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

April 19, 2022 Revised May 18, 2022

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Submitted by:

New Discovery Mines Ltd.

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# Contents

Re	evisions	6
ln <sup>.</sup>	troduction	17
Su	mmary of Project Activities	18
Up	odated Project Schedule	18
W	ater Usage	19
	Field Verification of Water Depths	19
	Calibration and Status of Installed Meters.	20
	Engagement Activities	20
	Traditional Knowledge	22
	Construction activities	22
	Major Maintenance Activities	22
	Activities under Waste Management Plan	22
	Updates and Revisions to Waste Management Plan	22
	Monthly and Annual Quantities of Sewage	22
	Monthly and Annual Quantities of Run off	22
	Monthly and Annual Quantities of Sewage Solids or Sludge	23
	Monthly Elevations of the Dry Stack Tailings Facility	23
	Map showing location of Sumps	23
	ctivities conducted in accordance of the Waste Rock Management and Geochemical Characterizand Monitoring Plan	
	Summary of Approved Updates and Changes	23
	Comparison of Annual Quantities Produced vs Predicted	23
	Summary of Rock Type, Geochemical Classification and Location	23
	Details of Waste Rock and Ore Stockpiles	23
	Summary of interpretation of Results	24
	Summary and Interpretation from Seepage Monitoring	24
	Location of Seepage	24
	Comparison to reference location	24
	Analysis of Major Trends since Project Inception	24
	Summary of Recommendations for Future Surface Monitoring	25
	Summary of Investigations into Field Test Cells	25
	Summary of Water Quality Monitoring	25

	Action Level Exceedances	34
	Action taken in Action Level Exceedances	34
<5	om: dave drwgcl.com <b>Sent:</b> Monday, October 25, 2021 2:40:22 PM <b>To:</b> Shannon Allers allerston@mvlwb.com> <b>Cc:</b> David-Scott McQuinn <david-scott_mcquinn@gov.nt.ca> <b>Subject:</b> Nold Property</david-scott_mcquinn@gov.nt.ca>	Mor
Su	mmary of Activities in accordance with the Approved GWWM Program	35
	Summary of Approved Updates or Changes	35
	Monthly and Annual Quantities of Recycled Water	35
	Monthly and Annual Quantities of Water from Each Approved Source.	35
	Monthly and Annual Quantities of Water used for Dust Control.	35
	Monthly and Annual Quantities of Sewage	35
	Monthly and Annual Quantities of Run-off from DSTF	36
	Monthly and Annual Quantities of Run-off from Waste Rock and Ore	36
	Monthly and Annual Quantities of Discharge of Minewater	37
	Monthly and Annual Quantities of Other Discharge.	37
	Monthly and Annual Measurements of Precipitation and Run-off	37
	Comparison of Water and Wastewaters Quantities	37
	Updated Water Balance	38
	Action Level Exceedances	38
	Action taken in Action Level Exceedances	38
٩c	tivities in Accordance with TMP	38
	Summary of Approved Updates or Changes	38
	Monthly and Annual Quantities of Tailings Placed in DSTF	38
	Monthly Elevations of the Dry Stack Tailings Facility	38
	Action Level Exceedances	39
	Action taken in Action Level Exceedances	39
Su	mmary of Hydrocarbon-Contaminated Soil Treatment Facility	39
	Summary of Approved Updates or Changes	39
	Monthly and Annual Quantities of Effluent Discharged	39
	Summary of all Contaminated Materials Accepted	39
	Soil Rock Snow Water	39
	Sources of Materials	39
	Volumes and Types of Materials from Each Source	39
	Analytical Results from Each Material from Each Source	39

Volume of Soil	Summary of Treated Soil Removed from the Facility	39
Location and Activity of Receiving Sites	Volume of Soil	39
Summary of Previous Year's Management of Contaminated Soil	Analytical Results	39
Record of Inspections of HCSTF	Location and Activity of Receiving Sites	39
Record of Inspections of HCSTF	Summary of Previous Year's Management of Contaminated Soil	39
Summary of Activities related to Explosives Management Plan		
Monthly and Annual Quantities of Explosives Spent. 40 Action Level Exceedances		
Action Level Exceedances	Summary of Approved Updates or Changes	39
Action taken in Action Level Exceedances	Monthly and Annual Quantities of Explosives Spent.	40
Summary and Results of Inspections		
Summary and Results of Inspections		
Summary of Activities in Accordance with the Spill Contingency Plan		
List of all unauthorised Discharges and Actions		
Spill Training Conducted	,	
Summary of Closure and Reclamation Activities		
Tabular Data collected under the SNP		
List of all Non-Compliance Conditions		
Summary of Actions Taken to Address Concerns		
Other Details Requested by the Board by November 30 of the Year Reported	·	
Appendixes		
Table 1. Table of water usage in cubic metres in 2021		
Table 2. Community consultation summary	Appendixes	49
Table 2. Community consultation summary		
Table 3. ABA test results from gabbroic waste sample		
Table 4. Results from water analyses, October 2021	·	
Table 5. Results for mercury by cold vapour, October 2021	·	
Table 6. Atomic Absorption on water, October 2021	•	
Table 7. Water samples August 2021		
Table 8. Lowe level metals by cold vapour, August 2021	·	
Table 9. Low level total metals by cold vapour, August 2021	· · ·	
Table 10. Monthly and annual water withdrawal in cubic metres (m³)	· · · · · · ·	
Table 11. Monthly and annual sewage and greywater in camp	, , , <del>,</del>	
Table 12. Monthly and annual quantities of run-off from waste and ore stockpiles		
Table 14. Water balance for each basin (see map in appendix)	Table 13. Monthly precipitation, 2021	37
	Table 14. Water balance for each basin (see map in appendix)	38

Table 15.	Total explosives used by month.	40
Table 16.	Tabular data for SNP-01, Discharge from bioreactor.	41
Table 17.	Tabular data from SNP-03, drainage from DST facility (not built).	41
Table 18.	Tabular data from SNP-09, 10 from drainage from waste rock pile	44

# Revisions

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
	WB - Heather Scott		Reviewer Recommendation	Tropolient Response
IVIVL	VVB Treatmer Scott	Board staff note that		
		although there is a table		
		of contents referring to		
		page numbers throughout		
		the document, no pages in	NDM to update Report with	
		the body of the Annual	page numbers that align with the	
1	Page numbers	Report are numbered.	Table of Contents.	Pg numbers added
1	rage Hullibers	Board staff note that	Table of Contents.	rg numbers added
		although there is a list of		
		maps included on the		
		appendix flysheet, the		
		maps should have map numbers and titles		
		included to avoid any		
		•		
		potential confusion.		
		Ideally, these map titles should be consist between		
		the appendix flysheet list	NDM to update map numbers	
		and the actual maps	and titles on the maps and	
2	Maps 1 and 2	themselves.	confirm consistency.	Updated
	Mahs I alia Z	Board staff note that there	committee consistency.	Opuateu
		still is inconsistency		
		between the legend and the information included		
		on the map. For example: (1) the road and lease		
		boundary, as well as the		
		bioreactor and explosives		
		magazine look very similar		
		because of the use of a		
		red and an orange that are		
		difficult to tell the		
		difference; (2) the		
		lines/slashing for the		
		waste rock, ore storage		
		and shops are not the		
		same between the legend		
		and the map information;		
		(3) the blue colour for the		
		underground can be		
		confused as a waterbody		
		because of the colour		
		choice; (4) fuel tank is		
		listed in the legend but		
		does not include a symbol;		
		(5) there is a symbol at the	NDM to update Map 1 for	
		north end of the waste	consistency between the legend	
3	Map 1 Legend	rock pile but there is	and the map information.	U <u>pdated</u>
٠	MIND T LEBELIN	rock plic but there is	and the map information.	o <u>puatea</u>

		nothing matching it in the		
		legend.		
		Board staff note that flow		
		direction arrows are		
		absent. These should be		
		included to enable		
		reviewers to understand		
		the movement of water		
		relative to this project	NDM to update Map 1 to include	
4	Map 1	area.	water flow direction arrows.	Added
-	Wap 1	Board staff note that cross	water now an ection arrows.	, idaed
		references in the Annual		
		Report text do not refer to		
		specific maps, which is		
		confusing. Text references		
		to the maps should be	NDM to update cross references	
	Map references	specific and state if it is	to maps in the Annual Report	Cross-references
	in text	Map 1, Map 2 or both.	text.	updated
	III text	Board staff note that text	text.	upuateu
		on PDF p. 6 states that		
		"No exceedances of the		
		license requirements were		
		identified." This appears		
		to contradict text on PDF		
		p. 26, which discusses an		
		exceedance of fecal		
		coliforms in the sewage		
		discharge resulting in an		
		Unauthorized Discharge	NDM to revise text in the Project	
	Summary of	that required notification	Summary for consistency with	
	Project	of the Board and	results discussed in later	
	Activities	Inspector.	section(s) of the Annual Report.	Summary updated
		Board staff note that this		,
		table includes a number of		
		parameters with no		
		associated results. Board		
		staff remind NDM to verify		
		consistency with		
		requirements of the SNP		
		Annex A and to revise		
		tables to remove		
		unnecessary or irrelevant	NDM to update Table 16 to	
		information to avoid	accurately reflect the SNP	
7	Table 16	potential confusion.	monitoring requirements.	Updated
		Board staff note a number	<u> </u>	
		of errors related to terms		
		applied to mercury and		
		other metals in numerous		
.	Total and	tables: (1) use of "Atomic		
	Dissolved	Adsorption" rather than		
	Metals –	the correct term of	NDM to correct analytical	
8	Various Tables	"Atomic Absorption"; (2)	method references.	Corrected

1	İ	l	1	
		reference to low level		
		metals by cold vapour and		
		by atomic adsorption,		
		which only applies so		
		mercury while all other		
		metals are done using a		
		_		
		different technique (i.e.,		
		ICP-MS). This should be		
		corrected.		
		Board staff note that the		
		intent of the tables in the		
		Annual Report is to		
		provide a summary of the		
		results. Ideally, this is		
		accomplished by grouping		
		stations together in a		
		logical manner to enable		
		reviewers to assess		
		concentrations across the		
		site as well as include		
		relevant information,		
		while including the final		
		Certificate of Analysis		
		documents as an appendix		
		(this is important because		
		·		
		the monthly SNP reports		
		may not include the final		
		Certificate of Analysis if		
		verification of suspect		
		results was still being		
		completed). Board staff		
		suggest that the multiple		
		tables could benefit from		
		some revision to facilitate		
	Summary of	clearer presentation of the		
	Water Quality	results and suggest NDM	NDM to revise the water	
	Results –	could reach out to	chemistry tables for clearer	Revised. Grouping is
9	Various Tables	reviewers for input.	presentation of information.	appropriate
		Board staff note that the		
		various analytical		
		detection limits should be		
		provided in the QA/QC		
		Plan and approved by the		
		Analyst. Listing the		
		detection limits in the		
		table is helpful, but		
		instances where the		
		detection limit required		
		adjustment from the	NDM to rovice tables to provide	
		I = 1	NDM to revise tables to provide	Datastian lin 11
		approved QA/QC Plan	information regarding changes	Detection limits and
	Detection Limits	should be noted and the	to detection limits and remove	approved techniques
10	<ul><li>Various Tables</li></ul>	reason for the change(s)	repetitive information.	added to Appendix

		be provided. Board staff further note that if the detection limits are consistent across samples and sampling events then these only need to be listed once per table, with deviations from that noted. This would help eliminate repetition of information and simplify the summary.  The Summary of Water Quality Monitoring Section on PDF page 12 (a new site proposed in the		
		detection limits are consistent across samples and sampling events then these only need to be listed once per table, with deviations from that noted. This would help eliminate repetition of information and simplify the summary. The Summary of Water Quality Monitoring Section on PDF page 12 (a new site proposed in the		
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		The Summary of Water Quality Monitoring Section on PDF page 12 (a new site proposed in the		
		Quality Monitoring Section on PDF page 12 (a new site proposed in the		
		Section on PDF page 12 (a new site proposed in the		
		new site proposed in the		
		Groundwater and Water		
		Management Plan, SNP-		
		10a was sampled), Table 4		
		, Table 5, Table 6, and		
		Table 18 (October 2021		
		water quality results) all		
		discuss and report results		
		from a SNP Station 10a.		Reference to 10a in
		There is no SNP-10a		removed. Sample site
		station identified in the	NDM to provide a discussion on	10a was considered, no
		Licence, the draft	the purpose of sampling this	water was found and it
		Groundwater and Water	location, including all	was sent to the lab as a
		Management Plan, or the	information on the site location,	duplicate of SNP-12. The
		recent request to update	and plans for including this area	mislabeling meant that it
		the Surveillance Network	into the sampling program for	was not analysed
11 SN	SNP-10a	Program.	the Mon Gold Project.	appropriately.
		Table 1 demonstrates		
		water use totals while		
		Table 10 identifies all		
		sources from which water		
		was extracted. The totals		
		of both tables and the		
		cumulative totals from		
		monthly reporting are not		
		the same. Table 1 shows		
		total water use at 896.9		
		m3. Table 10 shows total		
		water use at 896.7 m3 and		
		the December 2021		The adding error in table
		Monthy SNP Report		10 was corrected,
	l	identifies a cumulative		amending September's
		total of 815.4 m3. There	NDM to review all reported	draw from Discovery
		are likely other	water use totals to clarify and	Lake to 80.7 from 80.5 as
			accurately report the correct	
		inconsistencies to be	accurately report the correct	presented. Jan 21 draw
12 Wa		inconsistencies to be found if reviewing the	amounts of water used by	presented. Jan 21 draw of 670 corrected from
	l l	total of 815.4 m3. There	water use totals to clarify and	draw from Discovery

		all reports as well. These		
		differences should be		
		explained.		
13	SNP -1	Table 11 identified sewage estimates for July, August, September, and October. The SNP requires that this station be monitored while the STP is operating and should be sampling all discharges.	NDM to explain why sampling results are being presented only for August if the STP was in operation from July to October. If no other discharges occurred, what is the status of sewage stored after the August discharge?	The bioreactor is most efficient when full, so discharge only occurs when full. It is in the process of being filled again. The explanation is expanded. Monthly and Annual Quantities of Sewage. Pg 22
		The sewage spill was		
14	Unauthorized Discharge	reported to inspectors, and Spill Line. Discharges were halted, an ultraviolet sterilizing unit for wastewater streams was acquired and will be installed prior to discharge. Part F, condition 22 requires NDM to notify the Board. Board staff do not have any notification on file for this event.	NDM to provide all required notifications and correspondence with Inspectore regarding unauthorized discharges and any follow-up action required to address the spill.	Inspectors and board notified by email and phone. Spill line report made, and they advised no further action required. A copy of the email is included in the report Action taken in Action Level Exceedances. Pg 34
		PDF page 6 stated that all		
15	Waste Rock Laydown	waste rock extracted thus far has been placed in a laydown area for equipment and supplies, whereas PDF Page 11 indicates that the waste rock has been placed in an area for fuel storage. Page 20 states that this area is monitored by SNP-09 and -10. This laydown area is not identified on the accompanying maps and it is not clear if or how the stated SNP stations are directly monitoring runoff from the wate material.  Tables 4, 5, 6, 7, 8, 9, 16, 17, 18 should have EQC and CCME values provided for direct comparison. Any	NDM to demonstrate where waste rock extracted in 2021 is stored and how existing SNP stations are monitoring runoff from this area before it is mixing with other water sources in the area.  NDM to include ECQ and CCME values for direct comparison to monitoring results and clearly highlight exceedences within the	NDM shows where waste is placed on maps and how SNP monitors this. The sequence or "as placed" waste is shown on the included map. Seepage is sampled as reported in the Annual Reports, by date and location. Explanation is expanded.
16	Water Quality Requirements	exceedances should be clearly highlighted.	highlight exceedences within the Tables.	Added to tables.
10	Requirements	Table 11 lists camp Water	Please explain what the (50%)	All Greywater and
17	Table 11	use, camp Discharge and	estimated Sewage column	sewage are collected

		estimated Sewage. It appears that Discharge is estimated based on Water use and these numbers are set equal. However, this makes it unclear what the difference is between camp Discharge and estimated Sewage. If Sewage accounts for 50% of the camp Discharge, what is the composition of the remaining camp Discharge?	means and how it is different from the camp Discharge.	and treated as sewage, although blackwater constitutes only an estimate 50%. More details on the daily ablutions of personnel in the camp have been added to a footnote to Table 11.
18	Table 12	Table 12 includes the volume of minewater added to the Waste piles by month, indicating 75m3 was added in both September and October; however, the "monthly and Annual Quantities of Discharge of Minewater" states that "no minewater was discharged except for moisture entrained in Waste rock".	Please explain what NDM means by "moisture entrained in waste rock". Does that mean minewater was added to the Waste rock pile, or that the water was "entrained" in the rocks added to the pile? Please clarify.	All natural materials on earth contain water, including "dry" rock. This moisture is intra and intergranular, and is an integral part of the rock aggregate. This is explained.
No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
1	Updated Project Schedule	The updated project schedule states that "it is planned to commence mobilization of personnel to the property in late spring or early summer" It is not clear which year this is referring to.  ENR notes that the updated project schedule does not include any activities beyond 2023. A summary of activities for	ENR recommends that NDM clarify the year in which mobilization of personnel to site is planned, and ensure that specific years are given in the schedule for all future submissions.  ENR recommends that NDM	Clarified
2	Updated Project Schedule	the remainder of operations should be included in the overall project schedule, as well as closure activities.	include a summary of all activities planned throughout the term of this licence including operations and closure and reclamation activities.	Expanded
3	Table 1 units	Table 1 does not include units for the volumes of water.	ENR recommends that Table 1 include water volume units in the next annual report.	Added to caption

		Schedule 1, Part 1 c)		
		requires that the following		
		be included in the Annual		
		Report: "The monthly and		
		annual quantities in cubic		
		metres of fresh water		
		obtained from all sources,		
		as required in Part D,		
		Condition 1 of the		
		Licence."		
		ENR notes that while		
		Table 1 lists the total		
		volumes of monthly water		
		use, the water sources are		
		not specified. ENR also		
		acknowledges that this		Added to Table 1 as a
		information is presented		note with details. All
		in Table 10. In order to	ENR recommends that NDM	seepage location have
		meet the requirements of	provide the corresponding water	been identified, and
	Freshwater	the licence, water source	sources for the volumes of fresh	additional SNP stations
	obtained from	information should be	water listed in Table 1, as	have been proposed and
4	Water Sources	presented here as well.	required in the Licence.	will be sampled.
		Schedule 1, Part 1 d) requires that the following		
		be included in the Annual		
		Report: "Field verification		
		methods and results for		
		determining that the		
		depth of water sources		
		meets the minimum		
		requirements for use;".		
		NDM's annual report	ENR recommends that NDM	
		states that "water depths	provide the depth	
		during under ice	measurements that were	
		withdrawals were	collected during field verification	
		measured using 3m	of the depth of water sources.	Added that all probe
		probes, and from shorter probes during ice-free	This information should be included in the next annual	Added that all probe tests during under ice
		conditions." ENR notes	report.	withdrawals exceed 3m,
		that this section of the	report.	and all ice free
		annual report does not	ENR recommends that NDM	withdrawals were
		include a description of	clarify the length of the "shorter	conducted from a single
	Depth	the depth results found	probes" used during ice free	site on Discovery Lake at
5	Measurements	during field verification.	conditions.	our dock, >1.5m.
		Schedule 1, Part 1 k)iii		There is only one type of
		requires that the following		waste at the mine site.
		be included in the Annual	ENR recommends that NDM	This will be restated in
	Man or discre	Report: "including a map	include a map or diagram of the	the report again. The
	Map or diagram of Waste Rock	or diagram of the locations and types of	locations and types of Waste Rock deposited in the next	latest map shows this with sequenced
6	Locations	waste rock deposited;"	version of the annual report.	deposition.
U	LUCATIONS	waste rock deposited,	version of the annual report.	achosition.

1	1	1	1	ı
		ENR notes that the waste		
		rock section of the annual		
		report does not refer to a		
		map or diagram of		
		locations and types of		
		waste rock deposited.		
		Schedule 1, Part 1 k)vi		
		requires that the following		
		be included in the Annual		
		Report: "A summary and		
		interpretation of results		
		from seepage monitoring		
		performed under the		
		approved Waste Rock		
		Management and		
		Geochemical		
		Characterization and		
		Monitoring Plan,		
		including: a. a site map		
		with Seepage locations; b.		
		comparisons to reference locations; c. an analysis of		
		major trends over the year		
		and since Project		
		inception; and d. a		The map is included. It
		summary of		will be referenced
		recommendations for		better. All seepage
		future Seepage		location have been
		monitoring and/or		identified and additional
		management actions;"		SNP sites have been
		ENR notes that the	ENR recommends that NDM	proposed and will be
		seepage monitoring	ensure that all requirements,	sampled and analysed
	Seepage	section of the annual	including a map of seepage	according to the type of
	monitoring –	report does not refer to a	locations is included in the next	waste rock the seepage
7	location map	map of locations.	annual report.	represents.
-	1000000	NDM states that an		
		ultraviolet sterilizing unit		
		was acquired for waste		
		water streams. It is not	ENR recommends that NDM	
		clear if NDM has	provide additional detail on the	
		confirmed that this unit is	testing that will be completed in	
		sufficient to ensure there	order to determine the	NDM will provide all
	Action Levels –	are no further	sterilizing unit ensures no	manufacturer details,
	total coliform	exceedances of total	further exceedances of total	and infield tests once it
8	bacteria	coliform bacteria.	coliform bacteria.	is installed.
		There is an incomplete		
		sentence above Table 11		
	Incomplete	that states "Water into	ENR recommends that NDM	
9	Sentence	camp".	complete this sentence.	Completed.
	Runoff and	Table 12 presents monthly	ENR recommends that NDM	Currently, evaporation
	Seepage	and annual quantities of	report the volumes of runoff and	exceeds rainfall and
10	Collected and	run-off from waste and	seepage collected and	added water so no

Ì	Discharged	ore stockpiles. ENR notes	discharged from the waste rock	discharge from sumps
	from Waste	that it is not clear if this	and ore piles as per Schedule 1,	has occurred. Seepage
	Rock and Ore	water was collected and	Part 1 l) vii.	does not penetrate
	Piles	discharged, as is specified		permafrost which
		in Schedule 1, Part 1 l) vii.		underlies the site.
		NDM notes that SNP-03		
		exceeded TSS, ammonia,		
		and zinc in samples from		
		August and October. ENR		
		notes that as indicated by		
		NDM, exceedances of EQC		
		are events of		
		noncompliance with the		
		water licence. ENR notes		
		that it is not sufficient to		
		simply refer to these		
		results as representative		
		of baseline conditions.		
		ENR acknowledges that		
		NDM identified the		
		following on pdf page 20:		
		"SNP-03 demonstrates		
		that		
			ENR recommends that NDM	
		sampling, analytical, or	describe how they will address	
		natural variations exceed	the noted water quality	
		predicted values. This	exceedances.	
		should be discussed with		
		the	ENR recommends that NDM	NDM will address a
			identify how they will ensure	letter to the MVLWB
		Board and modifications	that no other non-compliance	pointing out that
		to the EQC values should	events take place on site.	baseline sample site,
		be considered." ENR notes		SNP-03 exceeds ECQ
		that it's not clear if NDM	ENR recommends that NDM	standards. We will
		will be seeking a Water	clarify if they have intentions to	recommend standards
	Water Quality	Licence amendment to	submit an amendment	that meet the natural
11	Exceedances	amend their EQC.	application to amend their EQC.	environment.
		Please see ENR's cover		
12	Cover Letter	letter.	N/A	
No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
	•	te Change Canada (ECCC) - EC		1 Topolient Response
2.771		Overall the report is not		
		well structured and		
		difficult to follow,		
		including both duplication		
		of information as well as		
		contradictory information.		
	General	Information should be		
1	Comment	clearly organized and		Accepted
L		, , - 0	I	1

1		presented to increase	1	
		clarity.		
	Topic:	The summary of the		
	Exceedances of	Annual Report states that,		
	License	"no exceedances of the		
	Requirements	licence requirements were		
		identified." However, later		
	Reference:	in the report non-	ECCC recommends that the	
	- Summary of	compliances are noted at	report is reviewed for	
	Project	SNP-01 for fecal coliforms,	consistency and that any	
	Activities (PDF	and at SNP-03 for TSS,	contradictory statements are	
2	pg. 6)	ammonia, and zinc.	corrected.	corrected
	70 7	On PDF page 12 of the		
		Annual Report, the header		
		"Comparison to reference		
		location" is included.		
		However, in the		
		subsequent text there is		
		no comparison or analysis		
		of results compared to any		
		reference water quality		
		monitoring station. The		
		text only includes the		
	Topic:	locations of exposure		
	Comparison to	monitoring stations and		
	Reference	the statement that "all		
	Location	sample locations are as		
		referenced." It is unclear		
	Reference:	whether this section was	ECCC recommends that the	
	- Comparison to	intended to compare	Proponent provide comparison	
	Reference	exposure values to an	of monitoring data to	
	Location (PDF	unimpacted reference	background, or to reference	Added ECQ and CCME
3	pg. 12)	location.	locations.	standards
		PDF page 12 of the Annual		
		Report states that, "the		
	Topic: Trend	mining activities have only		
	Analysis	started in 2021 so the		
		trend for a single year is		
	Reference:	presented to compare	ECCC recommends the	
	- Analysis of	against baseline values."	Proponent provide information	
	Major Trends	There is no reference to	on the analysis and comparisons	
	since Project	where this analysis or	that they completed to compare	
	Inception (PDF	comparison was	monitoring data to baseline	A comparison of the
4	pg. 12)	completed.	values.	operations is included
		The annual report		
	Table 1	indicates that SNP 10-a		
	Topic: Location	was added and sampled in		
	of SNP-10a	2021. However, the		
	Deferen	location of this monitoring	5000	
	Reference:	station is not included on	ECCC recommends the	CNID 10a ia assesse a al
-	- Appendix (PDF	the map in the Appendix	Proponent provide the location	SNP-10a is expunged
5	pg. 37)	of the report.	of SNP-10a.	from the report

presents the results of water quality in numerous tables (Tables 4 through 9 and Tables 16 through 18). However, there appears to be some duplication, with the same information being presented in multiple tables. Water quality data should be compiled with relevant summary statistics and presented clearly in summary tables to make data more easily reviewable, with raw data or laboratory-provided Quality appendix for reference. In addition, summary tables should identify the appropriate water quality guidelines or discharge limits and clearly identify any values which have exceeded guidelines or discharge limits. And presented guidelines or discharge limits. The report provides the following sampling data: Frequency - August - SNP-03, -10, - 10a Reference: - Summary of Water Quality Martoring (PDF pg. 12-20, - October - SNP-03, -10, - 10a Use to make data more easily reviewable, and references to the appropriate water quality guidelines or discharge limits. And vexceedances of guidelines or discharge limits should be clearly identified in the table.  ECCC recommends that future annual reports compile all water quality guidelines or discharge limits. And references to the appropriate water quality guidelines or discharge limits. And vexceedances of guidelines or discharge limits should be clearly identified in the table.  ECCC recommends that future annual reports compile all water quality guidelines or discharge limits. And references to the appropriate water quality guidelines or discharge limits should be clearly identified in the table.  ECCC recommends the proponent clarify sampling frequency during 2021 for all SNP stations. This should include identification of discharge periods, and presence/absence of water for monitoring at SNP	6	Topic: Water Use and Discharge  Reference: - Comparison of Water and Wastewaters Quantities (PDF pg. 23)	PDF page 23 of the Annual Report states, "No water was used nor discharged on the property in 2021." However, this statement contradicts subsequent statements indicated that water was added to the waste rock piles for dust suppression, and Table 11, which indicates the volumes of water used at camp, and discharged from camp.	ECCC recommends the Proponent clarify how water was used and discharged on the property in 2021.	Statement incorrectly referenced 2021. This is corrected.
18 176-25) I requirements indicate   I stations   1 A now table is added	7	of Water Quality Monitoring Data  Reference: - Summary of Water Quality Monitoring (PDF pg. 12-20, 26-35)  Topic: SNP Sampling Frequency  Reference: - Summary of Water Quality Monitoring	water quality in numerous tables (Tables 4 through 9 and Tables 16 through 18). However, there appears to be some duplication, with the same information being presented in multiple tables. Water quality data should be compiled with relevant summary statistics and presented clearly in summary tables to make data more easily reviewable, with raw data or laboratory-provided reports provided in an appendix for reference. In addition, summary tables should identify the appropriate water quality guidelines or discharge limits and clearly identify any values which have exceeded guidelines or limits.  The report provides the following sampling data: - August - SNP-01, -03a, -09, -12 - October - SNP -03, -10, -10a It is unclear why these SNP stations were	annual reports compile all water quality data into summary tables that include summary statistics and references to the appropriate water quality guidelines or discharge limits. Any exceedances of guidelines or discharge limits should be clearly identified in the table.  ECCC recommends the Proponent clarify sampling frequency during 2021 for all SNP stations. This should include identification of discharge periods, and presence/absence	Confirmed.  A new table is added.

