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Canada

Hope Bay Project - Annual effluent monitoring report - Version 1 - 2024

Report details

Facility name	Hope Bay Project
Reporting period	2024
Version	1
Status	Submitted
Last modified	2025/02/03 06:52 (MST)
Submission date	2025/02/03 06:53 (MST)

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

History

Status	Version	Last modified	Submission date
Submitted	1	2025/02/03 06:52 (MST)	2025/02/03 06:53 (MST)

Identifying information

Reporting period	**2024**
Facility name	**Hope Bay Project**
Facility physical address	**Cambridge Bay, Nunavut, X0B 0C0, Canada**
Operator name (required)	Agnico Eagle mines
Operator telephone number	819-759-3555
Operator extension	4600101
Operator e-mail address	brett.fairbairn@agnicoeagle.com

Note	Date	User name
No data available		

Test results

Final discharge point **RBD-1**

Final discharge point latitude **68.17699**

Final discharge point longitude **-106.63707**

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	0.0021	0.0139	0.0077	0.0001	0.0083	0.0075	1	0.006	0.0014	7.52	7.89	259667
Feb	0.0019	0.0152	0.0094	0.0002	0.0112	0.0153	1	0.0095	0.0012	7.53	7.83	261544
Mar	0.0019	0.015	0.009	0.0002	0.0109	0.0532	1	0.0078	0.0018	7.5	7.55	289354
Apr	0.0018	0.0197	0.0531	0.0002	0.0095	0.025	1	0.0096	0.0013	7.42	7.59	259679
May	0.0018	0.0254	0.046	0.0002	0.0092	0.0203	1	0.0069	0.0009	7.26	7.82	242737
Jun	0.0021	0.0196	0.0106	0.0002	0.0102	0.0135	1	0.0089	0.0005	7.47	8.12	273229
Jul	0.0017	0.0163	0.012	0.0001	0.0083	0.0103	2.2	0.015	0.0005	7.82	7.93	220945
Aug	0.0021	0.014	0.0075	0.0002	0.0087	0.0178	1.7667	0.0077	0.004	7.59	8.48	146689
Sep	0.0022	0.0133	0.0044	0.0001	0.0067	0.013	3.25	0.0069	0.0044	8.16	8.45	263054
Oct	0.0014	0.0075	0.0127	0.0002	0.0082	0.0353	7.68	0.0077	0.0012	7.19	8.07	225746
Nov	0.0012	0.007	0.0075	0.0001	0.0054	0.0257	2.6667	0.0163	0.0029	7.8	8	105310
Dec	0.0017	0.013	0.0067	0.0001	0.0062	0.021	3.48	0.0105	0.0024	7.7	7.91	190634

[1]Note: 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 *Daphnia magna* 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)
2024/01/03 06:00	0%	0%	
2024/02/07 05:35	0%		
2024/03/06 04:50	0%		

Date sample collected	Results for rainbow trout acute lethality tests (mean percentage mortality in 100% effluent test concentration)	Results for *Daphnia magna* 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)
2024/04/03 05:40	0%		
2024/05/01 05:50	0%		
2024/06/05 05:45	0%		
2024/07/03 04:46	0%		
2024/07/10 05:05	0%		
2024/08/07 05:30	0%		
2024/09/04 05:40	0%		
2024/09/11 05:40		0%	
2024/10/02 05:10	0%		
2024/11/20 04:30			0%
2024/12/04 05:30	0%		

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

Government of Canada / Gouvernement du Canada

Canada

Hope Bay Project - Quarterly effluent monitoring report - Version 2 - 2024-Q1

Report details

Facility name	Hope Bay Project
Reporting period	2024-Q1
Version	2
Status	Submitted
Last modified	2024/05/30 12:39 (MST)
Submission date	2024/05/30 12:46 (MST)

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

History

Status	Version	Last modified	Submission date
Submitted	2	2024/05/30 12:39 (MST)	2024/05/30 12:46 (MST)
Archived	1	2024/04/16 08:49 (MST)	2024/04/16 08:55 (MST)

Deleterious substances

Facility name Hope Bay Project

Reporting period 2024-Q1

Final discharge point	Reporting month	Was there deposit?
RBD-1	2024 - 01	Yes
RBD-1	2024 - 02	Yes
RBD-1	2024 - 03	Yes

Quarterly mass loading

Final discharge point	Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia [1] (kg)
RBD-1	1.5726	11.9302	7.0452	0.1356	8.2097	20.5546	810.565	6.2819	1.1983

[1]Note: The quarterly mass loading for un-ionized ammonia is calculated for collection dates as of June 1st, 2021.

