

APPENDIX E.14

2024 Metal and Diamond Mining Effluent Regulations (MDMER)
Annual Report

Submission confirmation

Facility name

Mary River Mine Site

Report type

Annual effluent monitoring report

Reporting period

2024

Submission date

2025/03/29
19:12 (EDT)

Submitter information

Full name

william bowden

Position

Environment Manager

☒ * I hereby certify that the information provided in this report is true, accurate and complete. I understand that ECCC retains the right to request additional information to verify or substantiate the contents of this report. (required)

Note	Date	User name
No data available		

Mary River Mine Site - Annual effluent monitoring report - Version 1 - 2024

Report details	
Facility name	Mary River Mine Site
Reporting period	2024
Version	1
Status	Submitted
Last modified	2025/03/29 19:10 (EDT)
Submission date	2025/03/29 19:12 (EDT)

Parent company

Parent company	Physical address
Baffinland Iron Mines Corporation	300, 360 Oakville Place, Drive, Oakville, Ontario, L6H 6K8, Canada

History

Status	Version	Last modified	Submission date
Submitted	1	2025/03/29 19:10 (EDT)	2025/03/29 19:12 (EDT)

Identifying information

Reporting period2024

Facility nameMary River Mine Site

Facility physical address

Operator name (required)Baffinland Iron Mines Corporation

Operator telephone number

Operator extension

Operator e-mail address

Note	Date	User name
No data available		

Test results

Final discharge point MS-08

Final discharge point latitude 71.34019

Final discharge point longitude -79.22178

Monthly mean concentrations, pH and volume of effluent

Month	As (mg/L)	Cu (mg/L)	CN (mg/L)	Pb (mg/L)	Ni (mg/L)	Zn (mg/L)	TSS (mg/L)	Ra-226 (Bq/L)	NH ₃ ¹ (mg/L expressed as nitrogen (N))	Lowest pH	Highest pH	Effluent volume (m ³)
Jan	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Feb	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Mar	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Apr	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
May	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Jun	0.0002	0.0024	-	0.0004	0.0057	0.0015	8.15	0.0188	0.0005	6.42	6.69	31537
Jul	0.0002	0.0025	-	0.0003	0.0193	0.006	7.08	0.0185	0.0019	7.05	7.81	103365
Aug	0.0002	0.0033	-	0.0001	0.0338	0.0049	2.68	0.0222	0.0405	7.17	9.23	54423
Sep	0.0004	0.003	-	0.0004	0.0368	0.0123	9.9333	0.0223	0.0025	7.36	7.61	43836
Oct	0.0005	0.0025	-	0.0002	0.0052	0.015	1.5	0.0185	0.0045	7.63	7.63	15864
Nov	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Dec	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP

¹Note: The monthly mean concentration for un-ionized ammonia is calculated for collection dates as of June 1st, 2021.

Results of acute lethality tests

Date sample collected	Results for rainbow trout acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for <i>Daphnia magna</i> monitoring / acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for threespine stickleback acute lethality tests (mean percentage mortality in 100% effluent test concentration)
2024/06/21 23:55	0%	3.3333%	
2024/07/09 11:05	0%	0%	
2024/08/06 09:25	0%	0%	

Date sample collected	Results for rainbow trout acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for <i>Daphnia magna</i> monitoring / acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for threespine stickleback acute lethality tests (mean percentage mortality in 100% effluent test concentration)
2024/08/15 10:45		0%	
2024/09/12 15:00	0%	0%	
2024/10/01 10:00	0%	3.3333%	

If effluent was non-compliant with the authorized limits set out in Schedule 4, or if the pH was less than 6.0 or greater than 9.5, or if effluent was determined to be acutely lethal, indicate the cause(s) of non-compliance and remedial measures that are planned or have been implemented.

Non-compliance information

On June 24th 2024 NT-NU spill report 2024-239 was submitted. The Follow Up report was submitted on July 24th 2024 detailing the below: On June 21, 2024, rising temperatures and rapid snowmelt resulted in the WRF Pond water levels rising significantly over a short period. A controlled discharge was subsequently initiated, on June 21, through the FDP (MS-08). Despite continued discharge, on June 23, water levels continued to rise. Three (3) additional pumps were added to lower the water level in the pond, and pumping commenced over the spillway onto frozen ground adjacent to the WRF on June 24. A full suite of samples including acute toxicity test was taken when discharge commenced. Results were compliant with applicable water licence and MDMER requirements, and the effluent was not acutely toxic. The effluent discharged was suspected to contain mostly snow melt.

Test results

Final discharge point	MS-06
Final discharge point latitude	71.31111
Final discharge point longitude	-79.27861

Monthly mean concentrations, pH and volume of effluent

Month	As (mg/L)	Cu (mg/L)	CN (mg/L)	Pb (mg/L)	Ni (mg/L)	Zn (mg/L)	TSS (mg/L)	Ra-226 (Bq/L)	NH ₃ ¹ (mg/L expressed as nitrogen (N))	Lowest pH	Highest pH	Effluent volume (m ³)
Jan	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Feb	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Mar	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Apr	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
May	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Jun	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Jul	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Aug	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Sep	0.0005	0.0025	-	0.0002	0.0282	0.015	1.775	0.0342	0.0123	7.26	7.52	1773
Oct	0.0005	0.0025	-	0.0002	0.0522	0.015	9.4667	0.0359	0.0213	7.32	7.32	973
Nov	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Dec	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP

¹Note: The monthly mean concentration for un-ionized ammonia is calculated for collection dates as of June 1st, 2021.

Results of acute lethality tests

Date sample collected	Results for rainbow trout acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for <i>Daphnia magna</i> monitoring / acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for threespine stickleback acute lethality tests (mean percentage mortality in 100% effluent test concentration)
2024/09/03 12:40	0%	0%	
2024/10/01 20:20	0%	0%	

was determined to be acutely lethal, indicate the cause(s) of non-compliance and remedial measures that are planned or have been implemented.

Non-compliance information

Test results

Final discharge pointMS-07

Final discharge point latitude71.31150

Final discharge point longitude-79.22186

Monthly mean concentrations, pH and volume of effluent

Month	As (mg/L)	Cu (mg/L)	CN (mg/L)	Pb (mg/L)	Ni (mg/L)	Zn (mg/L)	TSS (mg/L)	Ra-226 (Bq/L)	NH ₃ ¹ (mg/L expressed as nitrogen (N))	Lowest pH	Highest pH	Effluent volume (m ³)
Jan	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Feb	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Mar	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Apr	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
May	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Jun	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Jul	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Aug	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Sep	0	0.0007	-	0.0002	0.0002	0.0015	1.2	0.0185	0.0005	7.82	7.82	3814
Oct	0	0.001	-	0.0003	0.0014	0.0015	2.5	0.0185	0.0005	7.43	7.43	2300
Nov	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Dec	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP

¹Note: The monthly mean concentration for un-ionized ammonia is calculated for collection dates as of June 1st, 2021.

Results of acute lethality tests

Date sample collected	Results for rainbow trout acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for <i>Daphnia magna</i> monitoring / acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for threespine stickleback acute lethality tests (mean percentage mortality in 100% effluent test concentration)
2024/09/03 11:30	0%	0%	
2024/10/08 12:50	0%	0%	

was determined to be acutely lethal, indicate the cause(s) of non-compliance and remedial measures that are planned or have been implemented.