1	İ	l e	1	į
		more frequent sampling		
		requirements than was		
		completed. If sampling		
		was not completed due to		
		lack of discharge or		
		absence of water, this		
		should be noted in the		
		annual report so that it is		
		clear why sampling was		
		not completed. The SNP		
		also includes additional		
		stations which were not		
		sampled in 2021, the		
		report should clearly		
		outline why sampling was		
		not conducted.		
		Under the heading		
		Comparison of Water and		
		Wastewaters Quantities		
		(PDF pg. 23), the		
		Proponent states "there		
		was nearly 3,500 m3 of		
	Topic:	rainfall onto the waste		
		rock piles and 150 m3 was		
	Reference:	added during mining		
	- Monthly and	operations for dust		
	Annual	suppression."		
	Quantities of			
	Run-off from	Given the amount of		
	Waste Rock and	rainfall on the waste rock		
	Ore (PDF pg.	storage, it is not clear		
	22)	whether there was any	ECCC recommends the	
	- Comparison of	seepage out of the waste	proponent confirm whether	
	Water and	rock piles, and if there	there was seepage out of the	A note is added to
	Wastewaters	was, there is no	waste rock storage, and how the	answer seepage in an
	Quantities (PDF	description on how the	seepage was managed.	area where evaporation
9	pg. 23)	seepage was managed.	seepage was managea.	exceeds rainfall.
	P8. 43/	scepage was managed.		CACCCUS Fairffall.

# 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 except with respect to coliform bacteria (SNP-01) and a baseline sample (SNP-03) had exceedances in total suspended solids, ammonia, and zinc as specified in Section List of all Non-Compliance Conditions page 48.

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 and is shown on Map 1 (appendix).

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 each year 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 scram 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.

Mining and milling will continue until there is no further economically viable material to mine and process. This may exceed 20 years Reclamation will be continual as possible, and ultimately in the last year and the next for final reclamation and abandonment as approved in the Reclamation and Abandonment Plan.

# Water Usage

A total water usage in 2021 of 826.8 m<sup>3</sup> was recorded as shown on the table below.

Table 1. Table of water usage in cubic metres in 2021.

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

Note: All water used in camp and in the mine came from Discovery Lake. The 670 m3 of water used in other (winter road construction) came from Discovery Lake (45 m3), Sito Lake (90 m3), Quayta Lake (375 m3), Bluefish Lake (105 m3) and Prosperous Lake (55 m3).

Almost 75% of the water use (670 m<sup>3</sup>) was for winter road construction. The total amount of water used in mining was 150 m<sup>3</sup> and 76.9 m<sup>3</sup> 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. Under ice measurements all exceeded 3 m. Only Discovery Lake was used for water during ice-free conditions and the fixed source was at the shore line at >1.5 m depths.

## Calibration and Status of Installed Meters.

There were no installed meters in 2021 as all water withdrawal was batched in 10 m<sup>3</sup> tanks for ice road construction, and 3 m<sup>3</sup> 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 June 17, 2020	YK YK	Brooklyn Brooklyn	None	None	None None	Discuss project history, confirm email addresses re-introduce project, cc to SWF for letter confirming receipt of ash.
January 4, 2021	Tlicho	Zaby Nevitt	None	None	None	Reach out for updates
June 7, 2021	Tlicho	Violet Camsell-Blondin	None	None	None	Reach out for updates
June 7, 2021	YKDFN	Sarah Gilllis	None	None	None	Suggest meeting
June 7, 2021	YKDFN	Sarah Gilllis	None	None	None	Suggest meeting
July 13, 2021	YKDFN	Sarah Gilllis	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 Status of	None	None	Reach out, check on Femi
September 29, 2021	YKDFN	Femi Baiyewun and AB	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,	ĺ		1	1	Ì	CRP provided, amend
2021						fuel 120 to 150 and
	Tlicho	Violet Camsell-Blondin	Update	None	reply	then 200
December 3,						Amend fuel 120 to
2021	YK	Paula and Admin	Update	None	reply	150 and then 200
December 3,						Amend fuel 120 to
2021	YK	Sheila Bassi-Kellett and Admin	Congratulations	None	reply	150 and then 200
December 3,						CRP provided, amend
2021						fuel 120 to 150 and
	YKDFN	Femi Baiyewun and AB	Update	None	reply	then 200
December 7,						Amend fuel 120 to
2021	NWTMN	Tim Heron	Update	None	reply	150 and then 200
January 4, 2022	YKDFN	Femi Baiyewun	Soil Permeability	None	reply	Call to discuss
						Amend fuel 120 to
January 5, 2022	NSMA	Jessica Hurtubise	Update	None	reply	150 and then 200
		Noah Johnson phone 613 804-				Introduce NDM, Mon,
January 7, 2022	NSMA	2668	Introduction	None	reply	DRW.
January 13,			Comments on			Was NSMA involved in
2022	NSMA	Noah Johnson	AOA	None	reply	AOA
January 13,		Noah Johnson				No NSMA, but happy
2022	NSMA		AOA	None	reply	to share results
January 17,		Noah Johnson				Did we follow up on
2022	NSMA		AOA	None	reply	an AIA.
		Noah Johnson				No we did not do an
January 17,						AIA. Update on near
2022	NSMA		AOA	None	reply	term plans.
January 17,		Noah Johnson				Has there been any
2022	NSMA		AOA	None	reply	folllow up on AOA
		Noah Johnson				No follow up as
						nothing of significance
						was found. We
						operate in small
lanuari 17						footprint of disturbed
January 17,	NCNAA		100	None	rombi	ground except for DST
2022	NSMA	Noch Johnson	AOA	None	reply	facility
January 18,	NSMA	Noah Johnson	AOA	None	ronly	Can we call to discuss?
2022 January 18,	INSIVIA	Noah Johnson	AUA	None	reply	Call we call to discuss:
2022	NSMA	Noan Johnson	AOA	None	reply	Let's set it up
January 20,	INSIVIA	Noah Johnson	AOA	None	Теріу	Let's set it up
2022	NSMA	Noam John Son	AOA	None	reply	Speak on 26th
2022	NSIVIA	Noah Johnson	AOA	None	ТСРІУ	Confirmed for the
January 20,		Nour Johnson				26th. Set time for
2022	NSMA		AOA	None	reply	12:15
January 26,		Noah Johnson	-		-1- /	General discussion,
2022	NSMA			None	reply	introductions
February 2,					-1- /	
2022	YKDFN	Johanne Black		None	reply	No Trespassing Sign
						No Trespassing Sign.
February 2,						Femi gone, Ryan
2022	YKDFN	Johanne Black		None	reply	Miller, Kieron Testart
February 3,			Signage			Confirm translation is
2022	YKDFN	Ryan Miller	translation	None	reply	correct
February 3,		Ryan Miller				
2022	YKDFN		Signage	None	reply	Confirm from Minesite
February 3,		Ryan Miller				
2022	YKDFN		Signage	None	reply	Keep in touch
February 4,		Ryan Miller				
2022	YKDFN		Signage	None	reply	Capital Signs mock up
February 4,		Ryan Miller				Confirming costs for
2022	YKDFN		Signage	None	reply	member translation
February 11,		Ryan Miller		Who translated		
2022	YKDFN	i e	Signage	1	reply	Will confirm

February 11,		Ryan Miller		Who translated		
2022	YKDFN		Signage		reply	Translation completed
February 11,		Ryan Miller		Who translated		
2022	YKDFN		Signage		reply	Translation by whom.
February 11,		Ryan Miller				
2022	YKDFN		Signage	Who translated	reply	Will confirm
February 11,		Ryan Miller				Confirmed Denis
2022	YKDFN		Signage	Language	reply	Drygeese translated.

# Traditional Knowledge

Discussions with the Yellowknife Dene First Nation on language for 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. The bioreactor utilizes enhanced natural bacterial action to effectively treat effluent. The three-stage bioreactor initially uses the first stage to retain all solids and effluent in an anerobic environment. The second stage is also anerobic, but accepts overflow discharge from the first, partially clarifying the waste stream. The third stage of the bioreactor is aerobic, and uses naturally occurring aerobic bacteria to further clarify and treat and reduce the BOD of the waste stream. A new ultraviolet sterilizer is being installed on the discharge line to destroy remaining bacteria and microorganisms at discharge. 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 1, 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. Map 2 shows similar information on a geological base.

# 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 m<sup>3</sup> of waste rock totalling 200 tonnes were slashed vs 6,000 tonnes predicted due to delays in obtaining permits and management plan approvals.

# 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.
---

ID	Paste pH	Total S	HCI 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
3195863	6.98	0.04	0.02	0.02	0.6	4.70	4.10	7.8
imits	N/A	0.02	0.01	0.02	0.6	N/A	N/A	0.1
itas SOP	BBY0SOP-	LECO	BBY ARD-	BBY WI-	BBY WI-	BBY0SOP-	PPV W// 00022	BBY WI-00033
į	<b>Units</b> 3195863 <i>mit</i> s	Units pH Units 3195863 6.98 mits N/A	Units         pH Units         wt%           3195863         6.98         0.04           mits         N/A         0.02           tas SOP         BBY0SOP-	Units         pH Units         wt%         wt%           3195863         6.98         0.04         0.02           mits         N/A         0.02         0.01           tas SOP         BBY0SOP-         BBY ARD-	Units         pH Units         wt%         wt%         wt%           3195863         6.98         0.04         0.02         0.02           mits         N/A         0.02         0.01         0.02           tas SOP         BBY0SOP-         BBY ARD-         BBY WI-	Units         pH Units         wt%         wt%         wt%         CaCO3/T           3195863         6.98         0.04         0.02         0.02         0.6           mits         N/A         0.02         0.01         0.02         0.6           tas SOP         BBY0SOP-         BBY ARD-         BBY WI-         BBY WI-	Units         pH Units         wt%         wt%         wt%         CaCO3/T         Kg CaCO3/T         Kg CaCO3/T           3195863         6.98         0.04         0.02         0.02         0.6         4.70           mits         N/A         0.02         0.01         0.02         0.6         N/A           tas SOP         BBY0SOP-         BBY ARD-         BBY WI-         BBY WI-         BBY WI-         BBY0SOP-	Sulphur   diff.)   Potential   Potential   Potential

# 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. This is shown as a dashed green line on Map 1.

# 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. The site is underlain by permafrost, and water does not seep through permafrost, rather it travels over top on surface or in the unconsolidated fill. Ponds and natural sumps are where the surface and/or near surface water can be sampled.

# 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 has not been installed 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, Future 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, however the following observations can be made.

Water usage remains very low totaling less than 900 m3 in the last year, over 2/3 of this used in winter road construction. Annual allowance would be 36,500 m3.

Since inception, there has been no drainage at most SNP locations, only limited mining has commenced and no ore has been mined. A minor amount of waste has been placed and is used for road construction and laydown area preparation. Drainage from these materials have met all EQC parameters and show no trends of increasing or decreasing values. Drainage monitored at SNP-03 as a baseline in advance of a Dry Stack Tailings Facility being constructed has shown:

- a) pH remains <7 in all instances
- b) All tested N constituents increased in late summer
- c) Alkalinity is variable, ranges <10 to >40
- d) TSS is variable, exceeding EQC in late summer.
- e) Sulphate increases substantially in late summer
- f) Ammonia increases rapidly, exceeding EQC in late summer
- g) Conductivity increases rapidly in late summer
- h) TDS increases rapidly in late summer
- i) Dissolved hardness increases rapidly in late summer

j) Al, Co, Cu, Fe, Mn, Zn, is highly variable, Zn exceeding EQC

The DST site will not be used in 2022.

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

Water license MV2020L2-0002 requires the following sampling frequencies.

SNP	Location	Sampling Frequency	2021 Sampling
SNP-1	Sewage	Prior to discharge	1
SNP-2	DST	Monthly	not present
SNP-3	DST	Monthly	2
SNP-4	DST	Biannual	not present
SNP-5	Well	Monthly	not present
SNP-6a	Well	Monthly	not present
SNP-6b	Well	Monthly	not present
SNP-7	UG	Daily	not used
SNP-8	Mine	Daily	not used
SNP-9	Waste rock	Biannual	1
SNP-10	Ore	Biannual	1
SNP-11	Discovery L	Daily	Batch sampled
SNP-12	Discovery L	Monthly	1
SNP-13	Prosperous	Daily	road
SNP-14	Sito	Daily	road
SNP-15	Bluefish	Daily	road
SNP-16	Quayta	Daily	road
SNP-17	Lake A	Daily	no drilling
SNP-18	Lake B	Daily	no drilling
SNP-19	Lake C	Daily	no drilling
SNP-20	Lake D	Daily	no drilling
SNP-21	Waste rock	Biannual	not present
SNP-22	Explosives	Biannual	not present

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. 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 installed as a baseline sample now until the DST is constructed when it is to sample drainage from the DST facility. Samples collected from this station are to be considered baseline samples. Exceedances of TSS, ammonia and zinc are from natural sources. There have been no activities in this area currently nor have there been activities in this area historically. It is up hydrological gradient from the mine site. All laboratory results are presented in the Appendixes.

Table 4. Results from water analyses, October 2021.

Bureau Veritas ID		AJK923		AJK924		
Sampling Date		2021-10-		2021-10-26 10:20		
		26 10:00 643673-		643673-02-		
COC Number		02-01		01		
	UNITS	SNP-03	RDL	SNP-10	RDL	QC Batch
<b>Calculated Parameters</b>						
Filter and HNO3 Preservation	N/A	FIELD		FIELD		ONSITE
Dissolved Hardness (CaCO3)	mg/L	390	0.50	579	0.50	A407752
Total Hardness (CaCO3)	mg/L	425	0.50	598	0.50	A407751
Dissolved Nitrate (N)	mg/L	28	0.50	13	0.25	A408145
Dissolved Nitrate (NO3)	mg/L	120	2.2	59	1.1	A408140
Dissolved Nitrite (NO2)	mg/L	1.6	0.033	1.8	0.16	A408140
Total Total Kjeldahl Nitrogen (Calc)	mg/L	11.8	0.50	3.79	0.25	A407895
Dissolved Organic Phosphorus (P)	mg/L	0.0087	0.0030	0.0233	0.0030	A408526
<b>Demand Parameters</b>						
Biochemical Oxygen Demand (inhib.)	mg/L	<2.0	2.0	5.7	2.0	A408984
Misc. Inorganics						
рН	рН	6.55	N/A	7.14	N/A	A409328
Reactive Silica	mg/L	14	0.25	17	0.25	A416958
Alkalinity (Total as CaCO3)	mg/L	46.9	0.50	178	0.50	A409323
Total Organic Carbon (C)	mg/L	9.2	0.20	17	0.20	A410473
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	<0.50	0.50	A409323
Bicarbonate (HCO3)	mg/L	57.2	0.50	217	0.50	A409323
Carbonate (CO3)	mg/L	<0.50	0.50	<0.50	0.50	A409323
Hydroxide (OH)	mg/L	<0.50	0.50	<0.50	0.50	A409323
Total Suspended Solids	mg/L	30	0.99	9.3	1.0	A408930
Anions						
Dissolved Fluoride (F)	mg/L	<0.050	0.050	0.078	0.050	A409326
Dissolved Chloride (Cl)	mg/L	1.4	0.50	2.8	0.50	A411929
Discolused Culphata (COA)	mg/L	240	2.5	440	2.5	A411929
Dissolved Sulphate (SO4)	1116/ -	2.0	2.3	1.0	2.3	71111111

Dissolved Hex. Chromium (Cr 6+)	mg/L	0.0011	0.00099	<0.00099	0.00099	A415580
Total Hex. Chromium (Cr 6+)	mg/L	<0.00099	0.00099	<0.00099	0.00099	A415576
Nutrients						
Total Ammonia (N)	mg/L	7.3	0.075	2.6	0.075	A410613
Orthophosphate (P)	mg/L	0.0042	0.0030	0.0037	0.0030	A409764
Dissolved Phosphorus (P)	mg/L	0.014	0.0030	0.036	0.0030	A412103
Dissolved Inorganic Phosphorus (P)	mg/L	0.0048	0.0020	0.0123	0.0020	A413579
Total Inorganic Phosphorus (P)	mg/L	0.0149	0.0020	0.0107	0.0020	A413574
Dissolved Nitrite (N)	mg/L	0.48	0.010	0.55	0.050	A409522
Dissolved Nitrate plus Nitrite (N)	mg/L	28	0.50	14	0.25	A409522
Total Nitrogen (N)	mg/L	40 (1)	0.40	18 (1)	0.20	A413393
Physical Properties						
Conductivity	uS/cm	753	1.0	1180	1.0	A409324
Physical Properties						
Turbidity	NTU	7.4	0.10	11	0.10	A409904
Total Dissolved Solids	mg/L	652	1.0	920	1.0	A408924

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
Sampling Date		2021-10-26 10:00	2021-10-26 10:20
COC Number		643673-02-01	643673-02-01
	UNITS	SNP-03	SNP-10
Elements			
Dissolved Mercury (Hg)	ug/L	<0.0019	0.0028
Total Mercury (Hg)	ug/L	<0.0019	<0.0019

# RDL = Reportable Detection Limit

Table 6. Atomic Absorption on water, October 2021.

Bureau Veritas ID		AJK923	AJK924
Sampling Date		2021-10-26 10:00	2021-10-26 10:20
COC Number		643673-02-01	643673-02-01
	UNITS	SNP-03	SNP-10
Dissolved Metals by ICPMS			

Dissolved Aluminum (Al)	ug/L	32.5	154
Dissolved Antimony (Sb)	ug/L	0.616	0.781
Dissolved Arsenic (As)	ug/L	5.20	25.2
Dissolved Barium (Ba)	ug/L	52.3	55.5
Dissolved Beryllium (Be)	ug/L	<0.010	<0.010
Dissolved Bismuth (Bi)	ug/L	<0.0050	0.0475
Dissolved Boron (B)	ug/L	45	35
Dissolved Cadmium (Cd)	ug/L	3.26	0.982
Dissolved Chromium (Cr)	ug/L	0.32	1.17
Dissolved Cobalt (Co)	ug/L	34.4	28.7
Dissolved Copper (Cu)	ug/L	4.13	4.67
Dissolved Iron (Fe)	ug/L	156	2310
Dissolved Lead (Pb)	ug/L	0.109	11.7
Dissolved Lithium (Li)	ug/L	28.0	15.7
Dissolved Manganese (Mn)	ug/L	352	2090
Dissolved Molybdenum (Mo)	ug/L	0.712	1.65
Dissolved Nickel (Ni)	ug/L	452	93.3
Dissolved Phosphorus (P)	ug/L	25.5	37.4
Dissolved Selenium (Se)	ug/L	0.117	0.294
Dissolved Silicon (Si)	ug/L	5870	7990
Dissolved Silver (Ag)	ug/L	0.0053	0.0445
Dissolved Strontium (Sr)	ug/L	188	354
Dissolved Thallium (TI)	ug/L	0.0186	0.0135
Dissolved Tin (Sn)	ug/L	<0.20	<0.20
Dissolved Titanium (Ti)	ug/L	0.99	7.27
Dissolved Uranium (U)	ug/L	0.198	2.82
Dissolved Vanadium (V)	ug/L	0.54	1.13
Dissolved Zinc (Zn)	ug/L	4240	516
Dissolved Zirconium (Zr)	ug/L	0.12	0.35
Dissolved Calcium (Ca)	mg/L	86.0	148
Dissolved Magnesium (Mg)	mg/L	42.5	50.8
Dissolved Potassium (K)	mg/L	8.77	11.8
Dissolved Sodium (Na)	mg/L	12.4	13.0
Dissolved Sulphur (S)	mg/L	90.1	133
Total Metals by ICPMS			
Total Aluminum (Al)	ug/L	205	192
Total Antimony (Sb)	ug/L	0.785	0.864
Total Arsenic (As)	ug/L	52.5	31.9
Total Barium (Ba)	ug/L	65.6	64.8
Total Beryllium (Be)	ug/L	0.030	<0.010
Total Bismuth (Bi)	ug/L	0.030	0.068
Total Boron (B)	ug/L	51	44
Total Cadmium (Cd)	ug/L	7.88	1.17

Total Chromium (Cr)	ug/L	0.77	1.16
Total Cobalt (Co)	ug/L	56.3	35.1
Total Copper (Cu)	ug/L	18.5	5.38
Total Iron (Fe)	ug/L	2290	2790
Total Lead (Pb)	ug/L	1.25	18.0
Total Lithium (Li)	ug/L	32.8	17.6
Total Manganese (Mn)	ug/L	563	2590
Total Molybdenum (Mo)	ug/L	0.949	1.82
Total Nickel (Ni)	ug/L	550	98.8
Total Phosphorus (P)	ug/L	141	33.0
Total Selenium (Se)	ug/L	0.172	0.336
Total Silicon (Si)	ug/L	5600	7450
Total Silver (Ag)	ug/L	0.016	0.043
Total Strontium (Sr)	ug/L	218	398
Total Thallium (TI)	ug/L	0.0365	0.0142
Total Tin (Sn)	ug/L	<0.20	<0.20
Total Titanium (Ti)	ug/L	5.8	8.0
Total Uranium (U)	ug/L	0.460	2.86
Total Vanadium (V)	ug/L	1.75	0.85
Total Zinc (Zn)	ug/L	6050	568
Total Zirconium (Zr)	ug/L	0.26	0.34
Total Calcium (Ca)	mg/L	92.5	154
Total Magnesium (Mg)	mg/L	47.1	51.7
Total Potassium (K)	mg/L	9.28	11.7
Total Sodium (Na)	mg/L	13.7	12.6
Total Sulphur (S)	mg/L	96.4	132

# 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			

Processory   10	
Dissolver   Biochemical Oxygen Demand   Biochemical Oxyg	+
Biochemical Organic Properties   Propertie	<del> </del>
Biochemical Oxygen Demand (Inhiba)	
Misc. Inorganics         PH         7.81         N/A         A329997         6.10         N/A         A340473         7.00         N/A         A340473         7.45         N/A           Reactive Silica         mg/L         Imag/L	
Reactive Silica mg/L	-
Alkalinity (Total as CaCO3)  mg/L  27  0.40  A332791  55 (2)  0.80  A338644  18  0.20  A338644  Allalinity (Pas or Carbon (C)  mg/L  Alkalinity (Pas or Carbon (C)  Alkalinity (Pas or Carbon (C)  mg/L  Alkalinity (Pas or Carbon (C)  Alkalinity (Pas or Carbon (C)  Mayor (C)  mg/L  Alkalinity (Pas or Carbon (C)  Alkalinity (Pas or Carbon (C)  Alkalinity (Pas or Carbon (C)  Alkalinity (Carbon (C)  mg/L  Alkalinity (Pas or Carbon (C)  Alkalinity (Pas or Carbon (C)  Alkalinity (Carbon (C)  Mayor (C)  Mayor (C)  Mayor (C)  Alkalinity (Carbon (C)  Mayor (C)  Alkalinity (Pas or Carbon (C)  Alkalinity (Carbon (C)  Alkalinity (C)  Alkalinity (Corbon (C)  Alkalinity (Corbon (C)  Alkalinity (Corbon (C)	A329997
CacCo3	
Carbona (c)         fig/L         27         0.40         A332791         SS (z)         0.80         A338644         18         0.00         A338644         18           Alkalinity (PP as CaCO3)         mg/L         1         0.50         0.50         0.50         0.50         A329993         0.50         A33860         0.50         A33860         0.50         A340476         0.50         A340476         0.050         A340476         0.050         A340476         0.050         A340476         0.050         A338860         0.50         A33	
Akalinity (PP as CaCo3)   mg/L   mg	
Bicarbonate (HCO3)   mg/L	
Carbonate (CO3)   mg/L	
Total Suspended Solids    mg/L   25   1.0   A332176   75 (3)   1.5   A330604   3.9   1.0   A330604	
Solids         mg/L         25         1.0         A3321/6         75(3)         1.5         A330604         3.9         1.0         A330604         Image: Control of the control of th	
Dissolved Fluoride   Fluoride	
Columbia   Columbia	
Dissolved Chloride (Cl)	
Dissolved Sulphate (SO4)   mg/L	
Dissolved Hex.   Chromium (Cr 6+)   mg/L     romium (Cr 6+)   mg/L     Chromium (Cr 6+)   mg/L     Chromium (Cr 6+)   mg/L     Chromium (Cr 6+)   mg/L   Chromium (Cr 6+)   mg/L   Chromium (Cr 6+)   Chromium (Cr 6+)   Chromium (Cr 6+)   mg/L   Chromium (Cr 6+)   Ch	
Chromium (Cr 6+)   mg/L   (2)   0.0050   A326930   0.00099   0.0	
Total Hex. Chromium (Cr 6+)   mg/L   mg/L	A326930
Microbiological Param.         MPN/100mL         >2400         1.0         A326335   <	A328865
E.Coli DST         MPN/100mL         >2400         1.0         A326335	
Fecal Coliforms         MPN/100mL         >2400         1.0         A327501         Image: Coliforms DST         MPN/100mL         >2400         1.0         A326335         Image: Coliforms DST         MPN/100mL         >2400         1.0         A326335         Image: Coliforms DST	+
Total Coliforms DST         MPN/100mL         >2400         1.0         A326335         Second of the property of the prop	+
Nutrients         mg/L         62         0.75         A334254         0.024         0.015         A336194         0.019         0.015         A336194         0.025         0.015           Orthophosphate         mg/L         6.5         0.060         A327257         <0.0030	
Total Ammonia (N) mg/L 62 0.75 A334254 0.024 0.015 A336194 0.019 0.015 A336194 0.025 0.015 Orthophosphate mg/L 6.5 0.060 A327257 <0.0030 0.0030 A327443 <0.0030 0.0030 A327443	+
(N) mg/L 62 0.75 A334254 0.024 0.015 A336194 0.019 0.015 A336194 0.025 0.015  Orthophosphate mg/L 6.5 0.060 A327257 <0.0030 0.0030 A327443 <0.0030 0.0030 A327443	<del>                                     </del>
· · I mg/I I 6.5 I (1060   Δ377757   200030   100030   Δ377443   200030   100030   Δ377443   I	A336194
Dissolved Phosphorus (P) mg/L 9.3 0.15 A339968 0.044 (1) 0.015 A339968 0.037 0.0030 A339968	
Dissolved Inorganic mg/L 7.24 0.050 A338624 0.037 (1) 0.010 A338624 0.0185 0.0020 A338624 Phosphorus (P)	
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. Lowe 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 (AI)	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 (TI)	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 (CaCO3)	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 (TI)	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. A copy of the email to the MVLWB is shown below.

From:		dave				drwgcl.com		
Sent:	Monday,	October	25,	2021	2:40:22	PM		
To:	Shannon		Allerston	<	sallerston@mvlv	vb.com>		
Cc:	David-Scott	McQuinn		< <u>David-Scott_McQuinn@gov.nt.ca</u> >				
Subject: A	Aon Gold Property							

**Subject:** Mon Gold Property

Shannon, we received our initial SNP reports, from SNP -01, 03a, 9, and 12. No other SNP's exist yet.

SNP-03a exceeded TSS, but this was a very brown organic pond, and it's not unexpected. Lots of organic debris in the pond.

Of more concern is SNP-01 which is the discharge from our bioreactor. We had exceedance in ammonia (62 vs 5.9 mg/L) and fecal coliform bacteria (>2400 vs 1000). I spoke to David-Scott McQuinn about this, and we need to discuss how we can fix this. Our bioreactor is shut down and no more discharge will occur until we have an agreed plan. Do you have time for a phone call to discuss?

I will be filling out a spill report on this on the advise of David.

Dave Webb

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 (m<sup>3</sup>).

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	80.7	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	271.9	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 m<sup>3</sup> of water in September and 75 m<sup>3</sup> 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. All water into camp is discharged through this system

Table 11. Monthly and annual sewage and greywater in camp

Date	Water in Camp (m³)	Camp Discharge (m³)	Estimated Sewage (50%) (m³)
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

Note: The bioreactor collects all discharge from camp, including greywater from the kitchen, laundry and showers as well as the sewage from the toilets. The four toilets consume 20 liters per flush and with an eight-man camp usage, produce on average 300 liters of waste. The kitchen produces 80 liters of water per day and the showers average 300 liters per day with laundry contributing only 70 liters per week. The total usage of < 1,000 liters per day balances well with our input and natural fluctuations in consumption.

# 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

Rainfall 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 m<sup>3</sup> 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	On waste	Added from
	mm	pile m³	mine m <sup>3</sup>
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

Virtually all of the rainfall in this area of Yellowknife evaporates and that which falls on the waste piles is no different. All of that which works its way through the waste piles is gathered at the natural SNP sites where it is sampled as per the Surveillance Network Program. There has not yet been an active discharge from any sump.

