 2021 included installation and operation of a camp, with six to 8 people on site. The North Portal was reopened, removing unconsolidated material that had been mounded in front to block access. New pipe and cables were installed, the sides and back were slashed and the back bolted to stabilize the ground. In September, the underground workings were surveyed by Ollerhead and Associates. A sample of the waste rock was collected and submitted to independent certified laboratory Bureau Veritas. The gabbroic rock, sample 3195863 returned a NNP ratio of 7.8.

Summary of Project Activities

An ice road was installed in February 2021 and equipment and supplies were mobilized onto the property in February and March. The site was cleaned and SNP stations were installed as per the MV2020L2-0002. All water use was by truck from a temporary pump station in Discovery Lake and used directly from the 3 m³ truck or placed into a 9 m³ tank in camp. Domestic waste waters were collected and processed in a containerized 3 stage bioreactor, two anerobic and a final aerobic stage. No water was discharged from the mine, however all rock waste contained an estimated 10% moisture. This rock was placed as per the Waste Rock Management and Geochemical Characterization Plan. All of it was used for preparation of a laydown area for equipment and supplies.

No exceedances of the license requirements were identified.

Underground workings are now established to 17 m below historic stopes with a previously undocumented stope identified at this elevation. The void is 11 m high leaving an estimated 6 m crown pillar, and an estimated 1,100 tonnes of vein material had been extracted by previous operators.

Updated Project Schedule

A winter road was constructed in early 2022 and used to resupply the mine site. An additional 75,000 litre fuel tank was installed. These were placed according to the site plan.

The winter road was closed in late March 2022 and a watchman is on site to minimize thefts from the property.

It is planned to commence mobilization of personnel to the property in late spring or early summer to commence continue mining operations. This will extend the 130 m of the north ramp where development of a -15% 3m x 4m ramp exists by an additional 100 m +/- to the south. Safety stations will be installed and scam drifts will be driven into the A-Zone vein where stopes will be developed.

The waste rock will continue to be assessed as per the Waste Rock Management and Geochemical Characterization Plan and used as approved.

Mineralized vein material will be assessed and separately stockpiled in preparation for processing.

Operations will take approximately 250 days after which the operations will be shutdown in preparation for the 2023 winter road resupply season.

In 2023 it is expected that a nominal 100 tpd mill will be mobilized to the property together with supplies to process the material extracted in 2022 as well as support for ongoing operations. The mill would not be operational until the summer of 2023.

Water Usage

A total water usage in 2021 of 826.8 m³ was recorded as shown on the table below.

Table 1. Table of water usage in 2021.

Date	Water Camp	in	Water Mine	in	Other Water	comment	Total Water Used	Cumulative
Nov-20		0		0		0	0	0
Dec-20		0		0		0	0	0
Jan-21		0		0	670	Road	670	670
Feb-21		0		0		0	0	670
Mar-21		0		0		0	0	670
Apr-21		0		0		0	0	670
May-21		0		0		0	0	670
Jun-21		0		0		0	0	670
Jul-21		32.6		0		0	32.6	702.6
Aug-21		12.5		0		0	12.5	715.1
Sep-21		5.7		75.0		0	80.7	795.8
Oct-21		26.1		75.0		0	101.1	896.9
Nov-21		0		0		0	0	896.9
Dec-21		0		0		0	0	896.9

Almost 75% of the water use (600 m³) was for winter road construction. The total amount of water used in mining was 150 m³ and 76.9 m³ was used for domestic purposes.

Field Verification of Water Depths

Water was withdrawn from six different sites from five lakes (Prosperous, Bluefish, Quayta, Sito, and Discovery Lakes). Water depths during under ice withdrawals were measured using 3 m probes, and from shorter probes during ice-free conditions.

Calibration and Status of Installed Meters.

There were no installed meters in 2021 as all water withdrawal was batched in 10 m³ tanks for ice road construction, and 3 m³ tanks for all ice free withdrawals.

Engagement Activities

Since the issuance of this license, the following engagements have occurred:

Initially, this was to follow-up on suggestions from the Yellowknife's concerning a potential Heritage Study and its design, execution and results, later discussions were dominated by project updates, and lastly consultations focused on expansion of the project area to explicitly include the Mineral Claims. The last consultations focused on extension of the Land Use Permit.

Table 2. Community consultation summary.

Date	Community	Contact	Issues Raised by Affected Party	Recommendation by affected party	Solution	Discussion
June 1, 2020	Yk	communications@yellowknife.ca	None	None	None	Introduce renewal
June 17, 2020	YK	Brooklyn, EA to Mayor	None	None	None	Left message
June 17, 2020	YK	Brooklyn	None	None	None	Discuss project history, confirm email addresses
June 17, 2020	YK	Brooklyn	None	None	None	re-introduce project, cc to SWF for letter confirming receipt of ash.
January 4, 2021	Tlichio	Zaby Nevitt	None	None	None	Reach out for updates
June 7, 2021	Tlichio	Violet Camsell-Blondin	None	None	None	Reach out for updates
June 7, 2021	YKDFN	Sarah Gillis	None	None	None	Suggest meeting
June 7, 2021	YKDFN	Sarah Gillis	None	None	None	Suggest meeting
July 13, 2021	YKDFN	Sarah Gillis	None	None	None	Maybe meet on the 15th.
July 14, 2021	YKDFN	Sarah Gillis	None	None	None	Reach out. In town for discussions
August 14, 2021	YKDFN	Femi Baiyewun	Contact	None		Left message
August 15, 2021	YKDFN	Sarah Gillis	None	None	None	Reach out, check on Femi
September 29, 2021	YKDFN	Femi Baiyewun and AB	Status of application	None	reply	
September 30, 2021	YKDFN	Femi Baiyewun	Update	None	reply	Left message
October 2, 2021	YKDFN	Femi Baiyewun	Update	None	reply	no notes
November 5, 2021	YKDFN	Femi Baiyewun and AB	Update	None	reply	please reply
November 5, 2021	YKDFN	Femi Baiyewun and AB	Update	None	reply	Update plans to revise

November 5, 2021	YKDFN	Femi Baiyewun and AB	Update	None	reply	What schedule?
November 5, 2021	YKDFN	Femi Baiyewun and AB	Update	None	reply	Schedule provided.
December 3, 2021	Tlicho	Violet Camsell-Blondin	Update	None	reply	CRP provided, amend fuel 120 to 150 and then 200
December 3, 2021	YK	Paula and Admin	Update	None	reply	Amend fuel 120 to 150 and then 200
December 3, 2021	YK	Sheila Bassi-Kellett and Admin	Congratulations	None	reply	Amend fuel 120 to 150 and then 200
December 3, 2021	YKDFN	Femi Baiyewun and AB	Update	None	reply	CRP provided, amend fuel 120 to 150 and then 200
December 7, 2021	NWTMN	Tim Heron	Update	None	reply	Amend fuel 120 to 150 and then 200
January 4, 2022	YKDFN	Femi Baiyewun	Soil Permeability	None	reply	Call to discuss
January 5, 2022	NSMA	Jessica Hurtubise	Update	None	reply	Amend fuel 120 to 150 and then 200
January 7, 2022	NSMA	Noah Johnson phone 613 804-2668	Introduction	None	reply	Introduce NDM, Mon, DRW.
January 13, 2022	NSMA	Noah Johnson	Comments on AOA	None	reply	Was NSMA involved in AOA
January 13, 2022	NSMA	Noah Johnson	AOA	None	reply	No NSMA, but happy to share results
January 17, 2022	NSMA	Noah Johnson	AOA	None	reply	Did we follow up on an AIA.
January 17, 2022	NSMA	Noah Johnson	AOA	None	reply	No we did not do an AIA. Update on near term plans.
January 17, 2022	NSMA	Noah Johnson	AOA	None	reply	Has there been any follow up on AOA
January 17, 2022	NSMA	Noah Johnson	AOA	None	reply	No follow up as nothing of significance was found. We operate in small footprint of disturbed ground except for DST facility
January 18, 2022	NSMA	Noah Johnson	AOA	None	reply	Can we call to discuss?
January 18, 2022	NSMA	Noah Johnson	AOA	None	reply	Let's set it up
January 20, 2022	NSMA	Noah Johnson	AOA	None	reply	Speak on 26th
January 20, 2022	NSMA	Noah Johnson	AOA	None	reply	Confirmed for the 26th. Set time for 12:15
January 26, 2022	NSMA	Noah Johnson		None	reply	General discussion, introductions
February 2, 2022	YKDFN	Johanne Black		None	reply	No Trespassing Sign
February 2, 2022	YKDFN	Johanne Black		None	reply	No Trespassing Sign. Femi gone, Ryan Miller, Kieron Testart
February 3, 2022	YKDFN	Ryan Miller	Signage translation	None	reply	Confirm translation is correct
February 3, 2022	YKDFN	Ryan Miller	Signage	None	reply	Confirm from Minesite
February 3, 2022	YKDFN	Ryan Miller	Signage	None	reply	Keep in touch
February 4, 2022	YKDFN	Ryan Miller	Signage	None	reply	Capital Signs mock up

February 4, 2022	YKDFN	Ryan Miller	Signage	None	reply	Confirming costs for member translation
February 11, 2022	YKDFN	Ryan Miller	Signage	Who translated	reply	Will confirm
February 11, 2022	YKDFN	Ryan Miller	Signage	Who translated	reply	Translation completed
February 11, 2022	YKDFN	Ryan Miller	Signage	Who translated	reply	Translation by whom.
February 11, 2022	YKDFN	Ryan Miller	Signage	Who translated	reply	Will confirm
February 11, 2022	YKDFN	Ryan Miller	Signage	Language	reply	Confirmed Denis Drygeese translated.

Traditional Knowledge

Discussions with the Yellowknife Dene First Nation on language on signage was undertaken in early 2022.

Construction activities

Roadways were installed and cleared, equipment and trailers were placed. The North Portal was opened, cleared and stabilized.

Major Maintenance Activities

There were no major maintenance activities in 2021.

Activities under Waste Management Plan

Updates and Revisions to Waste Management Plan

The Waste Management Plan was updated to incorporate:

13	January 2021	Changes listed in Conformity Table
14	February 2021	Addressed February 01 comments from the ORS completed by the MVLWB, letter dated February 12, 2021 including review comments table.

Monthly and Annual Quantities of Sewage

A total of 76.9 m³ of grey and blackwater was treated as sewage as shown on Table 1. The water was processed through the bioreactor, treated and discharged on site in 2021. SNP-01 samples discharge from the bioreactor.

Monthly and Annual Quantities of Run off

There was no observed run off noted on the mine site, however a total of 160.8 mm of rain was recorded in 2021 and so this amount draining from the mine site (occupies 154,000 m²) would result in natural run off of 24,763 m³ of water naturally. Water used in the mine totalled 150 m³ or approximately 0.6% of the total drainage as shown on Table 1.

Monthly and Annual Quantities of Sewage Solids or Sludge

All sewage solids or sludge are contained in the system. No solids or sludge were discharged or removed from site in 2021.

Monthly Elevations of the Dry Stack Tailings Facility

There were no tailings produced nor stored on site in 2021.

Map showing location of Sumps

See attached map, showing the location of a constructed sump at SNP-08, and natural sumps at SNP-03, 09, 09a, 10, 21. No other sumps exist at this time.