Deleterious substances report — 2024-Q1 — Version 2

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 01**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	31	
Total effluent volume deposited (conditionally required)	259667	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	◉	○
Acute lethality - *Daphnia magna*	○	◉	○
Acute lethality - Threespine stickleback	○	○	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/01/03	Grab	No
2024/01/09	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/01/16	Grab	No
2024/01/23	Grab	No
2024/01/30	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0021	0.0139	0.0077	0.0001	0.0083	0.0075	1	0.006	0.0014	7.52	7.89

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.5422	3.6042	1.9994	0.0325	2.1604	1.9475	259.667	1.558	0.3531

Note	Date	User name
Effluent deposition was continued from January 1, 2024 to January 31, 2024.	2024/05/30 12:16 (MST)	Brett Fairbairn

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name Hope Bay Project

Final discharge point RBD-1

Reporting month 2024 - 01

Collection date (required) 2024/01/03

Collection method (required) Grab

Value	<	Value	Units
Arsenic		0.00194	mg/L
Copper		0.014	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00776	mg/L
Zinc	<	0.015	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.007	Bq/L
Un-ionized ammonia		0.0014	mg/L expressed as nitrogen (N)
pH		7.72	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name Hope Bay Project

Final discharge point RBD-1

Reporting month 2024 - 01

Collection date (required) 2024/01/09

Collection method (required) Grab

Value	<	Value	Units
Arsenic		0.00202	mg/L
Copper		0.0131	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00782	mg/L
Zinc	<	0.015	mg/L
Suspended solids	<	2	mg/L
Radium-226	<	0.005	Bq/L
Un-ionized ammonia		0.0017	mg/L expressed as nitrogen (N)
pH		7.89	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 01
Collection date (required)	2024/01/16
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00254	mg/L
Copper		0.0163	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00941	mg/L
Zinc	<	0.015	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.0011	mg/L expressed as nitrogen (N)
pH		7.68	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 01
Collection date (required)	2024/01/23
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00228	mg/L
Copper		0.0148	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00812	mg/L
Zinc	<	0.015	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.008	Bq/L
Un-ionized ammonia		0.0014	mg/L expressed as nitrogen (N)
pH		7.83	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 01
Collection date (required)	2024/01/30
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00166	mg/L
Copper		0.0112	mg/L
Cyanide		0.006	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00849	mg/L
Zinc	<	0.015	mg/L
Suspended solids	<	2	mg/L
Radium-226	<	0.005	Bq/L
Un-ionized ammonia		0.0012	mg/L expressed as nitrogen (N)
pH		7.52	

Note	Date	User name
No data available		

Deleterious substances report — 2024-Q1 — Version 2

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 02**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	29	
Total effluent volume deposited (conditionally required)	261544	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	◉	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	○	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/02/07	Grab	No
2024/02/13	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/02/21	Grab	No
2024/02/27	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0019	0.0152	0.0094	0.0002	0.0112	0.0153	1	0.0095	0.0012	7.53	7.83

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.4858	3.9885	2.4651	0.0496	2.9286	4.0082	261.544	2.4847	0.3204

Note	Date	User name
Effluent deposition was continued from February 1, 2024 to February 29, 2024.	2024/05/30 12:39 (MST)	Brett Fairbairn