## Monthly and Annual Quantities of Discharge of Minewater

There was no minewater discharge in 2021 except for moisture entrained in waste rock (see above). All rocks on earth contain water. When rock is broken, this water is retained on intergranular and intragranular grain boundaries and cannot be removed without use of kilns or other artificial drying systems. No added water is disposed with the waste rock.

## 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 2020. 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 except as disclosed for SNP-01. SNP-03 is a baseline sample which represents the natural environment.

## Action taken in Action Level Exceedances

NWT Spill Line, the Board and Inspectors were notified of the exceedance in SNP-01. The Spill Line confirmed the report, and the GNWT advised no actions are required.

## 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

None.

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	ECQ
Calculated Parameters	UNITS		
Dissolved Nitrate (N)	mg/L	<0.010	
Dissolved Nitrate (NO3)	mg/L	<0.044	
Dissolved Nitrite (NO2)	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	25
рН	рН	7.81	>6
Total Organic Carbon (C)	mg/L	27	
Total Suspended Solids	mg/L	25	
Microbiological Param.			
E.Coli DST	MPN/100mL	>2400	
Fecal Coliforms	MPN/100mL	>2400	1000
Total Coliforms DST	MPN/100mL	>2400	
Nutrients			
Total Ammonia (N)	mg/L	62	
Calculated unionized Ammonia	mg/L	0.86	1.25
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	5.0
Physical Properties			
Conductivity	uS/cm	956	
Physical Properties			
Turbidity	NTU	14	

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

Compling Data	2021-08-	2021-10-	2019-			EQC
Sampling Date	18	26	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							
рН	рН	6.10	6.55				>6<9.5
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				15 (30)
Anions							
Dissolved Fluoride (F)	mg/L	0.070	<0.050				
Dissolved Chloride (CI)	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				
Nutrients							
Total Ammonia (N)	mg/L	0.024	7.3				5.9
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)		1		
Physical Properties							
Conductivity	uS/cm	46.2	753		1	ļ	
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 (AI)	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	500 (1,000)

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	300 (600)
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	200 (400)
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	500 (1,000)
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 (TI)	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	500 (1,000)
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	<u> </u>						
Total Hardness (CaCO3)	mg/L	28.7	425				
Elements	<u> </u>						
Total Mercury (Hg)	ug/L	0.0130					
Total Metals by ICPMS	<u> </u>						
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				
(=-/	~6/ -	<u> </u>		<u> </u>	<u> </u>		

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 (TI)	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 from drainage from waste rock pile.

Sampling Date		2021-08-18	2021-10-26	
	Station	SNP-09	SNP-10	EQC
Calculated Parameters	UNITS			
Dissolved Nitrate (N)	mg/L	<0.010	13	
Dissolved Nitrate (NO3)	mg/L	<0.044	59	
Dissolved Nitrite (NO2)	mg/L	<0.033	1.8	
Total Total Kjeldahl Nitrogen (Calc)	mg/L	1.32	3.79	
Dissolved Organic Phosphorus (P)	mg/L	0.0181	0.0233	
Demand Parameters				
Dissolved Biochemical Oxygen Demand	mg/L		5.7	
Biochemical Oxygen Demand (inhib.)	mg/L	<2.0		
Misc. Inorganics				
рН	рН	7.00	7.14	>6.0<9.5
Reactive Silica	mg/L	11	17	
Alkalinity (Total as CaCO3)	mg/L	56.8	178	
Total Organic Carbon (C)	mg/L	18	17	
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	
Bicarbonate (HCO3)	mg/L	69.4	217	
Carbonate (CO3)	mg/L	<0.50	<0.50	
Hydroxide (OH)	mg/L	<0.50	<0.50	
Total Suspended Solids	mg/L	3.9	9.3	15 (30)
Anions				
Dissolved Fluoride (F)	mg/L	0.074	0.078	
Dissolved Chloride (Cl)	mg/L	1.5	2.8	
Dissolved Sulphate (SO4)	mg/L	310	440	
Metals				
Dissolved Hex. Chromium (Cr 6+)	mg/L	<0.00099	<0.00099	
Total Hex. Chromium (Cr 6+)	mg/L	<0.00099	<0.00099	

Microbiological Param.				
Nutrients				
Total Ammonia (N)	mg/L	0.019	2.6	5.9
Orthophosphate (P)	mg/L	<0.0030	0.0037	
Dissolved Phosphorus (P)	mg/L	0.037	0.036	
Dissolved Inorganic Phosphorus (P)	mg/L	0.0185	0.0123	
Total Inorganic Phosphorus (P)	mg/L	0.0450	0.0107	
Dissolved Nitrite (N)	mg/L	<0.010	0.55	
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.010	14	
Total Nitrogen (N)	mg/L	1.3 (1)	18 (1)	
Physical Properties	8/ =		25 (2)	
Conductivity	uS/cm	717	1180	
Physical Properties	0.57 5	1.2.	1100	
Turbidity	NTU	1.3	11	
Total Dissolved Solids	mg/L	550	920	
Calculated Parameters	6/ -	330	320	
Dissolved Hardness (CaCO3)	mg/L	332	579	
Elements	6/ L	332	3,3	
Dissolved Mercury (Hg)	ug/L	<0.0019	0.0028	
Dissolved Metals by ICPMS	46/ 5	10.0015	0.0020	
Dissolved Aluminum (Al)	ug/L	34.6	154	
Dissolved Antimony (Sb)	ug/L	0.299	0.781	
Dissolved Aritmony (36)	ug/L	4.24	25.2	
Dissolved Barium (Ba)	ug/L	33.3	55.5	
Dissolved Baridin (Ba)	_	0.011	<0.010	
Dissolved Bismuth (Bi)	ug/L ug/L	<0.0050	0.0475	
Dissolved Boron (B)	ug/L	16	35	
Dissolved Cadmium (Cd)	ug/L	0.947	0.982	
Dissolved Chromium (Cr)	ug/L	0.40	1.17	
Dissolved Cobalt (Co)	ug/L	3.61	28.7	
Dissolved Copper (Cu)	ug/L	4.09	4.67	
Dissolved Iron (Fe)	ug/L	406	2310	
Dissolved Lead (Pb)	ug/L	0.389	11.7	
Dissolved Lithium (Li)	ug/L	24.1	15.7	
Dissolved Manganese (Mn)	ug/L	114	2090	
Dissolved Molybdenum (Mo)	ug/L	0.157	1.65	
Dissolved Nickel (Ni)	ug/L	161	93.3	
Dissolved Phosphorus (P)	ug/L	17.7	37.4	
Dissolved Selenium (Se)	ug/L	0.091	0.294	
Dissolved Silicon (Si)	ug/L	4060	7990	
Dissolved Silver (Ag)	ug/L	<0.0050	0.0445	
Dissolved Strontium (Sr)	ug/L	150	354	
Dissolved Thallium (TI)	ug/L	0.0037	0.0135	
Dissolved Trialiful (11)	ug/L	<0.20	<0.20	
Dissolved Titr (3ii)	ug/L	0.73	7.27	
Dissolved Uranium (U)	_	0.165	2.82	
Dissolved Vanadium (V)	ug/L	0.163	1.13	
Dissolved Zinc (Zn)	ug/L	947	516	
Dissolved Zirconium (Zr)	ug/L	0.18	0.35	
Dissolved Calcium (Ca)	ug/L mg/l		148	
, ,	mg/L	74.5		
Dissolved Magnesium (Mg)	mg/L	35.5	50.8	

Dissolved Sodium (Na)   mg/L   4.27   13.0     Dissolved Sulphur (S)   mg/L   73.0   133     Calculated Parameters               Total Hardness (CaCO3)   mg/L   339   598     Elements                 Total Mercury (Hg)   ug/L   <0.0019       Total Aluminum (Al)   ug/L   38.3   192       Total Antimony (Sb)   ug/L   0.229   0.864       Total Barium (Ba)   ug/L   33.4   64.8       Total Barium (Ba)   ug/L   0.012   <0.010       Total Bismuth (Bi)   ug/L   0.012   <0.010       Total Bismuth (Bi)   ug/L   1.05   1.17       Total Cadmium (Cd)   ug/L   1.05   1.17       Total Cobalt (Co)   ug/L   4.20   35.1       Total Copper (Cu)   ug/L   4.34   5.38   300 (600)     Total Lead (Pb)   ug/L   0.110   18.0   200 (400)       Total Manganese (Mn)   ug/L   1.18   2590       Total Molybdenum (Mo)   ug/L   1.71   98.8   500 (1,000)       Total Phosphorus (P)   ug/L   0.094   0.336       Total Silicon (Si)   ug/L   4.20   0.35.1       Total Silicon (Si)   ug/L   0.184   1.82       Total Silicon (Si)   ug/L   0.184   0.336       Total Silicon (Si)   ug/L   0.094   0.336       Total Silicon (Si)   ug/L   4.00056   0.0043       Total Strontium (Cr)   ug/L   4.33   398       Total Total Thallium (TI)   ug/L   0.0056   0.0142	Dissolved Potassium (K)	mg/L	4.03	11.8	
Dissolved Sulphur (S)		mg/L	4.27	13.0	
Calculated Parameters         mg/L         339         598           Total Hardness (CaCO3)         mg/L         339         598           Elements	Dissolved Sulphur (S)		73.0	133	
Total Mercury (Hg)	Calculated Parameters	<u> </u>			
Total Mercury (Hg)	Total Hardness (CaCO3)	mg/L	339	598	
Total Metals by ICPMS         ug/L         38.3         192           Total Aluminum (Al)         ug/L         0.229         0.864           Total Arsenic (As)         ug/L         6.18         31.9         500 (1,000)           Total Barium (Ba)         ug/L         33.4         64.8           Total Beryllium (Be)         ug/L         0.012         <0.010	Elements	<u> </u>			
Total Metals by ICPMS         ug/L         38.3         192           Total Aluminum (Al)         ug/L         0.229         0.864           Total Arsenic (As)         ug/L         6.18         31.9         500 (1,000)           Total Barium (Ba)         ug/L         33.4         64.8           Total Beryllium (Be)         ug/L         0.012         <0.010	Total Mercury (Hg)	ug/L	<0.0019		
Total Antimony (Sb)         ug/L         0.229         0.864           Total Arsenic (As)         ug/L         6.18         31.9         500 (1,000)           Total Barium (Ba)         ug/L         33.4         64.8           Total Beryllium (Be)         ug/L         0.012         <0.010	Total Metals by ICPMS				
Total Arsenic (As)         ug/L         6.18         31.9         500 (1,000)           Total Barium (Ba)         ug/L         33.4         64.8           Total Beryllium (Be)         ug/L         0.012         <0.010	Total Aluminum (Al)	ug/L	38.3	192	
Total Barium (Ba)         ug/L         33.4         64.8           Total Beryllium (Be)         ug/L         0.012         <0.010	Total Antimony (Sb)	ug/L	0.229	0.864	
Total Barium (Ba)         ug/L         33.4         64.8           Total Beryllium (Be)         ug/L         0.012         <0.010	Total Arsenic (As)	ug/L	6.18	31.9	500 (1,000)
Total Bismuth (Bi)         ug/L         <0.0050         0.068           Total Boron (B)         ug/L         16         44           Total Cadmium (Cd)         ug/L         1.05         1.17           Total Chromium (Cr)         ug/L         0.40         1.16           Total Cobalt (Co)         ug/L         4.20         35.1           Total Copper (Cu)         ug/L         4.34         5.38         300 (600)           Total Iron (Fe)         ug/L         610         2790           Total Lead (Pb)         ug/L         0.110         18.0         200 (400)           Total Lead (Pb)         ug/L         26.1         17.6         17.6           Total Manganese (Mn)         ug/L         118         2590         18           Total Molybdenum (Mo)         ug/L         0.184         1.82         18           Total Nickel (Ni)         ug/L         171         98.8         500 (1,000)           Total Phosphorus (P)         ug/L         28.0         33.0         18           Total Selenium (Se)         ug/L         0.094         0.336         19           Total Silicon (Si)         ug/L         4090         7450         7450           Total	Total Barium (Ba)	1	33.4	64.8	
Total Boron (B)         ug/L         16         44           Total Cadmium (Cd)         ug/L         1.05         1.17           Total Chromium (Cr)         ug/L         0.40         1.16           Total Cobalt (Co)         ug/L         4.20         35.1           Total Copper (Cu)         ug/L         4.34         5.38         300 (600)           Total Iron (Fe)         ug/L         610         2790           Total Lead (Pb)         ug/L         0.110         18.0         200 (400)           Total Lithium (Li)         ug/L         26.1         17.6         17.0         17.6         17.6         17.6         17.6         17.6	Total Beryllium (Be)	ug/L	0.012	<0.010	
Total Cadmium (Cd)         ug/L         1.05         1.17           Total Chromium (Cr)         ug/L         0.40         1.16           Total Cobalt (Co)         ug/L         4.20         35.1           Total Copper (Cu)         ug/L         4.34         5.38         300 (600)           Total Iron (Fe)         ug/L         610         2790           Total Lead (Pb)         ug/L         0.110         18.0         200 (400)           Total Lead (Pb)         ug/L         26.1         17.6 <td>Total Bismuth (Bi)</td> <td>ug/L</td> <td>&lt;0.0050</td> <td>0.068</td> <td></td>	Total Bismuth (Bi)	ug/L	<0.0050	0.068	
Total Cadmium (Cd)         ug/L         1.05         1.17           Total Chromium (Cr)         ug/L         0.40         1.16           Total Cobalt (Co)         ug/L         4.20         35.1           Total Copper (Cu)         ug/L         4.34         5.38         300 (600)           Total Iron (Fe)         ug/L         610         2790           Total Lead (Pb)         ug/L         0.110         18.0         200 (400)           Total Lead (Pb)         ug/L         26.1         17.6 <td>Total Boron (B)</td> <td>ug/L</td> <td>16</td> <td>44</td> <td></td>	Total Boron (B)	ug/L	16	44	
Total Cobalt (Co)         ug/L         4.20         35.1           Total Copper (Cu)         ug/L         4.34         5.38         300 (600)           Total Iron (Fe)         ug/L         610         2790           Total Lead (Pb)         ug/L         0.110         18.0         200 (400)           Total Lithium (Li)         ug/L         26.1         17.6           Total Manganese (Mn)         ug/L         118         2590           Total Molybdenum (Mo)         ug/L         0.184         1.82           Total Nickel (Ni)         ug/L         171         98.8         500 (1,000)           Total Phosphorus (P)         ug/L         28.0         33.0         33.0           Total Selenium (Se)         ug/L         0.094         0.336         0.336           Total Silicon (Si)         ug/L         4090         7450         0.043           Total Silver (Ag)         ug/L         <0.0050	Total Cadmium (Cd)	_	1.05	1.17	
Total Copper (Cu)         ug/L         4.34         5.38         300 (600)           Total Iron (Fe)         ug/L         610         2790           Total Lead (Pb)         ug/L         0.110         18.0         200 (400)           Total Lithium (Li)         ug/L         26.1         17.6           Total Manganese (Mn)         ug/L         118         2590           Total Molybdenum (Mo)         ug/L         0.184         1.82           Total Nickel (Ni)         ug/L         171         98.8         500 (1,000)           Total Phosphorus (P)         ug/L         28.0         33.0         33.0           Total Selenium (Se)         ug/L         0.094         0.336         0.336           Total Silicon (Si)         ug/L         4090         7450         7450           Total Silver (Ag)         ug/L         <0.0050	Total Chromium (Cr)	ug/L	0.40	1.16	
Total Iron (Fe)         ug/L         610         2790           Total Lead (Pb)         ug/L         0.110         18.0         200 (400)           Total Lithium (Li)         ug/L         26.1         17.6           Total Manganese (Mn)         ug/L         118         2590           Total Molybdenum (Mo)         ug/L         0.184         1.82           Total Nickel (Ni)         ug/L         171         98.8         500 (1,000)           Total Phosphorus (P)         ug/L         28.0         33.0         33.0           Total Selenium (Se)         ug/L         0.094         0.336         0.336           Total Silicon (Si)         ug/L         4090         7450         7450           Total Silver (Ag)         ug/L         <0.0050	Total Cobalt (Co)	ug/L	4.20	35.1	
Total Lead (Pb)         ug/L         0.110         18.0         200 (400)           Total Lithium (Li)         ug/L         26.1         17.6           Total Manganese (Mn)         ug/L         118         2590           Total Molybdenum (Mo)         ug/L         0.184         1.82           Total Nickel (Ni)         ug/L         171         98.8         500 (1,000)           Total Phosphorus (P)         ug/L         28.0         33.0         33.0           Total Selenium (Se)         ug/L         0.094         0.336         0.336           Total Silicon (Si)         ug/L         4090         7450         0.043           Total Silver (Ag)         ug/L         <0.0050	Total Copper (Cu)	ug/L	4.34	5.38	300 (600)
Total Lithium (Li)         ug/L         26.1         17.6           Total Manganese (Mn)         ug/L         118         2590           Total Molybdenum (Mo)         ug/L         0.184         1.82           Total Nickel (Ni)         ug/L         171         98.8         500 (1,000)           Total Phosphorus (P)         ug/L         28.0         33.0           Total Selenium (Se)         ug/L         0.094         0.336           Total Silicon (Si)         ug/L         4090         7450           Total Silver (Ag)         ug/L         <0.0050	Total Iron (Fe)	ug/L	610	2790	
Total Manganese (Mn)         ug/L         118         2590           Total Molybdenum (Mo)         ug/L         0.184         1.82           Total Nickel (Ni)         ug/L         171         98.8         500 (1,000)           Total Phosphorus (P)         ug/L         28.0         33.0           Total Selenium (Se)         ug/L         0.094         0.336           Total Silicon (Si)         ug/L         4090         7450           Total Silver (Ag)         ug/L         <0.0050	Total Lead (Pb)	ug/L	0.110	18.0	200 (400)
Total Molybdenum (Mo)         ug/L         0.184         1.82           Total Nickel (Ni)         ug/L         171         98.8         500 (1,000)           Total Phosphorus (P)         ug/L         28.0         33.0           Total Selenium (Se)         ug/L         0.094         0.336           Total Silicon (Si)         ug/L         4090         7450           Total Silver (Ag)         ug/L         <0.0050	Total Lithium (Li)	ug/L	26.1	17.6	
Total Nickel (Ni)         ug/L         171         98.8         500 (1,000)           Total Phosphorus (P)         ug/L         28.0         33.0           Total Selenium (Se)         ug/L         0.094         0.336           Total Silicon (Si)         ug/L         4090         7450           Total Silver (Ag)         ug/L         <0.0050	Total Manganese (Mn)	ug/L	118	2590	
Total Phosphorus (P)         ug/L         28.0         33.0           Total Selenium (Se)         ug/L         0.094         0.336           Total Silicon (Si)         ug/L         4090         7450           Total Silver (Ag)         ug/L         <0.0050	Total Molybdenum (Mo)	ug/L	0.184	1.82	
Total Selenium (Se)         ug/L         0.094         0.336           Total Silicon (Si)         ug/L         4090         7450           Total Silver (Ag)         ug/L         <0.0050	Total Nickel (Ni)	ug/L	171	98.8	500 (1,000)
Total Silicon (Si)         ug/L         4090         7450           Total Silver (Ag)         ug/L         <0.0050	Total Phosphorus (P)	ug/L	28.0	33.0	
Total Silver (Ag)         ug/L         <0.0050         0.043           Total Strontium (Sr)         ug/L         143         398           Total Thallium (Tl)         ug/L         0.0056         0.0142	Total Selenium (Se)	ug/L	0.094	0.336	
Total Strontium (Sr)         ug/L         143         398           Total Thallium (Tl)         ug/L         0.0056         0.0142	Total Silicon (Si)	ug/L	4090	7450	
Total Thallium (TI)         ug/L         0.0056         0.0142	Total Silver (Ag)	ug/L	<0.0050	0.043	
· · ·	Total Strontium (Sr)	ug/L	143	398	
Total Tin (Sn)	Total Thallium (TI)	ug/L	0.0056	0.0142	
10tal fili (311) ug/L \(\cdot \).20 \(\cdot \).20	Total Tin (Sn)	ug/L	<0.20	<0.20	
Total Titanium (Ti) ug/L 1.26 8.0	Total Titanium (Ti)	ug/L	1.26	8.0	
Total Uranium (U)         ug/L         0.195         2.86	Total Uranium (U)	ug/L	0.195	2.86	
Total Vanadium (V) ug/L 0.38 0.85	Total Vanadium (V)	ug/L	0.38	0.85	
Total Zinc (Zn) ug/L 1060 568 500 (1,000)	Total Zinc (Zn)	ug/L	1060	568	500 (1,000)
Total Zirconium (Zr) ug/L 0.18 0.34	Total Zirconium (Zr)	ug/L	0.18	0.34	
Total Calcium (Ca) mg/L 74.5 154	Total Calcium (Ca)	mg/L	74.5	154	
Total Magnesium (Mg) mg/L 37.1 51.7	Total Magnesium (Mg)	mg/L	37.1	51.7	
Total Potassium (K) mg/L 4.00 11.7	Total Potassium (K)	mg/L	4.00	11.7	
Total Sodium (Na)         mg/L         3.97         12.6	Total Sodium (Na)	mg/L	3.97	12.6	
Total Sulphur (S)         mg/L         80.0         132	Total Sulphur (S)	mg/L	80.0	132	

Sampling Date		2021-08-18	CCME
	Station	SNP-12	
Misc. Inorganics			
рН	рН	7.45	>6.0<9.5
Metals			
Dissolved Hex. Chromium (Cr 6+)	mg/L	<0.00099	No data
Total Hex. Chromium (Cr 6+)	mg/L	<0.00099	No data

Nutrients			
Total Ammonia (N)	mg/L	0.025	Calculate 32.4
Physical Properties	3/		
Conductivity	uS/cm	102	No data
Calculated Parameters	,		
Dissolved Hardness (CaCO3)	mg/L	42.6	Calculate
Elements	Si Si		
Dissolved Mercury (Hg)	ug/L	<0.0019	0.026
Dissolved Metals by ICPMS	- 0/		
Dissolved Aluminum (Al)	ug/L	22.3	100
Dissolved Antimony (Sb)	ug/L	0.111	No data
Dissolved Arsenic (As)	ug/L	1.05	5
Dissolved Barium (Ba)	ug/L	5.96	No data
Dissolved Beryllium (Be)	ug/L	<0.010	
Dissolved Bismuth (Bi)	ug/L	<0.0050	
Dissolved Boron (B)	ug/L	11	1,500
Dissolved Cadmium (Cd)	ug/L	0.0091	Calculate 0.88
Dissolved Chromium (Cr)	ug/L	0.18	No data
Dissolved Cobalt (Co)	ug/L	0.0834	No data
Dissolved Copper (Cu)	ug/L	1.90	Calculate
Dissolved Iron (Fe)	ug/L	136	300
Dissolved Lead (Pb)	ug/L	0.220	Calculate 2.0
Dissolved Lithium (Li)	ug/L	2.29	
Dissolved Manganese (Mn)	ug/L	20.5	Calculate 350
Dissolved Molybdenum (Mo)	ug/L	0.646	73
Dissolved Nickel (Ni)	ug/L	1.61	Calculate 25
Dissolved Phosphorus (P)	ug/L	10.7	No data
Dissolved Selenium (Se)	ug/L	<0.040	1
Dissolved Silicon (Si)	ug/L	264	_
Dissolved Silver (Ag)	ug/L	<0.0050	0.25
Dissolved Strontium (Sr)	ug/L	31.5	
Dissolved Thallium (TI)	ug/L	<0.0020	0.8
Dissolved Tin (Sn)	ug/L	<0.20	No data
Dissolved Titanium (Ti)	ug/L	1.40	
Dissolved Uranium (U)	ug/L	0.107	15
Dissolved Vanadium (V)	ug/L	0.23	No data
Dissolved Zinc (Zn)	ug/L	4.53	Calculate 1,300
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	~6/ -	10.0013	
Total Aluminum (AI)	ug/L	49.0	
Total Antimony (Sb)	ug/L	0.044	
Total Arsenic (As)	ug/L	0.885	
Total Albertic (Ab)	46/ L	0.003	

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 (TI)	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 planned 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.

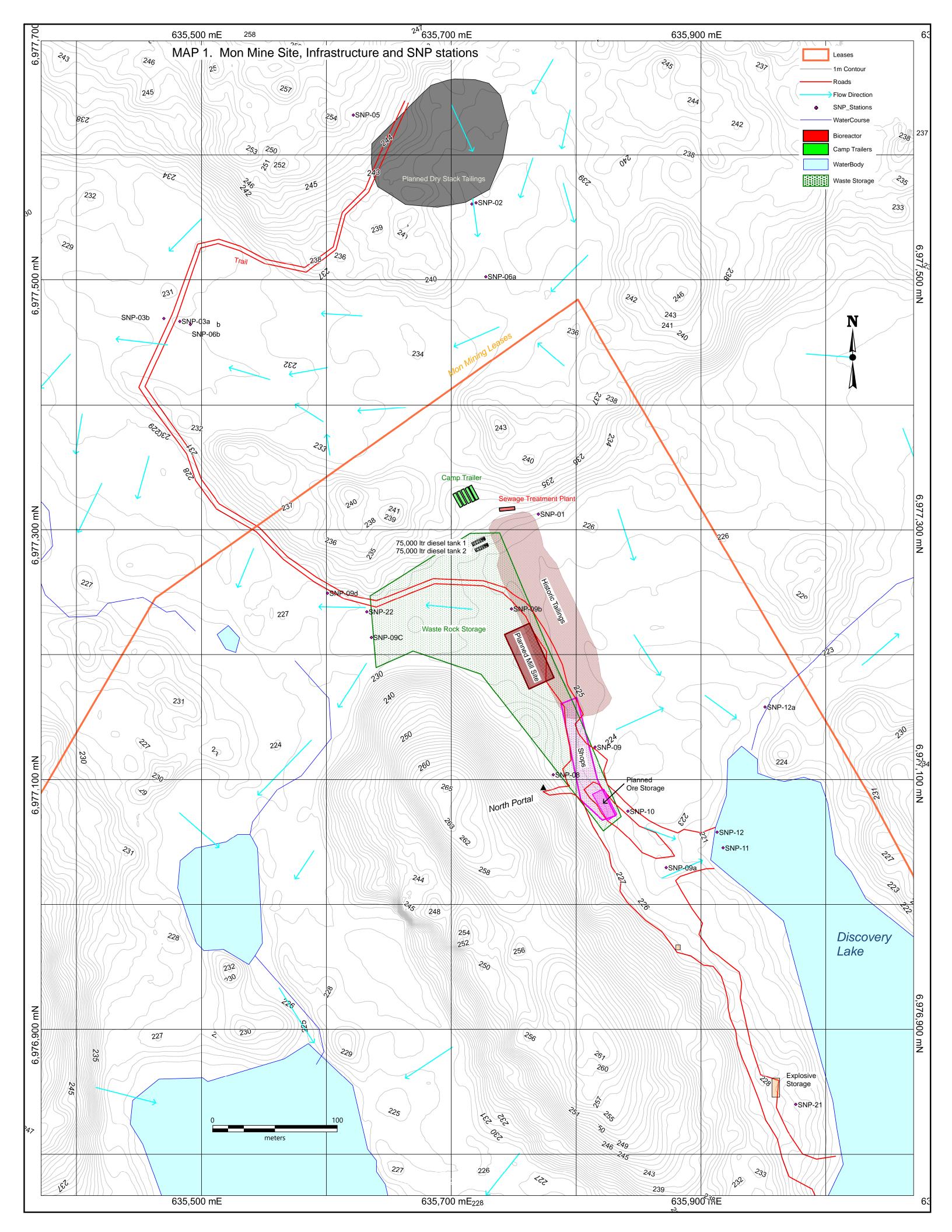
Discussions will continue with Inspectors and the MVLWB concerning exceedances at SNP-03 which are all baseline studies in an area removed from all activities.