Non-compliance information

Test results

Final discharge point MS-11

Final discharge point latitude 71.31264

Final discharge point longitude -79.26125

Monthly mean concentrations, pH and volume of effluent

Month	As (mg/L)	Cu (mg/L)	CN (mg/L)	Pb (mg/L)	Ni (mg/L)	Zn (mg/L)	TSS (mg/L)	Ra-226 (Bq/L)	NH ₃ ¹ (mg/L expressed as nitrogen (N))	Lowest pH	Highest pH	Effluent volume (m ³)
Jan	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Feb	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Mar	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Apr	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
May	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Jun	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Jul	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Aug	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Sep	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Oct	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Nov	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
Dec	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP

¹Note: The monthly mean concentration for un-ionized ammonia is calculated for collection dates as of June 1st, 2021.

Results of acute lethality tests

Date sample collected	Results for rainbow trout acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for <i>Daphnia magna</i> monitoring / acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for threespine stickleback acute lethality tests (mean percentage mortality in 100% effluent test concentration)
No data available			

If effluent was non-compliant with the authorized limits set out in Schedule 4, or if the pH was less than 6.0 or greater than 9.5, or if effluent was determined to be acutely lethal, indicate the cause(s) of non-compliance and remedial measures that are planned or have been implemented.

Non-compliance information

Submission confirmation

Facility name

Mary River Mine Site

Report type

Information related to effluent and water quality monitoring studies

Reporting period

2024

Submission date

2025/03/29
18:41 (EDT)

Submitter information

Full name

william bowden

Position

Environment Manager

☒ * I hereby certify that the information provided in this report is true, accurate and complete. I understand that ECCC retains the right to request additional information to verify or substantiate the contents of this report. (required)

Note	Date	User name
No data available		

Mary River Mine Site - Information related to effluent and water quality monitoring studies - Version 1 - 2024

Report details	
Facility name	Mary River Mine Site
Reporting period	2024
Version	1
Status	Submitted
Last modified	2025/03/29 18:14 (EDT)
Submission date	2025/03/29 18:41 (EDT)

Parent company

Parent company	Physical address
Baffinland Iron Mines Corporation	300, 360 Oakville Place, Drive, Oakville, Ontario, L6H 6K8, Canada

History

Status	Version	Last modified	Submission date
Submitted	1	2025/03/29 18:14 (EDT)	2025/03/29 18:41 (EDT)

Effluent characterization

Final discharge point	Collection date
MS-08	2024/06/21
MS-08	2024/06/25
MS-08	2024/07/09
MS-08	2024/07/29
MS-08	2024/08/06
MS-08	2024/08/27
MS-08	2024/09/12
MS-08	2024/10/01
MS-07	2024/09/03
MS-07	2024/10/08
MS-06	2024/09/03
MS-06	2024/10/01

Calculated Annual Average

Final discharge point	Mercury concentration	Selenium concentration
MS-08	0.000002	0.003628
MS-07	0.000002	0.000536
MS-06	0.000002	0.001650

Effluent characterization — 2024 — Version 1

Facility name Mary River Mine Site

* Final discharge point (required) MS-08

* Collection date (required) 2024/06/21

* Collection method (required) Grab

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Required variables	<	Value	Method detection limit	Units
Alkalinity		7.1	2	mg/L as CaCO ₃
Electrical conductivity		111	1	µS/cm
Hardness		44.4	0.5	mg/L as CaCO ₃
Temperature		0.8		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		1.01	0.003	mg/L
Cadmium		0.000021	0.000005	mg/L
Chloride		1.32	0.5	mg/L
Chromium		0.00278	0.0005	mg/L
Cobalt		0.00316	0.0001	mg/L
Iron		1.69	0.01	mg/L
Manganese		0.225	0.001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00208	0.00005	mg/L
Nitrate		1.03	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0135	0.002	mg/L as P
Selenium		0.000716	0.00005	mg/L
Sulphate		35.3	0.3	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.000014	0.00001	mg/L
Uranium		0.00022	0.00001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		3.36	0.05	mg/L
Dissolved organic carbon		0.72	0.5	mg/L
Fluoride	<	0.02	0.02	mg/L
Magnesium		10	0.005	mg/L
Potassium		1.3	0.05	mg/L
Sodium		0.552	0.05	mg/L
Total organic carbon		0.93	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

QA/QC reports are uploaded with COAs. The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries.

Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility name Mary River Mine Site

* Final discharge point (required) MS-08

* Collection date (required) 2024/06/25

* Collection method (required) Grab

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Required variables	<	Value	Method detection limit	Units
Alkalinity		7	2	mg/L as CaCO ₃
Electrical conductivity		118	1	µS/cm
Hardness		49.2	0.5	mg/L as CaCO ₃
Temperature		3.3		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.855	0.003	mg/L
Cadmium		0.00002	0.000005	mg/L
Chloride		1.23	0.5	mg/L
Chromium		0.00237	0.0005	mg/L
Cobalt		0.00304	0.0001	mg/L
Iron		1.39	0.01	mg/L
Manganese		0.22	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00213	0.00005	mg/L
Nitrate		1.22	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0147	0.002	mg/L as P
Selenium		0.000774	0.00005	mg/L
Sulphate		37.4	0.3	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.000018	0.00001	mg/L
Uranium		0.000199	0.00001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		3.56	0.05	mg/L
Dissolved organic carbon		1.51	0.5	mg/L
Fluoride		0.029	0.02	mg/L
Magnesium		11	0.005	mg/L
Potassium		1.33	0.05	mg/L
Sodium		0.551	0.05	mg/L
Total organic carbon		1.87	0.5	mg/L
Total thiosalts				mg/L

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility nameMary River Mine Site

* Final discharge point (required)MS-08

* Collection date (required)2024/07/09

* Collection method (required)Grab

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Required variables	<	Value	Method detection limit	Units
Alkalinity		12.3	2	mg/L as CaCO ₃
Electrical conductivity		218	1	µS/cm
Hardness		94.6	0.5	mg/L as CaCO ₃
Temperature		9.5		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.378	0.003	mg/L
Cadmium		0.000021	0.000005	mg/L
Chloride		1.94	0.5	mg/L
Chromium		0.00105	0.0005	mg/L
Cobalt		0.00418	0.0001	mg/L
Iron		0.614	0.01	mg/L
Manganese		0.336	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00286	0.00005	mg/L
Nitrate		2.95	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.007	0.002	mg/L as P
Selenium		0.00135	0.00005	mg/L
Sulphate		71.1	0.3	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.000013	0.00001	mg/L
Uranium		0.000283	0.00001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		6.89	0.05	mg/L
Dissolved organic carbon		1.01	0.5	mg/L
Fluoride		0.04	0.02	mg/L
Magnesium		20.4	0.005	mg/L
Potassium		1.73	0.05	mg/L
Sodium		0.831	0.05	mg/L
Total organic carbon		1	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility name	Mary River Mine Site
* Final discharge point (required)	MS-08
* Collection date (required)	2024/07/29
* Collection method (required)	Grab
<input type="checkbox"/> Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).	