Activities conducted in accordance of the Waste Rock Management and Geochemical Characterization and Monitoring Plan

Summary of Approved Updates and Changes

A proposed WRMGCM Plan was submitted in early March 2021 and was approved on March 18, 2022. Samples of the waste rock was collected and submitted for ABA testing, which confirmed its NAG nature.

Comparison of Annual Quantities Produced vs Predicted

A total of 72 m³ of waste rock totalling 200 tonnes were slashed vs 6,000 tonnes predicted due to delays in obtaining permits.

Summary of Rock Type, Geochemical Classification and Location

Two hundred tonnes of gabbro were slashed and removed. This is a NAG rock as confirmed by ABA testing completed at Bureau Veritas Laboratories on sample 3195863 which was collected by Dr. D.R. Webb, P.Geol. and returned a calculated Neutralization Potential Ratio of 7.8.

Table 3. ABA test results from gabbroic waste sample.

BV Labs Sample No	Sample ID	Paste pH	Total S	HCl Extractable Sulphur	Sulphide Sulphur (by diff.)	Acid Generation Potential	Mod. ABA Neutralization Potential	Net Neutralization Potential	Neutralization Potential Ratio
	Units	pH Units	wt%	wt%	wt%	Kg CaCO3/T	Kg CaCO3/T	Kg CaCO3/T	N/A
AJH146	3195863	6.98	0.04	0.02	0.02	0.6	4.70	4.10	7.8
<i>Detection Limits</i>		<i>N/A</i>	<i>0.02</i>	<i>0.01</i>	<i>0.02</i>	<i>0.6</i>	<i>N/A</i>	<i>N/A</i>	<i>0.1</i>
<i>Bureau Veritas SOP #</i>	<i>BBY0SOP-00016</i>	<i>LECO</i>	<i>BBY ARD-00009</i>	<i>BBY WI-00033</i>	<i>BBY WI-00033</i>	<i>BBY0SOP-00020</i>	<i>BBY WI-00033</i>	<i>BBY WI-00033</i>	<i>BBY WI-00033</i>

Details of Waste Rock and Ore Stockpiles

Waste rock was placed on the laydown area to square it off and as a pad for the fuel tanks. No ore was produced.

Summary of Interpretation of Results

All equipment and supplies were mobilized on a winter road constructed in 2021. Set up of services consumed much of the program while we awaited approvals of management plans.

Slashing of the existing ramp confirmed permafrost conditions as no water was encountered. A sump was partially developed at 50 m down ramp (from portal collar) but remains unused. A sump was developed at SNP-08 as per the Structure Design and Construction Plan, but remains unused.

Summary and Interpretation from Seepage Monitoring

Location of Seepage

Water naturally ponds at SNP-03, SNP-09 and SNP-10 and elsewhere on the property. Additional seepage is noted at SNP-09a which is proposed for an additional monitoring station.

Comparison to reference location

Samples from SNP-01 are used to monitor discharge from the bioreactor, site for all discharge of grey and black water from domestic uses. All samples were located as referenced.

Samples from SNP-03 and 03a are used to monitor drainage from the Dry Stack Tailings (DST) facility. The DST but sample locations are as referenced.

Samples collected at SNP-09 and SNP-10, as well as at SNP-12 are used to monitor drainage from Waste Piles, Ore piles, and the site in general.

Analysis of Major Trends since Project Inception

The mining activities have only started in 2021 so the trend for a single year is presented to compare against baseline values.

Summary of Recommendations for Future Surface Monitoring

No changes are recommended at this time.

Summary of Investigations into Field Test Cells

No field tests were conducted in 2021.

Summary of Water Quality Monitoring

Limited work was conducted in 2021 and two batches of samples were collected, in August and October from SNP-01, SNP-03, SNP-09, SNP-10, and SNP-12. A new site proposed in the Groundwater and Water Management Plan, SNP-10A was sampled. All other sites did not exist or no water was present.

All stations reported parameters within ECQ or CCME guidelines for the protection of aquatic life except for an exceedance at SNP-01 for total coliform bacteria (>2,400 MPN/100mL vs 1,000 CFU/100mL allowable). *Note; MPN is most probable number and attempts to decluster/declump bacteria counts.* This was reported to inspectors, and Spill Line. Discharges were halted, an ultraviolet sterilizing unit for waste water streams was acquired and will be installed prior to discharge. SNP-03 is to sample drainage from the DST facility which has not been constructed yet. Samples collected from this station are to be considered baseline samples. Exceedances of TSS and ammonia are from natural sources.

Table 4. Results from water analyses, October 2021.

Bureau Veritas ID		AJK923		AJK924			AJK925		
Sampling Date		2021-10-26 10:00		2021-10-26 10:20			2021-10-26 09:40		
COC Number		643673-02-01		643673-02-01			643673-02-01		
	UNITS	SNP-03	RDL	SNP-10	RDL	QC Batch	SNP-10A	RDL	QC Batch
Calculated Parameters									
Filter and HNO3 Preservation	N/A	FIELD		FIELD		ONSITE	FIELD		ONSITE

Dissolved Hardness (CaCO3)	mg/L	390	0.50	579	0.50	A407752	47.6	0.50	A407752
Total Hardness (CaCO3)	mg/L	425	0.50	598	0.50	A407751	48.5	0.50	A407751
Dissolved Nitrate (N)	mg/L	28	0.50	13	0.25	A408145	0.042	0.010	A408145
Dissolved Nitrate (NO3)	mg/L	120	2.2	59	1.1	A408140	0.19	0.044	A408140
Dissolved Nitrite (NO2)	mg/L	1.6	0.033	1.8	0.16	A408140	<0.033	0.033	A408140
Total Total Kjeldahl Nitrogen (Calc)	mg/L	11.8	0.50	3.79	0.25	A407895	0.833	0.020	A407895
Dissolved Organic Phosphorus (P)	mg/L	0.0087	0.0030	0.0233	0.0030	A408526	0.0070	0.0030	A408526
Demand Parameters									
Biochemical Oxygen Demand (inhib.)	mg/L	<2.0	2.0	5.7	2.0	A408984	<2.0	2.0	A408984
Misc. Inorganics									
pH	pH	6.55	N/A	7.14	N/A	A409328	6.84	N/A	A409328
Reactive Silica	mg/L	14	0.25	17	0.25	A416958	1.2	0.050	A416958
Alkalinity (Total as CaCO3)	mg/L	46.9	0.50	178	0.50	A409323	44.2	0.50	A409323
Total Organic Carbon (C)	mg/L	9.2	0.20	17	0.20	A410473	7.2	0.20	A410473
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	<0.50	0.50	A409323	<0.50	0.50	A409323
Bicarbonate (HCO3)	mg/L	57.2	0.50	217	0.50	A409323	54.0	0.50	A409323
Carbonate (CO3)	mg/L	<0.50	0.50	<0.50	0.50	A409323	<0.50	0.50	A409323
Hydroxide (OH)	mg/L	<0.50	0.50	<0.50	0.50	A409323	<0.50	0.50	A409323
Total Suspended Solids	mg/L	30	0.99	9.3	1.0	A408930	17	0.98	A408930
Anions									
Dissolved Fluoride (F)	mg/L	<0.050	0.050	0.078	0.050	A409326	0.065	0.050	A409326
Dissolved Chloride (Cl)	mg/L	1.4	0.50	2.8	0.50	A411929	1.4	0.50	A411929
Dissolved Sulphate (SO4)	mg/L	240	2.5	440	2.5	A411929	8.8	0.50	A411929
Metals									
Dissolved Hex. Chromium (Cr 6+)	mg/L	0.0011	0.00099	<0.00099	0.00099	A415580	<0.00099	0.00099	A415580
Total Hex. Chromium (Cr 6+)	mg/L	<0.00099	0.00099	<0.00099	0.00099	A415576	<0.00099	0.00099	A415576
Nutrients									
Total Ammonia (N)	mg/L	7.3	0.075	2.6	0.075	A410613	0.026	0.015	A410613
Orthophosphate (P)	mg/L	0.0042	0.0030	0.0037	0.0030	A409764	0.0042	0.0030	A409764
Dissolved Phosphorus (P)	mg/L	0.014	0.0030	0.036	0.0030	A412103	0.012	0.0030	A412103
Dissolved Inorganic Phosphorus (P)	mg/L	0.0048	0.0020	0.0123	0.0020	A413579	0.0055	0.0020	A413579
Total Inorganic Phosphorus (P)	mg/L	0.0149	0.0020	0.0107	0.0020	A413574	0.0087	0.0020	A413574
Dissolved Nitrite (N)	mg/L	0.48	0.010	0.55	0.050	A409522	<0.010	0.010	A409522
Dissolved Nitrate plus Nitrite (N)	mg/L	28	0.50	14	0.25	A409522	0.042	0.010	A409522
Total Nitrogen (N)	mg/L	40 (1)	0.40	18 (1)	0.20	A413393	0.88	0.020	A411831
Physical Properties									
Conductivity	uS/cm	753	1.0	1180	1.0	A409324	109	1.0	A409324
Physical Properties									
Turbidity	NTU	7.4	0.10	11	0.10	A409904	8.6	0.10	A409904

Total Dissolved Solids	mg/L	652	1.0	920	1.0	A408924	86.4	1.0	A408924
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RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Table 5. Results for mercury by cold vapour, October 2021.

Bureau Veritas ID		AJK923	AJK924	AJK925		
Sampling Date		2021-10-26 10:00	2021-10-26 10:20	2021-10-26 09:40		
COC Number		643673-02-01	643673-02-01	643673-02-01		
	UNITS	SNP-03	SNP-10	SNP-10A	RDL	QC Batch
Elements						
Dissolved Mercury (Hg)	ug/L	<0.0019	0.0028	<0.0019	0.0019	A415749
Total Mercury (Hg)	ug/L	<0.0019	<0.0019	<0.0019	0.0019	A415754

RDL = Reportable Detection Limit

Table 6. Atomic Adsorption on water, October 2021.