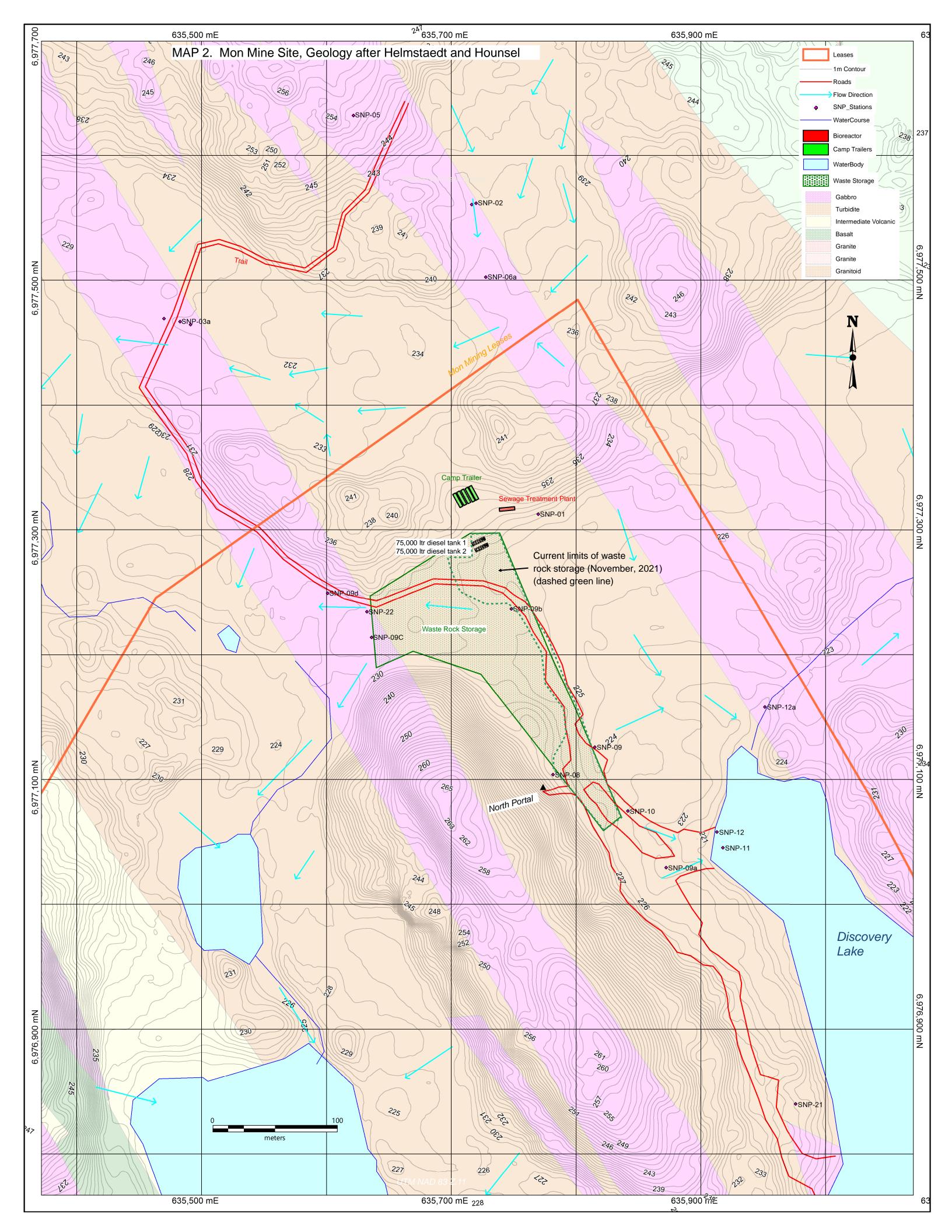
# Other Details Requested by the Board by November 30 of the Year Reported

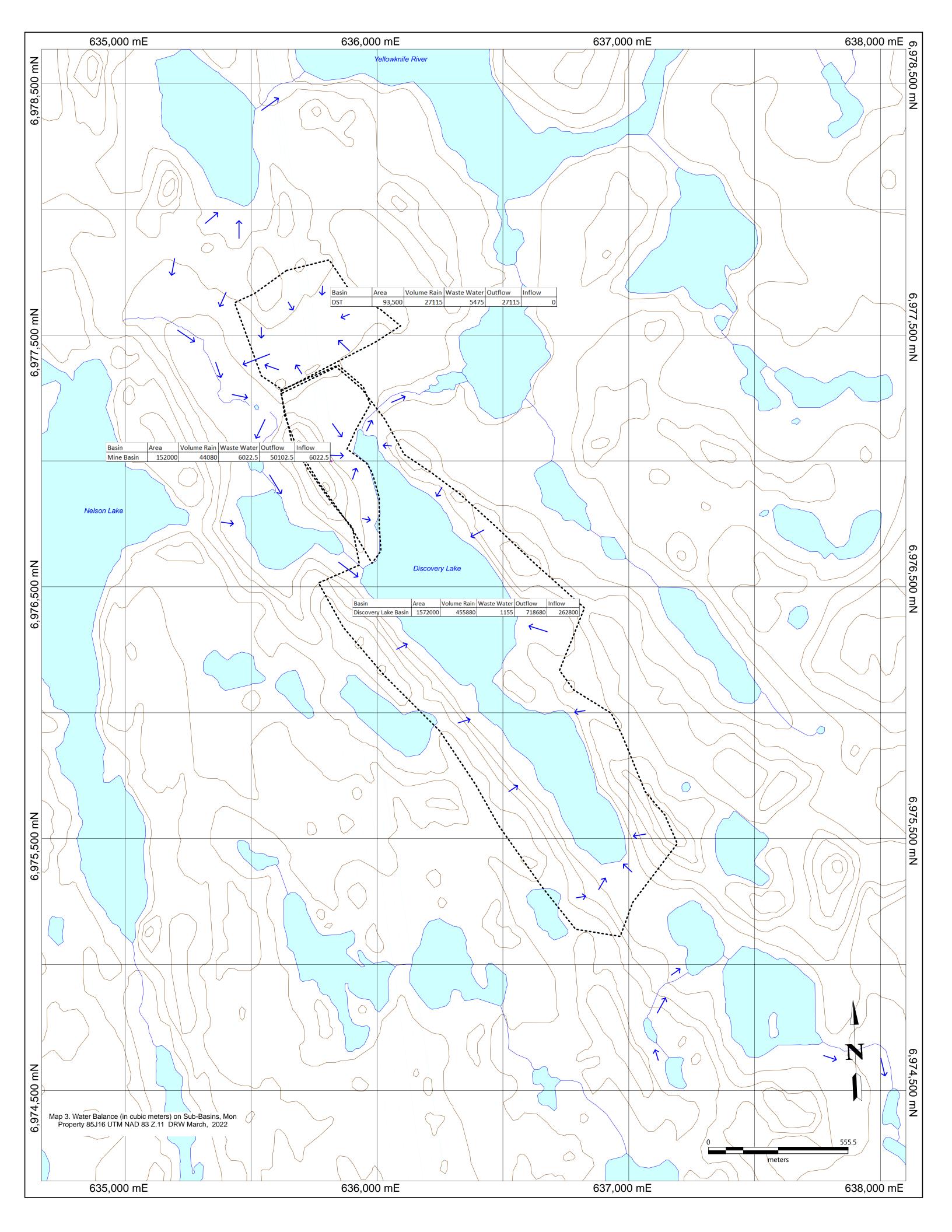
Revised Water and Groundwater Management Plans, Waste Rock Management and Geochemical Characterization Plans, Tailings Management, Closure and Reclamation, and Tailings Management Plans have been submitted in 2022.

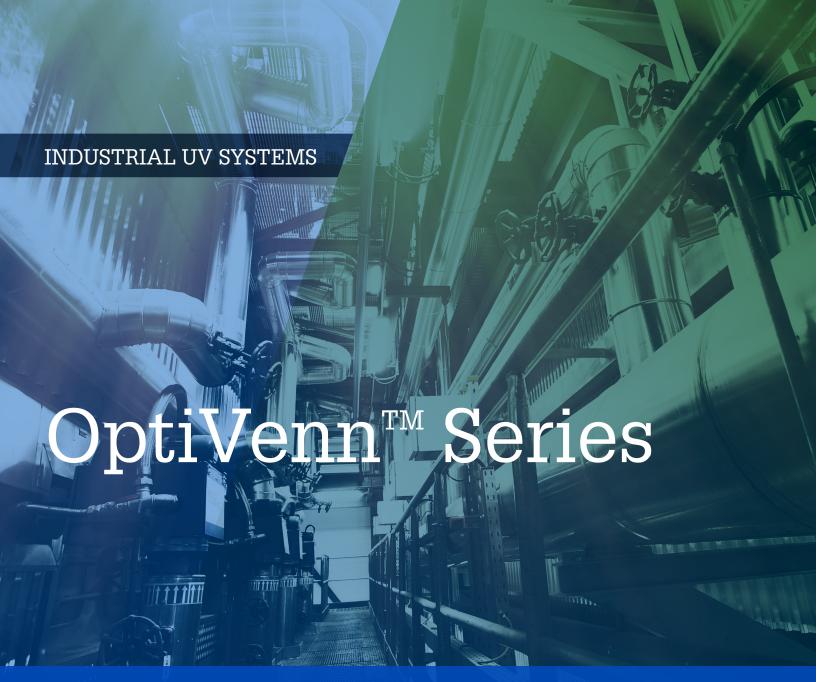
## **Appendixes**

1	Map showing Infrastructure and SNP locations
2	Map showing geology and SNP locations
3	Map showing basins with water balance
4	ABA results on gabbro
5	Analytical results from water sampling at SNP stations.









High performance, cost-effective system for stringent Industrial applications









# Redefining Flexibility, Reliability and Robustness for Industrial Applications.

The OptiVenn Series is a family of robust and flexible UV Systems with advanced technology designed to meet the stringent requirements of Pharmaceutical, Food & Beverage, Microelectronics and other Industrial Markets.

The OptiVenn breaks down the following microorganisms: *E.coli* and fecal coliform as well as trace chemicals; ozone, chlorine, total organic carbon.

The treatment chamber is constructed of 316L SS with two finish options. The control panel is constructed of 304 SS and is equipped with a Universal Controller which provides control, monitoring and operational information in a single convenient location.

The treatment chamber and control panel are extremely compact, yet offer flexibility of installation to accommodate into different skid designs or as a stand-alone UV System.

**MARKETS:** Aquaculture, Recreational Water, Oil & Gas, Power Generation, and General Industrial Applications

**APPLICATIONS:** Treatment, Ozone Reduction, Chlorine Reduction and TOC Reduction

## Introducing Aquafine OptiVenn

## **Compact Footprint.**

Optimized chamber design and multiple lamp arrays enable cost-effective installation in extremely compact spaces.

## Proven, Robust Components.

UV sensors, lamps, drivers and panels have demonstrated reliability worldwide in thousands of installations

## Flexible Panel Installation.

All stainless steel control panels provide maximum installation flexibility and are able to be mounted in different locations such as on the chamber or remotely to adapt to stringent space requirements.

## **Compact Chamber Design.**

The configurable treatment chamber makes it easy to fit the UV System into small spaces and tight pipe networks. The cylinder can be rotated to allow inlet and outlet connections at 4 different angles.

## User-friendly Human Machine Interface (HMI).

Intuitive interface enables at-a-glance system status checks.

## Improved Lamp Technology.

Low-pressure high-output lamp (LPH0) technology provides increased process performance and extended lamp life.

## **Delivering Water Confidence and Comprehensive Warranty.**

Aquafine UV Systems include a Lifetime Performance Guarantee and industry-leading warrantees for systems and parts.

## Global Support. Local Service.

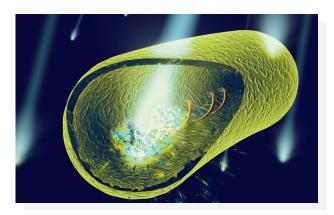
A comprehensive network of certified service providers offer fast response for spare parts and service.

## Ultraviolet (UV) Technology

Ultraviolet (UV) light is a versatile, reliable approach to address numerous requirements in industrial water applications.

## UV for Broad-based Treatment

- The Aquafine OptiVenn UV Water System treats the following: Escherichia coli (*E. coli*) and fecal coliform
- The Aquafine OptiVenn UV Water System breaks down trace chemicals; ozone, chlorine, total organic compound
- The OptiVenn system model 01CDS, 02CDS, 03CDS, 02CDM, 04CDM, 04CDL, 02DDM, 04DDM, 04DDL, 06DDL, 08DDL, 08EDL, 08FDL, 08GDL, 10GDL, 12GDL and 12HDL treats the following: Escherichia coli (*E. coli*) and fecal coliform
- The OptiVenn system model 04CTM, 06CTM, 08DTM, 12DTM, 08DTL, 10DTL and 12DTL break down trace chemicals; ozone, chlorine, total organic carbon.



UV light attacks the microorganisms genetic material (DNA) preventing replication and infection.

## **UV for TOC Reduction**

- 185 nm UV at a minimum dose of 90 mJ/cm<sup>2\*</sup> creates powerful hydroxyl radicals that oxidize total organic carbon (TOC) molecules
- UV can be used together with Deionization (DI) and Reverse Osmosis (RO) to reduce TOC to levels below 1.0 ppb

## **UV for Ozone Reduction**

- Residual ozone (0<sub>2</sub>) is efficiently removed by UV at a wavelength of 254 nm
- Ozone absorbs the UV energy and quickly breaks down to dissolved oxygen (02)
- Typically 1.0 ppm of ozone can be reduced to less than 0.1 ppm with a UV dosage of 90 mJ/cm<sup>2</sup>

## UV for Chlorine Reduction

- Free chlorine residuals up to 2.0 ppm can be successfully reduced by the application of UV light
- Reduces carcinogenic by-products
- Lower maintenance costs compared to carbon beds or chemical injections

## Aquafine Performance Guarantee and Support

As an added incentive to keep your Aquafine equipment operating at its optimum level, Aquafine provides a Lifetime Performance Guarantee for the equipment. A Lifetime Performance Guarantee means that the UV system will achieve the targets for which it was designed and sized on the original sales order of the equipment, which considers operational parameters such as UVT of the fluid, maximum flow rate, operating pressure, fluid temperature, among others.

A Lifetime Performance Warranty will only be applicable with the use of genuine OEM replacement parts. This guarantee is valid for the life of the equipment and it is available for both new and existing equipment when applicable conditions are met.

Customer support is available from our Authorized Distributor Network and from our 24/7 Technical Service Group. For questions regarding your application needs, please contact your local Authorized Distributor or Aquafine for more information.

Aquafin C optivent

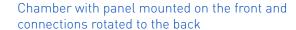
<sup>\*</sup>Required dose may vary depending on application. Please contact Aquafine for proper sizing.

## Flexible Chamber Requires Less Space

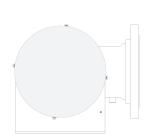
#### **Benefits:**

- An internal baffle and an anti-vibration mechanism optimize performance, support quartz sleeves and ensure reliable system performance even at high flow rates.
- The UV System can be installed with the chamber easily rotated to one of 4 different angles (12, 3, 6 and 9 o'clock position). No special customization is required.
- The flexible chamber, enabling rotation, reduces pipework, elbows, space and installation costs
- Inlet and outlet connections are always at the same angle

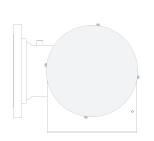












## Universal Control Panel Provides Installation Flexibility

## Benefits:

- All UV Systems have a stainless steel control panel designed to provide maximum installation flexibility and fit within stringent space requirements.
- All control panels are compliant with the following electrical codes: cULus (Canada, USA), CE (Europe)

	Standard Co	ontrol Panel	Optional Co	ntrol Panel
Systems with 4 lamps or less Shape	Stainless Steel UL Type 1 (IP51) Includes Fan Flat Top Mount on chamber or remotely*	SMALL	Stainless Steel UL Type 4X (IP55) with fan/shroud Includes Fan Sloped Top Mount on chamber or remotely	SMALL
Systems with 6 to 8 lamps Shape	Stainless Steel UL Type 1 (IP51) Includes fan Flat Top Mount on chamber or remotely**	MEDIUM	Stainless Steel UL Type 12 (IP54) with fan UL Type 4X (IP55) with fan / shroud UL Type 4X (IP66) with AC Sloped Top Remote mount only	LARGE UL Type 4X shown
Systems with 10 to 12 lamps Shape	Stainless Steel UL Type 12 (IP54) with fan Sloped Top Remote mount only	LARGE	Stainless Steel UL Type 4X (IP55) with fan / shroud UL Type 4X (IP66) with AC Sloped Top Remote mount only	LARGE UL Type 4X shown

<sup>\*</sup>No mounting option for 01CDS and 03CDS

<sup>\*\*</sup>Mounting options vary by model and configuration

## Compact System Design to Preserve Space

#### Benefits:

- The panel can be mounted in different locations to optimize the use of space, especially for frame mounted designs.
- The small and medium control panels can be mounted on top of the cylinder (between the inlet and outlet connection), in front of the cylinder or remotely up to 18 feet apart from the cylinder. The location of the panel can be easily changed at any point in time. It is recommended that the large panel be mounted remotely (not on the cylinder).
- Mounting is possible based on configuration and orientation of inlet and outlet.\*





## User-Friendly HMI

#### Benefits:

- Intuitive interface enables at-a-glance check status of the system.
- Information displayed includes: individual lamp status, operational hours of the system and lamps, UV intensity and temperature condition of the chamber and control panel.
- A 4-20mA output signal is included with the UV monitoring option.
- Base model includes HOA (Remote Start and Stop) and LOA (Lamp Out Alert)



## High Performance UV Lamps

## Benefits:

- The LPHO lamps are approximately 3 times more efficient than medium pressure lamps, delivering most of the UV output in the germicidal absorbance curve peak. Low pressure lamps operate at a lower temperature than medium pressure lamps, which leads to less fouling and less maintenance requirements.
- The OptiVenn series lamps can restart immediately after a shut down (no cool down period required) which maximizes system uptime.



## $OptiVenn^{\tt TM}\ Series$

Model:	01CDS	02CDS	03CDS	02CDM	02DDM	04CDM	04DDM	04CDL	04DDL	06DDL	08DDL	08EDL	08FDL	10GDL	12HDL
Maximum Flow Rate															
Flow rate (gpm)*								m - 2,200							
Flow rate (m³/hr)*		I .	_	l .	_			³/hr - 500		T .	_				
Number of UV lamps	1	2	3	2	2	4	4	4	4	6	8	8	8	10	12
Electrical Requirements															
Electrical supply		I		I			40V, 50/60					I	1		I
Operating power (W)	63	145	165	155	155	297	297	583	583	1,153	1,438	1,438	1,438	1,723	2,008
Chamber															
Material of Construction				ı			316L	Stainless	Steel						
Lamp Length - in (cm)		15 (38)			30	(76)					60 (	152)			
Chamber diameter - in (cm)		6 (	15)	I	8 (20)	6 (15)	8 (20)	6 (15)		8 (20)		10 (25)	12 (30)	14 (36)	16 (41)
ANSI flanges size - in (cm) Optional - Tri-clamp size - in (cm)		2 (5)		3	(8)		4 (10)			6 (15)			8 (20)		10 (25)
Monitoring and Controls															
Standard								se Packa							
Standard			Lamp	status indi	icator, Sys	stem hour	s of opera	tion, Lam	p out aler	t (LOA) an	d Remote	start/sto	p (HOA)		
Optional						UV inten	UV Mor sity readin	nitoring Pa ng with NI		ed sensor					
Control Panel															
Standard															
Material of Construction		304 Stainless Steel													
Rating		UL Type 1 (IP51)  UL Type 12 (IP54) with Fan							vith Fan						
Size (HxWxD) in (cm)				16x1	6x7 (41x4	1x18)					16x20x9 (	41x51x23	)		23x9 i9x23)
Shape							Flat Top							Slope	ed Top
Cooling Mechanism					Fan							F	an		
Operating Temp °F (°C)				340	-104º (1º-	40°)						34°-104	0 (10-400)		
Optional															
Rating				UL '	Type 4X (II	P55)				UL Type	Type 12 (I e 4X (IP55 Type 4X (	) with Fan	/Shroud	with Far	4X (IP55) n/Shroud rpe 4X with AC
Size (HxWxD) in (cm) **				18x1	9x8 (46x4'	9x21)				2	22x23x9 ( 24.5x23x9	56x59x23 (62x59x23		(59x5 24.5x	4.5x9 (6x23) (23x9 (9x23)
Shape							9	Sloped Top	D	'					•
Elastomers															
Standard								EPDM							
Optional		Viton													
Surface Finish															
Standard		Ra15													
Operating Conditions															
Maximum water operating temperature F(C)							40°-	-104° (5°-	40°)						
Maximum Operating Pressure PSI (BAR)								150 (10)							
Hot Water Sanitization °F (°C)					194° (90°)	with stair	nless steel	sleeve bo	olts and vi	iton elasto	mers only	у			

<sup>\*</sup>Dose Level: 30 mJ/cm $^2$  after 9,000 hours of operation

 $<sup>\</sup>hbox{\tt **Please consult drawings for exact specifications.}$ 

## $\mathsf{OptiVenn}^{\mathtt{TM}}\,\mathsf{Series}\,/\!/\,\mathsf{TOC}$

Model:	04CTM	04CTM 06CTM 08DTM 08DTL 10DTL 12DTM 12D							
Maximum Flow Rate									
Flow rate (gpm)*		6 gpm - 36 gpm							
Flow rate (m³/hr)*			1.4	4 m³/hr - 8.2 m³/hr					
Number of UV Lamps	4	6	8	8	10	12	12		
Electrical Requirements									
Electrical Supply			110-240V, 50	)/60Hz, L-L or L-N,	2W+GND				
Operating power (W)	297	723	868	1,438	1,723	1,153	2,008		
Chamber									
Material of Construction			31	6L Stainless Steel					
Lamp Length - in (cm)		30 (76)		60 (	152)	30 (76)	60 (152)		
Chamber Diameter - in (cm)	6 (15	5)			8 (20)				
ANSI flanges size - in (cm) Optional - Tri-clamp size - in (cm)	2 (5)			2 (5) or	4 (10)				
Monitoring and Controls									
Standard	Lam	np Status Indicator,	System Hours of Op	Base Package: peration, Lamp out a	alert (LOA) and Rem	ote start/stop (HOA	]		
Optional				Monitoring Package ading with NIST Cer					
Control Panel									
Standard									
Material of Construction	304 Stainless Steel								
Rating		UL Type 1	(IP51)		UL	Type 12 (IP54) with	Fan		
Size (HxWxD) in (cm)	16x16x7 (41x41x18)		16x20x9 (41x51x23)			22x23x9 (56x59x23)			
Shape		Flat T	Гор			Sloped Top			
Cooling Mechanism	Fan			Fa	ın				
Operating Temp °F (°C)	34°-104° (1°-40°)			34°-104°	(1°-40°)				
Optional									
Rating	UL Type 4X (IP55)	UL Type	Type 12 (IP54) with e 4X (IP55) with Fan, . Type 4X (IP66) with	/Shroud		e 4X (IP55) with Fan, Type 4X (IP66) with			
Size (HxWxD) in (cm)**	18x19x8 (46x49x21)		22x23x9 (56x59x23) 24.5x23x9 (62x59x23			23x24.5x9 (59x56x23 24.5x23x9 (62x59x23			
Shape				Sloped Top					
Elastomers									
Standard				Viton					
Surface Finish									
Standard				Ra15					
Operating Conditions									
Maximum water operating temperature F(C)				40°-104° (5°-40°)					
Maximum Operating Pressure PSI (BAR)				150 (10)					
Hot Water Sanitization °F (°C)		194° (9	90°) with stainless s	teel sleeve bolts and	d viton elastomers o	only			

## \*Dose Level: >600 mJ/cm² after 9,000 hours of operation

 $<sup>\</sup>begin{tabular}{l} **Please consult drawings for exact specifications. \end{tabular}$ 

## Guaranteed Performance and Support Services

All of our systems come with a lifetime performance warranty. Global customer support is available from our Authorized Distributor Network and from our 24/7 Technical Service Group.

For questions regarding your application needs, please contact your local Authorized Distributor or Aquafine for more information.





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New Discovery Mines Ltd.

Page 1 of 5

Table 1: ABA Test Results for project MON GOLD PROJECT

BV Labs Sample No	Sample ID	Paste pH	Total S	HCI Extractable Sulphur	Sulphide Sulphur (by diff.)	Acid Generation Potential	Mod. ABA Neutralization Potential	Fizz Rating	Net Neutralization Potential	Neutralization Potential Ratio
	Units	pH Units	wt%	wt%	wt%	Kg CaCO3/T	Kg CaCO3/T	N/A	Kg CaCO3/T	N/A
AJH145	3195859 exploration	9.63	0.08	<0.01	0.08	2.5	4.00	NONE	1.50	1.6
AJH146	3195863	6.98	0.04	0.02	0.02	0.6	4.70	NONE	4.10	7.8
Detection Limits		N/A	0.02	0.01	0.02	0.6	N/A	N/A	N/A	0.1
Bureau Veritas S	OP#	BBY0SOF	LECO	BBY ARD-00009	BBY WI-00033	BBY WI-00033	BBY0SOP-00020	BBY0SOP-00	BBY WI-00033	BBY WI-00033

#### Notes:

Lawrence, R.W. 1991. Acid Rock Drainage Prediction Manual

Sobek, A.A., Schuller, W.A., Freeman, J.R. and Smith, R.M. (March 1978), Field and Laboratory Methods Applicable to Overburden and Minesoils, Report EPA-600/2-78-054, U.S. National Technical Information Service Report PB-280 495 pages 46-47.

#### References:

Acid Generation Potential = Sulphide Sulphur (by diff.)\*31.25

Fizz Rating - Reference method used is based on NP method.

HCl Extractable Sulphur is based on a modified version of ASTM Method D 2492-02

Mod. ABA Neutralization Potential - MEND Acid Rock Drainage Prediction Manual, MEND Project 1.16.1b (pages 6.2-11 to 17), March 1991.

Net Neutralization Potential = (Modified ABA Neutralization Potential)-(Acid Generation Potential (S-S by diff))

Neutralization Potential Ratio = (Neutralization Potential)/(Acid Generation Potential)

Paste pH - Field and Laboratory Methods Applicable to Overburdens and Minesoils, (EPA 600 / 2-78-054, March 1978).

Sulphide Sulphur = (Total Sulphur)-(Sulphate Sulphur)

Total sulphur by Leco done at BV Calgary



New Discovery Mines Ltd.

Page 2 of 5

#### Table 2: ABA QAQC Test Results for project MON GOLD PROJECT

	Duplicate QC								
BV Labs Sample	Sample ID	Paste pH Reported	Paste pH Dup	HCI	HCI	Mod. ABA	Mod. ABA	Fizz Rating	Fizz Rating Dup
No				Extractable	Extractable	Neutralization	Neutralization	Reported	
				Sulphur	Sulphur Dup	Potential Reported	Potential Reported		
				Reported			Dup		
	Units	pH Units	pH Units	wt%	wt%	Kg CaCO3/T	Kg CaCO3/T	N/A	N/A
AJH145 Dup	3195859	9.63	9.65	<0.01	<0.01	4.00	4.00	NONE	NONE

Reference Material QC		<u></u>	
	Paste pH	HCI Extractable	Mod. ABA Neutralization
Units	pH Units	wt%	Kg CaCO3/T
Reference Material			
DBOHCX (A406032) (0.29 wt%)		0.30	
ppH Ref Mat-ppHR5-8.91 (A440389) (8.91 pH Units)	8.97		
KZK-1ModS Slight (A440476) (58.9 Kg CaCO3/T)			59.50
Blank QC		<del> </del>	ī
Method Blank		<0.01	
Method Blank			0



New Discovery Mines Ltd.

Page 3 of 5

Table 3: NAG Test Results for project MON GOLD PROJECT

BV Labs Sample No	Sample ID	Pulp Sample Weight	NAG Vol. of 15% H2O2 Used	NAG pH	NAG Volume to pH 4.5	NAG Volume to pH 7.0	NAG NaOH Conc.	NAG Acidity pH 4.5	NAG Acidity pH 7.0
	Units	g	mL	pH Units	mL	mL	N	Kg H2SO4/T	Kg H2SO4/T
AJH145	3195859	2.50	250	4.42	0.1	0.3	0.1	0.20	0.59
AJH146	3195863	2.50	250	6.48	0.0	0.3	0.1	0.00	0.59
QAQC									
Duplicates									
AJH145 Dup	3195859	2.50	250	4.44	0.1	0.3	0.1	0.20	0.59
Blanks									
Method Blank		0.00	250	5.77	0.0	3.0	0.1	0.00	5.88
Detection Limits		1	N/A	N/A	N/A	N/A	N/A	0	0
Bureau Veritas SOP #		BBY0SOP-00007	BBY0SOP-00007	-00007 / BBY0S0	BBY0SOP-00007	BBY0SOP-00007	BBY0SOP-00007	BBY WI-00033	BBY WI-00033

#### Notes:

EGi Environmental Geochemistry International. 2006. Single Addition Net Acid Generation (NAG) Test Procedure. Page 1 to 4.

#### References:

NAG Acidity pH 4.5 = (NAG Volume to pH 4.5) \* 49 \* (NaOH Conc.) / Pulp Sample Weight

NAG Acidity pH 7.0 = (NAG Volume to pH 7.0) \* 49 \* (NaOH Conc.) / Pulp Sample Weight

Single Addition NAG - S. Miller, EGI Pty. Ltd., Net Acid Generation (NAG) Test Procedures, March 2001.

Solid:Liquid ratio used = 1:100; 2.5g Pulp Sample:250mL 15% H2O2.



New Discovery Mines Ltd.