Required variables	<	Value	Method detection limit	Units
Alkalinity		8.1	2	mg/L as CaCO ₃
Electrical conductivity		754	1	µS/cm
Hardness		384	0.5	mg/L as CaCO ₃
Temperature		6.9		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.107	0.003	mg/L
Cadmium		0.000123	0.000005	mg/L
Chloride		4.5	0.5	mg/L
Chromium	<	0.0005	0.0005	mg/L
Cobalt		0.0334	0.0001	mg/L
Iron		0.847	0.01	mg/L
Manganese		2.78	0.001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00106	0.00005	mg/L
Nitrate		6.48	0.02	mg/L expressed as nitrogen (N)
Phosphorus	<	0.002	0.002	mg/L as P
Selenium		0.00304	0.00005	mg/L
Sulphate		346	0.3	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.000092	0.00001	mg/L
Uranium		0.000552	0.00001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		26.4	0.05	mg/L
Dissolved organic carbon		1.74	0.5	mg/L
Fluoride		0.068	0.02	mg/L
Magnesium		82.4	0.005	mg/L
Potassium		5.08	0.05	mg/L
Sodium		1.87	0.05	mg/L
Total organic carbon		1.23	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility name	Mary River Mine Site
* Final discharge point (required)	MS-08
* Collection date (required)	2024/08/06
* Collection method (required)	Grab
<input type="checkbox"/> Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).	

Required variables	<	Value	Method detection limit	Units
Alkalinity		21.3	2	mg/L as CaCO ₃
Electrical conductivity		697	1	µS/cm
Hardness		352	0.5	mg/L as CaCO ₃
Temperature		9.7		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.0325	0.003	mg/L
Cadmium		0.000054	0.000005	mg/L
Chloride		5.45	0.5	mg/L
Chromium	<	0.0005	0.0005	mg/L
Cobalt		0.0173	0.0001	mg/L
Iron		0.38	0.01	mg/L
Manganese		1.47	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00436	0.00005	mg/L
Nitrate		10.4	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.004	0.004	mg/L as P
Selenium		0.00408	0.00005	mg/L
Sulphate		278	0.3	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.00005	0.00001	mg/L
Uranium		0.000471	0.00001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		24.2	0.05	mg/L
Dissolved organic carbon		1.52	0.5	mg/L
Fluoride		0.078	0.02	mg/L
Magnesium		71.1	0.005	mg/L
Potassium		4.54	0.05	mg/L
Sodium		2.17	0.05	mg/L
Total organic carbon		1.11	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

QA/QC reports are uploaded with COAs. The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries.

Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility name Mary River Mine Site

* Final discharge point (required) MS-08

* Collection date (required) 2024/08/27

* Collection method (required) Grab

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Required variables	<	Value	Method detection limit	Units
Alkalinity		24.6	2	mg/L as CaCO ₃
Electrical conductivity		886	1	µS/cm
Hardness		466	0.5	mg/L as CaCO ₃
Temperature		4		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.397	0.003	mg/L
Cadmium		0.000091	0.000005	mg/L
Chloride		7.45	0.5	mg/L
Chromium		0.00055	0.0005	mg/L
Cobalt		0.0274	0.0001	mg/L
Iron		2.59	0.01	mg/L
Manganese		2.49	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00539	0.000005	mg/L
Nitrate		15.4	0.02	mg/L expressed as nitrogen (N)
Phosphorus	<	0.002	0.002	mg/L as P
Selenium		0.00537	0.00005	mg/L
Sulphate		356	0.3	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.000067	0.00001	mg/L
Uranium		0.00146	0.00001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		33.2	0.05	mg/L
Dissolved organic carbon		1.77	0.5	mg/L
Fluoride		0.081	0.02	mg/L
Magnesium		94.8	0.005	mg/L
Potassium		5.72	0.05	mg/L
Sodium		3	0.05	mg/L
Total organic carbon		1.64	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

QA/QC reports are uploaded with COAs. The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries.

Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility name	Mary River Mine Site
* Final discharge point (required)	MS-08
* Collection date (required)	2024/09/12
* Collection method (required)	Grab
<input type="checkbox"/> Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).	

Required variables	<	Value	Method detection limit	Units
Alkalinity		18.6	2	mg/L as CaCO ₃
Electrical conductivity		950	1	µS/cm
Hardness		531	0.5	mg/L as CaCO ₃
Temperature		1		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.0506	0.003	mg/L
Cadmium		0.000115	0.000005	mg/L
Chloride		8.38	2.5	mg/L
Chromium	<	0.0005	0.0005	mg/L
Cobalt		0.0349	0.0001	mg/L
Iron		0.398	0.01	mg/L
Manganese		3.1	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00252	0.00005	mg/L
Nitrate		16.5	0.1	mg/L expressed as nitrogen (N)
Phosphorus	<	0.002	0.002	mg/L as P
Selenium		0.0058	0.00005	mg/L
Sulphate		396	1.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.00008	0.00001	mg/L
Uranium		0.000775	0.00001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		39.5	0.05	mg/L
Dissolved organic carbon		0.87	0.5	mg/L
Fluoride	<	0.1	0.1	mg/L
Magnesium		106	0.005	mg/L
Potassium		5.87	0.05	mg/L
Sodium		3.33	0.05	mg/L
Total organic carbon		0.94	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

QA/QC reports are uploaded with COAs. The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries.

Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility name Mary River Mine Site

* Final discharge point (required) MS-08

* Collection date (required) 2024/10/01

* Collection method (required) Composite

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Required variables	<	Value	Method detection limit	Units
Alkalinity		35.2	2	mg/L as CaCO ₃
Electrical conductivity		926	1	µS/cm
Hardness		463	0.5	mg/L as CaCO ₃
Temperature		0.6		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.112	0.03	mg/L
Cadmium	<	0.00005	0.00005	mg/L
Chloride		16.2	0.5	mg/L
Chromium	<	0.005	0.00005	mg/L
Cobalt		0.0055	0.001	mg/L
Iron		0.169	0.1	mg/L
Manganese		0.908	0.001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00936	0.0005	mg/L
Nitrate		27.5	0.02	mg/L expressed as nitrogen (N)
Phosphorus	<	0.002	0.002	mg/L as P
Selenium		0.00789	0.0005	mg/L
Sulphate		319	0.3	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium	<	0.0001	0.0001	mg/L
Uranium		0.00206	0.0001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		28.4	0.5	mg/L
Dissolved organic carbon		1.45	0.5	mg/L
Fluoride		0.086	0.02	mg/L
Magnesium		103	0.05	mg/L
Potassium		4.52	0.5	mg/L
Sodium		4.7	0.5	mg/L
Total organic carbon		1.47	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

QA/QC reports are uploaded with COAs. The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries.

Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility nameMary River Mine Site

* Final discharge point (required)MS-07

* Collection date (required)2024/09/03

* Collection method (required)Grab

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Required variables	<	Value	Method detection limit	Units
Alkalinity		54.5	2	mg/L as CaCO ₃
Electrical conductivity		336	1	µS/cm
Hardness		158	0.5	mg/L as CaCO ₃
Temperature		4.7		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.0698	0.003	mg/L
Cadmium		0.000014	0.000005	mg/L
Chloride		8.95	0.5	mg/L
Chromium	<	0.0005	0.0005	mg/L
Cobalt		0.00034	0.0001	mg/L
Iron		0.09	0.01	mg/L
Manganese		0.00387	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.004	0.00005	mg/L
Nitrate		4.79	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.004	0.002	mg/L as P
Selenium		0.000398	0.00005	mg/L
Sulphate		80	0.3	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.000012	0.00001	mg/L
Uranium		0.00337	0.00001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		23.3	0.05	mg/L
Dissolved organic carbon		1.9	0.5	mg/L
Fluoride		0.074	0.02	mg/L
Magnesium		22.6	0.005	mg/L
Potassium		6.11	0.05	mg/L
Sodium		2.8	0.05	mg/L
Total organic carbon		2.09	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

QA/QC reports are uploaded with COAs. The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries.

Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility nameMary River Mine Site

* Final discharge point (required)MS-07

* Collection date (required)2024/10/08

* Collection method (required)Grab

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Required variables	<	Value	Method detection limit	Units
Alkalinity		23.6	2	mg/L as CaCO ₃
Electrical conductivity		268	1	µS/cm
Hardness		114	0.5	mg/L as CaCO ₃
Temperature		2.7		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.158	0.003	mg/L
Cadmium		0.000046	0.000005	mg/L
Chloride		5.18	0.5	mg/L
Chromium		0.00062	0.0005	mg/L
Cobalt		0.0017	0.0001	mg/L
Iron		0.236	0.01	mg/L
Manganese		0.328	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00247	0.00005	mg/L
Nitrate		5.52	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0046	0.002	mg/L as P
Selenium		0.000673	0.00005	mg/L
Sulphate		72.8	0.3	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.000016	0.00001	mg/L
Uranium		0.000937	0.00001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		14.4	0.05	mg/L
Dissolved organic carbon		1.31	0.5	mg/L
Fluoride		0.043	0.02	mg/L
Magnesium		19.4	0.005	mg/L
Potassium		3.93	0.05	mg/L
Sodium		1.77	0.05	mg/L
Total organic carbon		1.05	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility name Mary River Mine Site

* Final discharge point (required) MS-06

* Collection date (required) 2024/09/03

* Collection method (required) Grab

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Required variables	<	Value	Method detection limit	Units
Alkalinity		34.6	2	mg/L as CaCO ₃
Electrical conductivity		1760	1	µS/cm
Hardness		978	0.5	mg/L as CaCO ₃
Temperature		6.3		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.0357	0.03	mg/L
Cadmium		0.000101	0.00005	mg/L
Chloride		85.9	2.5	mg/L
Chromium	<	0.005	0.005	mg/L
Cobalt		0.0329	0.001	mg/L
Iron		0.194	0.1	mg/L
Manganese		17.5	0.001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00176	0.0005	mg/L
Nitrate		16.6	0.1	mg/L expressed as nitrogen (N)
Phosphorus	<	0.01	0.01	mg/L as P
Selenium		0.002	0.0005	mg/L
Sulphate		799	1.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.000159	0.0001	mg/L
Uranium		0.00137	0.0001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		80.9	0.5	mg/L
Dissolved organic carbon		2.3	0.5	mg/L
Fluoride	<	0.1	0.1	mg/L
Magnesium		193	0.05	mg/L
Potassium		14.9	0.5	mg/L
Sodium		31.8	0.5	mg/L
Total organic carbon		2.61	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Effluent characterization — 2024 — Version 1

Facility name Mary River Mine Site

* Final discharge point (required) MS-06

* Collection date (required) 2024/10/01

* Collection method (required) Grab

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Required variables	<	Value	Method detection limit	Units
Alkalinity		18.9	2	mg/L as CaCO ₃
Electrical conductivity		1460	1	µS/cm
Hardness		599	0.5	mg/L as CaCO ₃
Temperature		2.9		°C

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.427	0.03	mg/L
Cadmium		0.000104	0.00005	mg/L
Chloride		83.6	2.5	mg/L
Chromium	<	0.005	0.005	mg/L
Cobalt		0.0586	0.001	mg/L
Iron		1.1	0.1	mg/L
Manganese		17	0.001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00135	0.0005	mg/L
Nitrate		14	0.1	mg/L expressed as nitrogen (N)
Phosphorus	<	0.004	0.004	mg/L as P
Selenium		0.0013	0.0005	mg/L
Sulphate		530	1.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Thallium		0.00022	0.0001	mg/L
Uranium		0.000357	0.0001	mg/L
Optional variables	<	Concentration	Method detection limit	Units
Calcium		40.8	0.5	mg/L
Dissolved organic carbon		1.84	0.5	mg/L
Fluoride	<	0.1	0.1	mg/L
Magnesium		123	0.05	mg/L
Potassium		7.91	0.5	mg/L
Sodium		37	0.5	mg/L
Total organic carbon		2.34	0.5	mg/L
Total thiosalts				mg/L

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

Sublethal toxicity test LC₅₀

Final discharge point	Collection date	Species tested
No data available		

Sublethal toxicity test IC₂₅/EC₂₅

Final discharge point	Collection date	Species tested
MS-08	2024/06/25	Lemna minor - Growth (Frond Number)
MS-08	2024/08/06	Lemna minor - Growth (Frond Number)
MS-08	2024/10/01	Lemna minor - Growth (Frond Number)

Sublethal toxicity test IC₂₅/EC₂₅ — 2024 — Version 1

Facility name	Mary River Mine Site	
* Final discharge point (required)	MS-08	
* Collection date (required)	2024/06/25	
* Collection method (required)	Grab	
* Aquatic environment (required)	Fresh water	
* Species tested (required)	Lemna minor - Growth (Frond Number)	
Test start date	2024/06/27	
Consultant laboratory	Nautilus Environmental Company Inc.	
* IC ₂₅ or EC ₂₅ flag (required)	=	
* IC ₂₅ or EC ₂₅ concentration (required)	72.7	%
* IC ₂₅ or EC ₂₅ lower 95% confidence limit (conditionally required)	19.7	%
* IC ₂₅ or EC ₂₅ upper 95% confidence limit (conditionally required)	198	%
* Was there statistical stimulation of any concentration? (required)	No	
Percent stimulation	Effluent concentration with stimulation	
No data available		

For the purpose of SLT, please indicate which data were used for determining the final discharge point that has potentially the most adverse environmental impact on the environment.

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided

Note	Date	User name
Noted Deviation(s) : As requested by the client, and as per the Metal and Diamond Mining Effluent Regulations, Lemna minor dry weight for determination of the IC25 (Weight) endpoint has not been analyzed or reported.	2025/02/11 13:11 (EST)	Jasmine Lauinger

Note	Date	User name
An upper 95% confidence limit greater than 97.0% is statistically valid.	2025/02/11 13:10 (EST)	Jasmine Lauinger

Sublethal toxicity test IC₂₅/EC₂₅ — 2024 — Version 1

Facility name	Mary River Mine Site	
* Final discharge point (required)	MS-08	
* Collection date (required)	2024/08/06	
* Collection method (required)	Grab	
* Aquatic environment (required)	Fresh water	
* Species tested (required)	Lemna minor - Growth (Frond Number)	
Test start date	2024/08/09	
Consultant laboratory	Nautilus Environmental Company Inc.	
* IC ₂₅ or EC ₂₅ flag (required)	=	
* IC ₂₅ or EC ₂₅ concentration (required)	48.1	%
* IC ₂₅ or EC ₂₅ lower 95% confidence limit (conditionally required)	36	%
* IC ₂₅ or EC ₂₅ upper 95% confidence limit (conditionally required)	63	%
* Was there statistical stimulation of any concentration? (required)	No	
Percent stimulation	Effluent concentration with stimulation	
No data available		

For the purpose of SLT, please indicate which data were used for determining the final discharge point that has potentially the most adverse environmental impact on the environment.