Bureau Veritas ID		AJK923	AJK924	AJK925		
Sampling Date		2021-10-26 10:00	2021-10-26 10:20	2021-10-26 09:40		
COC Number		643673-02-01	643673-02-01	643673-02-01		
	UNITS	SNP-03	SNP-10	SNP-10A	RDL	QC Batch
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	ug/L	32.5	154	94.4	0.50	A412157
Dissolved Antimony (Sb)	ug/L	0.616	0.781	0.051	0.020	A412157
Dissolved Arsenic (As)	ug/L	5.20	25.2	0.876	0.020	A412157
Dissolved Barium (Ba)	ug/L	52.3	55.5	7.62	0.020	A412157
Dissolved Beryllium (Be)	ug/L	<0.010	<0.010	<0.010	0.010	A412157
Dissolved Bismuth (Bi)	ug/L	<0.0050	0.0475	<0.0050	0.0050	A412157
Dissolved Boron (B)	ug/L	45	35	<10	10	A412157
Dissolved Cadmium (Cd)	ug/L	3.26	0.982	<0.0050	0.0050	A412157
Dissolved Chromium (Cr)	ug/L	0.32	1.17	0.33	0.10	A412157
Dissolved Cobalt (Co)	ug/L	34.4	28.7	0.0997	0.0050	A412157
Dissolved Copper (Cu)	ug/L	4.13	4.67	0.933	0.050	A412157
Dissolved Iron (Fe)	ug/L	156	2310	167	1.0	A412157
Dissolved Lead (Pb)	ug/L	0.109	11.7	0.0713	0.0050	A412157
Dissolved Lithium (Li)	ug/L	28.0	15.7	2.43	0.50	A412157
Dissolved Manganese (Mn)	ug/L	352	2090	26.2	0.050	A412157
Dissolved Molybdenum (Mo)	ug/L	0.712	1.65	0.672	0.050	A412157

Dissolved Nickel (Ni)	ug/L	452	93.3	1.46	0.020	A412157
Dissolved Phosphorus (P)	ug/L	25.5	37.4	17.3	2.0	A412157
Dissolved Selenium (Se)	ug/L	0.117	0.294	<0.040	0.040	A412157
Dissolved Silicon (Si)	ug/L	5870	7990	874	50	A412157
Dissolved Silver (Ag)	ug/L	0.0053	0.0445	<0.0050	0.0050	A412157
Dissolved Strontium (Sr)	ug/L	188	354	32.6	0.050	A412157
Dissolved Thallium (Tl)	ug/L	0.0186	0.0135	0.0024	0.0020	A412157
Dissolved Tin (Sn)	ug/L	<0.20	<0.20	<0.20	0.20	A412157
Dissolved Titanium (Ti)	ug/L	0.99	7.27	5.49	0.50	A412157
Dissolved Uranium (U)	ug/L	0.198	2.82	0.132	0.0020	A412157
Dissolved Vanadium (V)	ug/L	0.54	1.13	0.65	0.20	A412157
Dissolved Zinc (Zn)	ug/L	4240	516	1.10	0.10	A412157
Dissolved Zirconium (Zr)	ug/L	0.12	0.35	0.13	0.10	A412157
Dissolved Calcium (Ca)	mg/L	86.0	148	11.4	0.050	A407901
Dissolved Magnesium (Mg)	mg/L	42.5	50.8	4.68	0.050	A407901
Dissolved Potassium (K)	mg/L	8.77	11.8	1.93	0.050	A407901
Dissolved Sodium (Na)	mg/L	12.4	13.0	2.12	0.050	A407901
Dissolved Sulphur (S)	mg/L	90.1	133	3.3	3.0	A407901
Total Metals by ICPMS						
Total Aluminum (Al)	ug/L	205	192	107	3.0	A411813
Total Antimony (Sb)	ug/L	0.785	0.864	0.055	0.020	A411813
Total Arsenic (As)	ug/L	52.5	31.9	0.922	0.020	A411813
Total Barium (Ba)	ug/L	65.6	64.8	8.37	0.050	A411813
Total Beryllium (Be)	ug/L	0.030	<0.010	<0.010	0.010	A411813
Total Bismuth (Bi)	ug/L	0.030	0.068	<0.010	0.010	A411813
Total Boron (B)	ug/L	51	44	10	10	A411813
Total Cadmium (Cd)	ug/L	7.88	1.17	<0.0050	0.0050	A411813
Total Chromium (Cr)	ug/L	0.77	1.16	0.38	0.10	A411813
Total Cobalt (Co)	ug/L	56.3	35.1	0.118	0.010	A411813
Total Copper (Cu)	ug/L	18.5	5.38	0.99	0.10	A411813
Total Iron (Fe)	ug/L	2290	2790	193	5.0	A411813
Total Lead (Pb)	ug/L	1.25	18.0	0.059	0.020	A411813
Total Lithium (Li)	ug/L	32.8	17.6	2.52	0.50	A411813
Total Manganese (Mn)	ug/L	563	2590	28.0	0.10	A411813
Total Molybdenum (Mo)	ug/L	0.949	1.82	0.702	0.050	A411813
Total Nickel (Ni)	ug/L	550	98.8	1.60	0.10	A411813
Total Phosphorus (P)	ug/L	141	33.0	16.7	5.0	A411813
Total Selenium (Se)	ug/L	0.172	0.336	<0.040	0.040	A411813
Total Silicon (Si)	ug/L	5600	7450	723	50	A411813
Total Silver (Ag)	ug/L	0.016	0.043	<0.010	0.010	A411813
Total Strontium (Sr)	ug/L	218	398	35.9	0.050	A411813
Total Thallium (Tl)	ug/L	0.0365	0.0142	0.0027	0.0020	A411813
Total Tin (Sn)	ug/L	<0.20	<0.20	<0.20	0.20	A411813

Total Titanium (Ti)	ug/L	5.8	8.0	5.1	2.0	A411813
Total Uranium (U)	ug/L	0.460	2.86	0.129	0.0050	A411813
Total Vanadium (V)	ug/L	1.75	0.85	0.26	0.20	A411813
Total Zinc (Zn)	ug/L	6050	568	1.5	1.0	A411813
Total Zirconium (Zr)	ug/L	0.26	0.34	0.10	0.10	A411813
Total Calcium (Ca)	mg/L	92.5	154	11.3	0.25	A407834
Total Magnesium (Mg)	mg/L	47.1	51.7	4.96	0.25	A407834
Total Potassium (K)	mg/L	9.28	11.7	1.93	0.25	A407834
Total Sodium (Na)	mg/L	13.7	12.6	2.31	0.25	A407834
Total Sulphur (S)	mg/L	96.4	132	<3.0	3.0	A407834

RDL = Reportable Detection Limit

Table 7. Water samples August 2021

Bureau Veritas ID		AEE902			AEE903			AEE904			AEE905		
Sampling Date		2021-08-19 12:00			2021-08-18 12:00			2021-08-18 13:00			2021-08-18 14:00		
COC Number		643673-01-01			643673-01-01			643673-01-01			643673-01-01		
	UNITS	SNP-01	RDL	QC Batch	SNP-03A	RDL	QC Batch	SNP-09	RDL	QC Batch	SNP-12	RDL	QC Batch
Calculated Parameters													
Filter and HNO3 Preservation	N/A				FIELD		ONSITE	FIELD		ONSITE	FIELD		ONSITE
Dissolved Nitrate (N)	mg/L	<0.010	0.010	A327228	<0.050	0.050	A327228	<0.010	0.010	A327228			
Dissolved Nitrate (NO3)	mg/L	<0.044	0.044	A327227	<0.22	0.22	A327227	<0.044	0.044	A327227			
Dissolved Nitrite (NO2)	mg/L	<0.033	0.033	A327227	<0.033	0.033	A327227	<0.033	0.033	A327227			
Total Total Kjeldahl Nitrogen (Calc)	mg/L	69.8	1.0	A327229	1.72	0.10	A327229	1.32	0.10	A327229			
Dissolved Organic Phosphorus (P)	mg/L	2.07	0.15	A327246	<0.015	0.015	A327246	0.0181	0.0030	A327246			
Demand Parameters													
Dissolved Biochemical Oxygen Demand	mg/L	<6.3	2.0	A327363									
Biochemical Oxygen Demand (inhib.)	mg/L	28	2.0	A327366	<6.8	2.0	A327366	<2.0	2.0	A327366			
Misc. Inorganics													
pH	pH	7.81	N/A	A329997	6.10	N/A	A340473	7.00	N/A	A340473	7.45	N/A	A329997
Reactive Silica	mg/L				6.9 (1)	0.50	A342138	11	0.25	A342138			
Alkalinity (Total as CaCO3)	mg/L				9.74	0.50	A329993	56.8	0.50	A329993			
Total Organic Carbon (C)	mg/L	27	0.40	A332791	55 (2)	0.80	A338644	18	0.20	A338644			
Alkalinity (PP as CaCO3)	mg/L				<0.50	0.50	A329993	<0.50	0.50	A329993			
Bicarbonate (HCO3)	mg/L				11.9	0.50	A329993	69.4	0.50	A329993			
Carbonate (CO3)	mg/L				<0.50	0.50	A329993	<0.50	0.50	A329993			
Hydroxide (OH)	mg/L				<0.50	0.50	A329993	<0.50	0.50	A329993			

Total Suspended Solids	mg/L	25	1.0	A332176	75 (3)	1.5	A330604	3.9	1.0	A330604			
Anions													
Dissolved Fluoride (F)	mg/L				0.070	0.050	A340476	0.074	0.050	A340476			
Dissolved Chloride (Cl)	mg/L				3.2	0.50	A338860	1.5	0.50	A338860			
Dissolved Sulphate (SO4)	mg/L				<2.5 (4)	2.5	A338860	310	2.5	A338860			
Metals													
Dissolved Hex. Chromium (Cr 6+)	mg/L				<0.0050 (2)	0.0050	A326930	<0.00099	0.00099	A326930	<0.00099	0.00099	A326930
Total Hex. Chromium (Cr 6+)	mg/L				<0.0050 (2)	0.0050	A326934	<0.00099	0.00099	A328865	<0.00099	0.00099	A328865
Microbiological Param.													
E.Coli DST	MPN/100mL	>2400	1.0	A326335									
Fecal Coliforms	MPN/100mL	>2400	1.0	A327501									
Total Coliforms DST	MPN/100mL	>2400	1.0	A326335									
Nutrients													
Total Ammonia (N)	mg/L	62	0.75	A334254	0.024	0.015	A336194	0.019	0.015	A336194	0.025	0.015	A336194
Orthophosphate (P)	mg/L	6.5	0.060	A327257	<0.0030	0.0030	A327443	<0.0030	0.0030	A327443			
Dissolved Phosphorus (P)	mg/L	9.3	0.15	A339968	0.044 (1)	0.015	A339968	0.037	0.0030	A339968			
Dissolved Inorganic Phosphorus (P)	mg/L	7.24	0.050	A338624	0.037 (1)	0.010	A338624	0.0185	0.0020	A338624			
Total Inorganic Phosphorus (P)	mg/L	7.59	0.050	A341516	0.096 (1)	0.010	A341516	0.0450	0.0020	A341516			
Dissolved Nitrite (N)	mg/L	<0.010	0.010	A327533	<0.010 (5)	0.010	A327557	<0.010	0.010	A327557			
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.010	0.010	A327533	<0.050 (6)	0.050	A327557	<0.010	0.010	A327557			
Total Nitrogen (N)	mg/L	70 (1)	1.0	A340962	1.7 (1)	0.10	A339640	1.3 (1)	0.10	A339640			
Misc. Organics													
Total Oil and grease	mg/L	1.1	1.0	A327833									
Physical Properties													
Conductivity	uS/cm	956	1.0	A329998	46.2	1.0	A329998	717	1.0	A329998	102	1.0	A329998
Physical Properties													
Turbidity	NTU	14	0.10	A327621	27	0.10	A327206	1.3	0.10	A327206			
Total Dissolved Solids	mg/L				159	1.0	A331399	550	1.0	A331399			

RDL = Reportable

Detection Limit

N/A = Not

Applicable

(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

(2) Detection limits raised due to sample matrix.

(3) Detection limit raised based on sample volume used for analysis.

(4) Detection limits raised due to matrix interference.