Page 4 of 5

## Table 4: Sample List Test Results for project MON GOLD PROJECT

BV Labs Sample ID	Client Sample ID	Sample Form	Dry Weight Received (kg)
AJH145	3195859	Rock	1.73
AJH146	3195863	Rock	0.91

Total Weight	2.64
Total Samples Received	2



## Table 5: Sample Summary for project MON GOLD PROJECT

New Discovery Mines Ltd., MON GOLD PROJECT

Page 5 of 5

Date Samples Rec'd by BV Labs: 2 sample were rec'd on 19-Oct-21

Sample Prep Conducted by BV Labs: YES

Date of Analysis: NP-MABA: 24/25-Nov-21

SANAG: 18-Nov-21 SO4HCLV: 24-Nov-21 PPHARD: 22-Nov-21

Date Reported: 20-Dec-21

Client: New Discovery Mines Ltd.

Client Project Name: MON GOLD PROJECT

Client Project No: N/A
ARD Project #: N/A
BV Labs Job No: C182860

Contact Person: Dave Webb

E-mail Address: dave@drwgcl.com

Data Validated by: Tim O'Hearn

**Position:** Senior Scientific Specialist, ARD

## **Sample Storage**

Sample rejects (and selected test residues where applicable) have been archived Standard archive protocol is archiving for samples for 3 months after testing is complete. If archiving is required past 3 months a fee will be required.



Your Project #: MON GOLD PROJECT Your C.O.C. #: 643673-01-01

**Attention: Dave Webb** 

New Discovery Mines Ltd. 1901 108W. Cordova St. Vancouver, BC Canada V6B 0G5

Report Date: 2021/09/07

Report #: R3068310 Version: 1 - Partial

## **CERTIFICATE OF ANALYSIS – PARTIAL RESULTS**

BV LABS JOB #: C160999 Received: 2021/08/20, 15:00

Sample Matrix: Water # Samples Received: 4

in .			Date	Date		
_	Analyses	Quantity	Extracted	Analyzed	<b>Laboratory Method</b>	<b>Analytical Method</b>
E.	Alkalinity - Low Level (1)	2	N/A	2021/08/24	AB SOP-00005	SM 23 2320 B m
W	Biochemical Oxygen Demand (Dissolved) (1, 2)	1	2021/08/21	2021/08/27	AB SOP-00017	SM 23 5210B m
1	Biochemical Oxygen Demand (Inhibited) (1)	2	2021/08/21	2021/08/26	AB SOP-00017	SM 23 5210B m
Ţ	Biochemical Oxygen Demand (Inhibited) (1)	1	2021/08/21	2021/08/27	AB SOP-00017	SM 23 5210B m
	Low level chloride/sulphate by AC (1)	2	N/A	2021/09/01	AB SOP-00020	SM23-4500-Cl/SO4-E m
Ų	Fecal Coliforms (MPN/100mL) (1)	1	2021/08/21	2021/08/22	AB SOP-00089	SM 23 9223 A,B m
Ĺ	Total Coliforms and E.Coli (1)	1	2021/08/20	2021/08/21	AB SOP-00089	SM 23 9223 A,B m
***	Dissolved Hexavalent Chromium (1)	3	N/A	2021/08/23	AB SOP-00063	SM 23 3500-Cr B m
ı	Total Hexavalent Chromium (1)	1	N/A	2021/08/23	AB SOP-00063	SM 23 3500-Cr B m
10	Total Hexavalent Chromium (1)	2	N/A	2021/08/25	AB SOP-00063	SM 23 3500-Cr B m
Ø	Conductance - Low Level (1)	4	N/A	2021/08/24	AB SOP-00005	SM 23 2510 B m
Ö	Fluoride (1)	2	N/A	2021/09/03	AB SOP-00005	SM 23 4500-F C m
Ø	Hardness Total (calculated as CaCO3) (1, 3)	2	N/A	2021/08/25	BBY WI-00033	Auto Calc
j	Hardness Total (calculated as CaCO3) (1, 3)	1	N/A	2021/08/27	BBY WI-00033	Auto Calc
	Hardness (calculated as CaCO3) (1)	3	N/A	2021/08/27	BBY WI-00033	Auto Calc
2	Mercury (Dissolved) by CV (1, 2)	2	2021/09/01	2021/09/01	AB SOP-00084	BCMOE BCLM Oct2013 m
	Mercury (Dissolved) by CV (1, 2)	1	2021/09/01	2021/09/02	AB SOP-00084	BCMOE BCLM Oct2013 m
	Mercury (Total) by CV (1)	2	2021/09/01	2021/09/01	AB SOP-00084	BCMOE BCLM Oct2013 m
	Mercury (Total) by CV (1)	1	2021/09/01	2021/09/02	AB SOP-00084	BCMOE BCLM Oct2013 m
	Na, K, Ca, Mg, S by CRC ICPMS (diss.) (1)	3	N/A	2021/08/27	BBY WI-00033	Auto Calc
	Elements by ICPMS Low Level (dissolved) (1, 2)	3	N/A	2021/08/24	CAL SOP-00265	EPA 6020 m
	Na, K, Ca, Mg, S by CRC ICPMS (total) (1)	2	N/A	2021/08/25	BBY WI-00033	Auto Calc
	Na, K, Ca, Mg, S by CRC ICPMS (total) (1)	1	N/A	2021/08/27	BBY WI-00033	Auto Calc
	Elements by ICPMS Low Level (total) (1)	3	N/A	2021/08/24	CAL SOP-00265	EPA 6020 m
	Ammonia-N (Total) (1)	1	N/A	2021/08/27	AB SOP-00007	SM 23 4500 NH3 A G m
	Ammonia-N (Total) (1)	3	N/A	2021/08/30	AB SOP-00007	SM 23 4500 NH3 A G m
	Nitrate and Nitrite (1)	3	N/A	2021/08/22		Auto Calc
	NO2 (N); NO2 (N) + NO3 (N) in Water (1)	2	N/A	2021/08/21	AB SOP-00091	SM 23 4500 NO3m
	NO2 (N); NO2 (N) + NO3 (N) in Water (1)	1	N/A		AB SOP-00091	SM 23 4500 NO3m
	Nitrate (as N) (1)	3		2021/08/22		Auto Calc
	Oil and Grease (Gravimetric, n-Hexane) (1)	1			AB SOP-00092	SM 23 5520B/5520F m
	Filter and HNO3 Preserve for Metals (1)	3	N/A	2021/08/21		



Your Project #: MON GOLD PROJECT Your C.O.C. #: 643673-01-01

**Attention: Dave Webb** 

New Discovery Mines Ltd. 1901 108W. Cordova St. Vancouver, BC Canada V6B 0G5

Report Date: 2021/09/07

Report #: R3068310 Version: 1 - Partial

## **CERTIFICATE OF ANALYSIS – PARTIAL RESULTS**

BV LABS JOB #: C160999 Received: 2021/08/20, 15:00

Sample Matrix: Water # Samples Received: 4

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	<b>Laboratory Method</b>	Analytical Method
pH @25°C (1, 4)	2	N/A	2021/08/24	AB SOP-00005	SM 23 4500-H+B m
pH @25°C (1, 4)	2	N/A	2021/09/03	AB SOP-00005	SM 23 4500-H+B m
Orthophosphate by Konelab (1, 5)	3	N/A	2021/08/21	AB SOP-00025	SM 23 4500-P A,F m
Silica (Reactive) (1)	2	N/A	2021/09/05	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids - Low Level (1)	2	2021/08/23	2021/08/25	AB SOP-00065	SM 23 2540 C m
Total Kjeldahl Nitrogen (Total) (1)	2	N/A	2021/09/02	BBY WI-00033	Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2021/09/03	BBY WI-00033	Auto Calc
Nitrogen (Total) (1)	2	2021/09/02	2021/09/02	AB SOP-00093	SM 23 4500-N C m
Nitrogen (Total) (1)	1	2021/09/02	2021/09/03	AB SOP-00093	SM 23 4500-N C m
Carbon (Total Organic) (1, 6)	1	N/A	2021/08/27	AB SOP-00087	MMCW 119 1996 m
Carbon (Total Organic) (1, 6)	2	N/A	2021/09/02	AB SOP-00087	MMCW 119 1996 m
Phosphorus -P (Total, Dissolved) (1, 7)	1	2021/08/30	2021/09/03	AB SOP-00024	SM 23 4500-P A,B,F m
Phosphorus -P (Total, Dissolved) (1, 7)	2	2021/09/02	2021/09/03	AB SOP-00024	SM 23 4500-P A,B,F m
Inorganic Phosphorus (Total, dissolved) (1, 2)	3	N/A	2021/09/07	AB SOP-00024	SM 23 4500-P A,B,F m
Organic Phosphorus (Total, dissolved) (1)	3	N/A	2021/09/07		Auto Calc
Total Inorganic Phosphorus (1)	3	N/A	2021/09/07	AB SOP-00024	SM 23 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	2	2021/08/25	2021/08/25	AB SOP-00061	SM 23 2540 D m
Total Suspended Solids (NFR) (1)	1	2021/08/26	2021/08/26	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	2	N/A	2021/08/21	CAL SOP-00081	SM 23 2130 B m
Turbidity (1)	1	N/A	2021/08/22	CAL SOP-00081	SM 23 2130 B m

#### Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report.



Your Project #: MON GOLD PROJECT Your C.O.C. #: 643673-01-01

**Attention: Dave Webb** 

New Discovery Mines Ltd. 1901 108W. Cordova St. Vancouver, BC Canada V6B 0G5

Report Date: 2021/09/07

Report #: R3068310 Version: 1 - Partial

## **CERTIFICATE OF ANALYSIS – PARTIAL RESULTS**

**BV LABS JOB #: C160999** 

Received: 2021/08/20, 15:00

Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

- \* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
- (1) This test was performed by Bureau Veritas Calgary Environmental
- (2) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (3) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (4) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas Laboratories endeavours to analyze samples as soon as possible after receipt.
- (5) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (6) TOC present in the sample should be considered as non-purgeable TOC.
- (7) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

## **Encryption Key**

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Customer Solutions, Western Canada Customer Experience Team

Email: customer solutions we st@bureauver it as. com

Phone# (780) 577-7100

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

## **RESULTS OF CHEMICAL ANALYSES OF WATER**

		1	1			1	
BV Labs ID		AEE902			AEE903		
Sampling Date		2021/08/19			2021/08/18		
		12:00			12:00		
COC Number		643673-01-01			643673-01-01		
	UNITS	SNP-01	RDL	QC Batch	SNP-03A	RDL	QC Batch
Calculated Parameters							
Filter and HNO3 Preservation	N/A				FIELD		ONSITE
Dissolved Hardness (CaCO3)	mg/L				28.1	0.50	A327240
Total Hardness (CaCO3)	mg/L				28.7	0.50	A327239
Dissolved Nitrate (N)	mg/L	<0.010	0.010	A327228	<0.050	0.050	A327228
Dissolved Nitrate (NO3)	mg/L	<0.044	0.044	A327227	<0.22	0.22	A327227
Dissolved Nitrite (NO2)	mg/L	<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
Dissolved Organic Phosphorus (P)	mg/L	2.07	0.15	A327246	<0.015	0.015	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
Misc. Inorganics		•					•
рН	рН	7.81	N/A	A329997	6.10	N/A	A340473
Reactive Silica	mg/L				6.9 (1)	0.50	A342138
Alkalinity (Total as CaCO3)	mg/L				9.74	0.50	A329993
Total Organic Carbon (C)	mg/L	27	0.40	A332791	55 (2)	0.80	A338644
Alkalinity (PP as CaCO3)	mg/L				<0.50	0.50	A329993
Bicarbonate (HCO3)	mg/L				11.9	0.50	A329993
Carbonate (CO3)	mg/L				<0.50	0.50	A329993
Hydroxide (OH)	mg/L				<0.50	0.50	A329993
Total Suspended Solids	mg/L	25	1.0	A332176	75 (3)	1.5	A330604
Anions			•			•	
Dissolved Fluoride (F)	mg/L				0.070	0.050	A340476
Dissolved Chloride (Cl)	mg/L				3.2	0.50	A338860
Dissolved Sulphate (SO4)	mg/L				<2.5 (4)	2.5	A338860
Metals		•	•			•	
Dissolved Hex. Chromium (Cr 6+)	mg/L				<0.0050 (2)	0.0050	A326930
Total Hex. Chromium (Cr 6+)	mg/L				<0.0050 (2)	0.0050	A326934
		•					

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.

## **RESULTS OF CHEMICAL ANALYSES OF WATER**

BV Labs ID		AEE902			AEE903		
Sampling Date		2021/08/19			2021/08/18		
Sampling Date		12:00			12:00		
COC Number		643673-01-01			643673-01-01		
	UNITS	SNP-01	RDL	QC Batch	SNP-03A	RDL	QC Batch
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
Orthophosphate (P)	mg/L	6.5	0.060	A327257	<0.0030	0.0030	A327443
Dissolved Phosphorus (P)	mg/L	9.3	0.15	A339968	0.044 (1)	0.015	A339968
Dissolved Inorganic Phosphorus (P)	mg/L	7.24	0.050	A338624	0.037 (1)	0.010	A338624
Total Inorganic Phosphorus (P)	mg/L	7.59	0.050	A341516	0.096 (1)	0.010	A341516
Dissolved Nitrite (N)	mg/L	<0.010	0.010	A327533	<0.010 (2)	0.010	A327557
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.010	0.010	A327533	<0.050 (3)	0.050	A327557
Total Nitrogen (N)	mg/L	70 (1)	1.0	A340962	1.7 (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
Physical Properties							
Turbidity	NTU	14	0.10	A327621	27	0.10	A327206
Total Dissolved Solids	mg/L				159	1.0	A331399

## RDL = Reportable Detection Limit

- (1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.
- (2) Sample was originally processed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.
- (3) 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.

## **RESULTS OF CHEMICAL ANALYSES OF WATER**

Calculated Parameters           Filter and HNO3 Preservation         N/A         FIELD         ONSITE         FIELD         ONSITE           Dissolved Hardness (CaCO3)         mg/L         332         0.50         A327240         42.6         0.50         A32724           Total Hardness (CaCO3)         mg/L         339         0.50         A327239         41.7         0.50         A32723           Dissolved Nitrate (NO3)         mg/L         <0.010         0.010         A327228         —         —           Dissolved Nitrate (NO3)         mg/L         <0.044         0.044         327227         —         —           Dissolved Nitrate (NO2)         mg/L         <0.033         0.033         A327229         —         —           Dissolved Nitrate (NO2)         mg/L         1.32         0.10         A327229         —         —           Dissolved Draganic Phosphorus (P)         mg/L         0.0181         0.0030         A327229         —         —           Dissolved Draganic Phosphorus (P)         mg/L         <0.0181         0.0030         A327229         —         —           Dissolved Draganic Carbon (Carbon (C	BV Labs ID		AEE904			AEE905		
14:00	Sampling Date		2021/08/18			2021/08/18		
Calculated Parameters	Sampling Date		13:00			14:00		
Calculated Parameters         Filter and HNO3 Preservation         N/A         FIELD         ONSITE         FIELD         ONSITE           Dissolved Hardness (CaCO3)         mg/L         332         0.50         A327240         42.6         0.50         A32724           Total Hardness (CaCO3)         mg/L         339         0.50         A327239         41.7         0.50         A32723           Dissolved Nitrate (NO3)         mg/L         <0.010         0.010         A327228            Dissolved Nitrate (NO2)         mg/L         <0.044         0.044         A327227            Dissolved Nitrate (NO2)         mg/L         <0.033         0.033         A327229            Dissolved Organic Phosphorus (P)         mg/L         1.32         0.10         A327229            Dissolved Organic Phosphorus (P)         mg/L         1.32         0.10         A327229            Dissolved Organic Phosphorus (P)         mg/L         1.32         0.10         A327729            Dissolved Organic Phosphorus (P)         mg/L         42.0         2.0         A327366            Misc. Inorganic Supplace (Posphorus (P)         mg/L         42.0         2.0         A327366	COC Number		643673-01-01			643673-01-01		
Filter and HNO3 Preservation   N/A   FIELD   ONSITE   FIELD   ONSITE   Dissolved Hardness (CaCO3)   mg/L   332   0.50   A327240   42.6   0.50   A327247   A2.6   0.50   A327247   A2.6   0.50   A327248   A2.6   0.50   A327239   A1.7   0.50   A327239   A3.7   A3		UNITS	SNP-09	RDL	QC Batch	SNP-12	RDL	QC Batch
Dissolved Hardness (CaCO3)         mg/L         332         0.50         A327240         42.6         0.50         A327247           Total Hardness (CaCO3)         mg/L         339         0.50         A327239         41.7         0.50         A32723           Dissolved Nitrate (N)         mg/L         <0.010	Calculated Parameters							
Total Hardness (CaCO3)	Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD		ONSITE
Dissolved Nitrate (N)         mg/L         <0.010         0.010         A327228	Dissolved Hardness (CaCO3)	mg/L	332	0.50	A327240	42.6	0.50	A327240
Dissolved Nitrate (NO3)	Total Hardness (CaCO3)	mg/L	339	0.50	A327239	41.7	0.50	A327238
Dissolved Nitrite (NO2)   mg/L   <0.033   0.033   A327227	Dissolved Nitrate (N)	mg/L	<0.010	0.010	A327228			
Total Total Kjeldahl Nitrogen (Calc)   mg/L   1.32   0.10   A327229	Dissolved Nitrate (NO3)	mg/L	<0.044	0.044	A327227			
Dissolved Organic Phosphorus (P)   mg/L   0.0181   0.0030   A327246	Dissolved Nitrite (NO2)	mg/L	<0.033	0.033	A327227			
Demand Parameters	Total Total Kjeldahl Nitrogen (Calc)	mg/L	1.32	0.10	A327229			
Biochemical Oxygen Demand (inhib.)   mg/L   <2.0   2.0   A327366	Dissolved Organic Phosphorus (P)	mg/L	0.0181	0.0030	A327246			
Misc. Inorganics         pH         PH         7.00         N/A         A340473         7.45         N/A         A32999           Reactive Silica         mg/L         11         0.25         A342138         —         —           Alkalinity (Total as CaCO3)         mg/L         56.8         0.50         A329993         —         —           Total Organic Carbon (C)         mg/L         18         0.20         A338644         —         —           Alkalinity (PP as CaCO3)         mg/L         <0.50	Demand Parameters	•	•				•	
pH         pH         7.00         N/A         A340473         7.45         N/A         A32999           Reactive Silica         mg/L         11         0.25         A342138         ————————————————————————————————————	Biochemical Oxygen Demand (inhib.)	mg/L	<2.0	2.0	A327366			
Reactive Silica	Misc. Inorganics	•	•				•	
Alkalinity (Total as CaCO3)	рН	рН	7.00	N/A	A340473	7.45	N/A	A329997
Total Organic Carbon (C)	Reactive Silica	mg/L	11	0.25	A342138			
Alkalinity (PP as CaCO3) mg/L	Alkalinity (Total as CaCO3)	mg/L	56.8	0.50	A329993			
Bicarbonate (HCO3)	Total Organic Carbon (C)	mg/L	18	0.20	A338644			
Carbonate (CO3)         mg/L         <0.50         0.50         A329993         Hydroxide (OH)         mg/L         <0.50         0.50         A329993         A329993         A329993         A330604         A330604 <th< td=""><td>Alkalinity (PP as CaCO3)</td><td>mg/L</td><td>&lt;0.50</td><td>0.50</td><td>A329993</td><td></td><td></td><td></td></th<>	Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	A329993			
Hydroxide (OH)	Bicarbonate (HCO3)	mg/L	69.4	0.50	A329993			
Total Suspended Solids mg/L 3.9 1.0 A330604  Anions  Dissolved Fluoride (F) mg/L 0.074 0.050 A340476  Dissolved Chloride (Cl) mg/L 1.5 0.50 A338860  Dissolved Sulphate (SO4) mg/L 310 2.5 A338860  Metals  Dissolved Hex. Chromium (Cr 6+) mg/L <0.00099 0.00099 A326930 <0.00099 0.00099 A326930  Total Hex. Chromium (Cr 6+) mg/L <0.00099 0.00099 A328865 <0.00099 0.00099 A32886  Nutrients  Total Ammonia (N) mg/L 0.019 0.015 A336194 0.025 0.015 A336194  Orthophosphate (P) mg/L <0.0030 0.0030 A327443	Carbonate (CO3)	mg/L	<0.50	0.50	A329993			
Anions  Dissolved Fluoride (F) mg/L 0.074 0.050 A340476  Dissolved Chloride (Cl) mg/L 1.5 0.50 A338860  Dissolved Sulphate (SO4) mg/L 310 2.5 A338860  Metals  Dissolved Hex. Chromium (Cr 6+) mg/L <0.00099 0.00099 A326930 <0.00099 0.00099 A326930  Total Hex. Chromium (Cr 6+) mg/L <0.00099 0.00099 A328865 <0.00099 0.00099 A32886  Nutrients  Total Ammonia (N) mg/L 0.019 0.015 A336194 0.025 0.015 A336194  Orthophosphate (P) mg/L <0.0030 0.0030 A327443	Hydroxide (OH)	mg/L	<0.50	0.50	A329993			
Dissolved Fluoride (F)         mg/L         0.074         0.050         A340476         Second Processing For Support Supp	Total Suspended Solids	mg/L	3.9	1.0	A330604			
Dissolved Chloride (CI)         mg/L         1.5         0.50         A338860           Dissolved Sulphate (SO4)         mg/L         310         2.5         A338860           Metals           Dissolved Hex. Chromium (Cr 6+)         mg/L         <0.00099	Anions	•	•				•	
Dissolved Sulphate (SO4)         mg/L         310         2.5         A338860           Metals           Dissolved Hex. Chromium (Cr 6+)         mg/L         <0.00099	Dissolved Fluoride (F)	mg/L	0.074	0.050	A340476			
Metals         Dissolved Hex. Chromium (Cr 6+)         mg/L         <0.00099         0.00099         A326930         <0.00099         0.00099         A326930           Total Hex. Chromium (Cr 6+)         mg/L         <0.00099	Dissolved Chloride (Cl)	mg/L	1.5	0.50	A338860			
Dissolved Hex. Chromium (Cr 6+)         mg/L         <0.00099         0.00099         A326930         <0.00099         0.00099         A326930           Total Hex. Chromium (Cr 6+)         mg/L         <0.00099	Dissolved Sulphate (SO4)	mg/L	310	2.5	A338860			
Total Hex. Chromium (Cr 6+)         mg/L         <0.00099         0.00099         A328865         <0.00099         0.00099         A328865           Nutrients         Total Ammonia (N)         mg/L         0.019         0.015         A336194         0.025         0.015         A336194           Orthophosphate (P)         mg/L         <0.0030	Metals	•	•				•	
Nutrients           Total Ammonia (N)         mg/L         0.019         0.015         A336194         0.025         0.015         A336194           Orthophosphate (P)         mg/L         <0.0030	Dissolved Hex. Chromium (Cr 6+)	mg/L	<0.00099	0.00099	A326930	<0.00099	0.00099	A326930
Total Ammonia (N)         mg/L         0.019         0.015         A336194         0.025         0.015         A336194           Orthophosphate (P)         mg/L         <0.0030	Total Hex. Chromium (Cr 6+)	mg/L	<0.00099	0.00099	A328865	<0.00099	0.00099	A328865
Orthophosphate (P) mg/L <0.0030 0.0030 A327443	Nutrients		•	•			•	•
	Total Ammonia (N)	mg/L	0.019	0.015	A336194	0.025	0.015	A336194
	Orthophosphate (P)	mg/L	<0.0030	0.0030	A327443			
	Dissolved Phosphorus (P)	mg/L	0.037	0.0030				

## **RESULTS OF CHEMICAL ANALYSES OF WATER**

BV Labs ID		AEE904			AEE905		
Sampling Data		2021/08/18			2021/08/18		
Sampling Date		13:00			14:00		
COC Number		643673-01-01			643673-01-01		
	UNITS	SNP-09	RDL	QC Batch	SNP-12	RDL	QC Batch
Dissolved Inorganic Phosphorus (P)	mg/L	0.0185	0.0020	A338624			
Total Inorganic Phosphorus (P)	mg/L	0.0450	0.0020	A341516			
Dissolved Nitrite (N)	mg/L	<0.010	0.010	A327557			
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.010	0.010	A327557			
Total Nitrogen (N)	mg/L	1.3 (1)	0.10	A339640			
Physical Properties	•			•			•
Conductivity	uS/cm	717	1.0	A329998	102	1.0	A329998
Physical Properties	•			•			•
Turbidity	NTU	1.3	0.10	A327206			
Total Dissolved Solids	mg/L	550	1.0	A331399			
RDL = Reportable Detection Limit	•	•		•			•

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

### **MERCURY BY COLD VAPOR (WATER)**

BV Labs 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	SNP-09	SNP-12	RDL	QC Batch		
Elements								
Dissolved Mercury (Hg)	ug/L	0.0082	<0.0019	<0.0019	0.0019	A338619		
Dissolved Mercury (Hg) Total Mercury (Hg)	ug/L ug/L	0.0082 0.0130	<0.0019 <0.0019	<0.0019 <0.0019	0.0019	A338619 A338636		

BV Labs ID		AEE903		AEE904			AEE905		
		2021/08/18		2021/08/18			2021/08/18		
Sampling Date		12:00		13:00			14:00		
COC Number		643673-01-01		643673-01-01			643673-01-01		
	UNITS	SNP-03A	RDL	SNP-09	RDL	QC Batch	SNP-12	RDL	QC Batch
Dissolved Metals by ICPMS									
Dissolved Aluminum (AI)	ug/L	753	2.5	34.6	0.50	A330201	22.3	0.50	A330201
Dissolved Antimony (Sb)	ug/L	0.18	0.10	0.299	0.020	A330201			
Dissolved Arsenic (As)	ug/L	4.27	0.10	4.24	0.020	A330201	1.05	0.020	A330201
Dissolved Barium (Ba)	ug/L	19.9	0.10	33.3	0.020	A330201	5.96	0.020	A330201
Dissolved Beryllium (Be)	ug/L	0.068	0.050	0.011	0.010	A330201	<0.010	0.010	A330201
Dissolved Bismuth (Bi)	ug/L	<0.025	0.025	<0.0050	0.0050	A330201	<0.0050	0.0050	A330201
Dissolved Boron (B)	ug/L	<50	50	16	10	A330201	11	10	A330201
Dissolved Cadmium (Cd)	ug/L	<0.025	0.025	0.947	0.0050	A330201	0.0091	0.0050	A330201
Dissolved Chromium (Cr)	ug/L	2.38	0.50	0.40	0.10	A330201	0.18	0.10	A330201
Dissolved Cobalt (Co)	ug/L	0.797	0.025	3.61	0.0050	A330201	0.0834	0.0050	A330201
Dissolved Copper (Cu)	ug/L	5.79	0.25	4.09	0.050	A330201			
Dissolved Iron (Fe)	ug/L	1270	5.0	406	1.0	A330201	136	1.0	A330201
Dissolved Lithium (Li)	ug/L	5.8	2.5	24.1	0.50	A330201	2.29	0.50	A330201
Dissolved Manganese (Mn)	ug/L	31.2	0.25	114	0.050	A330201	20.5	0.050	A330201
Dissolved Molybdenum (Mo)	ug/L	<0.25	0.25	0.157	0.050	A330201	0.646	0.050	A330201
Dissolved Nickel (Ni)	ug/L	6.36	0.10	161	0.020	A330201	1.61	0.020	A330201
Dissolved Phosphorus (P)	ug/L	62	10	17.7	2.0	A330201	10.7	2.0	A330201
Dissolved Selenium (Se)	ug/L	<0.20	0.20	0.091	0.040	A330201	<0.040	0.040	A330201
Dissolved Silicon (Si)	ug/L	2910	250	4060	50	A330201	264	50	A330201
Dissolved Silver (Ag)	ug/L	<0.025	0.025	<0.0050	0.0050	A330201	<0.0050	0.0050	A330201
Dissolved Strontium (Sr)	ug/L	25.3	0.25	150	0.050	A330201	31.5	0.050	A330201
Dissolved Thallium (TI)	ug/L	<0.010	0.010	0.0037	0.0020	A330201	<0.0020	0.0020	A330201
Dissolved Tin (Sn)	ug/L	<1.0	1.0	<0.20	0.20	A330201	<0.20	0.20	A330201
Dissolved Titanium (Ti)	ug/L	13.0	2.5	0.73	0.50	A330201	1.40	0.50	A330201
Dissolved Uranium (U)	ug/L	0.477	0.010	0.165	0.0020	A330201	0.107	0.0020	A330201
Dissolved Vanadium (V)	ug/L	3.4	1.0	0.27	0.20	A330201	0.23	0.20	A330201
Dissolved Zinc (Zn)	ug/L	9.20	0.50	947	0.10	A330201			
Dissolved Zirconium (Zr)	ug/L	3.74	0.50	0.18	0.10	A330201	<0.10	0.10	A330201
Dissolved Calcium (Ca)	mg/L	5.69	0.25	74.5	0.050	A327242	10.7	0.050	A327242
Dissolved Magnesium (Mg)	mg/L	3.37	0.25	35.5	0.050	A327242	3.85	0.050	A327242
Dissolved Potassium (K)	mg/L	1.18	0.25	4.03	0.050	A327242	1.61	0.050	A327242
Dissolved Sodium (Na)	mg/L	1.49	0.25	4.27	0.050	A327242	2.31	0.050	A327242
Dissolved Sulphur (S)	mg/L	<15	15	73.0	3.0	A327242	<3.0	3.0	A327242
RDL = Reportable Detection Lir	nit								