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided

Note	Date	User name
No data available		

Sublethal toxicity test IC₂₅/EC₂₅ — 2024 — Version 1

Facility name	Mary River Mine Site	
* Final discharge point (required)	MS-08	
* Collection date (required)	2024/10/01	
* Collection method (required)	Grab	
* Aquatic environment (required)	Fresh water	
* Species tested (required)	Lemna minor - Growth (Frond Number)	
Test start date	2024/10/03	
Consultant laboratory	Nautilus Environmental Company Inc.	
* IC ₂₅ or EC ₂₅ flag (required)	>	
* IC ₂₅ or EC ₂₅ concentration (required)	97	%
* IC ₂₅ or EC ₂₅ lower 95% confidence limit (conditionally required)		%
* IC ₂₅ or EC ₂₅ upper 95% confidence limit (conditionally required)		%
* Was there statistical stimulation of any concentration? (required)	No	
Percent stimulation	Effluent concentration with stimulation	
No data available		

For the purpose of SLT, please indicate which data were used for determining the final discharge point that has potentially the most adverse environmental impact on the environment.

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided

Note	Date	User name
No data available		

Water quality monitoring data for exposure area

Exposure area name	Collection date	Aquatic environment
MS-06-DS	2024/09/03	Fresh water
MS-06-DS	2024/10/02	Fresh water
MS-07-DS	2024/09/03	Fresh water
MS-07-DS	2024/10/08	Fresh water
MS-08-DS	2024/06/25	Fresh water
MS-08-DS	2024/07/29	Fresh water
MS-08-DS	2024/08/27	Fresh water
MS-08-DS	2024/09/13	Fresh water
MS-08-DS	2024/10/01	Fresh water

Water quality monitoring data for exposure area — 2024 — Version 1

Facility name

Mary River Mine Site

* Exposure area name (required)

MS-06-DS

* Latitude (required)

71.299020

* Longitude (required)

-79.257940

* Collection date (required)

2024/09/03

* Collection method (required)

Grab

* Aquatic environment (required)

Fresh water

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Final discharge point

Name

MS-06

Required variables	<	Value	Method detection limit	Units
Hardness		80	0.5	mg/L as CaCO ₃
Alkalinity		77.6	2	mg/L
Electrical conductivity		171	1	µS/cm
Salinity				Parts per thousand
Water temperature		3.8		°C
Dissolved oxygen		12.97		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.08	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium		0.000005	0.000005	mg/L
Chloride		4.67	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium	<	0.0005	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.063	0.01	mg/L
Manganese		0.00168	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.000586	0.00005	mg/L
Nitrate		0.247	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0037	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		5.82	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.00334	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00112	0.0005	mg/L
Cyanide				mg/L
Lead		0.000067	0.00005	mg/L
Nickel		0.00076	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids	<	1	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.98		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		15.6	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.97	0.5	mg/L
Fluoride		0.03	0.02	mg/L
Magnesium		9.97	0.005	mg/L
Potassium		1.25	0.05	mg/L
Sodium		4.59	0.05	mg/L
Total organic carbon		2.16	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for exposure area — 2024 — Version 1

Facility name

Mary River Mine Site

* Exposure area name (required)

MS-06-DS

* Latitude (required)

71.299020

* Longitude (required)

-79.257940

* Collection date (required)

2024/10/02

* Collection method (required)

Grab

* Aquatic environment (required)

Fresh water

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Final discharge point

Name

MS-06

Required variables	<	Value	Method detection limit	Units
Hardness		74.2	0.5	mg/L as CaCO ₃
Alkalinity		70.8	2	mg/L
Electrical conductivity		170	1	µS/cm
Salinity				Parts per thousand
Water temperature		0.5		°C
Dissolved oxygen		13.48		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.141	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium		0.000006	0.000005	mg/L
Chloride		3.65	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium		0.00069	0.0005	mg/L
Cobalt		0.00011	0.0001	mg/L
Iron		0.132	0.01	mg/L
Manganese		0.00196	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.000614	0.00005	mg/L
Nitrate		0.462	0.02	mg/L expressed as nitrogen (N)
Phosphorus	<	0.006	0.002	mg/L as P
Selenium		0.000084	0.00005	mg/L
Sulphate		7.66	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.00229	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00134	0.0005	mg/L
Cyanide				mg/L
Lead		0.000136	0.00005	mg/L
Nickel		0.00105	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids		1.8	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.87		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		14	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		2.09	0.5	mg/L
Fluoride		0.033	0.02	mg/L
Magnesium		9.53	0.005	mg/L
Potassium		1.21	0.05	mg/L
Sodium		5.04	0.05	mg/L
Total organic carbon		1.99	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for exposure area — 2024 — Version 1

Facility name Mary River Mine Site

* Exposure area name (required) MS-07-DS

* Latitude (required) 71.306270

* Longitude (required) -79.239370

* Collection date (required) 2024/09/03

* Collection method (required) Grab

* Aquatic environment (required) Fresh water

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Final discharge point

Name

MS-07

Required variables	<	Value	Method detection limit	Units
Hardness		84.6	0.5	mg/L as CaCO ₃
Alkalinity		76.4	2	mg/L
Electrical conductivity		165	1	µS/cm
Salinity				Parts per thousand
Water temperature		3.6		°C
Dissolved oxygen		13.07		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.0968	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium		0.000016	0.000005	mg/L
Chloride		3.71	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium	<	0.0005	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.086	0.01	mg/L
Manganese		0.00224	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.000513	0.00005	mg/L
Nitrate		0.087	0.02	mg/L expressed as nitrogen (N)
Phosphorus	<	0.0027	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		5.06	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.0033	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00121	0.0005	mg/L
Cyanide				mg/L
Lead		0.000623	0.00005	mg/L
Nickel	<	0.0005	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids		1.2	1	mg/L
Radium 226		0.0835	0.037	Bq/L
pH		8.04		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		15.3	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.61	0.5	mg/L
Fluoride		0.028	0.02	mg/L
Magnesium		10.1	0.005	mg/L
Potassium		1.2	0.05	mg/L
Sodium		2.68	0.05	mg/L
Total organic carbon		1.76	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for exposure area — 2024 — Version 1

Facility name	Mary River Mine Site
* Exposure area name (required)	MS-07-DS
* Latitude (required)	71.306270
* Longitude (required)	-79.239370
* Collection date (required)	2024/10/08
* Collection method (required)	Grab
* Aquatic environment (required)	Fresh water
<input type="checkbox"/> Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).	

Final discharge point

Name
MS-07

Required variables	<	Value	Method detection limit	Units
Hardness		71	0.5	mg/L as CaCO ₃
Alkalinity		68.3	2	mg/L
Electrical conductivity		144	1	µS/cm
Salinity				Parts per thousand
Water temperature		-0.1		°C
Dissolved oxygen		14.65		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.119	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium		0.000021	0.000005	mg/L
Chloride		2.38	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium		0.00058	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.1	0.01	mg/L
Manganese		0.00277	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00046	0.00005	mg/L
Nitrate		0.103	0.02	mg/L expressed as nitrogen (N)
Phosphorus	<	0.0028	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		3.35	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.0026	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00115	0.0005	mg/L
Cyanide				mg/L
Lead		0.000366	0.00005	mg/L
Nickel		0.00058	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids	<	1	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.78		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		14.4	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.94	0.5	mg/L
Fluoride		0.031	0.02	mg/L
Magnesium		8.52	0.005	mg/L
Potassium		1.02	0.05	mg/L
Sodium		2.21	0.05	mg/L
Total organic carbon		1.81	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for exposure area — 2024 — Version 1