(5) Sample was originally processed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

(6) Detection limits raised due to matrix interference. Sample was originally processed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Table 8. Low level metals by cold vapour, August 2021

Bureau Veritas ID		AEE903		AEE904		AEE905		
Sampling Date		2021-08-18 12:00		2021-08-18 13:00		2021-08-18 14:00		
COC Number		643673-01-01		643673-01-01		643673-01-01		
	UNITS	SNP-03A	RDL	SNP-09	QC Batch	SNP-12	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	28.1	0.50	332	A327240	42.6	0.50	A327240
Elements								
Dissolved Mercury (Hg)	ug/L	0.0082	0.0019	<0.0019	A338619	<0.0019	0.0019	A338619
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	ug/L	753	2.5	34.6	A330201	22.3	0.50	A330201
Dissolved Antimony (Sb)	ug/L	0.18	0.10	0.299	A330201	0.111	0.020	A344298
Dissolved Arsenic (As)	ug/L	4.27	0.10	4.24	A330201	1.05	0.020	A330201
Dissolved Barium (Ba)	ug/L	19.9	0.10	33.3	A330201	5.96	0.020	A330201
Dissolved Beryllium (Be)	ug/L	0.068	0.050	0.011	A330201	<0.010	0.010	A330201
Dissolved Bismuth (Bi)	ug/L	<0.025	0.025	<0.0050	A330201	<0.0050	0.0050	A330201
Dissolved Boron (B)	ug/L	<50	50	16	A330201	11	10	A330201
Dissolved Cadmium (Cd)	ug/L	<0.025	0.025	0.947	A330201	0.0091	0.0050	A330201
Dissolved Chromium (Cr)	ug/L	2.38	0.50	0.40	A330201	0.18	0.10	A330201
Dissolved Cobalt (Co)	ug/L	0.797	0.025	3.61	A330201	0.0834	0.0050	A330201
Dissolved Copper (Cu)	ug/L	5.79	0.25	4.09	A330201	1.90	0.050	A344298
Dissolved Iron (Fe)	ug/L	1270	5.0	406	A330201	136	1.0	A330201
Dissolved Lead (Pb)	ug/L	1.59	0.0050	0.389	A344298	0.220	0.0050	A344298
Dissolved Lithium (Li)	ug/L	5.8	2.5	24.1	A330201	2.29	0.50	A330201
Dissolved Manganese (Mn)	ug/L	31.2	0.25	114	A330201	20.5	0.050	A330201
Dissolved Molybdenum (Mo)	ug/L	<0.25	0.25	0.157	A330201	0.646	0.050	A330201
Dissolved Nickel (Ni)	ug/L	6.36	0.10	161	A330201	1.61	0.020	A330201
Dissolved Phosphorus (P)	ug/L	62	10	17.7	A330201	10.7	2.0	A330201
Dissolved Selenium (Se)	ug/L	<0.20	0.20	0.091	A330201	<0.040	0.040	A330201
Dissolved Silicon (Si)	ug/L	2910	250	4060	A330201	264	50	A330201
Dissolved Silver (Ag)	ug/L	<0.025	0.025	<0.0050	A330201	<0.0050	0.0050	A330201
Dissolved Strontium (Sr)	ug/L	25.3	0.25	150	A330201	31.5	0.050	A330201
Dissolved Thallium (Tl)	ug/L	<0.010	0.010	0.0037	A330201	<0.0020	0.0020	A330201
Dissolved Tin (Sn)	ug/L	<1.0	1.0	<0.20	A330201	<0.20	0.20	A330201

Dissolved Titanium (Ti)	ug/L	13.0	2.5	0.73	A330201	1.40	0.50	A330201
Dissolved Uranium (U)	ug/L	0.477	0.010	0.165	A330201	0.107	0.0020	A330201
Dissolved Vanadium (V)	ug/L	3.4	1.0	0.27	A330201	0.23	0.20	A330201
Dissolved Zinc (Zn)	ug/L	9.20	0.50	947	A330201	4.53	0.10	A344298
Dissolved Zirconium (Zr)	ug/L	3.74	0.50	0.18	A330201	<0.10	0.10	A330201
Dissolved Calcium (Ca)	mg/L	5.69	0.25	74.5	A327242	10.7	0.050	A327242
Dissolved Magnesium (Mg)	mg/L	3.37	0.25	35.5	A327242	3.85	0.050	A327242
Dissolved Potassium (K)	mg/L	1.18	0.25	4.03	A327242	1.61	0.050	A327242
Dissolved Sodium (Na)	mg/L	1.49	0.25	4.27	A327242	2.31	0.050	A327242
Dissolved Sulphur (S)	mg/L	<15	15	73.0	A327242	<3.0	3.0	A327242

RDL = Reportable Detection Limit

Table 9. Low level total metals by cold vapour, August 2021

Bureau Veritas ID		AEE903		AEE904		AEE905		
Sampling Date		2021-08-18 12:00		2021-08-18 13:00		2021-08-18 14:00		
COC Number		643673-01-01		643673-01-01		643673-01-01		
	UNITS	SNP-03A	RDL	SNP-09	QC Batch	SNP-12	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO ₃)	mg/L	28.7	0.50	339	A327239	41.7	0.50	A327238
Elements								
Total Mercury (Hg)	ug/L	0.0130	0.0019	<0.0019	A338636	<0.0019	0.0019	A338636
Total Metals by ICPMS								
Total Aluminum (Al)	ug/L	1050	2.5	38.3	A330202	49.0	0.50	A330202
Total Antimony (Sb)	ug/L	<0.10	0.10	0.229	A330202	0.044	0.020	A330202
Total Arsenic (As)	ug/L	4.61	0.10	6.18	A330202	0.885	0.020	A330202
Total Barium (Ba)	ug/L	23.7	0.10	33.4	A330202	5.29	0.020	A330202
Total Beryllium (Be)	ug/L	0.078	0.050	0.012	A330202	<0.010	0.010	A330202
Total Bismuth (Bi)	ug/L	<0.025	0.025	<0.0050	A330202	<0.0050	0.0050	A330202
Total Boron (B)	ug/L	<50	50	16	A330202	<10	10	A330202
Total Cadmium (Cd)	ug/L	<0.025	0.025	1.05	A330202	<0.0050	0.0050	A330202
Total Chromium (Cr)	ug/L	2.39	0.50	0.40	A330202	0.15	0.10	A330202
Total Cobalt (Co)	ug/L	1.17	0.025	4.20	A330202	0.0807	0.0050	A330202
Total Copper (Cu)	ug/L	4.63	0.25	4.34	A330202	0.892	0.050	A330202
Total Iron (Fe)	ug/L	996	5.0	610	A330202	129	1.0	A330202
Total Lead (Pb)	ug/L	0.261	0.025	0.110	A330202	0.0409	0.0050	A330202

Total Lithium (Li)	ug/L	6.4	2.5	26.1	A330202	2.26	0.50	A330202
Total Manganese (Mn)	ug/L	48.9	0.25	118	A330202	16.9	0.050	A330202
Total Molybdenum (Mo)	ug/L	<0.25	0.25	0.184	A330202	0.730	0.050	A330202
Total Nickel (Ni)	ug/L	7.37	0.10	171	A330202	1.27	0.020	A330202
Total Phosphorus (P)	ug/L	52	10	28.0	A330202	19.9	2.0	A330202
Total Selenium (Se)	ug/L	<0.20	0.20	0.094	A330202	<0.040	0.040	A330202
Total Silicon (Si)	ug/L	3900	250	4090	A330202	349	50	A330202
Total Silver (Ag)	ug/L	<0.025	0.025	<0.0050	A330202	<0.0050	0.0050	A330202
Total Strontium (Sr)	ug/L	27.0	0.25	143	A330202	26.9	0.050	A330202
Total Thallium (Tl)	ug/L	<0.010	0.010	0.0056	A330202	<0.0020	0.0020	A330202
Total Tin (Sn)	ug/L	<1.0	1.0	<0.20	A330202	<0.20	0.20	A330202
Total Titanium (Ti)	ug/L	12.8	2.5	1.26	A330202	2.46	0.50	A330202
Total Uranium (U)	ug/L	0.457	0.010	0.195	A330202	0.118	0.0020	A330202
Total Vanadium (V)	ug/L	2.7	1.0	0.38	A330202	0.34	0.20	A330202
Total Zinc (Zn)	ug/L	8.31	0.50	1060	A330202	1.53	0.10	A330202
Total Zirconium (Zr)	ug/L	3.90	0.50	0.18	A330202	0.10	0.10	A330202
Total Calcium (Ca)	mg/L	5.60	0.25	74.5	A327244	10.5	0.050	A327243
Total Magnesium (Mg)	mg/L	3.58	0.25	37.1	A327244	3.78	0.050	A327243
Total Potassium (K)	mg/L	1.05	0.25	4.00	A327244	1.42	0.050	A327243
Total Sodium (Na)	mg/L	1.52	0.25	3.97	A327244	1.84	0.050	A327243
Total Sulphur (S)	mg/L	<15	15	80.0	A327244	<3.0	3.0	A327243

RDL = Reportable Detection Limit

All stations except SNP-03 which is currently a baseline sample station and SNP-01 which is discussed below in Action Level Exceedances returned acceptable and predicted values. SNP-03 demonstrates that sampling, analytical, or natural variations exceed predicted values. This should be discussed with the Board and modifications to the EQC values should be considered.

SNP-09, 9a, 10, measure drainage from laydown areas and are within EQC limits and as predicted. SNP-12, 12a measure drainage from the overall site as it enters or has entered Discovery Lake and meets CCME Guidelines for the Protection of Aquatic Life as predicted.

Action Level Exceedances

SNP-01 was sampled in August with results received October 20 2021.

Action taken in Action Level Exceedances

Water and Land Use Inspectors and the Spill Line were immediately notified of exceedances in coliform bacteria. The Spill Line confirmed that all notifications required have been made and no further activity was required. All discharges from the bioreactor were halted. An ultraviolet sterilizer for waste water streams was acquired and will be installed and in any subsequent discharge.

No residue remained as only clear liquids were discharged, and the only exceedance was coliform bacteria.

Summary of Activities in accordance with the Approved GWWM Program

Summary of Approved Updates or Changes

The Groundwater and water Monitoring Plan was submitted in March 2021. The last revision was submitted April 6, 2022 and has not been approved.

Monthly and Annual Quantities of Recycled Water

No water was used or recycled in 2021

Monthly and Annual Quantities of Water from Each Approved Source.

Water was drawn from the following sites in 2021:

Table 10. Monthly and annual water withdrawal in cubic metres (m³).

Location	Discovery Lake	Sito Lake	Quayta Lake	Bluefish Lake	Prosperous Lake
January 2021	0	0	0	0	0
February 2021	45	90	375	105	55
March 2021	0	0	0	0	0
April 2021	0	0	0	0	0
May 2021	0	0	0	0	0
June 2021	0	0	0	0	0
July 2021	32.6	0	0	0	0
August 2021	12.5	0	0	0	0
September 2021	80.5	0	0	0	0
October 2021	101.1	0	0	0	0
November 2021	0	0	0	0	0
December 2021	0	0	0	0	0
Total	271.7	90	375	105	55

No other water was drawn from any other source.

Monthly and Annual Quantities of Water used for Dust Control.

No water was used for dust control on surface. Underground mining used 75 m³ of water in September and 75 m³ of water in October. Approximately 10% of this was used for dust control and the balance to flush cuttings from drill holes.