BV Labs ID		AEE903		AEE904			AEE905		
		2021/08/18		2021/08/18			2021/08/18		
Sampling Date		12:00		13:00			14:00		
COC Number		643673-01-01		643673-01-01			643673-01-01		
	UNITS	SNP-03A	RDL	SNP-09	RDL	QC Batch	SNP-12	RDL	QC Batch
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L	1050	2.5	38.3	0.50	A330202	49.0	0.50	A330202
Total Antimony (Sb)	ug/L	<0.10	0.10	0.229	0.020	A330202	0.044	0.020	A330202
Total Arsenic (As)	ug/L	4.61	0.10	6.18	0.020	A330202	0.885	0.020	A330202
Total Barium (Ba)	ug/L	23.7	0.10	33.4	0.020	A330202	5.29	0.020	A330202
Total Beryllium (Be)	ug/L	0.078	0.050	0.012	0.010	A330202	<0.010	0.010	A330202
Total Bismuth (Bi)	ug/L	<0.025	0.025	<0.0050	0.0050	A330202	<0.0050	0.0050	A330202
Total Boron (B)	ug/L	<50	50	16	10	A330202	<10	10	A330202
Total Cadmium (Cd)	ug/L	<0.025	0.025	1.05	0.0050	A330202	<0.0050	0.0050	A330202
Total Chromium (Cr)	ug/L	2.39	0.50	0.40	0.10	A330202	0.15	0.10	A330202
Total Cobalt (Co)	ug/L	1.17	0.025	4.20	0.0050	A330202	0.0807	0.0050	A330202
Total Copper (Cu)	ug/L	4.63	0.25	4.34	0.050	A330202	0.892	0.050	A330202
Total Iron (Fe)	ug/L	996	5.0	610	1.0	A330202	129	1.0	A330202
Total Lead (Pb)	ug/L	0.261	0.025	0.110	0.0050	A330202	0.0409	0.0050	A330202
Total Lithium (Li)	ug/L	6.4	2.5	26.1	0.50	A330202	2.26	0.50	A330202
Total Manganese (Mn)	ug/L	48.9	0.25	118	0.050	A330202	16.9	0.050	A330202
Total Molybdenum (Mo)	ug/L	<0.25	0.25	0.184	0.050	A330202	0.730	0.050	A330202
Total Nickel (Ni)	ug/L	7.37	0.10	171	0.020	A330202	1.27	0.020	A330202
Total Phosphorus (P)	ug/L	52	10	28.0	2.0	A330202	19.9	2.0	A330202
Total Selenium (Se)	ug/L	<0.20	0.20	0.094	0.040	A330202	<0.040	0.040	A330202
Total Silicon (Si)	ug/L	3900	250	4090	50	A330202	349	50	A330202
Total Silver (Ag)	ug/L	<0.025	0.025	<0.0050	0.0050	A330202	<0.0050	0.0050	A330202
Total Strontium (Sr)	ug/L	27.0	0.25	143	0.050	A330202	26.9	0.050	A330202
Total Thallium (TI)	ug/L	<0.010	0.010	0.0056	0.0020	A330202	<0.0020	0.0020	A330202
Total Tin (Sn)	ug/L	<1.0	1.0	<0.20	0.20	A330202	<0.20	0.20	A330202
Total Titanium (Ti)	ug/L	12.8	2.5	1.26	0.50	A330202	2.46	0.50	A330202
Total Uranium (U)	ug/L	0.457	0.010	0.195	0.0020	A330202	0.118	0.0020	A330202
Total Vanadium (V)	ug/L	2.7	1.0	0.38	0.20	A330202	0.34	0.20	A330202
Total Zinc (Zn)	ug/L	8.31	0.50	1060	0.10	A330202	1.53	0.10	A330202
Total Zirconium (Zr)	ug/L	3.90	0.50	0.18	0.10	A330202	0.10	0.10	A330202
Total Calcium (Ca)	mg/L	5.60	0.25	74.5	0.050	A327244	10.5	0.050	A327243
Total Magnesium (Mg)	mg/L	3.58	0.25	37.1	0.050	A327244	3.78	0.050	A327243
Total Potassium (K)	mg/L	1.05	0.25	4.00	0.050	A327244	1.42	0.050	A327243
Total Sodium (Na)	mg/L	1.52	0.25	3.97	0.050	A327244	1.84	0.050	A327243
RDL = Reportable Detection Lir	nit								

BV Labs Job #: C160999 Report Date: 2021/09/07

New Discovery Mines Ltd. Client Project #: MON GOLD PROJECT

BV Labs ID		AEE903		AEE904			AEE905		
Sampling Date		2021/08/18		2021/08/18			2021/08/18		
Sampling Date		12:00		13:00			14:00		
COC Number		643673-01-01		643673-01-01			643673-01-01		
	UNITS	SNP-03A	RDL	SNP-09	RDL	QC Batch	SNP-12	RDL	QC Batch
Total Sulphur (S)	mg/L	<15	15	80.0	3.0	A327244	<3.0	3.0	A327243
RDL = Reportable Detection Lir	nit								

### **GENERAL COMMENTS**

Sample AEE903 [SNP-03A] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

### **ELEMENTS BY ATOMIC SPECTROSCOPY (WATER) Comments**

Sample AEE903 [SNP-03A] Elements by ICPMS Low Level (dissolved): Detection limits raised due to sample matrix.

Results relate only to the items tested.



New Discovery Mines Ltd.

Client Project #: MON GOLD PROJECT

### **QUALITY ASSURANCE REPORT**

2.122			QUALITI ASSURANCE					
QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A326335	JEB	RPD	E.Coli DST	2021/08/21	NC	Recovery	%	N/A
A320333	JLD	III D	Total Coliforms DST	2021/08/21	NC		%	N/A
A326930	KWE	Matrix Spike	Dissolved Hex. Chromium (Cr 6+)	2021/08/23	110	108	%	80 - 120
A326930	KWE	Spiked Blank	Dissolved Hex. Chromium (Cr 6+)	2021/08/23		91	%	80 - 120
A326930	KWE	Method Blank	Dissolved Hex. Chromium (Cr 6+)	2021/08/23	<0.00099	31	mg/L	00 120
A326930	KWE	RPD	Dissolved Hex. Chromium (Cr 6+)	2021/08/23	2.2		%	20
A326934	KWE	Matrix Spike	Total Hex. Chromium (Cr 6+)	2021/08/23	2.2	97	%	80 - 120
A326934	KWE	Spiked Blank	Total Hex. Chromium (Cr 6+)	2021/08/23		92	%	80 - 120
A326934	KWE	Method Blank	Total Hex. Chromium (Cr 6+)	2021/08/23	<0.00099	32	mg/L	00 120
A326934	KWE	RPD	Total Hex. Chromium (Cr 6+)	2021/08/23	4.7		%	20
A327206	JEB	Spiked Blank	Turbidity	2021/08/21	7.7	102	%	80 - 120
A327200 A327206	JEB	Method Blank	Turbidity	2021/08/21	<0.10	102	NTU	00 - 120
A327200 A327206	JEB	RPD	Turbidity	2021/08/21	1.8		%	20
A327257	FM0	Matrix Spike	Orthophosphate (P)	2021/08/21	1.0	106	%	80 - 120
A327257	FM0	Spiked Blank	Orthophosphate (P)	2021/08/21		103	%	80 - 120
A327257	FM0	Method Blank	Orthophosphate (P)	2021/08/21	<0.0030	105		60 - 120
A327257	FM0	RPD		2021/08/21	NC		mg/L %	20
A327257 A327363		Spiked Blank	Orthophosphate (P)		INC	101	% %	
	PK8	•	Dissolved Biochemical Oxygen Demand	2021/08/27	-2.0	101		85 - 115
A327363	PK8	Method Blank	Dissolved Biochemical Oxygen Demand	2021/08/27	<2.0		mg/L	20
A327363	PK8	RPD [AEE902-02]	Dissolved Biochemical Oxygen Demand	2021/08/27	NC	04	%	20
A327366	PK8	Spiked Blank	Biochemical Oxygen Demand (inhib.)	2021/08/27	-2.0	91	% /1	85 - 115
A327366	PK8	Method Blank	Biochemical Oxygen Demand (inhib.)	2021/08/27	<2.0		mg/L	20
A327366	PK8	RPD [AEE904-02]	Biochemical Oxygen Demand (inhib.)	2021/08/26	NC	07	%	20
A327443	FM0	Matrix Spike [AEE904-04]	Orthophosphate (P)	2021/08/21		97	%	80 - 120
A327443	FM0	Spiked Blank	Orthophosphate (P)	2021/08/21		100	%	80 - 120
A327443	FM0	Method Blank	Orthophosphate (P)	2021/08/21	<0.0030		mg/L	
A327443	FM0	RPD [AEE904-04]	Orthophosphate (P)	2021/08/21	NC		%	20
A327501	JEB	RPD [AEE902-08]	Fecal Coliforms	2021/08/22	NC		%	N/A
A327533	SKM	Matrix Spike	Dissolved Nitrite (N)	2021/08/21		101	%	80 - 120
			Dissolved Nitrate plus Nitrite (N)	2021/08/21		90	%	80 - 120
A327533	SKM	Spiked Blank	Dissolved Nitrite (N)	2021/08/21		103	%	80 - 120
			Dissolved Nitrate plus Nitrite (N)	2021/08/21		104	%	80 - 120
A327533	SKM	Method Blank	Dissolved Nitrite (N)	2021/08/21	<0.010		mg/L	
			Dissolved Nitrate plus Nitrite (N)	2021/08/21	<0.010		mg/L	
A327533	SKM	RPD	Dissolved Nitrite (N)	2021/08/21	NC		%	20
			Dissolved Nitrate plus Nitrite (N)	2021/08/21	NC		%	20
A327557	SKM	Matrix Spike	Dissolved Nitrite (N)	2021/08/21		94	%	80 - 120
			Dissolved Nitrate plus Nitrite (N)	2021/08/21		115	%	80 - 120
A327557	SKM	Spiked Blank	Dissolved Nitrite (N)	2021/08/21		101	%	80 - 120
			Dissolved Nitrate plus Nitrite (N)	2021/08/21		99	%	80 - 120
A327557	SKM	Method Blank	Dissolved Nitrite (N)	2021/08/21	<0.010		mg/L	
			Dissolved Nitrate plus Nitrite (N)	2021/08/21	<0.010		mg/L	
A327557	SKM	RPD	Dissolved Nitrite (N)	2021/08/21	NC		%	20
			Dissolved Nitrate plus Nitrite (N)	2021/08/21	NC		%	20
A327621	JEB	Spiked Blank	Turbidity	2021/08/22		102	%	80 - 120
A327621	JEB	Method Blank	Turbidity	2021/08/22	<0.10		NTU	
A327621	JEB	RPD	Turbidity	2021/08/22	1.8		%	20
A327833	JB9	Matrix Spike [AEE902-06]	Total Oil and grease	2021/08/23		100	%	70 - 130
A327833	JB9	Spiked Blank	Total Oil and grease	2021/08/23		97	%	70 - 130
A327833	JB9	Method Blank	Total Oil and grease	2021/08/23	<1.0		mg/L	
A327833	JB9	RPD	Total Oil and grease	2021/08/23	13		%	40
A328865	KWE	Matrix Spike [AEE905-03]	Total Hex. Chromium (Cr 6+)	2021/08/25		85	%	80 - 120
A328865	KWE	Spiked Blank	Total Hex. Chromium (Cr 6+)	2021/08/25		95	%	80 - 120
A328865	KWE	Method Blank	Total Hex. Chromium (Cr 6+)	2021/08/25	<0.00099		mg/L	
A328865	KWE	RPD [AEE905-03]	Total Hex. Chromium (Cr 6+)	2021/08/25	NC		%	20

BV Labs Job #: C160999 Report Date: 2021/09/07

New Discovery Mines Ltd.

Client Project #: MON GOLD PROJECT

			QOALITT ASSONANCE					
QA/QC	lua:4	06.7	Davamatav	Data Analysed	Value	Dagayamı	LINUTC	OC Limita
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A329993	KD9	Spiked Blank	Alkalinity (Total as CaCO3)	2021/08/24	-0.50	95	%	80 - 120
A329993	KD9	Method Blank	Alkalinity (Total as CaCO3)	2021/08/24	<0.50		mg/L	
			Alkalinity (PP as CaCO3)	2021/08/24	<0.50		mg/L	
			Bicarbonate (HCO3)	2021/08/24	<0.50		mg/L	
			Carbonate (CO3)	2021/08/24	<0.50		mg/L	
			Hydroxide (OH)	2021/08/24	<0.50		mg/L	
A329993	KD9	RPD	Alkalinity (Total as CaCO3)	2021/08/24	5.0		%	20
			Alkalinity (PP as CaCO3)	2021/08/24	NC		%	20
			Bicarbonate (HCO3)	2021/08/24	5.0		%	20
			Carbonate (CO3)	2021/08/24	NC		%	20
			Hydroxide (OH)	2021/08/24	NC		%	20
A329997	KD9	Spiked Blank	рН	2021/08/24		99	%	97 - 103
A329997	KD9	RPD	рН	2021/08/24	1.1		%	N/A
A329998	KD9	Spiked Blank	Conductivity	2021/08/24		99	%	90 - 110
A329998	KD9	Method Blank	Conductivity	2021/08/24	<1.0		uS/cm	
A329998	KD9	RPD	Conductivity	2021/08/24	0.32		%	20
A330201	PC5	Matrix Spike	Dissolved Aluminum (Al)	2021/08/24		107	%	80 - 120
			Dissolved Antimony (Sb)	2021/08/24		112	%	80 - 120
			Dissolved Arsenic (As)	2021/08/24		115	%	80 - 120
			Dissolved Barium (Ba)	2021/08/24		108	%	80 - 120
			Dissolved Beryllium (Be)	2021/08/24		116	%	80 - 120
			Dissolved Bismuth (Bi)	2021/08/24		120	%	80 - 120
			Dissolved Boron (B)	2021/08/24		129 (1)	%	80 - 120
			Dissolved Cadmium (Cd)	2021/08/24		111	%	80 - 120
			Dissolved Chromium (Cr)	2021/08/24		115	%	80 - 120
			Dissolved Cobalt (Co)	2021/08/24		113	%	80 - 120
			Dissolved Copper (Cu)	2021/08/24		111	%	80 - 120
			Dissolved Iron (Fe)	2021/08/24		111	%	80 - 120
			Dissolved Lithium (Li)	2021/08/24		114	%	80 - 120
			Dissolved Littlidin (Li)  Dissolved Manganese (Mn)	2021/08/24		120	%	80 - 120
							% %	
			Dissolved Molybdenum (Mo)	2021/08/24		111		80 - 120
			Dissolved Nickel (Ni)	2021/08/24		116	%	80 - 120
			Dissolved Phosphorus (P)	2021/08/24		111	%	80 - 120
			Dissolved Selenium (Se)	2021/08/24		115	%	80 - 120
			Dissolved Silicon (Si)	2021/08/24		98	%	80 - 120
			Dissolved Silver (Ag)	2021/08/24		114	%	80 - 120
			Dissolved Strontium (Sr)	2021/08/24		111	%	80 - 120
			Dissolved Thallium (TI)	2021/08/24		116	%	80 - 120
			Dissolved Tin (Sn)	2021/08/24		127 (1)	%	80 - 120
			Dissolved Titanium (Ti)	2021/08/24		105	%	80 - 120
			Dissolved Uranium (U)	2021/08/24		117	%	80 - 120
			Dissolved Vanadium (V)	2021/08/24		114	%	80 - 120
			Dissolved Zinc (Zn)	2021/08/24		114	%	80 - 120
			Dissolved Zirconium (Zr)	2021/08/24		106	%	80 - 120
A330201	PC5	Spiked Blank	Dissolved Aluminum (Al)	2021/08/24		87	%	80 - 120
			Dissolved Antimony (Sb)	2021/08/24		107	%	80 - 120
			Dissolved Arsenic (As)	2021/08/24		95	%	80 - 120
			Dissolved Barium (Ba)	2021/08/24		90	%	80 - 120
			Dissolved Beryllium (Be)	2021/08/24		104	%	80 - 120
			Dissolved Bismuth (Bi)	2021/08/24		100	%	80 - 120
			Dissolved Boron (B)	2021/08/24		121 (1)	%	80 - 120
			Dissolved Cadmium (Cd)	2021/08/24		92	%	80 - 120
			Dissolved Chromium (Cr)	2021/08/24		105	%	80 - 120
			Dissolved Cobalt (Co)	2021/08/24		102	%	80 - 120
			Dissolved Copper (Cu)	2021/08/24		90	%	80 - 120
			Dissolved copper (cd)	2021/00/24		50	/0	55 120

New Discovery Mines Ltd.

Client Project #: MON GOLD PROJECT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
20001		٦٠ ١٢٠	Dissolved Iron (Fe)	2021/08/24	· aiac	109	%	80 - 120
			Dissolved Lithium (Li)	2021/08/24		102	%	80 - 120
			Dissolved Manganese (Mn)	2021/08/24		106	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/08/24		94	%	80 - 120
			Dissolved Nickel (Ni)	2021/08/24		104	%	80 - 120
			Dissolved Phosphorus (P)	2021/08/24		87	%	80 - 120
			Dissolved Filosphords (1)	2021/08/24		101	%	80 - 120
			Dissolved Silicon (Si)	2021/08/24		80	%	80 - 120
			Dissolved Silver (Ag)	2021/08/24		114	%	80 - 120
			Dissolved Strontium (Sr)	2021/08/24		91	%	80 - 120
			Dissolved Thallium (TI)	2021/08/24		96	%	80 - 120
			Dissolved Triallidit (Tr) Dissolved Tin (Sn)	2021/08/24		107	%	80 - 120
			Dissolved Titl (311) Dissolved Titanium (Ti)	2021/08/24		85	% %	80 - 120
				• •		96		
			Dissolved Uranium (U)	2021/08/24			%	80 - 120
			Dissolved Vanadium (V)	2021/08/24		103	%	80 - 120
			Dissolved Zinc (Zn)	2021/08/24		116	%	80 - 120
220201	D.C.=	NA-41 1 D1 - 1	Dissolved Zirconium (Zr)	2021/08/24	.0.56	88	%	80 - 120
330201	PC5	Method Blank	Dissolved Aluminum (Al)	2021/08/24	<0.50		ug/L	
			Dissolved Antimony (Sb)	2021/08/24	<0.020		ug/L	
			Dissolved Arsenic (As)	2021/08/24	<0.020		ug/L	
			Dissolved Barium (Ba)	2021/08/24	<0.020		ug/L	
			Dissolved Beryllium (Be)	2021/08/24	<0.010		ug/L	
			Dissolved Bismuth (Bi)	2021/08/24	<0.0050		ug/L	
			Dissolved Boron (B)	2021/08/24	<10		ug/L	
			Dissolved Cadmium (Cd)	2021/08/24	<0.0050		ug/L	
			Dissolved Chromium (Cr)	2021/08/24	<0.10		ug/L	
			Dissolved Cobalt (Co)	2021/08/24	<0.0050		ug/L	
			Dissolved Copper (Cu)	2021/08/24	< 0.050		ug/L	
			Dissolved Iron (Fe)	2021/08/24	<1.0		ug/L	
			Dissolved Lithium (Li)	2021/08/24	<0.50		ug/L	
			Dissolved Manganese (Mn)	2021/08/24	< 0.050		ug/L	
			Dissolved Molybdenum (Mo)	2021/08/24	< 0.050		ug/L	
			Dissolved Nickel (Ni)	2021/08/24	<0.020		ug/L	
			Dissolved Phosphorus (P)	2021/08/24	<2.0		ug/L	
			Dissolved Selenium (Se)	2021/08/24	<0.040		ug/L	
			Dissolved Silicon (Si)	2021/08/24	<50		ug/L	
			Dissolved Silver (Ag)	2021/08/24	<0.0050		ug/L	
			Dissolved Strontium (Sr)	2021/08/24	< 0.050		ug/L	
			Dissolved Thallium (TI)	2021/08/24	<0.0020		ug/L	
			Dissolved Tin (Sn)	2021/08/24	<0.20		ug/L	
			Dissolved Titanium (Ti)	2021/08/24	<0.50		ug/L	
			Dissolved Tranium (T)  Dissolved Uranium (U)	2021/08/24	<0.0020		ug/L ug/L	
			Dissolved Oranium (U)  Dissolved Vanadium (V)	2021/08/24	<0.0020		ug/L ug/L	
			Dissolved Variadium (V)  Dissolved Zinc (Zn)		<0.20			
			• •	2021/08/24			ug/L	
220204	חכר	DDD	Dissolved Zirconium (Zr)	2021/08/24	<0.10		ug/L	20
330201	PC5	RPD	Dissolved Aluminum (Al)	2021/08/24	NC		%	20
			Dissolved Antimony (Sb)	2021/08/24	NC		%	20
			Dissolved Arsenic (As)	2021/08/24	NC		%	20
			Dissolved Barium (Ba)	2021/08/24	NC		%	20
			Dissolved Bismuth (Bi)	2021/08/24	NC		%	20
			Dissolved Boron (B)	2021/08/24	NC		%	20
			Dissolved Cadmium (Cd)	2021/08/24	NC		%	20
			Dissolved Chromium (Cr)	2021/08/24	NC		%	20
			Dissolved Iron (Fe)	2021/08/24	NC		%	20
			Dissolved Lithium (Li)	2021/08/24	NC		%	20

New Discovery Mines Ltd.

Client Project #: MON GOLD PROJECT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
		- N	Dissolved Manganese (Mn)	2021/08/24	NC	,	%	20
			Dissolved Molybdenum (Mo)	2021/08/24	NC		%	20
			Dissolved Nickel (Ni)	2021/08/24	NC		%	20
			Dissolved Selenium (Se)	2021/08/24	NC		%	20
			Dissolved Silicon (Si)	2021/08/24	NC		%	20
			Dissolved Silver (Ag)	2021/08/24	NC		%	20
			Dissolved Strontium (Sr)	2021/08/24	NC		%	20
			Dissolved Thallium (TI)	2021/08/24	1.0		%	20
			Dissolved Tin (Sn)	2021/08/24	NC		%	20
			Dissolved Titanium (Ti)	2021/08/24	NC		%	20
			Dissolved Vanadium (V)	2021/08/24	NC		%	20
			Dissolved Zinc (Zn)	2021/08/24	6.6		%	20
			Dissolved Zirconium (Zr)	2021/08/24	NC		%	20
A330202	PC5	Matrix Spike	Total Aluminum (Al)	2021/08/24		104	%	80 - 120
71330202	. 03	Matrix Spine	Total Antimony (Sb)	2021/08/24		116	%	80 - 120
			Total Arsenic (As)	2021/08/24		113	%	80 - 120
			Total Barium (Ba)	2021/08/24		102	%	80 - 120
			Total Baridin (Ba) Total Beryllium (Be)	2021/08/24		102	%	80 - 120
			Total Bismuth (Bi)	2021/08/24		116	%	80 - 120
			Total Boron (B)	2021/08/24		127 (1)	%	80 - 120
			Total Cadmium (Cd)	2021/08/24		107	%	80 - 120
			Total Cadifiditi (Cd)  Total Chromium (Cr)	2021/08/24		107	%	80 - 120
				• •				
			Total Copper (Cu)	2021/08/24 2021/08/24		118 104	%	80 - 120 80 - 120
			Total Copper (Cu)				%	
			Total Iron (Fe)	2021/08/24		NC	%	80 - 120
			Total Lead (Pb)	2021/08/24		113	%	80 - 120
			Total May 2011 (May)	2021/08/24		124 (1)	%	80 - 120
			Total Manganese (Mn)	2021/08/24		NC	%	80 - 120
			Total Molybdenum (Mo)	2021/08/24		111	%	80 - 120
			Total Nickel (Ni)	2021/08/24		119	%	80 - 120
			Total Phosphorus (P)	2021/08/24		113	%	80 - 120
			Total Selenium (Se)	2021/08/24		114	%	80 - 120
			Total Silicon (Si)	2021/08/24		94	%	80 - 120
			Total Silver (Ag)	2021/08/24		111	%	80 - 120
			Total Strontium (Sr)	2021/08/24		NC	%	80 - 120
			Total Thallium (Tl)	2021/08/24		112	%	80 - 120
			Total Tin (Sn)	2021/08/24		116	%	80 - 120
			Total Titanium (Ti)	2021/08/24		110	%	80 - 120
			Total Uranium (U)	2021/08/24		115	%	80 - 120
			Total Vanadium (V)	2021/08/24		120	%	80 - 120
			Total Zinc (Zn)	2021/08/24		113	%	80 - 120
			Total Zirconium (Zr)	2021/08/24		104	%	80 - 120
A330202	PC5	Spiked Blank	Total Aluminum (AI)	2021/08/24		89	%	80 - 120
			Total Antimony (Sb)	2021/08/24		105	%	80 - 120
			Total Arsenic (As)	2021/08/24		94	%	80 - 120
			Total Barium (Ba)	2021/08/24		89	%	80 - 120
			Total Beryllium (Be)	2021/08/24		107	%	80 - 120
			Total Bismuth (Bi)	2021/08/24		99	%	80 - 120
			Total Boron (B)	2021/08/24		126 (1)	%	80 - 120
			Total Cadmium (Cd)	2021/08/24		93	%	80 - 120
			Total Chromium (Cr)	2021/08/24		103	%	80 - 120
			Total Cobalt (Co)	2021/08/24		101	%	80 - 120
			Total Copper (Cu)	2021/08/24		90	%	80 - 120
			Total Iron (Fe)	2021/08/24		107	%	80 - 120
			Total Lead (Pb)	2021/08/24		96	%	80 - 120

New Discovery Mines Ltd.

Client Project #: MON GOLD PROJECT

QA/QC Batch	Init	OC Type	Parameter	Date Analyzed	Value	Pacovary	UNITS	OC Limits
Datti	Init	QC Type	Total Lithium (Li)	2021/08/24	value	Recovery 104	%	QC Limits 80 - 120
			` '			104		80 - 120 80 - 120
			Total Malyhdanym (Ma)	2021/08/24		92	%	
			Total Molybdenum (Mo)	2021/08/24		103	%	80 - 120
			Total Discharus (D)	2021/08/24		91	% %	80 - 120
			Total Phosphorus (P)	2021/08/24 2021/08/24		101		80 - 120 80 - 120
			Total Silican (Se)				%	
			Total Silicon (Si)	2021/08/24		80	%	80 - 120
			Total Strontium (Sr)	2021/08/24		103 88	%	80 - 120
			Total Strontium (Sr) Total Thallium (Tl)	2021/08/24		95	%	80 - 120
			` '	2021/08/24			%	80 - 120
			Total Titanium (Ti)	2021/08/24		105	%	80 - 120
			Total Uranium (Ti)	2021/08/24		100 95	%	80 - 120 80 - 120
			Total Uranium (U)	2021/08/24			%	
			Total Vanadium (V)	2021/08/24		101	%	80 - 120
			Total Zinc (Zn)	2021/08/24		129 (1)	%	80 - 120
	D.C.E.		Total Zirconium (Zr)	2021/08/24	0.50	87	%	80 - 120
A330202	PC5	Method Blank	Total Autimore (Al)	2021/08/24	<0.50		ug/L	
			Total Antimony (Sb)	2021/08/24	<0.020		ug/L	
			Total Arsenic (As)	2021/08/24	<0.020		ug/L	
			Total Barium (Ba)	2021/08/24	<0.020		ug/L	
			Total Beryllium (Be)	2021/08/24	<0.010		ug/L	
			Total Bismuth (Bi)	2021/08/24	<0.0050		ug/L	
			Total Boron (B)	2021/08/24	<10		ug/L	
			Total Cadmium (Cd)	2021/08/24	<0.0050		ug/L	
			Total Chromium (Cr)	2021/08/24	<0.10		ug/L	
			Total Cobalt (Co)	2021/08/24	<0.0050		ug/L	
			Total Copper (Cu)	2021/08/24	<0.050		ug/L	
			Total Iron (Fe)	2021/08/24	<1.0		ug/L	
			Total Lead (Pb)	2021/08/24	<0.0050		ug/L	
			Total Lithium (Li)	2021/08/24	<0.50		ug/L	
			Total Manganese (Mn)	2021/08/24	<0.050		ug/L	
			Total Molybdenum (Mo)	2021/08/24	<0.050		ug/L	
			Total Nickel (Ni)	2021/08/24	<0.020		ug/L	
			Total Phosphorus (P)	2021/08/24	<2.0		ug/L	
			Total Selenium (Se)	2021/08/24	<0.040		ug/L	
			Total Silicon (Si)	2021/08/24	<50		ug/L	
			Total Silver (Ag)	2021/08/24	<0.0050		ug/L	
			Total Strontium (Sr)	2021/08/24	<0.050		ug/L	
			Total Thallium (TI)	2021/08/24	<0.0020		ug/L	
			Total Tin (Sn)	2021/08/24	<0.20		ug/L	
			Total Titanium (Ti)	2021/08/24	<0.50		ug/L	
			Total Uranium (U)	2021/08/24	<0.0020		ug/L	
			Total Vanadium (V)	2021/08/24	<0.20		ug/L	
			Total Zinc (Zn)	2021/08/24	<0.10		ug/L	
			Total Zirconium (Zr)	2021/08/24	<0.10		ug/L	
A330202	PC5	RPD	Total Aluminum (Al)	2021/08/24	17		%	20
			Total Antimony (Sb)	2021/08/24	NC		%	20
			Total Arsenic (As)	2021/08/24	2.9		%	20
			Total Barium (Ba)	2021/08/24	3.9		%	20
			Total Beryllium (Be)	2021/08/24	NC		%	20
			Total Bismuth (Bi)	2021/08/24	NC		%	20
			Total Boron (B)	2021/08/24	14		%	20
			Total Cadmium (Cd)	2021/08/24	19		%	20
			Total Chromium (Cr)	2021/08/24	NC		%	20
			Total Cobalt (Co)	2021/08/24	14		%	20

New Discovery Mines Ltd.