Facility name Mary River Mine Site

* Exposure area name (required) MS-08-DS

* Latitude (required) 71.310800

* Longitude (required) -79.202620

* Collection date (required) 2024/06/25

* Collection method (required) Grab

* Aquatic environment (required) Fresh water

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Final discharge point

Name

MS-08

Required variables	<	Value	Method detection limit	Units
Hardness		8.93	0.5	mg/L as CaCO ₃
Alkalinity		10.6	2	mg/L
Electrical conductivity		25	1	µS/cm
Salinity				Parts per thousand
Water temperature		1		°C
Dissolved oxygen		16.4		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.145	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.000005	0.000005	mg/L
Chloride		0.54	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium	<	0.0005	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.142	0.01	mg/L
Manganese		0.00411	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum	<	0.00005	0.00005	mg/L
Nitrate	<	0.02	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0053	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate	<	0.3	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.000095	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00051	0.0005	mg/L
Cyanide				mg/L
Lead		0.000114	0.00005	mg/L
Nickel	<	0.0005	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids		5	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.18		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		1.73	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.9	0.5	mg/L
Fluoride	<	0.02	0.02	mg/L
Magnesium		1.12	0.005	mg/L
Potassium		0.328	0.05	mg/L
Sodium		0.302	0.05	mg/L
Total organic carbon		1.82	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for exposure area — 2024 — Version 1

Facility name Mary River Mine Site

* Exposure area name (required) MS-08-DS

* Latitude (required) 71.310800

* Longitude (required) -79.202620

* Collection date (required) 2024/07/29

* Collection method (required) Grab

* Aquatic environment (required) Fresh water

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Final discharge point

Name

MS-08

Required variables	<	Value	Method detection limit	Units
Hardness		58.5	0.5	mg/L as CaCO ₃
Alkalinity		54.2	2	mg/L
Electrical conductivity		121	1	µS/cm
Salinity				Parts per thousand
Water temperature		3.8		°C
Dissolved oxygen		12.72		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.0884	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.000005	0.000005	mg/L
Chloride		2.09	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium	<	0.0005	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.068	0.01	mg/L
Manganese		0.00093	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.00024	0.00005	mg/L
Nitrate		0.038	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0027	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		3.36	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.00166	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00075	0.0005	mg/L
Cyanide				mg/L
Lead		0.00006	0.00005	mg/L
Nickel	<	0.0005	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids		1.4	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.81		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		11.3	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.31	0.5	mg/L
Fluoride		0.022	0.02	mg/L
Magnesium		7.35	0.005	mg/L
Potassium		0.849	0.05	mg/L
Sodium		1.72	0.05	mg/L
Total organic carbon		1.04	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for exposure area — 2024 — Version 1

Facility name

Mary River Mine Site

* Exposure area name (required)

MS-08-DS

* Latitude (required)

71.310800

* Longitude (required)

-79.202620

* Collection date (required)

2024/08/27

* Collection method (required)

Grab

* Aquatic environment (required)

Fresh water

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Final discharge point

Name

MS-08

Required variables	<	Value	Method detection limit	Units
Hardness		68.8	0.5	mg/L as CaCO ₃
Alkalinity		64.5	2	mg/L
Electrical conductivity		144	1	µS/cm
Salinity				Parts per thousand
Water temperature		3.4		°C
Dissolved oxygen		12.7		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.173	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.000005	0.000005	mg/L
Chloride		3.14	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium		0.00051	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.151	0.01	mg/L
Manganese		0.00176	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.000357	0.00005	mg/L
Nitrate		0.049	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0033	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		3.64	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.00266	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00111	0.0005	mg/L
Cyanide				mg/L
Lead		0.000148	0.00005	mg/L
Nickel	<	0.0005	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids	<	1	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.79		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		13.5	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		2.27	0.5	mg/L
Fluoride		0.027	0.02	mg/L
Magnesium		8.51	0.005	mg/L
Potassium		1.09	0.05	mg/L
Sodium		2.4	0.05	mg/L
Total organic carbon		1.79	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for exposure area — 2024 — Version 1

Facility name

Mary River Mine Site

* Exposure area name (required)

MS-08-DS

* Latitude (required)

71.310800

* Longitude (required)

-79.202620

* Collection date (required)

2024/09/13

* Collection method (required)

Grab

* Aquatic environment (required)

Fresh water

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Final discharge point

Name

MS-08

Required variables	<	Value	Method detection limit	Units
Hardness		78.7	0.5	mg/L as CaCO ₃
Alkalinity		84.3	2	mg/L
Electrical conductivity		154	1	µS/cm
Salinity				Parts per thousand
Water temperature		3.4		°C
Dissolved oxygen		12.29		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.0761	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.000005	0.000005	mg/L
Chloride		3.43	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium	<	0.0005	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.07	0.01	mg/L
Manganese		0.00105	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.000359	0.00005	mg/L
Nitrate		0.021	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0034	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		4.12	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.00304	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00095	0.0005	mg/L
Cyanide				mg/L
Lead		0.000085	0.00005	mg/L
Nickel		0.00057	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids		1.6	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		8.41		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		15.8	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.64	0.5	mg/L
Fluoride		0.026	0.02	mg/L
Magnesium		9.53	0.005	mg/L
Potassium		1.04	0.05	mg/L
Sodium		2.54	0.05	mg/L
Total organic carbon		1.79	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for exposure area — 2024 — Version 1

Facility name Mary River Mine Site

* Exposure area name (required) MS-08-DS

* Latitude (required) 71.310800

* Longitude (required) -79.202620

* Collection date (required) 2024/10/01

* Collection method (required) Grab

* Aquatic environment (required) Fresh water

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Final discharge point

Name

MS-08

Required variables	<	Value	Method detection limit	Units
Hardness		61	0.5	mg/L as CaCO ₃
Alkalinity		59.6	2	mg/L
Electrical conductivity		135	1	µS/cm
Salinity				Parts per thousand
Water temperature		0.3		°C
Dissolved oxygen		14.22		mg/L
Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.229	0.03	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.00005	0.00005	mg/L
Chloride		2.13	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium	<	0.005	0.005	mg/L
Cobalt	<	0.001	0.001	mg/L
Iron		0.173	0.1	mg/L
Manganese		0.00184	0.001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum	<	0.0005	0.0005	mg/L
Nitrate		0.026	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0039	0.002	mg/L as P
Selenium	<	0.0005	0.0005	mg/L
Sulphate		1.68	0.3	mg/L
Thallium	<	0.0001	0.0001	mg/L
Uranium		0.00214	0.0001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.001	0.001	mg/L
Copper	<	0.005	0.005	mg/L
Cyanide				mg/L
Lead	<	0.0005	0.0005	mg/L
Nickel	<	0.005	0.005	mg/L
Zinc	<	0.03	0.03	mg/L
Total suspended solids		1	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.9		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		12.8	0.5	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.83	0.5	mg/L
Fluoride		0.031	0.02	mg/L
Magnesium		7.05	0.05	mg/L
Potassium		0.956	0.5	mg/L
Sodium		2.07	0.5	mg/L
Total organic carbon		2.24	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for reference area

Reference area name	Collection date	Aquatic environment
MS-08-US	2024/06/25	Fresh water
MS-08-US	2024/07/29	Fresh water
MS-08-US	2024/08/27	Fresh water
MS-08-US	2024/09/03	Fresh water
MS-08-US	2024/09/13	Fresh water
MS-08-US	2024/10/01	Fresh water
MS-08-US	2024/10/08	Fresh water

Water quality monitoring data for reference area — 2024 — Version 1

Facility name	Mary River Mine Site
* Reference area name (required)	MS-08-US
* Latitude (required)	71.310500
* Longitude (required)	-79.187090
* Collection date (required)	2024/06/25
* Collection method (required)	Grab
* Aquatic environment (required)	Fresh water
<input type="checkbox"/> Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).	