Monthly and Annual Quantities of Sewage

Our bioreactor collects all greywater and sewage and treats it in a two stage anaerobic digester feeding a single stage aerobic digester. Water into camp

Table 11. Monthly and annual sewage and greywater in camp

Date	Water in Camp (m ³)	Camp Discharge (m ³)	Estimated Sewage (50%) (m ³)
Jan-21	0	0	0
Feb-21	0	0	0
Mar-21	0	0	0

Apr-21	0	0	0
May-21	0	0	0
Jun-21	0	0	0
Jul-21	32.6	32.6	16.3
Aug-21	12.5	12.5	6.3
Sep-21	5.7	5.7	2.9
Oct-21	26.1	26.1	13
Nov-21	0	0	0
Dec-21	0	0	0
Total	76.9	76.9	38.5

Monthly and Annual Quantities of Run-off from DSTF

No dry stack tailings exist on the property.

Monthly and Annual Quantities of Run-off from Waste Rock and Ore

Rain fall as measured in Yellowknife contributed the following water to the waste rock storage in 2021. As shown on the Design and Construction Management Plan, waste rock storage occupies 16,370 m³ and this figure is used to convert rainfall to volumes on waste piles and ore piles. There are currently no ore piles.

Table 12. Monthly and annual quantities of run-off from waste and ore stockpiles.

Month	Rainfall mm	On waste pile m ³	Added from mine m ³
Jan-21	9.0	147	0
Feb-21	9.0	147	0
Mar-21	8.0	131	0
Apr-21	7.5	123	0
May-21	2.1	34	0
Jun-21	31.8	521	0
Jul-21	41.8	684	0
Aug-21	25.6	419	0
Sep-21	43.0	704	75
Oct-21	18.4	301	75
Nov-21	8.1	133	0
Dec-21	8.1	133	0
Total	212.4	3477	150

Monthly and Annual Quantities of Discharge of Minewater

There was no minewater discharge in 2021 except for moisture entrained in waste rock (see above).

Monthly and Annual Quantities of Other Discharge.

There was no other discharge from the property.

Monthly and Annual Measurements of Precipitation and Run-off

Yellowknife reported the following monthly precipitation in 2021

(<https://yellowknife.weatherstats.ca/charts/precipitation-monthly.html>):

Table 13. Monthly precipitation, 2021

Month	Precipitation
Jan-21	9.0
Feb-21	9.0
Mar-21	8.0
Apr-21	7.5
May-21	2.1
Jun-21	31.8
Jul-21	41.8
Aug-21	25.6
Sep-21	43.0
Oct-21	18.4
Nov-21	8.1
Dec-21	8.1

A similar volume of water is considered to have flowed into drainage systems on the property.

Comparison of Water and Wastewaters Quantities

No water was used nor discharged on the property in 2021. There was nearly 3,500 m³ of rainfall onto the waste rock piles and 150 m³ was added during mining operations for dust suppression. The total amount of water from mining to the waste pile is approximately 4% of the total. This equals the amount of water used in mining.

Updated Water Balance

Rainfall is the largest contributor of water into each subbasin and would generally match outflows from each subbasin. Waste rock will entrain water and retain that water in each area. In our project, this will only affect the Mine Basin which is part of the Discovery Basin.

Table 14. Water balance for each basin (see map in appendix).

Basin	Area	Volume Rain	Waste Water	Outflow	Inflow
Mine Basin	152,000	44,080	226	44,306	226
Discovery Lake Basin	1,572,000	455,880	226	718,680	262,800

Sito Lake	2,500,000	725,000	60	488,808,000	488,808,000
Quayta Lake	9,770,000	2,833,300	60	977,616,000	977,616,000
Bluefish Lake	2,940,000	852,600	60	977,616,000	977,616,000
Prosperous Lake	40,000,000	11,600,000	60	977,616,000	977,616,000
Lake B	64,920	18,827	20	-	20
Lake C	10,500	3,045	20	-	20
Lake D	121,300	35,177	20	-	20

Lake B, C, and D have not seen any activity in or around them.

Action Level Exceedances

No exceedances were noted in 2021.

Action taken in Action Level Exceedances

None.

Activities in Accordance with TMP

Summary of Approved Updates or Changes

A Tailings Management Plan was submitted in 2022 and rejected.

Monthly and Annual Quantities of Tailings Placed in DSTF

No tailings were placed in the DSTF in 2021.

Monthly Elevations of the Dry Stack Tailings Facility

There were no tailings produced nor stored on site in 2021.

Action Level Exceedances

No samples were collected, no exceedances were noted in 2021.

Action taken in Action Level Exceedances

None.

Summary of Hydrocarbon-Contaminated Soil Treatment Facility

Summary of Approved Updates or Changes

No updates or changes.

Monthly and Annual Quantities of Effluent Discharged

No effluent was discharged in 2021.

Summary of all Contaminated Materials Accepted

Soil Rock Snow Water

There were no contaminated materials placed in this site in 2021.

Sources of Materials

There were no contaminated materials placed in this site in 2021.

Volumes and Types of Materials from Each Source

There were no contaminated materials placed in this site in 2021.

Analytical Results from Each Material from Each Source

There were no contaminated materials placed in this site in 2021.

Summary of Treated Soil Removed from the Facility

Volume of Soil

There were no contaminated materials removed from this site in 2021.

Analytical Results

There were no contaminated materials removed from this site in 2021.

Location and Activity of Receiving Sites

There were no contaminated materials removed from this site in 2021.

Summary of Previous Year's Management of Contaminated Soil

There were no contaminated materials on site in the previous year.

Record of Inspections of HCSTF

There were no inspections as no site exists.

Summary of Activities related to Explosives Management Plan

Summary of Approved Updates or Changes

An EMP was submitted to the MVLWB in March 2021 and approved June 2021.

Monthly and Annual Quantities of Explosives Spent.

Explosives were used in September and October 2021.

Table 15. Total explosives used by month.

Month	Amex (kg)	Stick (kg)
Dec-21	0	0
Nov-21	0	0
Oct-21	875	650
Sep-21	875	650
Aug-21	0	0
Jul-21	0	0
Jun-21	0	0
May-21	0	0

Apr-21	0	0
Mar-21	0	0
Feb-21	0	0
Jan-21	0	0
Total	1750	1300

In addition, 100 kg of primacord and 1,325 nonel caps (at 1.1 kg/thousand units) were used. Some undetonated explosives were identified in the broken rock, and this was gathered by hand and disposed of by the miners in the approved manner.

Action Level Exceedances

No spills occurred, no samples were collected, no exceedances were noted in 2021.

Action taken in Action Level Exceedances

None.

Summary and Results of Inspections

No issues were noted during inspections.

Summary of Activities in Accordance with the Spill Contingency Plan

List of all unauthorised Discharges and Actions

A planned discharge from the company's bioreactor was completed in August, sampled, and found to exceed licensed coliform bacteria counts. This was reported to Inspectors and Spill Line in accordance with the SCP. The discharge drained into a dry swamp which would enter the receiving environment at SNP-12.

Spill Training Conducted.

Personnel were made aware of the SCP in 2021 and discussions occurred.

Summary of Closure and Reclamation Activities

All waste material from domestic sources and operations was removed from site. A first draft of the CRP was submitted in late 2021 and in consultation with GNWT it was revised and submitted in January 2022. It was rejected in April 2022 after revisions were submitted.

Tabular Data collected under the SNP.

The following data is provided from collections under MV2020L2-0002

Table 16. Tabular data for SNP-01, Discharge from bioreactor.

Sampling Date		2021-08-18
	Station	SNP-01
Calculated Parameters	UNITS	
Dissolved Nitrate (N)	mg/L	<0.010
Dissolved Nitrate (NO3)	mg/L	<0.044

Dissolved Nitrite (NO ₂)	mg/L	<0.033
Total Total Kjeldahl Nitrogen (Calc)	mg/L	69.8
Dissolved Organic Phosphorus (P)	mg/L	2.07
Demand Parameters		
Dissolved Biochemical Oxygen Demand	mg/L	<6.3
Biochemical Oxygen Demand (inhib.)	mg/L	28
Misc. Inorganics		
pH	pH	7.81
Reactive Silica	mg/L	
Alkalinity (Total as CaCO ₃)	mg/L	
Total Organic Carbon (C)	mg/L	27
Alkalinity (PP as CaCO ₃)	mg/L	
Bicarbonate (HCO ₃)	mg/L	
Carbonate (CO ₃)	mg/L	
Hydroxide (OH)	mg/L	
Total Suspended Solids	mg/L	25
Anions		
Dissolved Fluoride (F)	mg/L	
Dissolved Chloride (Cl)	mg/L	
Dissolved Sulphate (SO ₄)	mg/L	
Metals		
Dissolved Hex. Chromium (Cr 6+)	mg/L	
Total Hex. Chromium (Cr 6+)	mg/L	
Microbiological Param.		
E.Coli DST	MPN/100mL	>2400
Fecal Coliforms	MPN/100mL	>2400
Total Coliforms DST	MPN/100mL	>2400
Nutrients		
Total Ammonia (N)	mg/L	62
Orthophosphate (P)	mg/L	6.5
Dissolved Phosphorus (P)	mg/L	9.3
Dissolved Inorganic Phosphorus (P)	mg/L	7.24
Total Inorganic Phosphorus (P)	mg/L	7.59
Dissolved Nitrite (N)	mg/L	<0.010
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.010
Total Nitrogen (N)	mg/L	70 (1)
Misc. Organics		
Total Oil and grease	mg/L	1.1
Physical Properties		
Conductivity	uS/cm	956
Physical Properties		
Turbidity	NTU	14

Table 17. Tabular data from SNP-03, drainage from DST facility (not built).

Sampling Date		2021-08-18	2021-10-26	2019-07-06	historic	historic
	Station	SNP-03A	SNP-03	SNP-03	SNP-03	SNP-03
Calculated Parameters	UNITS					
Dissolved Nitrate (N)	mg/L	<0.050	28			

Dissolved Nitrate (NO3)	mg/L	<0.22	120			
Dissolved Nitrite (NO2)	mg/L	<0.033	1.6			
Total Total Kjeldahl Nitrogen (Calc)	mg/L	1.72	11.8			
Dissolved Organic Phosphorus (P)	mg/L	<0.015	0.0087			
Demand Parameters						
Dissolved Biochemical Oxygen Demand	mg/L		<2.0			
Biochemical Oxygen Demand (inhib.)	mg/L	<6.8				
Misc. Inorganics						
pH	pH	6.10	6.55			
Reactive Silica	mg/L	6.9 (1)	14			
Alkalinity (Total as CaCO3)	mg/L	9.74	46.9			
Total Organic Carbon (C)	mg/L	55 (2)	9.2			
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50			
Bicarbonate (HCO3)	mg/L	11.9	57.2			
Carbonate (CO3)	mg/L	<0.50	<0.50			
Hydroxide (OH)	mg/L	<0.50	<0.50			
Total Suspended Solids	mg/L	75 (3)	30			
Anions						
Dissolved Fluoride (F)	mg/L	0.070	<0.050			
Dissolved Chloride (Cl)	mg/L	3.2	1.4			
Dissolved Sulphate (SO4)	mg/L	<2.5 (4)	240			
Metals						
Dissolved Hex. Chromium (Cr 6+)	mg/L	<0.0050 (2)	0.0011			
Total Hex. Chromium (Cr 6+)	mg/L	<0.0050 (2)	<0.00099			
Microbiological Param.						
E.Coli DST	MPN/100mL					
Fecal Coliforms	MPN/100mL					
Total Coliforms DST	MPN/100mL					
Nutrients						
Total Ammonia (N)	mg/L	0.024	7.3			
Orthophosphate (P)	mg/L	<0.0030	0.0042			
Dissolved Phosphorus (P)	mg/L	0.044 (1)	0.014			
Dissolved Inorganic Phosphorus (P)	mg/L	0.037 (1)	0.0048			
Total Inorganic Phosphorus (P)	mg/L	0.096 (1)	0.0149			
Dissolved Nitrite (N)	mg/L	<0.010 (5)	0.48			
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.050 (6)	28			
Total Nitrogen (N)	mg/L	1.7 (1)	40 (1)			
Misc. Organics						
Total Oil and grease	mg/L					
Physical Properties						
Conductivity	uS/cm	46.2	753			
Physical Properties						
Turbidity	NTU	27	7.4			
Total Dissolved Solids	mg/L	159	652			
Calculated Parameters						
Dissolved Hardness (CaCO3)	mg/L	28.1	390			
Elements						
Dissolved Mercury (Hg)	ug/L	0.0082				
Dissolved Metals by ICPMS						