Client Project #: MON GOLD PROJECT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Copper (Cu)	2021/08/24	4.8	- 1	%	20
			Total Iron (Fe)	2021/08/24	6.9		%	20
			Total Lead (Pb)	2021/08/24	NC		%	20
			Total Lithium (Li)	2021/08/24	2.2		%	20
			Total Manganese (Mn)	2021/08/24	6.8		%	20
			Total Molybdenum (Mo)	2021/08/24	0.72		%	20
			Total Nickel (Ni)	2021/08/24	3.2		%	20
			Total Selenium (Se)	2021/08/24	18		%	20
			Total Silicon (Si)	2021/08/24	0.13		%	20
			Total Silver (Ag)	2021/08/24	NC		%	20
			Total Strontium (Sr)	2021/08/24	3.7		%	20
			Total Thallium (TI)	2021/08/24	NC		%	20
			Total Tin (Sn)	2021/08/24	NC		%	20
			Total Titanium (Ti)	2021/08/24	NC		%	20
			Total Uranium (U)	2021/08/24	6.7		%	20
			Total Vanadium (V)	2021/08/24	NC		%	20
			Total Zinc (Zn)	2021/08/24	0.32		%	20
			Total Zirconium (Zr)	2021/08/24	NC		%	20
A330604	QNG	Matrix Spike	Total Suspended Solids	2021/08/25		108	%	80 - 120
A330604	QNG	Spiked Blank	Total Suspended Solids	2021/08/25		106	%	80 - 120
A330604	QNG	Method Blank	Total Suspended Solids	2021/08/25	<1.0		mg/L	
A330604	QNG	RPD	Total Suspended Solids	2021/08/25	5.7		%	20
A331399	AP1	Matrix Spike [AEE904-01]	Total Dissolved Solids	2021/08/25		85	%	80 - 120
A331399	AP1	Spiked Blank	Total Dissolved Solids	2021/08/25		112	%	80 - 120
A331399	AP1	Method Blank	Total Dissolved Solids	2021/08/25	<1.0		mg/L	
A331399	AP1	RPD	Total Dissolved Solids	2021/08/25	0.69		%	20
A332176	AP1	Matrix Spike	Total Suspended Solids	2021/08/26		97	%	80 - 120
A332176	AP1	Spiked Blank	Total Suspended Solids	2021/08/26		95	%	80 - 120
A332176	AP1	Method Blank	Total Suspended Solids	2021/08/26	<1.0		mg/L	
A332176	AP1	RPD	Total Suspended Solids	2021/08/26	NC		%	20
A332791	ZWU	Matrix Spike	Total Organic Carbon (C)	2021/08/27		108	%	80 - 120
A332791	ZWU	Spiked Blank	Total Organic Carbon (C)	2021/08/27		109	%	80 - 120
A332791	ZWU	Method Blank	Total Organic Carbon (C)	2021/08/27	<0.20		mg/L	
A332791	ZWU	RPD	Total Organic Carbon (C)	2021/08/27	NC		%	20
A334254	JFH	Matrix Spike	Total Ammonia (N)	2021/08/27		91	%	80 - 120
A334254	JFH	Spiked Blank	Total Ammonia (N)	2021/08/27		100	%	80 - 120
A334254	JFH	Method Blank	Total Ammonia (N)	2021/08/27	<0.015		mg/L	
A334254	JFH	RPD	Total Ammonia (N)	2021/08/27	NC		%	20
A336194	JFH	Matrix Spike	Total Ammonia (N)	2021/08/30		84	%	80 - 120
A336194	JFH	Spiked Blank	Total Ammonia (N)	2021/08/30		105	%	80 - 120
A336194	JFH	Method Blank	Total Ammonia (N)	2021/08/30	<0.015		mg/L	
A336194	JFH	RPD	Total Ammonia (N)	2021/08/30	NC	0.2	%	20
A338619	LQ1	Matrix Spike	Dissolved Mercury (Hg)	2021/09/02		93	%	80 - 120
A338619	LQ1	Spiked Blank	Dissolved Mercury (Hg)	2021/09/01		105	%	80 - 120
A338619	LQ1	Method Blank	Dissolved Mercury (Hg)	2021/09/01	<0.0019		ug/L	
A338619	LQ1	RPD	Dissolved Mercury (Hg)	2021/09/01	NC	101	%	20
A338624	STI	Matrix Spike [AEE904-06]	Dissolved Inorganic Phosphorus (P)	2021/09/07		104	%	80 - 120
A338624	STI	QC Standard	Dissolved Inorganic Phosphorus (P)	2021/09/07		89	%	80 - 120
A338624	STI	Spiked Blank	Dissolved Inorganic Phosphorus (P)	2021/09/07	-0.0000	101	%	80 - 120
A338624	STI	Method Blank	Dissolved Inorganic Phosphorus (P)	2021/09/07	<0.0020		mg/L	20
A338624	STI	RPD [AEE904-06]	Dissolved Inorganic Phosphorus (P)	2021/09/07	11	400	%	20
A338636	LQ1	Matrix Spike	Total Manager (Hg)	2021/09/02		102	%	80 - 120
A338636	LQ1	Spiked Blank	Total Mercury (Hg)	2021/09/01	0.0010	109	%	80 - 120
A338636	LQ1	Method Blank	Total Manager (Hg)	2021/09/01	<0.0019		ug/L	20
A338636	LQ1	RPD	Total Mercury (Hg)	2021/09/01	NC		%	20



BV Labs Job #: C160999 Report Date: 2021/09/07

New Discovery Mines Ltd.

Client Project #: MON GOLD PROJECT

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	QA/QC	114	00 T	Development	Data Analysis	Malica	D	LINUTC	061::
	Batch	Init	QC Type	Parameter  Tatal Operania Contrar (C)	Date Analyzed	Value	Recovery	UNITS	QC Limits
	A338644	ZWU	Matrix Spike [AEE903-05]	Total Organic Carbon (C)	2021/09/02		NC	%	80 - 120
	A338644	ZWU	Spiked Blank	Total Organic Carbon (C)	2021/09/02	2.4	105	%	80 - 120
	A338644	ZWU	RPD [AEE903-05]	Total Organic Carbon (C)	2021/09/02	3.1		%	20
	A338860	BFE	Matrix Spike	Dissolved Chloride (Cl)	2021/09/01		NC	%	80 - 120
				Dissolved Sulphate (SO4)	2021/09/01		NC	%	80 - 120
	A338860	BFE	Spiked Blank	Dissolved Chloride (CI)	2021/09/01		106	%	80 - 120
				Dissolved Sulphate (SO4)	2021/09/01		97	%	80 - 120
	A338860	BFE	Method Blank	Dissolved Chloride (CI)	2021/09/01	0.72, RDL=0.50 (2)		mg/L	
				Dissolved Sulphate (SO4)	2021/09/01	0.63, RDL=0.50 (2)		mg/L	
	A338860	BFE	RPD	Dissolved Chloride (CI)	2021/09/01	2.1		%	20
				Dissolved Sulphate (SO4)	2021/09/01	3.7		%	20
	A339640	FM0	Matrix Spike	Total Nitrogen (N)	2021/09/02		114	%	80 - 120
	A339640	FM0	QC Standard	Total Nitrogen (N)	2021/09/02		106	%	80 - 120
	A339640	FM0	Spiked Blank	Total Nitrogen (N)	2021/09/02		110	%	80 - 120
	A339640	FM0	Method Blank	Total Nitrogen (N)	2021/09/02	<0.020		mg/L	
	A339640	FM0	RPD	Total Nitrogen (N)	2021/09/02	4.3		%	20
	A339968	FM0	Matrix Spike	Dissolved Phosphorus (P)	2021/09/03		105	%	80 - 120
	A339968	FM0	QC Standard	Dissolved Phosphorus (P)	2021/09/03		89	%	80 - 120
	A339968	FM0	Spiked Blank	Dissolved Phosphorus (P)	2021/09/03		102	%	80 - 120
	A339968	FM0	Method Blank	Dissolved Phosphorus (P)	2021/09/03	<0.0030		mg/L	
	A339968	FM0	RPD	Dissolved Phosphorus (P)	2021/09/03	NC		%	20
	A340473	IK0	Spiked Blank	pH	2021/09/03		100	%	97 - 103
	A340473	IKO	RPD	pH	2021/09/03	0.34		%	N/A
	A340476	IK0	Matrix Spike	Dissolved Fluoride (F)	2021/09/03		94	%	80 - 120
	A340476	IK0	Spiked Blank	Dissolved Fluoride (F)	2021/09/03		96	%	80 - 120
	A340476	IK0	Method Blank	Dissolved Fluoride (F)	2021/09/03	<0.050		mg/L	
	A340476	IK0	RPD	Dissolved Fluoride (F)	2021/09/03	0.90		%	20
	A340962	FM0	Matrix Spike	Total Nitrogen (N)	2021/09/03		NC	%	80 - 120
	A340962	FM0	QC Standard	Total Nitrogen (N)	2021/09/03		86	%	80 - 120
	A340962	FM0	Spiked Blank	Total Nitrogen (N)	2021/09/03		91	%	80 - 120
	A340962	FM0	Method Blank	Total Nitrogen (N)	2021/09/03	<0.020		mg/L	
	A340962	FM0	RPD	Total Nitrogen (N)	2021/09/03	3.9		%	20
	A341516	STI	Matrix Spike	Total Inorganic Phosphorus (P)	2021/09/07	- <del>-</del>	105	%	80 - 120
	A341516	STI	QC Standard	Total Inorganic Phosphorus (P)	2021/09/07		89	%	80 - 120
	A341516	STI	Spiked Blank	Total Inorganic Phosphorus (P)	2021/09/07		101	%	80 - 120
	A341516	STI	Method Blank	Total Inorganic Phosphorus (P)	2021/09/07	<0.0020		mg/L	
	A341516	STI	RPD	Total Inorganic Phosphorus (P)	2021/09/07	0		%	20
	A342138	STI	Matrix Spike	Reactive Silica	2021/09/05	ŭ	103	%	80 - 120
	A342138	STI	Spiked Blank	Reactive Silica	2021/09/05		111	%	80 - 120
	A342138	STI	Method Blank	Reactive Silica	2021/09/05	<0.050		mg/L	00 120
	, 13-2130	511	Wiction Dialik	reactive sincu	2021/03/03	·0.030		···6/ L	



New Discovery Mines Ltd. Client Project #: MON GOLD PROJECT

### QUALITY ASSURANCE REPORT(CONT'D)

C	QA/QC								
	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A:	342138	STI	RPD	Reactive Silica	2021/09/05	5.0		%	20

#### N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

- (1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.
- (2) Method blank is <2x RDL.

### **VALIDATION SIGNATURE PAGE**

The analytical data and all QC contained in this report were reviewed and validated by:

- aym Citu

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Gita Pokhrel, Laboratory Supervisor

Sandy Yuan, M.Sc., QP, Scientific Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Your Project #: Mon Gold Project Your C.O.C. #: 643673-02-01

### **Attention: Dave Webb**

New Discovery Mines Ltd. 1901 108W. Cordova St. Vancouver, BC Canada V6B 0G5

Report Date: 2021/11/08

Report #: R3096379 Version: 1 - Final

### **CERTIFICATE OF ANALYSIS**

BV LABS JOB #: C183536 Received: 2021/10/27, 16:40

Sample Matrix: Water # Samples Received: 3

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	3	N/A	2021/11/01	AB SOP-00005	SM 23 2320 B m
Biochemical Oxygen Demand (Inhibited) (1)	3	2021/11/01	2021/11/06	AB SOP-00017	SM 23 5210B m
Low level chloride/sulphate by AC (1)	3	N/A	2021/11/03	AB SOP-00020	SM23-4500-CI/SO4-E m
Dissolved Hexavalent Chromium (1)	3	N/A	2021/11/05	AB SOP-00063	SM 23 3500-Cr B m
Total Hexavalent Chromium (1)	3	N/A	2021/11/05	AB SOP-00063	SM 23 3500-Cr B m
Conductance - Low Level (1)	3	N/A	2021/11/01	AB SOP-00005	SM 23 2510 B m
Fluoride (1)	3	N/A	2021/11/01	AB SOP-00005	SM 23 4500-F C m
Hardness Total (calculated as CaCO3) (2, 3)	3	N/A	2021/11/05	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (2)	3	N/A	2021/11/04	BBY WI-00033	Auto Calc
Mercury (Dissolved) by CV (1, 4)	3	2021/11/05	2021/11/05	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV (1)	3	2021/11/05	2021/11/05	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.) (2)	3	N/A	2021/11/04	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved) (2, 4)	3	N/A	2021/11/04	BBY7SOP-00002	EPA 6020b R2 m
Elements by ICPMS Digested LL (total) (2)	3	2021/11/03	2021/11/04	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total) (2)	3	N/A	2021/11/05	BBY WI-00033	Auto Calc
Ammonia-N (Total) (1)	3	N/A	2021/11/02	AB SOP-00007	SM 23 4500 NH3 A G m
Nitrate and Nitrite (1)	3	N/A	2021/11/01		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (1)	3	N/A	2021/11/01	AB SOP-00091	SM 23 4500 NO3m
Nitrate (as N) (1)	3	2021/10/30	2021/11/01		Auto Calc
Filter and HNO3 Preserve for Metals (2)	3	N/A	2021/10/31	BBY7 WI-00004	SM 23 3030B m
pH @25°C (1, 5)	3	N/A	2021/11/01	AB SOP-00005	SM 23 4500-H+B m
Orthophosphate by Konelab (1, 6)	3	N/A	2021/11/01	AB SOP-00025	SM 23 4500-P A,F m
Silica (Reactive) (1)	3	N/A	2021/11/06	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids - Low Level (1)	3	2021/11/01	2021/11/01	AB SOP-00065	SM 23 2540 C m
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2021/11/03	BBY WI-00033	Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	2	N/A	2021/11/04	BBY WI-00033	Auto Calc
Nitrogen (Total) (1)	1	2021/11/03	2021/11/03	AB SOP-00093	SM 23 4500-N C m
Nitrogen (Total) (1)	2		2021/11/04	AB SOP-00093	SM 23 4500-N C m
Carbon (Total Organic) (1, 7)	3	N/A	2021/11/03	AB SOP-00087	MMCW 119 1996 m
Phosphorus -P (Total, Dissolved) (1, 8)	3	2021/11/03	2021/11/04	AB SOP-00024	SM 23 4500-P A,B,F m
Inorganic Phosphorus (Total , dissolved) (1, 4)	3	N/A	2021/11/05	AB SOP-00024	SM 23 4500-P A,B,F m



Your Project #: Mon Gold Project Your C.O.C. #: 643673-02-01

**Attention: Dave Webb** 

New Discovery Mines Ltd. 1901 108W. Cordova St. Vancouver, BC Canada V6B 0G5

Report Date: 2021/11/08

Report #: R3096379 Version: 1 - Final

### **CERTIFICATE OF ANALYSIS**

BV LABS JOB #: C183536 Received: 2021/10/27, 16:40

Sample Matrix: Water # Samples Received: 3

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	<b>Laboratory Method</b>	Analytical Method
Organic Phosphorus (Total , dissolved) (1)	3	N/A	2021/11/05		Auto Calc
Total Inorganic Phosphorus (1)	3	N/A	2021/11/05	AB SOP-00024	SM 23 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	3	2021/11/01	2021/11/01	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	3	N/A	2021/11/01	CAL SOP-00081	SM 23 2130 B m

#### Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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 $Reference\ Method\ suffix\ "m"\ indicates\ test\ methods\ incorporate\ validated\ modifications\ from\ specific\ reference\ methods\ to\ improve\ performance.$ 

- \* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
- (1) This test was performed by Bureau Veritas Calgary, 4000 19 St. , Calgary, AB, T2E 6P8
- (2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G  $1 \mathrm{K5}$
- (3) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (4) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas Laboratories endeavours to analyze samples as soon as possible after receipt.
- (6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (7) TOC present in the sample should be considered as non-purgeable TOC.



Your Project #: Mon Gold Project Your C.O.C. #: 643673-02-01

**Attention: Dave Webb** 

New Discovery Mines Ltd. 1901 108W. Cordova St. Vancouver, BC Canada V6B 0G5

Report Date: 2021/11/08

Report #: R3096379 Version: 1 - Final

### **CERTIFICATE OF ANALYSIS**

#### BV LABS JOB #: C183536 Received: 2021/10/27, 16:40

(8) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

### **Encryption Key**

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (780) 577-7100

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

### **RESULTS OF CHEMICAL ANALYSES OF WATER**

Bureau Veritas ID		AJK923		AJK924			AJK925		
		2021/10/26		2021/10/26			2021/10/26		
Sampling Date		10:00		10:20			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			•		-				
рН	рН	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 (CI)	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	3'	•	•		•				
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	3'	•	•		•				
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
RDL = Reportable Detection Limit									
N/A = Not Applicable									

### **RESULTS OF CHEMICAL ANALYSES OF WATER**

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
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
DDI Damantahla Dataatian Lincit									

RDL = Reportable Detection Limit

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



### **MERCURY BY COLD VAPOR (WATER)**

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											
Elements											
	ug/L	<0.0019	0.0028	<0.0019	0.0019	A415749					
Elements Dissolved Mercury (Hg) Total Mercury (Hg)	ug/L ug/L	<0.0019 <0.0019	0.0028 <0.0019	<0.0019 <0.0019	0.0019 0.0019	A415749 A415754					

Bureau Veritas ID		AJK923	AJK924	AJK925		
Campling Date		2021/10/26	2021/10/26	2021/10/26		
Sampling Date		10:00	10:20	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 (AI)	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 (TI)	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
RDL = Reportable Detection Li	mit					

Bureau Veritas ID		AJK923	AJK924	AJK925		
Sampling Date		2021/10/26	2021/10/26	2021/10/26		
		10:00	10:20	09:40		
COC Number		643673-02-01	643673-02-01	643673-02-01		
	UNITS	SNP-03	SNP-10	SNP-10A	RDL	QC Batch
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 (TI)	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
RDL = Reportable Detection Li	mit					



Bureau Veritas ID		AJK923	AJK924	AJK925		
Sampling Date		2021/10/26	2021/10/26	2021/10/26		
Sampling Date		10:00	10:20	09:40		
COC Number		643673-02-01	643673-02-01	643673-02-01		
	UNITS	SNP-03	SNP-10	SNP-10A	RDL	QC Batch
Total Sodium (Na)	mg/L	13.7	12.6	2.31	0.25	A407834
Total Sodium (Na) Total Sulphur (S)	mg/L mg/L	13.7 96.4	12.6 132	2.31 <3.0	0.25 3.0	A407834 A407834



#### **GENERAL COMMENTS**

Sample AJK923 [SNP-03]: Sample was analyzed past method specified hold time for Biochemical Oxygen Demand (Inhibited). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for Orthophosphate by Konelab. Dissolved Chromium < Dissolved Hexavalent Chromium. High Hexavalent result is likely due to matrix interference.

Sample AJK924 [SNP-10]: Sample was analyzed past method specified hold time for Biochemical Oxygen Demand (Inhibited). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for Orthophosphate by Konelab.

Sample AJK925 [SNP-10A]: Sample was analyzed past method specified hold time for Biochemical Oxygen Demand (Inhibited). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for Orthophosphate by Konelab.

Results relate only to the items tested.



Bureau Veritas Job #: C183536 Report Date: 2021/11/08 New Discovery Mines Ltd. Client Project #: Mon Gold Project

### **QUALITY ASSURANCE REPORT**

			QUALITI ASSURANCE					
QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A408924	HE1	Matrix Spike [AJK923-01]	Total Dissolved Solids	2021/11/01		119	%	80 - 120
A408924	HE1	Spiked Blank	Total Dissolved Solids	2021/11/01		100	%	80 - 120
A408924	HE1	Method Blank	Total Dissolved Solids	2021/11/01	<1.0		mg/L	
A408924	HE1	RPD [AJK924-01]	Total Dissolved Solids	2021/11/01	0.043		%	20
A408930	AP1	Matrix Spike	Total Suspended Solids	2021/11/01		85	%	80 - 120
A408930	AP1	Spiked Blank	Total Suspended Solids	2021/11/01		98	%	80 - 120
A408930	AP1	Method Blank	Total Suspended Solids	2021/11/01	<1.0		mg/L	
A408930	AP1	RPD	Total Suspended Solids	2021/11/01	NC		%	20
A408984	RKA	Spiked Blank	Biochemical Oxygen Demand (inhib.)	2021/11/06		103	%	85 - 115
A408984	RKA	Method Blank	Biochemical Oxygen Demand (inhib.)	2021/11/06	<2.0		mg/L	
A408984	RKA	RPD	Biochemical Oxygen Demand (inhib.)	2021/11/06	NC		%	20
A409323	KGR	Spiked Blank	Alkalinity (Total as CaCO3)	2021/11/01	110	96	%	80 - 120
A409323	KGR	Method Blank	Alkalinity (Total as CaCO3)	2021/11/01	<0.50	30	mg/L	00 120
A403323	KOK	Wethou blank	Alkalinity (PP as CaCO3)	2021/11/01	<0.50		mg/L	
			Bicarbonate (HCO3)	2021/11/01	<0.50		mg/L	
					<0.50			
			Carbonate (CO3)	2021/11/01			mg/L	
4400333	WCD.	DDD [AU(035 06]	Hydroxide (OH)	2021/11/01	<0.50		mg/L	20
A409323	KGR	RPD [AJK925-06]	Alkalinity (Total as CaCO3)	2021/11/01	1.8		%	20
			Alkalinity (PP as CaCO3)	2021/11/01	NC		%	20
			Bicarbonate (HCO3)	2021/11/01	1.8		%	20
			Carbonate (CO3)	2021/11/01	NC		%	20
			Hydroxide (OH)	2021/11/01	NC		%	20
A409324	KGR	Spiked Blank	Conductivity	2021/11/01		100	%	90 - 110
A409324	KGR	Method Blank	Conductivity	2021/11/01	<1.0		uS/cm	
A409324	KGR	RPD [AJK925-04]	Conductivity	2021/11/01	0.18		%	20
A409326	KGR	Matrix Spike [AJK925-06]	Dissolved Fluoride (F)	2021/11/01		96	%	80 - 120
A409326	KGR	Spiked Blank	Dissolved Fluoride (F)	2021/11/01		91	%	80 - 120
A409326	KGR	Method Blank	Dissolved Fluoride (F)	2021/11/01	<0.050		mg/L	
A409326	KGR	RPD [AJK925-06]	Dissolved Fluoride (F)	2021/11/01	0.77		%	20
A409328	KGR	Spiked Blank	рН	2021/11/01		101	%	97 - 103
A409328	KGR	RPD [AJK925-06]	рН	2021/11/01	0.22		%	N/A
A409522	JFH	Matrix Spike	Dissolved Nitrite (N)	2021/11/01		94	%	80 - 120
			Dissolved Nitrate plus Nitrite (N)	2021/11/01		116	%	80 - 120
A409522	JFH	Spiked Blank	Dissolved Nitrite (N)	2021/11/01		101	%	80 - 120
			Dissolved Nitrate plus Nitrite (N)	2021/11/01		108	%	80 - 120
A409522	JFH	Method Blank	Dissolved Nitrite (N)	2021/11/01	<0.010		mg/L	
			Dissolved Nitrate plus Nitrite (N)	2021/11/01	<0.010		mg/L	
A409522	JFH	RPD	Dissolved Nitrite (N)	2021/11/01	NC		%	20
			Dissolved Nitrate plus Nitrite (N)	2021/11/01	NC		%	20
A409764	STI	Matrix Spike	Orthophosphate (P)	2021/11/01		97	%	80 - 120
A409764	STI	Spiked Blank	Orthophosphate (P)	2021/11/01		98	%	80 - 120
A409764	STI	Method Blank	Orthophosphate (P)	2021/11/01	<0.0030		mg/L	
A409764	STI	RPD	Orthophosphate (P)	2021/11/01	4.5		%	20
A409904	MTG	Spiked Blank	Turbidity	2021/11/01	1.5	104	%	80 - 120
A409904	MTG	Method Blank	Turbidity	2021/11/01	<0.10	104	NTU	00 120
A409904 A409904	MTG	RPD [AJK925-02]	Turbidity	2021/11/01 2021/11/01	11		%	20
A410473	MDO	Matrix Spike [AJK925-09]	Total Organic Carbon (C)	2021/11/01 2021/11/03	11	99	% %	80 - 120
			. ,					80 - 120 80 - 120
A410473	MDO	Spiked Blank	Total Organic Carbon (C)	2021/11/03	ZO 20	100	% ma/l	00 - 120
A410473	MDO	Method Blank	Total Organic Carbon (C)	2021/11/03	<0.20		mg/L	20
A410473	MDO	RPD [AJK925-09]	Total Argus aris (A)	2021/11/03	7.3	405	%	20
A410613	ACR	Matrix Spike	Total Ammonia (N)	2021/11/02		106	%	80 - 120
A410613	ACR	Spiked Blank	Total Ammonia (N)	2021/11/02		103	%	80 - 120
A410613	ACR	Method Blank	Total Ammonia (N)	2021/11/02	<0.015		mg/L	
A410613	ACR	RPD	Total Ammonia (N)	2021/11/02	NC		%	20
A411813	AA1	Matrix Spike	Total Aluminum (AI)	2021/11/04		124 (1)	%	80 - 120