Final discharge point

Name
MS-08

Required variables	<	Value	Method detection limit	Units
Hardness		7.7	0.5	mg/L as CaCO ₃
Alkalinity		6.7	2	mg/L
Electrical conductivity		17.1	1	µS/cm
Salinity				Parts per thousand
Water temperature		1.7		°C
Dissolved oxygen		17.69		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.141	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.000005	0.000005	mg/L
Chloride	<	0.5	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium	<	0.0005	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.139	0.01	mg/L
Manganese		0.00392	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum	<	0.00005	0.00005	mg/L
Nitrate	<	0.02	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.006	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate	<	0.3	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.000098	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper	<	0.0005	0.0005	mg/L
Cyanide				mg/L
Lead		0.000115	0.00005	mg/L
Nickel	<	0.0005	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids		5.7	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		6.68		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		1.53	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.62	0.5	mg/L
Fluoride	<	0.02	0.02	mg/L
Magnesium		0.943	0.005	mg/L
Potassium		0.321	0.05	mg/L
Sodium		0.306	0.05	mg/L
Total organic carbon		1.69	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

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²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for reference area — 2024 — Version 1

Facility name	Mary River Mine Site
* Reference area name (required)	MS-08-US
* Latitude (required)	71.310500
* Longitude (required)	-79.187090
* Collection date (required)	2024/07/29
* Collection method (required)	Grab
* Aquatic environment (required)	Fresh water
<input type="checkbox"/> Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).	

Final discharge point

Name
MS-08

Required variables	<	Value	Method detection limit	Units
Hardness		53.6	0.5	mg/L as CaCO ₃
Alkalinity		53.5	2	mg/L
Electrical conductivity		111	1	µS/cm
Salinity				Parts per thousand
Water temperature		4.4		°C
Dissolved oxygen		12.4		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.0966	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.000005	0.000005	mg/L
Chloride		1.94	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium	<	0.0005	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.072	0.01	mg/L
Manganese		0.00093	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.000238	0.00005	mg/L
Nitrate	<	0.02	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.003	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		1.28	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.0017	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00076	0.0005	mg/L
Cyanide				mg/L
Lead		0.000063	0.00005	mg/L
Nickel	<	0.0005	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids		1.1	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.75		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		10.6	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.77	0.5	mg/L
Fluoride	<	0.02	0.02	mg/L
Magnesium		6.58	0.005	mg/L
Potassium		0.817	0.05	mg/L
Sodium		1.75	0.05	mg/L
Total organic carbon		1.54	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for reference area — 2024 — Version 1

Facility name

Mary River Mine Site

* Reference area name (required)

MS-08-US

* Latitude (required)

71.310500

* Longitude (required)

-79.187090

* Collection date (required)

2024/08/27

* Collection method (required)

Grab

* Aquatic environment (required)

Fresh water

☐ Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).

Final discharge point

Name

MS-08

Required variables	<	Value	Method detection limit	Units
Hardness		66.9	0.5	mg/L as CaCO ₃
Alkalinity		65.8	2	mg/L
Electrical conductivity		141	1	µS/cm
Salinity				Parts per thousand
Water temperature		3.8		°C
Dissolved oxygen		12.45		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.241	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.000005	0.000005	mg/L
Chloride		3.34	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium		0.0007	0.0005	mg/L
Cobalt		0.0001	0.0001	mg/L
Iron		0.201	0.01	mg/L
Manganese		0.00212	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.000358	0.00005	mg/L
Nitrate	<	0.02	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0036	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		2.24	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.0028	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00117	0.0005	mg/L
Cyanide				mg/L
Lead		0.000182	0.00005	mg/L
Nickel		0.00055	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids	<	1	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.64		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		13.5	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		2.06	0.5	mg/L
Fluoride		0.029	0.02	mg/L
Magnesium		8.07	0.005	mg/L
Potassium		1.13	0.05	mg/L
Sodium		2.49	0.05	mg/L
Total organic carbon		2.04	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for reference area — 2024 — Version 1

Facility name	Mary River Mine Site
* Reference area name (required)	MS-08-US
* Latitude (required)	71.310500
* Longitude (required)	-79.187090
* Collection date (required)	2024/09/03
* Collection method (required)	Grab
* Aquatic environment (required)	Fresh water
<input type="checkbox"/> Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).	

Final discharge point

Name
MS-06
MS-07

Required variables	<	Value	Method detection limit	Units
Hardness		80.6	0.5	mg/L as CaCO ₃
Alkalinity		76.2	2	mg/L
Electrical conductivity		156	1	µS/cm
Salinity				Parts per thousand
Water temperature		3.2		°C
Dissolved oxygen		12.05		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.0738	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.000005	0.000005	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chloride		3.6	0.5	mg/L
Chromium	<	0.0005	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.049	0.01	mg/L
Manganese		0.00056	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.000414	0.00005	mg/L
Nitrate	<	0.02	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.002	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		2.72	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.00339	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00096	0.0005	mg/L
Cyanide				mg/L
Lead	<	0.00005	0.00005	mg/L
Nickel	<	0.0005	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids	<	1	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.87		

Optional variables	<	Concentration	Method detection limit	Units
Calcium		14.9	0.05	mg/L
Dissolved organic carbon		1.8	0.5	mg/L
Fluoride		0.027	0.02	mg/L
Magnesium		9.27	0.005	mg/L
Potassium		1.11	0.05	mg/L
Sodium		2.72	0.05	mg/L
Total organic carbon		2.05	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for reference area — 2024 — Version 1

Facility name	Mary River Mine Site
* Reference area name (required)	MS-08-US
* Latitude (required)	71.310500
* Longitude (required)	-79.187090
* Collection date (required)	2024/09/13
* Collection method (required)	Grab
* Aquatic environment (required)	Fresh water
<input type="checkbox"/> Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).	

Final discharge point

Name
MS-08

Required variables	<	Value	Method detection limit	Units
Hardness		70.1	0.5	mg/L as CaCO ₃
Alkalinity		78.7	2	mg/L
Electrical conductivity		147	1	µS/cm
Salinity				Parts per thousand
Water temperature		3		°C
Dissolved oxygen		12.68		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.0519	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.000005	0.000005	mg/L
Chloride		3.38	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium	<	0.0005	0.0005	mg/L
Cobalt		0.0001	0.0001	mg/L
Iron		0.051	0.01	mg/L
Manganese		0.00071	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.000331	0.00005	mg/L
Nitrate	<	0.02	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0026	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		2.68	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.00322	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00088	0.0005	mg/L
Cyanide				mg/L
Lead		0.000062	0.00005	mg/L
Nickel	<	0.0005	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids	<	1	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.8		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		14.3	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.64	0.5	mg/L
Fluoride		0.024	0.02	mg/L
Magnesium		8.36	0.005	mg/L
Potassium		0.985	0.05	mg/L
Sodium		2.62	0.05	mg/L
Total organic carbon		1.65	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for reference area — 2024 — Version 1

Facility name	Mary River Mine Site
* Reference area name (required)	MS-08-US
* Latitude (required)	71.310500
* Longitude (required)	-79.187090
* Collection date (required)	2024/10/01
* Collection method (required)	Grab
* Aquatic environment (required)	Fresh water
<input type="checkbox"/> Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).	