Dissolved Aluminum (Al)	ug/L	753	32.5	127	906	7.6
Dissolved Antimony (Sb)	ug/L	0.18	0.616	<0.50	<0.50	<0.50
Dissolved Arsenic (As)	ug/L	4.27	5.20	11.1	4.18	1.04
Dissolved Barium (Ba)	ug/L	19.9	52.3	20.5	21.6	6.8
Dissolved Beryllium (Be)	ug/L	0.068	<0.010	<0.10	<0.10	<0.10
Dissolved Bismuth (Bi)	ug/L	<0.025	<0.0050	<1.0	<1.0	<1.0
Dissolved Boron (B)	ug/L	<50	45	<50	<50	<50
Dissolved Cadmium (Cd)	ug/L	<0.025	3.26	0.102	0.362	<0.010
Dissolved Chromium (Cr)	ug/L	2.38	0.32	1.1	1.9	<1.0
Dissolved Cobalt (Co)	ug/L	0.797	34.4	0.35	0.26	<0.20
Dissolved Copper (Cu)	ug/L	5.79	4.13	33.2	7.28	0.79
Dissolved Iron (Fe)	ug/L	1270	156	584	603	10.2
Dissolved Lead (Pb)	ug/L	1.59	0.109	0.85	0.23	<0.20
Dissolved Lithium (Li)	ug/L	5.8	28.0	<2.0	6.9	2.4
Dissolved Manganese (Mn)	ug/L	31.2	352	20.4	5.4	<1.0
Dissolved Molybdenum (Mo)	ug/L	<0.25	0.712	<1.0	<1.0	<1.0
Dissolved Nickel (Ni)	ug/L	6.36	452	28.4	5.5	1.3
Dissolved Phosphorus (P)	ug/L	62	25.5			
Dissolved Selenium (Se)	ug/L	<0.20	0.117	0.17	0.12	<0.10
Dissolved Silicon (Si)	ug/L	2910	5870	6540	5020	239
Dissolved Silver (Ag)	ug/L	<0.025	0.0053	0.030	<0.020	<0.020
Dissolved Strontium (Sr)	ug/L	25.3	188	107	23.3	34.4
Dissolved Thallium (Tl)	ug/L	<0.010	0.0186	<0.010	<0.010	<0.010
Dissolved Tin (Sn)	ug/L	<1.0	<0.20	<5.0	<5.0	<5.0
Dissolved Titanium (Ti)	ug/L	13.0	0.99	<5.0	6.7	<5.0
Dissolved Uranium (U)	ug/L	0.477	0.198	1.47	0.49	0.18
Dissolved Vanadium (V)	ug/L	3.4	0.54	<5.0	<5.0	<5.0
Dissolved Zinc (Zn)	ug/L	9.20	4240	15.3	5.5	<5.0
Dissolved Zirconium (Zr)	ug/L	3.74	0.12	1.52	4.29	0.13
Dissolved Calcium (Ca)	mg/L	5.69	86.0	28.4	5.14	12.1
Dissolved Magnesium (Mg)	mg/L	3.37	42.5	13.9	3.45	4.96
Dissolved Potassium (K)	mg/L	1.18	8.77			
Dissolved Sodium (Na)	mg/L	1.49	12.4			
Dissolved Sulphur (S)	mg/L	<15	90.1			
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	28.7	425			
Elements						
Total Mercury (Hg)	ug/L	0.0130				
Total Metals by ICPMS						
Total Aluminum (Al)	ug/L	1050	205			
Total Antimony (Sb)	ug/L	<0.10	0.785			
Total Arsenic (As)	ug/L	4.61	52.5			
Total Barium (Ba)	ug/L	23.7	65.6			
Total Beryllium (Be)	ug/L	0.078	0.030			
Total Bismuth (Bi)	ug/L	<0.025	0.030			
Total Boron (B)	ug/L	<50	51			
Total Cadmium (Cd)	ug/L	<0.025	7.88			
Total Chromium (Cr)	ug/L	2.39	0.77			
Total Cobalt (Co)	ug/L	1.17	56.3			
Total Copper (Cu)	ug/L	4.63	18.5			
Total Iron (Fe)	ug/L	996	2290			

Total Lead (Pb)	ug/L	0.261	1.25			
Total Lithium (Li)	ug/L	6.4	32.8			
Total Manganese (Mn)	ug/L	48.9	563			
Total Molybdenum (Mo)	ug/L	<0.25	0.949			
Total Nickel (Ni)	ug/L	7.37	550			
Total Phosphorus (P)	ug/L	52	141			
Total Selenium (Se)	ug/L	<0.20	0.172			
Total Silicon (Si)	ug/L	3900	5600			
Total Silver (Ag)	ug/L	<0.025	0.016			
Total Strontium (Sr)	ug/L	27.0	218			
Total Thallium (Tl)	ug/L	<0.010	0.0365			
Total Tin (Sn)	ug/L	<1.0	<0.20			
Total Titanium (Ti)	ug/L	12.8	5.8			
Total Uranium (U)	ug/L	0.457	0.460			
Total Vanadium (V)	ug/L	2.7	1.75			
Total Zinc (Zn)	ug/L	8.31	6050			
Total Zirconium (Zr)	ug/L	3.90	0.26			
Total Calcium (Ca)	mg/L	5.60	92.5			
Total Magnesium (Mg)	mg/L	3.58	47.1			
Total Potassium (K)	mg/L	1.05	9.28			
Total Sodium (Na)	mg/L	1.52	13.7			
Total Sulphur (S)	mg/L	<15	96.4			

Table 18. Tabular data from SNP-09, 10 and 10a from drainage from waste rock pile.

Sampling Date		2021-08-18	2021-10-26	2021-10-26
	Station	SNP-09	SNP-10	SNP-10A
Calculated Parameters	UNITS			
Dissolved Nitrate (N)	mg/L	<0.010	13	0.042
Dissolved Nitrate (NO3)	mg/L	<0.044	59	0.19
Dissolved Nitrite (NO2)	mg/L	<0.033	1.8	<0.033
Total Total Kjeldahl Nitrogen (Calc)	mg/L	1.32	3.79	0.833
Dissolved Organic Phosphorus (P)	mg/L	0.0181	0.0233	0.0070
Demand Parameters				
Dissolved Biochemical Oxygen Demand	mg/L		5.7	<2.0
Biochemical Oxygen Demand (inhib.)	mg/L	<2.0		
Misc. Inorganics				
pH	pH	7.00	7.14	6.84
Reactive Silica	mg/L	11	17	1.2
Alkalinity (Total as CaCO3)	mg/L	56.8	178	44.2
Total Organic Carbon (C)	mg/L	18	17	7.2
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50
Bicarbonate (HCO3)	mg/L	69.4	217	54.0
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50
Total Suspended Solids	mg/L	3.9	9.3	17
Anions				
Dissolved Fluoride (F)	mg/L	0.074	0.078	0.065
Dissolved Chloride (Cl)	mg/L	1.5	2.8	1.4
Dissolved Sulphate (SO4)	mg/L	310	440	8.8

Metals				
Dissolved Hex. Chromium (Cr 6+)	mg/L	<0.00099	<0.00099	<0.00099
Total Hex. Chromium (Cr 6+)	mg/L	<0.00099	<0.00099	<0.00099
Microbiological Param.				
E.Coli DST	MPN/100mL			
Fecal Coliforms	MPN/100mL			
Total Coliforms DST	MPN/100mL			
Nutrients				
Total Ammonia (N)	mg/L	0.019	2.6	0.026
Orthophosphate (P)	mg/L	<0.0030	0.0037	0.0042
Dissolved Phosphorus (P)	mg/L	0.037	0.036	0.012
Dissolved Inorganic Phosphorus (P)	mg/L	0.0185	0.0123	0.0055
Total Inorganic Phosphorus (P)	mg/L	0.0450	0.0107	0.0087
Dissolved Nitrite (N)	mg/L	<0.010	0.55	<0.010
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.010	14	0.042
Total Nitrogen (N)	mg/L	1.3 (1)	18 (1)	0.88
Misc. Organics				
Total Oil and grease	mg/L			
Physical Properties				
Conductivity	uS/cm	717	1180	109
Physical Properties				
Turbidity	NTU	1.3	11	8.6
Total Dissolved Solids	mg/L	550	920	86.4
Calculated Parameters				
Dissolved Hardness (CaCO3)	mg/L	332	579	47.6
Elements				
Dissolved Mercury (Hg)	ug/L	<0.0019	0.0028	
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	ug/L	34.6	154	94.4
Dissolved Antimony (Sb)	ug/L	0.299	0.781	0.051
Dissolved Arsenic (As)	ug/L	4.24	25.2	0.876
Dissolved Barium (Ba)	ug/L	33.3	55.5	7.62
Dissolved Beryllium (Be)	ug/L	0.011	<0.010	<0.010
Dissolved Bismuth (Bi)	ug/L	<0.0050	0.0475	<0.0050
Dissolved Boron (B)	ug/L	16	35	<10
Dissolved Cadmium (Cd)	ug/L	0.947	0.982	<0.0050
Dissolved Chromium (Cr)	ug/L	0.40	1.17	0.33
Dissolved Cobalt (Co)	ug/L	3.61	28.7	0.0997
Dissolved Copper (Cu)	ug/L	4.09	4.67	0.933
Dissolved Iron (Fe)	ug/L	406	2310	167
Dissolved Lead (Pb)	ug/L	0.389	11.7	0.0713
Dissolved Lithium (Li)	ug/L	24.1	15.7	2.43
Dissolved Manganese (Mn)	ug/L	114	2090	26.2
Dissolved Molybdenum (Mo)	ug/L	0.157	1.65	0.672
Dissolved Nickel (Ni)	ug/L	161	93.3	1.46
Dissolved Phosphorus (P)	ug/L	17.7	37.4	17.3
Dissolved Selenium (Se)	ug/L	0.091	0.294	<0.040
Dissolved Silicon (Si)	ug/L	4060	7990	874
Dissolved Silver (Ag)	ug/L	<0.0050	0.0445	<0.0050
Dissolved Strontium (Sr)	ug/L	150	354	32.6
Dissolved Thallium (Tl)	ug/L	0.0037	0.0135	0.0024