04/00			QUALITI ASSURANCE	- <b>,</b>				
QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
2010.1		ζο . γρο	Total Antimony (Sb)	2021/11/04	74.40	114	%	80 - 120
			Total Arsenic (As)	2021/11/04		112	%	80 - 120
			Total Barium (Ba)	2021/11/04		NC	%	80 - 120
			Total Beryllium (Be)	2021/11/04		102	%	80 - 120
			Total Bismuth (Bi)	2021/11/04		102	%	80 - 120
			Total Boron (B)	2021/11/04		NC	%	80 - 120
			Total Cadmium (Cd)	2021/11/04		106	%	80 - 120
			Total Chromium (Cr)	2021/11/04		105	%	80 - 120
			Total Cobalt (Co)	2021/11/04		104	%	80 - 120
			Total Copper (Cu)	2021/11/04		100	%	80 - 120
			Total Iron (Fe)	2021/11/04		117	%	80 - 120
			Total Lead (Pb)	2021/11/04		102	%	80 - 120
			Total Lithium (Li)	2021/11/04		NC	%	80 - 120
			Total Manganese (Mn)	2021/11/04		NC	%	80 - 120
			Total Molybdenum (Mo)	2021/11/04		NC	%	80 - 120
			Total Nickel (Ni)	2021/11/04		100	%	80 - 120
			Total Phosphorus (P)	2021/11/04		98	%	80 - 120
			Total Selenium (Se)	2021/11/04		113	%	80 - 120
			Total Silicon (Si)	2021/11/04		101	%	80 - 120
			Total Silver (Ag)	2021/11/04		101	%	80 - 120
			Total Strontium (Sr)	2021/11/04		NC	%	80 - 120
			Total Thallium (TI)	2021/11/04		107	% %	80 - 120
			Total Trialium (Tr)	2021/11/04		112	%	80 - 120
			Total Titanium (Ti)	2021/11/04		113	%	80 - 120
			Total Uranium (U)	2021/11/04		113	%	80 - 120
			Total Vanadium (V)	2021/11/04		110	% %	80 - 120
			Total Variation (V) Total Zinc (Zn)	2021/11/04		104	%	80 - 120
			Total Ziric (Zir)  Total Zirconium (Zr)	2021/11/04		113	% %	80 - 120
A 411012	۸ ۸ 1	Cailead Dlank	, ,			98		
A411813	AA1	Spiked Blank	Total Aluminum (Al) Total Antimony (Sb)	2021/11/04 2021/11/04		98 106	% %	80 - 120 80 - 120
			Total Artimony (3b)	2021/11/04		103	%	80 - 120
			Total Barium (Ba)	2021/11/04		106	%	80 - 120
			Total Barillin (Ba)	2021/11/04		100	% %	80 - 120 80 - 120
			Total Bismuth (Bi)	2021/11/04		102	% %	80 - 120
			Total Boron (B)	2021/11/04		103	% %	80 - 120
			Total Cadmium (Cd)	2021/11/04		101	%	80 - 120
			Total Chromium (Cr)	2021/11/04		105	% %	80 - 120
			Total Cobalt (Co)	2021/11/04		106	% %	80 - 120 80 - 120
			Total Copper (Cu)	2021/11/04		105	%	80 - 120
			Total Iron (Fe)	2021/11/04		103	% %	80 - 120 80 - 120
			Total Lead (Pb)	2021/11/04		105		80 - 120 80 - 120
			Total Lead (FB)  Total Lithium (Li)	2021/11/04			%	80 - 120 80 - 120
			` ,			103	%	
			Total Mahadanum (Ma)	2021/11/04		106	%	80 - 120
			Total Molybdenum (Mo)	2021/11/04		109	%	80 - 120
			Total Nickel (Ni)	2021/11/04		105	%	80 - 120
			Total Phosphorus (P)	2021/11/04		95 104	%	80 - 120 80 - 120
			Total Selenium (Se)	2021/11/04		104	%	80 - 120 80 - 120
			Total Silicon (Si)	2021/11/04		93	%	80 - 120
			Total Strentium (Sr.)	2021/11/04		103	%	80 - 120
			Total Strontium (Sr)	2021/11/04		106	%	80 - 120
			Total Thallium (TI)	2021/11/04		105	%	80 - 120
			Total Titagium (Ti)	2021/11/04		104	%	80 - 120
			Total Titanium (Ti)	2021/11/04		111	%	80 - 120
			Total Uranium (U)	2021/11/04		108	%	80 - 120
			Total Vanadium (V)	2021/11/04		107	%	80 - 120

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Zinc (Zn)	2021/11/04		106	%	80 - 120
			Total Zirconium (Zr)	2021/11/04		105	%	80 - 120
A411813	AA1	Method Blank	Total Aluminum (Al)	2021/11/04	<3.0		ug/L	
			Total Antimony (Sb)	2021/11/04	<0.020		ug/L	
			Total Arsenic (As)	2021/11/04	<0.020		ug/L	
			Total Barium (Ba)	2021/11/04	< 0.050		ug/L	
			Total Beryllium (Be)	2021/11/04	< 0.010		ug/L	
			Total Bismuth (Bi)	2021/11/04	< 0.010		ug/L	
			Total Boron (B)	2021/11/04	<10		ug/L	
			Total Cadmium (Cd)	2021/11/04	<0.0050		ug/L	
			Total Chromium (Cr)	2021/11/04	<0.10		ug/L	
			Total Cobalt (Co)	2021/11/04	< 0.010		ug/L	
			Total Copper (Cu)	2021/11/04	<0.10		ug/L	
			Total Iron (Fe)	2021/11/04	<5.0		ug/L	
			Total Lead (Pb)	2021/11/04	<0.020		ug/L	
			Total Lead (1 b)  Total Lithium (Li)	2021/11/04	<0.50		ug/L	
			Total Manganese (Mn)	2021/11/04	<0.10		ug/L ug/L	
			Total Maliganese (1911)  Total Molybdenum (Mo)	2021/11/04	<0.10		ug/L	
			Total Nickel (Ni)	2021/11/04	<0.10		ug/L	
					<5.0			
			Total Phosphorus (P)	2021/11/04	<0.040		ug/L	
			Total Silicon (Se)	2021/11/04	<0.040 <50		ug/L	
			Total Silver (Ac)	2021/11/04			ug/L	
			Total Silver (Ag)	2021/11/04	<0.010		ug/L	
			Total Strontium (Sr)	2021/11/04	<0.050		ug/L	
			Total Thallium (TI)	2021/11/04	<0.0020		ug/L	
			Total Tin (Sn)	2021/11/04	<0.20		ug/L	
			Total Titanium (Ti)	2021/11/04	<2.0		ug/L	
			Total Uranium (U)	2021/11/04	<0.0050		ug/L	
			Total Vanadium (V)	2021/11/04	<0.20		ug/L	
			Total Zinc (Zn)	2021/11/04	<1.0		ug/L	
			Total Zirconium (Zr)	2021/11/04	<0.10		ug/L	
A411813	AA1	RPD	Total Aluminum (Al)	2021/11/04	0.096		%	20
			Total Antimony (Sb)	2021/11/04	0.67		%	20
			Total Arsenic (As)	2021/11/04	0.68		%	20
			Total Barium (Ba)	2021/11/04	1.6		%	20
			Total Beryllium (Be)	2021/11/04	NC		%	20
			Total Bismuth (Bi)	2021/11/04	NC		%	20
			Total Boron (B)	2021/11/04	7.6		%	20
			Total Cadmium (Cd)	2021/11/04	NC		%	20
			Total Chromium (Cr)	2021/11/04	NC		%	20
			Total Cobalt (Co)	2021/11/04	1.3		%	20
			Total Copper (Cu)	2021/11/04	1.7		%	20
			Total Iron (Fe)	2021/11/04	0.33		%	20
			Total Lead (Pb)	2021/11/04	10		%	20
			Total Lithium (Li)	2021/11/04	1.7		%	20
			Total Manganese (Mn)	2021/11/04	0.20		%	20
			Total Molybdenum (Mo)	2021/11/04	0.49		%	20
			Total Nickel (Ni)	2021/11/04	0.45		%	20
			Total Phosphorus (P)	2021/11/04	NC		%	20
			Total Selenium (Se)	2021/11/04	1.2		%	20
			Total Silicon (Si)	2021/11/04	4.2		%	20
			Total Silver (Ag)	2021/11/04	NC		%	20
			Total Strontium (Sr)	2021/11/04	0.51		%	20
			Total Thallium (TI)	2021/11/04	NC		%	20
			Total Tin (Sn)	2021/11/04	NC		%	20

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Titanium (Ti)	2021/11/04	NC		%	20
			Total Uranium (U)	2021/11/04	2.5		%	20
			Total Vanadium (V)	2021/11/04	0.27		%	20
			Total Zinc (Zn)	2021/11/04	3.2		%	20
			Total Zirconium (Zr)	2021/11/04	6.1		%	20
A411831	FM0	Matrix Spike	Total Nitrogen (N)	2021/11/03		NC	%	80 - 120
A411831	FM0	QC Standard	Total Nitrogen (N)	2021/11/03		92	%	80 - 120
A411831	FM0	Spiked Blank	Total Nitrogen (N)	2021/11/03		105	%	80 - 120
A411831	FM0	Method Blank	Total Nitrogen (N)	2021/11/03	<0.020		mg/L	
A411831	FM0	RPD	Total Nitrogen (N)	2021/11/03	11		%	20
A411929	BFE	Matrix Spike	Dissolved Chloride (CI)	2021/11/03		NC	%	80 - 120
			Dissolved Sulphate (SO4)	2021/11/03		NC	%	80 - 120
A411929	BFE	Spiked Blank	Dissolved Chloride (CI)	2021/11/03		99	%	80 - 120
			Dissolved Sulphate (SO4)	2021/11/03		104	%	80 - 120
A411929	BFE	Method Blank	Dissolved Chloride (Cl)	2021/11/03	<0.50		mg/L	
			Dissolved Sulphate (SO4)	2021/11/03	<0.50		mg/L	
A411929	BFE	RPD	Dissolved Chloride (Cl)	2021/11/03	0.81		%	20
A412103	FM0	Matrix Spike	Dissolved Phosphorus (P)	2021/11/04		114	%	80 - 120
A412103	FM0	QC Standard	Dissolved Phosphorus (P)	2021/11/04		88	%	80 - 120
A412103	FM0	Spiked Blank	Dissolved Phosphorus (P)	2021/11/04		96	%	80 - 120
A412103	FM0	Method Blank	Dissolved Phosphorus (P)	2021/11/04	< 0.0030		mg/L	
A412103	FM0	RPD	Dissolved Phosphorus (P)	2021/11/04	NC		%	20
A412157	AA1	Matrix Spike	Dissolved Aluminum (Al)	2021/11/04		99	%	80 - 120
			Dissolved Antimony (Sb)	2021/11/04		101	%	80 - 120
			Dissolved Arsenic (As)	2021/11/04		102	%	80 - 120
			Dissolved Barium (Ba)	2021/11/04		96	%	80 - 120
			Dissolved Beryllium (Be)	2021/11/04		99	%	80 - 120
			Dissolved Bismuth (Bi)	2021/11/04		95	%	80 - 120
			Dissolved Boron (B)	2021/11/04		98	%	80 - 120
			Dissolved Cadmium (Cd)	2021/11/04		100	%	80 - 120
			Dissolved Chromium (Cr)	2021/11/04		94	%	80 - 120
			Dissolved Cobalt (Co)	2021/11/04		91	%	80 - 120
			Dissolved Copper (Cu)	2021/11/04		90	%	80 - 120
			Dissolved Iron (Fe)	2021/11/04		101	%	80 - 120
			Dissolved Lead (Pb)	2021/11/04		97	%	80 - 120
			Dissolved Lithium (Li)	2021/11/04		96	%	80 - 120
			Dissolved Manganese (Mn)	2021/11/04		96	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/11/04		106	%	80 - 120
			Dissolved Nickel (Ni)	2021/11/04		93	%	80 - 120
			Dissolved Phosphorus (P)	2021/11/04		102	%	80 - 120
			Dissolved Selenium (Se)	2021/11/04		102	%	80 - 120
			Dissolved Silicon (Si)	2021/11/04		NC	%	80 - 120
			Dissolved Silver (Ag)	2021/11/04		98	%	80 - 120
			Dissolved Strontium (Sr)	2021/11/04		NC	%	80 - 120
			Dissolved Thallium (TI)	2021/11/04		99	%	80 - 120
			Dissolved Tin (Sn)	2021/11/04		100	%	80 - 120
			Dissolved Titanium (Ti)	2021/11/04		101	%	80 - 120
			Dissolved Uranium (U)	2021/11/04		110	%	80 - 120
			Dissolved Vanadium (V)	2021/11/04		99	%	80 - 120
			Dissolved Zinc (Zn)	2021/11/04		96	%	80 - 120
			Dissolved Ziric (Zir)  Dissolved Zirconium (Zr)	2021/11/04		106	%	80 - 120
A412157	AA1	Spiked Blank	Dissolved Aluminum (Al)	2021/11/04		100	%	80 - 120
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	WAT	Spinea Dialik	Dissolved Antimum (Ai)  Dissolved Antimony (Sb)	2021/11/04		100	% %	80 - 120
			Dissolved Antimony (Sb)  Dissolved Arsenic (As)	2021/11/04		99	% %	80 - 120 80 - 120
			• •					80 - 120 80 - 120
			Dissolved Barium (Ba)	2021/11/04		98	%	

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
Dattii	HIIC	QС туре	Dissolved Beryllium (Be)	2021/11/04	value	100	%	80 - 120
			Dissolved Berymuth (Be)	2021/11/04		96	%	80 - 120
			Dissolved Boron (B)	2021/11/04		99	%	80 - 120
			Dissolved Cadmium (Cd)	2021/11/04		101	%	80 - 120
			Dissolved Carmum (Cr)	2021/11/04		95	% %	80 - 120
			` ,					
			Dissolved Cobalt (Co)	2021/11/04		94	%	80 - 120
			Dissolved Copper (Cu)	2021/11/04		96	%	80 - 120
			Dissolved Iron (Fe)	2021/11/04		100	%	80 - 120
			Dissolved Lead (Pb)	2021/11/04		98	%	80 - 120
			Dissolved Lithium (Li)	2021/11/04		95	%	80 - 120
			Dissolved Manganese (Mn)	2021/11/04		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/11/04		102	%	80 - 120
			Dissolved Nickel (Ni)	2021/11/04		98	%	80 - 120
			Dissolved Phosphorus (P)	2021/11/04		99	%	80 - 120
			Dissolved Selenium (Se)	2021/11/04		102	%	80 - 120
			Dissolved Silicon (Si)	2021/11/04		106	%	80 - 120
			Dissolved Silver (Ag)	2021/11/04		99	%	80 - 120
			Dissolved Strontium (Sr)	2021/11/04		100	%	80 - 120
			Dissolved Thallium (TI)	2021/11/04		97	%	80 - 120
			Dissolved Tin (Sn)	2021/11/04		99	%	80 - 120
			Dissolved Titanium (Ti)	2021/11/04		101	%	80 - 120
			Dissolved Uranium (U)	2021/11/04		107	%	80 - 120
			Dissolved Vanadium (V)	2021/11/04		99	%	80 - 120
			Dissolved Zinc (Zn)	2021/11/04		102	%	80 - 120
			Dissolved Zirconium (Zr)	2021/11/04		103	%	80 - 120
A412157	AA1	Method Blank	Dissolved Aluminum (Al)	2021/11/04	<0.50		ug/L	
			Dissolved Antimony (Sb)	2021/11/04	<0.020		ug/L	
			Dissolved Arsenic (As)	2021/11/04	<0.020		ug/L	
			Dissolved Barium (Ba)	2021/11/04	<0.020		ug/L	
			Dissolved Beryllium (Be)	2021/11/04	<0.010		ug/L	
			Dissolved Bismuth (Bi)	2021/11/04	<0.0050		ug/L	
			Dissolved Boron (B)	2021/11/04	<10		ug/L	
			Dissolved Cadmium (Cd)	2021/11/04	<0.0050		ug/L	
			Dissolved Chromium (Cr)	2021/11/04	<0.10		ug/L	
			Dissolved Cobalt (Co)	2021/11/04	<0.0050		ug/L	
			Dissolved Copper (Cu)	2021/11/04	< 0.050		ug/L	
			Dissolved Iron (Fe)	2021/11/04	<1.0		ug/L	
			Dissolved from (Fe)  Dissolved Lead (Pb)	2021/11/04	<0.0050		ug/L	
			Dissolved Lead (1 b)  Dissolved Lithium (Li)	2021/11/04	<0.50		ug/L	
			Dissolved Lithum (El)  Dissolved Manganese (Mn)	2021/11/04	<0.050			
							ug/L	
			Dissolved Molybdenum (Mo)	2021/11/04	<0.050		ug/L	
			Dissolved Nickel (Ni)	2021/11/04	<0.020		ug/L	
			Dissolved Phosphorus (P)	2021/11/04	<2.0		ug/L	
			Dissolved Selenium (Se)	2021/11/04	<0.040		ug/L	
			Dissolved Silicon (Si)	2021/11/04	<50		ug/L	
			Dissolved Silver (Ag)	2021/11/04	<0.0050		ug/L	
			Dissolved Strontium (Sr)	2021/11/04	<0.050		ug/L	
			Dissolved Thallium (TI)	2021/11/04	<0.0020		ug/L	
			Dissolved Tin (Sn)	2021/11/04	<0.20		ug/L	
			Dissolved Titanium (Ti)	2021/11/04	<0.50		ug/L	
			Dissolved Uranium (U)	2021/11/04	0.0022,		ug/L	
					RDL=0.0020 (2)			
			Dissolved Vanadium (V)	2021/11/04	<0.20		ug/L	
			Dissolved Zinc (Zn)	2021/11/04	<0.10		ug/L	
			Dissolved Zirconium (Zr)	2021/11/04	<0.10		ug/L	

			QUALITY ASSURANCE					
QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A412157	AA1	RPD	Dissolved Aluminum (AI)	2021/11/04	2.1		%	20
			Dissolved Antimony (Sb)	2021/11/04	NC		%	20
			Dissolved Arsenic (As)	2021/11/04	3.0		%	20
			Dissolved Barium (Ba)	2021/11/04	0.22		%	20
			Dissolved Beryllium (Be)	2021/11/04	NC		%	20
			Dissolved Bismuth (Bi)	2021/11/04	NC		%	20
			Dissolved Boron (B)	2021/11/04	NC		%	20
			Dissolved Cadmium (Cd)	2021/11/04	NC		%	20
			Dissolved Chromium (Cr)	2021/11/04	0.57		%	20
			Dissolved Cobalt (Co)	2021/11/04	2.3		%	20
			Dissolved Copper (Cu)	2021/11/04	0.76		%	20
			Dissolved Iron (Fe)	2021/11/04	2.0		%	20
			Dissolved Lead (Pb)	2021/11/04	13		%	20
			Dissolved Lithium (Li)	2021/11/04	0.57		%	20
			Dissolved Manganese (Mn)	2021/11/04	1.9		%	20
			Dissolved Molybdenum (Mo)	2021/11/04	0.14		%	20
			Dissolved Nickel (Ni)	2021/11/04	4.1		%	20
			Dissolved Phosphorus (P)	2021/11/04	6.2		%	20
			Dissolved Selenium (Se)	2021/11/04	18		%	20
			Dissolved Silicon (Si)	2021/11/04	1.3		%	20
			Dissolved Silver (Ag)	2021/11/04	NC		%	20
			Dissolved Strontium (Sr)	2021/11/04	0.093		%	20
			Dissolved Thallium (TI)	2021/11/04	NC		%	20
			Dissolved Tin (Sn)	2021/11/04	NC		%	20
			Dissolved Titanium (Ti)	2021/11/04	NC		% % %	20
			Dissolved Uranium (U)	2021/11/04	1.3			20
			Dissolved Vanadium (V)	2021/11/04	8.3			20
			Dissolved Zinc (Zn)	2021/11/04	15		%	20
			Dissolved Ziric (Zr)	2021/11/04	NC		%	20
			Dissolved Aluminum (Al)	2021/11/04	8.2		%	20
			Dissolved Antimony (Sb)	2021/11/04	NC		%	20
			Dissolved Artimony (35)  Dissolved Arsenic (As)	2021/11/04	NC		%	20
			Dissolved Arsenic (AS)  Dissolved Barium (Ba)	2021/11/04	4.9		%	20
			Dissolved Baridin (Ba)  Dissolved Beryllium (Be)	2021/11/04	NC		%	20
			Dissolved Beryllium (Be) Dissolved Bismuth (Bi)	2021/11/04	NC		% %	20
			Dissolved Boron (B)	2021/11/04	NC NC		% %	20
			Dissolved Cadmium (Cd)	2021/11/04	NC NC			20
			Dissolved Cabalt (Ca)	2021/11/04	NC NC		%	20 20
			Dissolved Cobalt (Co)	2021/11/04	NC NC		%	
			Dissolved Copper (Cu)	2021/11/04	NC		%	20
			Dissolved Iron (Fe)	2021/11/04	1.2		%	20
			Dissolved Lead (Pb)	2021/11/04	NC		%	20
			Dissolved Lithium (Li)	2021/11/04	NC		%	20
			Dissolved Manganese (Mn)	2021/11/04	NC		%	20
			Dissolved Molybdenum (Mo)	2021/11/04	NC		%	20
			Dissolved Nickel (Ni)	2021/11/04	13		%	20
			Dissolved Phosphorus (P)	2021/11/04	NC		%	20
			Dissolved Selenium (Se)	2021/11/04	NC		%	20
			Dissolved Silicon (Si)	2021/11/04	NC		%	20
			Dissolved Silver (Ag)	2021/11/04	NC		%	20
			Dissolved Strontium (Sr)	2021/11/04	4.4		%	20
			Dissolved Thallium (TI)	2021/11/04	NC		%	20
			Dissolved Tin (Sn)	2021/11/04	NC		%	20
			Dissolved Titanium (Ti)	2021/11/04	NC		%	20
			Dissolved Uranium (U)	2021/11/04	NC		%	20



New Discovery Mines Ltd. Client Project #: Mon Gold Project

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Vanadium (V)	2021/11/04	NC		%	20
			Dissolved Zinc (Zn)	2021/11/04	3.7		%	20
			Dissolved Zirconium (Zr)	2021/11/04	NC		%	20
A413393	FM0	Matrix Spike	Total Nitrogen (N)	2021/11/04		NC	%	80 - 120
A413393	FM0	QC Standard	Total Nitrogen (N)	2021/11/04		94	%	80 - 120
A413393	FM0	Spiked Blank	Total Nitrogen (N)	2021/11/04		103	%	80 - 120
A413393	FM0	Method Blank	Total Nitrogen (N)	2021/11/04	<0.020		mg/L	
A413393	FM0	RPD	Total Nitrogen (N)	2021/11/04	2.8		%	20
A413574	FM0	Matrix Spike [AJK925-09]	Total Inorganic Phosphorus (P)	2021/11/05		88	%	80 - 120
A413574	FM0	QC Standard	Total Inorganic Phosphorus (P)	2021/11/05		82	%	80 - 120
A413574	FM0	Spiked Blank	Total Inorganic Phosphorus (P)	2021/11/05		87	%	80 - 120
A413574	FM0	Method Blank	Total Inorganic Phosphorus (P)	2021/11/05	<0.0020		mg/L	
A413574	FM0	RPD [AJK925-09]	Total Inorganic Phosphorus (P)	2021/11/05	3.1		%	20
A413579	FM0	Matrix Spike [AJK925-10]	Dissolved Inorganic Phosphorus (P)	2021/11/05		88	%	80 - 120
A413579	FM0	QC Standard	Dissolved Inorganic Phosphorus (P)	2021/11/05		87	%	80 - 120
A413579	FM0	Spiked Blank	Dissolved Inorganic Phosphorus (P)	2021/11/05		88	%	80 - 120
A413579	FM0	Method Blank	Dissolved Inorganic Phosphorus (P)	2021/11/05	<0.0020		mg/L	
A413579	FM0	RPD [AJK925-10]	Dissolved Inorganic Phosphorus (P)	2021/11/05	0.73		%	20
A415576	KWE	Matrix Spike	Total Hex. Chromium (Cr 6+)	2021/11/05		98	%	80 - 120
A415576	KWE	Spiked Blank	Total Hex. Chromium (Cr 6+)	2021/11/05		100	%	80 - 120
A415576	KWE	Method Blank	Total Hex. Chromium (Cr 6+)	2021/11/05	<0.00099		mg/L	
A415576	KWE	RPD	Total Hex. Chromium (Cr 6+)	2021/11/05	2.7		%	20
A415580	KWE	Matrix Spike [AJK925-08]	Dissolved Hex. Chromium (Cr 6+)	2021/11/05		86	%	80 - 120
A415580	KWE	Spiked Blank	Dissolved Hex. Chromium (Cr 6+)	2021/11/05		104	%	80 - 120
A415580	KWE	Method Blank	Dissolved Hex. Chromium (Cr 6+)	2021/11/05	<0.00099		mg/L	
A415580	KWE	RPD [AJK925-08]	Dissolved Hex. Chromium (Cr 6+)	2021/11/05	NC		%	20
A415749	RK3	Matrix Spike	Dissolved Mercury (Hg)	2021/11/05		102	%	80 - 120
A415749	RK3	Spiked Blank	Dissolved Mercury (Hg)	2021/11/05		97	%	80 - 120
A415749	RK3	Method Blank	Dissolved Mercury (Hg)	2021/11/05	< 0.0019		ug/L	
A415749	RK3	RPD	Dissolved Mercury (Hg)	2021/11/05	NC		%	20
A415754	RK3	Matrix Spike	Total Mercury (Hg)	2021/11/05		106	%	80 - 120
A415754	RK3	Spiked Blank	Total Mercury (Hg)	2021/11/05		97	%	80 - 120
A415754	RK3	Method Blank	Total Mercury (Hg)	2021/11/05	< 0.0019		ug/L	
A415754	RK3	RPD	Total Mercury (Hg)	2021/11/05	NC		%	20
A416958	ZI	Matrix Spike	Reactive Silica	2021/11/06		103	%	80 - 120
A416958	ZI	Spiked Blank	Reactive Silica	2021/11/06		102	%	80 - 120
A416958	ZI	Method Blank	Reactive Silica	2021/11/06	<0.050		mg/L	
A416958	ZI	RPD	Reactive Silica	2021/11/06	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

- (1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.
- (2) Method blank exceeds acceptance limits for UI- 2X RDL acceptable for low level metals determination.



### **VALIDATION SIGNATURE PAGE**

The analytical data and all QC contained in this report were reviewed and validated by:

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Sandy Yuan, M.Sc., QP, Scientific Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BUTE A	Bureau Veritas Laboratories 4608 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-583-6286 Fax:(804) 731 2386 www.bviabs.com  Chain Of Custody Record  (804) 731 2386 www.bviabs.com															Page of					
		INVOICE TO:					Report Info	ormation					Project Information					Laboratory Use Only			
Company Nam	Name #12976 New Discovery Mines Ltd.					Company Name #44691 New Discovery Mines Ltd.						Out	Quotation# C10657						BV Labs Job #	Bottle Order #:	
Contact Name	Assemble Develop					Contact Name Dave Webb						P.C									
Address	1000 100M O-d Ct				Address	200000000000000000000000000000000000000	V. Cordova	177700				0.000	Project # Mon Gold I			lon Gold Project				643673	
	Vancouver BC V6B 0G5						BC V6B 0	G5				Pro	ect Name						Chain Of Custody Record	Project Manager	
Phone	(604) 818-1400 Fax:				Phone	(604) 818-1400 Fax:						Site	Site #							Customer Solutions	
Email	rozemary@dr	vgcl.com, dave@	frwgcl.com		Email	dave@drv	gcl.com					Sar	npled By						C#843673-02-01	Castonier Colditoris	
Regulatory	Criteria				Speci	al Instructions							Analysis F	Requeste	d				Turnaround Time (TAT) Red		
								nking iltere uent lant		. 03b First Narrows	Pol Pol	SNP-09 Seepage from Waste rock pile(s)	SNP-10 Seepage from ore stockpile(s)	Discovery Lake				Regular (State of Push provide advance notice for rush provide Regular (State of Rush TAT is not specified)  Standard TAT = 5-7 Working days for most tests.  Please note: Standard TAT for certain tests such as BOD and Dioxins/Fure days - contact your Project Manager for details.  Job Specific Rush TAT (if applies to entire submission)			
	Note: For regulate	d drinking water samp	oles - please use th	o Drinking Wa	ter Chain of	Custody Form			出世	a &	₩ 6	Se (s)	Se e(s)	Ö					Date Required:Time Required:Time Required:		
	Samples	must be kept cool ( < )	0°C ) from time of sa	ampling until de	livery to BV L	abs 📜		Regulated D	P	SNP-03a & and Culvert	-08 o-	9 all	kpi-7	SNP-12	1 1			10/03/04/04/04/04/04/04/04/04/04/04/04/04/04/		(call lab for #)	
Comm	le Barcode Label	Sample // ocati	on) Identification	Date	ampled	Time Sampled	Matrix	Regu	SNE	SNE	SNF	SNF	Stoc	NS.				# of Bottles	Comments		
1	ie Barcoe Laber	SNP-	63	Dar	26	10:00	WATE	V					1					W CI COLORS	BOD resamo	- Oct 27	
2		SAID	-10	0.	-26	10:20	1.1 -	·	,	43			X						Doy 105th	1 841	
3		SUD	- 10-	0	-21	0.40	WATER	-/	,					-						11.01	
1		3104	100		100	7.70	WARK	//	-					<u></u>	1				9		
4				-				4					-		-			F	eceived in Yellow	knife	
5																		By	merca	2	
6																			C 16.	40	
7								T									oss <del>ens</del> e		OCI 2 7 2021	<del></del>	
8															T				1ce - yes	105-NO	
9																			Temp: X / C	2 / 12	
10								$\top$												1 / 0	
* RELI	QUISHED BY: (Signate	ure/Print)	Date	e: (YY/MM/DD)	Time	1 , /	RECEN	ED BY: (5	Signature/F	rint)	L . ,	Di	ite: (YY/MM/	(DD)	Time	#jars used and			Lab Use Only		
		277 <b>4</b>			1	Wohy	nrelo		ma		neld	_		29	16:30	not submitted	Time Sens	sitive Ten		y Seal Intact on Cooler?	
□ 4.1,3.0,4.4 ▼ves No																					
FOR VIEWIN	IG AT WWW.BVLABS.CO	DM/TERMS-AND-CONDI	TIONS.											CUMENT	IS ACKNOWL	EDGMENT AND ACC	EPTANCE	OF OUR TE	RMS WHICH ARE AVAILABLE White: B	V Labs Yellow: Client	
IT IS THE RE																					
	ICE: YES																				

29-Oct-21 16:40

Bureau Veritas Canada (2019) Inc.

NMU INS-0184