Final discharge point

Name
MS-08
MS-06

Required variables	<	Value	Method detection limit	Units
Hardness		65.6	0.5	mg/L as CaCO ₃
Alkalinity		61.2	2	mg/L
Electrical conductivity		146	1	µS/cm
Salinity				Parts per thousand
Water temperature		0.5		°C
Dissolved oxygen		13.92		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.17	0.03	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.00005	0.00005	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chloride		2.09	0.5	mg/L
Chromium	<	0.005	0.005	mg/L
Cobalt	<	0.001	0.001	mg/L
Iron		0.146	0.1	mg/L
Manganese		0.00162	0.001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum	<	0.0005	0.0005	mg/L
Nitrate		0.205	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0037	0.002	mg/L as P
Selenium	<	0.0005	0.0005	mg/L
Sulphate		4.45	0.3	mg/L
Thallium	<	0.0001	0.0001	mg/L
Uranium		0.00206	0.0001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.001	0.001	mg/L
Copper	<	0.005	0.005	mg/L
Cyanide				mg/L
Lead	<	0.0005	0.0005	mg/L
Nickel	<	0.005	0.005	mg/L
Zinc	<	0.03	0.03	mg/L
Total suspended solids	<	1	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.91		

Optional variables	<	Concentration	Method detection limit	Units
Calcium		13	0.5	mg/L
Dissolved organic carbon		1.56	0.5	mg/L
Fluoride		0.029	0.02	mg/L
Magnesium		8.04	0.05	mg/L
Potassium		0.946	0.5	mg/L
Sodium		2.01	0.5	mg/L
Total organic carbon		1.72	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided.

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Note	Date	User name
No data available		

¹Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.

²Note: The concentration and method detection limit fields for total ammonia are required for collection dates prior to **June 1st, 2021**. For samples collected on or after **June 1st, 2021**, only the method detection limit is required.

³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Water quality monitoring data for reference area — 2024 — Version 1

Facility name	Mary River Mine Site
* Reference area name (required)	MS-08-US
* Latitude (required)	71.310500
* Longitude (required)	-79.187090
* Collection date (required)	2024/10/08
* Collection method (required)	Grab
* Aquatic environment (required)	Fresh water
<input type="checkbox"/> Mercury concentration is less than 0.10 µg/L in 12 consecutive samples collected under MDMER Schedule 5 subsection 4(4).	

Final discharge point

Name
MS-07

Required variables	<	Value	Method detection limit	Units
Hardness		67.7	0.5	mg/L as CaCO ₃
Alkalinity		66.9	2	mg/L
Electrical conductivity		137	1	µS/cm
Salinity				Parts per thousand
Water temperature		0		°C
Dissolved oxygen		14.17		mg/L

Required variables	<	Concentration	Method detection limit	Units
Aluminum		0.137	0.003	mg/L
Ammonia ²			0.005	mg/L expressed as nitrogen (N)
Un-ionized ammonia ³		0.001		mg/L expressed as nitrogen (N)
Cadmium	<	0.000005	0.000005	mg/L
Chloride		2.39	0.5	mg/L

Required variables	<	Concentration	Method detection limit	Units
Chromium		0.00058	0.0005	mg/L
Cobalt	<	0.0001	0.0001	mg/L
Iron		0.112	0.01	mg/L
Manganese		0.0013	0.0001	mg/L
Mercury ¹	<	0.000005	0.000005	mg/L
Molybdenum		0.000371	0.00005	mg/L
Nitrate	<	0.02	0.02	mg/L expressed as nitrogen (N)
Phosphorus		0.0027	0.002	mg/L as P
Selenium	<	0.00005	0.00005	mg/L
Sulphate		1.76	0.3	mg/L
Thallium	<	0.00001	0.00001	mg/L
Uranium		0.00276	0.00001	mg/L
Required variables	<	Concentration	Method detection limit	Units
Arsenic	<	0.0001	0.0001	mg/L
Copper		0.00106	0.0005	mg/L
Cyanide				mg/L
Lead		0.000106	0.00005	mg/L
Nickel		0.00052	0.0005	mg/L
Zinc	<	0.003	0.003	mg/L
Total suspended solids	<	1	1	mg/L
Radium 226	<	0.037	0.037	Bq/L
pH		7.63		
Optional variables	<	Concentration	Method detection limit	Units
Calcium		14.1	0.05	mg/L

Optional variables	<	Concentration	Method detection limit	Units
Dissolved organic carbon		1.84	0.5	mg/L
Fluoride		0.031	0.02	mg/L
Magnesium		7.9	0.005	mg/L
Potassium		0.964	0.05	mg/L
Sodium		2.24	0.05	mg/L
Total organic carbon		1.76	0.5	mg/L
Total thiosalts				mg/L
Water depth				m

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Note	Date	User name
No data available		

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³Note: The concentration field for un-ionized ammonia is required for collection dates on or after **June 1st, 2021**.

Methodologies & QA/QC measures and data (e.g., lab certificates)

Effluent characterization

File name	Version	Date
YL2401496 Your Reference MS-08 Final Version 0.pdf	1	3/21/2025
YL2401496 Your Reference MS-08 Final Version 0.pdf	1	3/21/2025
WT2429212 Your Reference MS-08 Final Version 0.pdf	1	3/21/2025
WT2417334 Your Reference MS-08-SUB Final Version 0.pdf	1	3/21/2025
BF2400293 Your Reference MS-08 Final Version 0.pdf	1	3/21/2025
BF2400227 Your Reference MDMER Qtrly MS-08 SUB Final Version 0.pdf	1	3/21/2025
BF2400210 Your Reference MDMER MS-08 Final Version 0.pdf	1	3/21/2025
BF2400177 Your Reference MS-08 Final Version 0.pdf	1	3/21/2025
BF2400129 Your Reference 24 06 22_MS-08_TOX Final Version 1.pdf	1	3/21/2025
BF2400388 Your Reference MDMER monthly MS-07 FDP TOX Final Version 1.pdf	1	3/21/2025
BF2400312 Your Reference MDMER_Monthly_MS-07 TOX_240903 Final Version 0.pdf	1	3/21/2025
BF2400367 Your Reference MDMER monthly MS-06 FDP TOX Final Version 1.pdf	1	3/21/2025
BF2400311 Your Reference MDMER_Monthly_MS-06 TOX_240903 Final Version 0.pdf	1	3/21/2025

Sublethal toxicity test

File name	Version	Date
255157-82925.PDF	1	2/11/2025
255521-83478.PDF	1	2/11/2025
256015-84274.PDF	1	2/11/2025

Water quality monitoring data

File name	Version	Date
WT2417329 Your Reference MDMER_MS-08_WQ Final Version 4_Combined.pdf	1	3/25/2025
WT2429212 Your Reference MS-08 Final Version 0.pdf	1	3/23/2025
BF2400388 Your Reference MDMER monthly MS-07 FDP TOX Final Version 1.pdf	1	3/23/2025
BF2400367 Your Reference MDMER monthly MS-06 FDP TOX Final Version 1.pdf	1	3/23/2025
BF2400340 Your Reference MS-08 DS Final Version 0.pdf	1	3/23/2025
BF2400339 Your Reference MS-08-US Final Version 0.pdf	1	3/23/2025
BF2400312 Your Reference MDMER_Monthly_MS-07 TOX_240903 Final Version 0.pdf	1	3/23/2025
BF2400311 Your Reference MDMER_Monthly_MS-06 TOX_240903 Final Version 0.pdf	1	3/23/2025
BF2400293 Your Reference MS-08 Final Version 0.pdf	1	3/23/2025
BF2400209 Your Reference MS-08_WA Final Version 0.pdf	1	3/23/2025