Dissolved Tin (Sn)	ug/L	<0.20	<0.20	<0.20
Dissolved Titanium (Ti)	ug/L	0.73	7.27	5.49
Dissolved Uranium (U)	ug/L	0.165	2.82	0.132
Dissolved Vanadium (V)	ug/L	0.27	1.13	0.65
Dissolved Zinc (Zn)	ug/L	947	516	1.10
Dissolved Zirconium (Zr)	ug/L	0.18	0.35	0.13
Dissolved Calcium (Ca)	mg/L	74.5	148	11.4
Dissolved Magnesium (Mg)	mg/L	35.5	50.8	4.68
Dissolved Potassium (K)	mg/L	4.03	11.8	1.93
Dissolved Sodium (Na)	mg/L	4.27	13.0	2.12
Dissolved Sulphur (S)	mg/L	73.0	133	3.3
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	339	598	48.5
Elements				
Total Mercury (Hg)	ug/L	<0.0019		<0.0019
Total Metals by ICPMS				
Total Aluminum (Al)	ug/L	38.3	192	107
Total Antimony (Sb)	ug/L	0.229	0.864	0.055
Total Arsenic (As)	ug/L	6.18	31.9	0.922
Total Barium (Ba)	ug/L	33.4	64.8	8.37
Total Beryllium (Be)	ug/L	0.012	<0.010	<0.010
Total Bismuth (Bi)	ug/L	<0.0050	0.068	<0.010
Total Boron (B)	ug/L	16	44	10
Total Cadmium (Cd)	ug/L	1.05	1.17	<0.0050
Total Chromium (Cr)	ug/L	0.40	1.16	0.38
Total Cobalt (Co)	ug/L	4.20	35.1	0.118
Total Copper (Cu)	ug/L	4.34	5.38	0.99
Total Iron (Fe)	ug/L	610	2790	193
Total Lead (Pb)	ug/L	0.110	18.0	0.059
Total Lithium (Li)	ug/L	26.1	17.6	2.52
Total Manganese (Mn)	ug/L	118	2590	28.0
Total Molybdenum (Mo)	ug/L	0.184	1.82	0.702
Total Nickel (Ni)	ug/L	171	98.8	1.60
Total Phosphorus (P)	ug/L	28.0	33.0	16.7
Total Selenium (Se)	ug/L	0.094	0.336	<0.040
Total Silicon (Si)	ug/L	4090	7450	723
Total Silver (Ag)	ug/L	<0.0050	0.043	<0.010
Total Strontium (Sr)	ug/L	143	398	35.9
Total Thallium (Tl)	ug/L	0.0056	0.0142	0.0027
Total Tin (Sn)	ug/L	<0.20	<0.20	<0.20
Total Titanium (Ti)	ug/L	1.26	8.0	5.1
Total Uranium (U)	ug/L	0.195	2.86	0.129
Total Vanadium (V)	ug/L	0.38	0.85	0.26
Total Zinc (Zn)	ug/L	1060	568	1.5
Total Zirconium (Zr)	ug/L	0.18	0.34	0.10
Total Calcium (Ca)	mg/L	74.5	154	11.3
Total Magnesium (Mg)	mg/L	37.1	51.7	4.96
Total Potassium (K)	mg/L	4.00	11.7	1.93
Total Sodium (Na)	mg/L	3.97	12.6	2.31
Total Sulphur (S)	mg/L	80.0	132	<3.0

Sampling Date		2021-08-18
	Station	SNP-12
Calculated Parameters	UNITS	
Dissolved Nitrate (N)	mg/L	
Dissolved Nitrate (NO3)	mg/L	
Dissolved Nitrite (NO2)	mg/L	
Total Total Kjeldahl Nitrogen (Calc)	mg/L	
Dissolved Organic Phosphorus (P)	mg/L	
Demand Parameters		
Dissolved Biochemical Oxygen Demand	mg/L	
Biochemical Oxygen Demand (inhib.)	mg/L	
Misc. Inorganics		
pH	pH	7.45
Reactive Silica	mg/L	
Alkalinity (Total as CaCO3)	mg/L	
Total Organic Carbon (C)	mg/L	
Alkalinity (PP as CaCO3)	mg/L	
Bicarbonate (HCO3)	mg/L	
Carbonate (CO3)	mg/L	
Hydroxide (OH)	mg/L	
Total Suspended Solids	mg/L	
Anions		
Dissolved Fluoride (F)	mg/L	
Dissolved Chloride (Cl)	mg/L	
Dissolved Sulphate (SO4)	mg/L	
Metals		
Dissolved Hex. Chromium (Cr 6+)	mg/L	<0.00099
Total Hex. Chromium (Cr 6+)	mg/L	<0.00099
Microbiological Param.		
E.Coli DST	MPN/100mL	
Fecal Coliforms	MPN/100mL	
Total Coliforms DST	MPN/100mL	
Nutrients		
Total Ammonia (N)	mg/L	0.025
Orthophosphate (P)	mg/L	
Dissolved Phosphorus (P)	mg/L	
Dissolved Inorganic Phosphorus (P)	mg/L	
Total Inorganic Phosphorus (P)	mg/L	
Dissolved Nitrite (N)	mg/L	
Dissolved Nitrate plus Nitrite (N)	mg/L	
Total Nitrogen (N)	mg/L	
Misc. Organics		
Total Oil and grease	mg/L	
Physical Properties		
Conductivity	uS/cm	102
Physical Properties		
Turbidity	NTU	
Total Dissolved Solids	mg/L	
Calculated Parameters		
Dissolved Hardness (CaCO3)	mg/L	42.6
Elements		

Dissolved Mercury (Hg)	ug/L	<0.0019
Dissolved Metals by ICPMS		
Dissolved Aluminum (Al)	ug/L	22.3
Dissolved Antimony (Sb)	ug/L	0.111
Dissolved Arsenic (As)	ug/L	1.05
Dissolved Barium (Ba)	ug/L	5.96
Dissolved Beryllium (Be)	ug/L	<0.010
Dissolved Bismuth (Bi)	ug/L	<0.0050
Dissolved Boron (B)	ug/L	11
Dissolved Cadmium (Cd)	ug/L	0.0091
Dissolved Chromium (Cr)	ug/L	0.18
Dissolved Cobalt (Co)	ug/L	0.0834
Dissolved Copper (Cu)	ug/L	1.90
Dissolved Iron (Fe)	ug/L	136
Dissolved Lead (Pb)	ug/L	0.220
Dissolved Lithium (Li)	ug/L	2.29
Dissolved Manganese (Mn)	ug/L	20.5
Dissolved Molybdenum (Mo)	ug/L	0.646
Dissolved Nickel (Ni)	ug/L	1.61
Dissolved Phosphorus (P)	ug/L	10.7
Dissolved Selenium (Se)	ug/L	<0.040
Dissolved Silicon (Si)	ug/L	264
Dissolved Silver (Ag)	ug/L	<0.0050
Dissolved Strontium (Sr)	ug/L	31.5
Dissolved Thallium (Tl)	ug/L	<0.0020
Dissolved Tin (Sn)	ug/L	<0.20
Dissolved Titanium (Ti)	ug/L	1.40
Dissolved Uranium (U)	ug/L	0.107
Dissolved Vanadium (V)	ug/L	0.23
Dissolved Zinc (Zn)	ug/L	4.53
Dissolved Zirconium (Zr)	ug/L	<0.10
Dissolved Calcium (Ca)	mg/L	10.7
Dissolved Magnesium (Mg)	mg/L	3.85
Dissolved Potassium (K)	mg/L	1.61
Dissolved Sodium (Na)	mg/L	2.31
Dissolved Sulphur (S)	mg/L	<3.0
Calculated Parameters		
Total Hardness (CaCO3)	mg/L	41.7
Elements		
Total Mercury (Hg)	ug/L	<0.0019
Total Metals by ICPMS		
Total Aluminum (Al)	ug/L	49.0
Total Antimony (Sb)	ug/L	0.044
Total Arsenic (As)	ug/L	0.885
Total Barium (Ba)	ug/L	5.29
Total Beryllium (Be)	ug/L	<0.010
Total Bismuth (Bi)	ug/L	<0.0050
Total Boron (B)	ug/L	<10
Total Cadmium (Cd)	ug/L	<0.0050
Total Chromium (Cr)	ug/L	0.15
Total Cobalt (Co)	ug/L	0.0807

Total Copper (Cu)	ug/L	0.892
Total Iron (Fe)	ug/L	129
Total Lead (Pb)	ug/L	0.0409
Total Lithium (Li)	ug/L	2.26
Total Manganese (Mn)	ug/L	16.9
Total Molybdenum (Mo)	ug/L	0.730
Total Nickel (Ni)	ug/L	1.27
Total Phosphorus (P)	ug/L	19.9
Total Selenium (Se)	ug/L	<0.040
Total Silicon (Si)	ug/L	349
Total Silver (Ag)	ug/L	<0.0050
Total Strontium (Sr)	ug/L	26.9
Total Thallium (Tl)	ug/L	<0.0020
Total Tin (Sn)	ug/L	<0.20
Total Titanium (Ti)	ug/L	2.46
Total Uranium (U)	ug/L	0.118
Total Vanadium (V)	ug/L	0.34
Total Zinc (Zn)	ug/L	1.53
Total Zirconium (Zr)	ug/L	0.10
Total Calcium (Ca)	mg/L	10.5
Total Magnesium (Mg)	mg/L	3.78
Total Potassium (K)	mg/L	1.42
Total Sodium (Na)	mg/L	1.84
Total Sulphur (S)	mg/L	<3.0

List of all Non-Compliance Conditions

SNP-01 exceeded coliform bacteria in an August sample.

SNP-03 exceeded TSS, ammonia and zinc in samples in August and October. SNP-03 is a site to sample drainage from the DST facility. This has not been constructed, and is not in use. There has been no activities in this area, so the SNP-03 results are to be considered baseline samples.

Summary of Actions Taken to Address Concerns

A commercial waste water ultraviolet sterilizer was purchased and will be installed in the bioreactor for SNP-01.

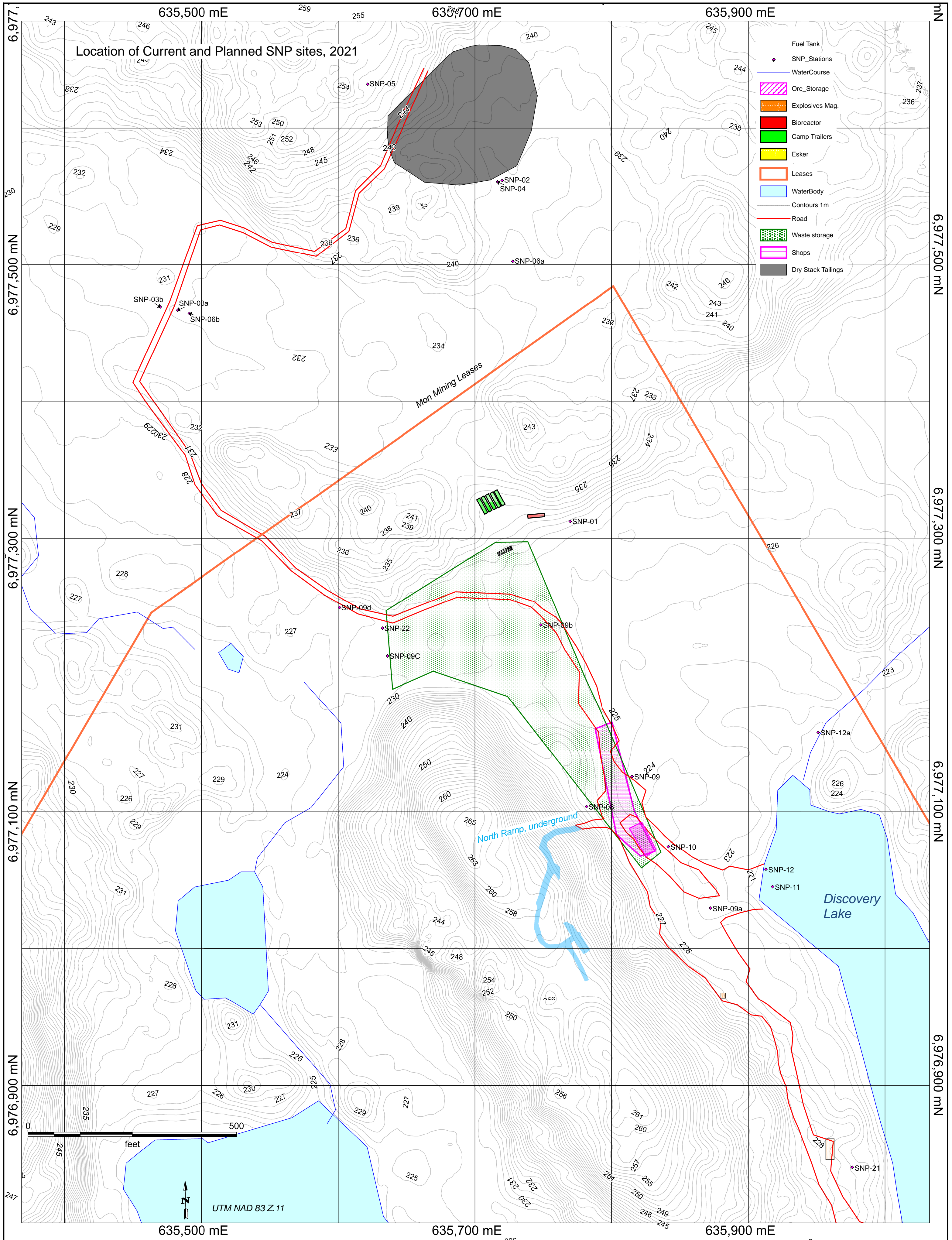
Discussions will continue with Inspectors and the MVLWB concerning exceedances at SNP-03 which are all baseline studies in an area removed from all activities.

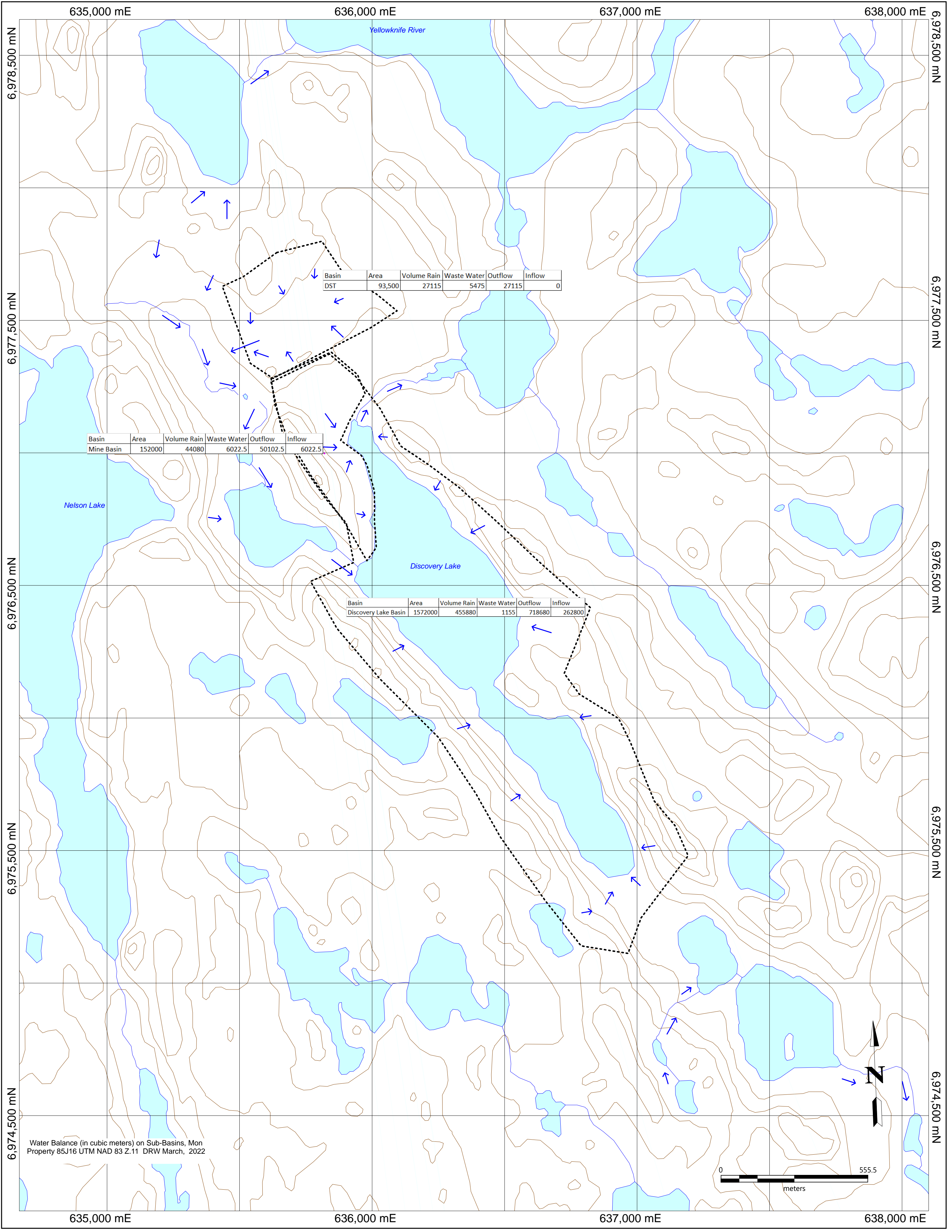
Other Details Requested by the Board by November 30 of the Year Reported

Revised Water and Groundwater Management Plans, Waste Rock Management and Geochemical Characterization Plans, Tailings Management, Closure and Reclamation, and Tailings Management Plans have been submitted in 2022.

Appendixes

1	Map showing SNP locations
2	Map showing basins



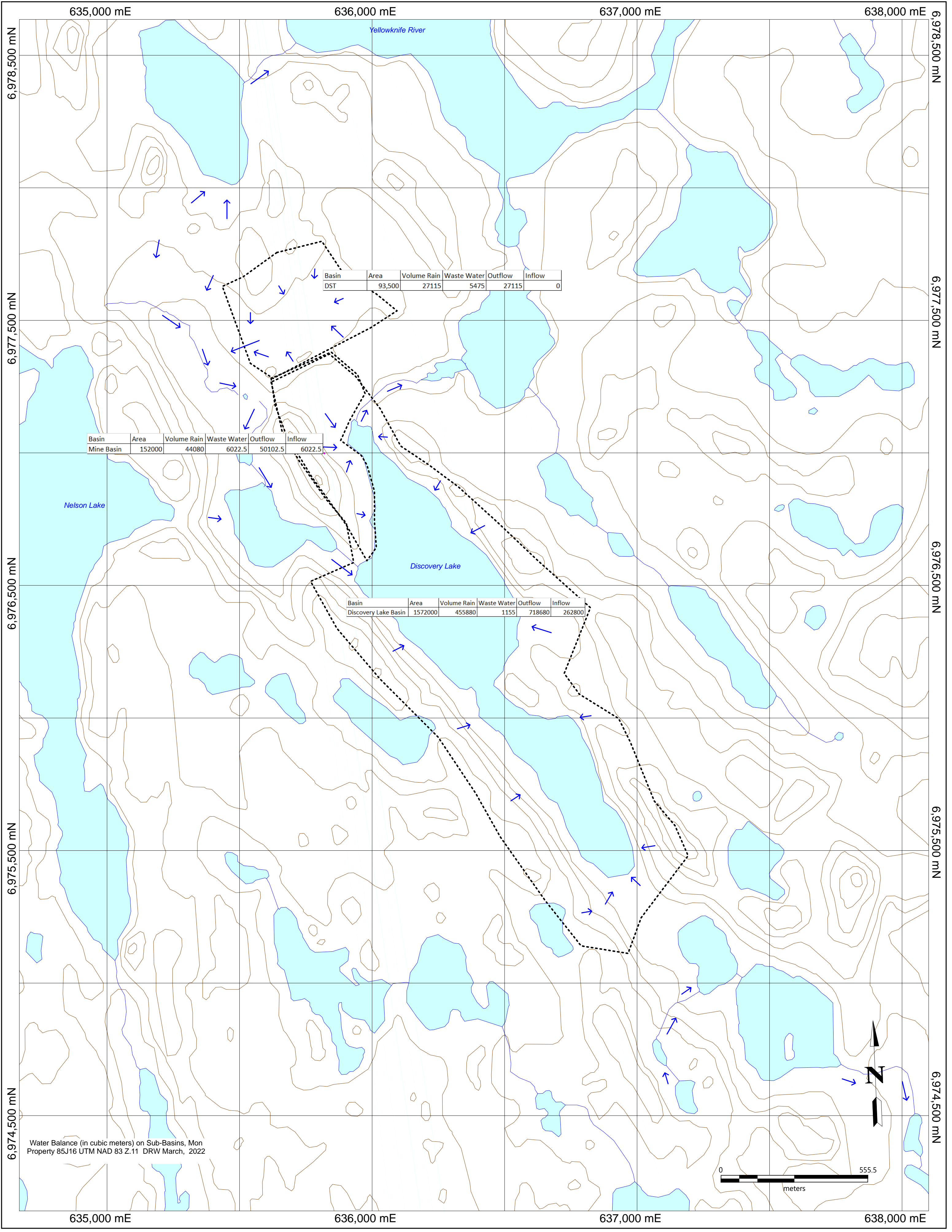
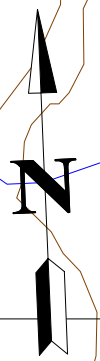
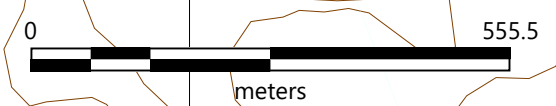


Basin	Area	Volume Rain	Waste Water	Outflow	Inflow
DST	93,500	27115	5475	27115	0

Basin	Area	Volume Rain	Waste Water	Outflow	Inflow
Mine Basin	152000	44080	6022.5	50102.5	6022.5

Basin	Area	Volume Rain	Waste Water	Outflow	Inflow
Discovery Lake Basin	1572000	455880	1155	718680	262800

Water Balance (in cubic meters) on Sub-Basins, Mon
 Property 85J16 UTM NAD 83 Z.11 DRW March, 2022



635,000 mE 636,000 mE 637,000 mE 638,000 mE

6,978,500 mN

6,977,500 mN

6,976,500 mN

6,975,500 mN

6,974,500 mN

6,978,500 mN

6,977,500 mN

6,976,500 mN

6,975,500 mN

6,974,500 mN

635,000 mE 636,000 mE 637,000 mE 638,000 mE