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 02
Collection date (required)	2024/02/07
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00181	mg/L
Copper		0.02	mg/L
Cyanide	<	0.02	mg/L
Lead		0.000258	mg/L
Nickel		0.0168	mg/L
Zinc		0.0175	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.0017	mg/L expressed as nitrogen (N)
pH		7.53	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 02
Collection date (required)	2024/02/13
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00188	mg/L
Copper		0.0117	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00744	mg/L
Zinc	<	0.015	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.008	Bq/L
Un-ionized ammonia		0.0016	mg/L expressed as nitrogen (N)
pH		7.53	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 02
Collection date (required)	2024/02/21
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00171	mg/L
Copper		0.0152	mg/L
Cyanide		0.0077	mg/L
Lead	<	0.0005	mg/L
Nickel		0.0115	mg/L
Zinc	<	0.03	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.83	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 02
Collection date (required)	2024/02/27
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00203	mg/L
Copper		0.0141	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00905	mg/L
Zinc		0.0213	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.0011	mg/L expressed as nitrogen (N)
pH		7.59	

Note	Date	User name
No data available		

Deleterious substances report — 2024-Q1 — Version 2

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 03**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	31	
Total effluent volume deposited (conditionally required)	289354	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	○	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	○	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/03/06	Grab	No
2024/03/12	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/03/19	Grab	No
2024/03/26	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0019	0.015	0.009	0.0002	0.0109	0.0532	1	0.0078	0.0018	7.5	7.55

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.5425	4.3475	2.5897	0.0543	3.1446	15.4081	289.354	2.2425	0.5353

Note	Date	User name
Effluent deposition was continued from March 1, 2024 to March 31, 2024.	2024/05/30 12:39 (MST)	Brett Fairbairn

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 03
Collection date (required)	2024/03/06
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00184	mg/L
Copper		0.0144	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.0005	mg/L
Nickel		0.0162	mg/L
Zinc		0.069	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.007	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.55	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 03
Collection date (required)	2024/03/12
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00196	mg/L
Copper		0.013	mg/L
Cyanide		0.0058	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00904	mg/L
Zinc		0.0238	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.006	Bq/L
Un-ionized ammonia		0.001	mg/L expressed as nitrogen (N)
pH		7.54	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 03
Collection date (required)	2024/03/19
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.0017	mg/L
Copper		0.0185	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.012	mg/L
Zinc		0.0694	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.0034	mg/L expressed as nitrogen (N)
pH		7.5	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q1 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 03
Collection date (required)	2024/03/26
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.002	mg/L
Copper		0.0142	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.0005	mg/L
Nickel		0.00623	mg/L
Zinc		0.0508	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.008	Bq/L
Un-ionized ammonia		0.0025	mg/L expressed as nitrogen (N)
pH		7.55	

Note	Date	User name
No data available		

Acute lethality test

Facility name Hope Bay Project

Reporting period 2024-Q1

Final discharge point	Collection date/time	Test type	Mortality
RBD-1	2024/01/03 06:00	*Daphnia magna*	0%
RBD-1	2024/01/03 06:00	Rainbow trout	0%
RBD-1	2024/02/07 05:35	Rainbow trout	0%
RBD-1	2024/03/06 04:50	Rainbow trout	0%

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/01/03
Collection time	06:00
Collection method (required)	Grab
Collector name (required)	Kailey Painchaud-Niemi

Note	Date	User name
No data available		

Test facility information

Fish species tested	***Daphnia magna***
Test method (required)	**Multi concentration**
Species used in test	***Daphnia magna***
Reference method	**Daphnia magna EPS 1/RM/14**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	None
Test lab name (required)	Bureau Veritas
Test lab city (required)	Burnaby
Test lab province (required)	British Columbia
Test start date (required)	2024/01/04
Test start time (required)	13:33
Person(s) performing the test (required)	Dayna Lee, Mustaffa Hamad
Person(s) verifying the test (required)	Melissa Thompson

Conditions in effluent sample

Temperature	19 °C
Dissolved oxygen	123.7 %
Electrical conductivity	8109 µS/cm
pH	7.5
pH adjustment to sample or solution?	No
pH adjustment procedure	
Hardness adjustment to sample or solution?	No
Hardness before adjustment	
Hardness after adjustment	
Aeration rate before	37.5 ± 12.5 mL/(min*L)
Aeration time before	30 minutes
Days to first brood	8 days
Average neonates/brood	38
Percent mortality %	1.6 %
	Enter percent mortality during the seven-day period prior to a test

Common conditions

Volume tested per vessel	185 mL
Were any replication solutions used for control(s) and effluent concentrations?	No
Neonates per vessel	10
Volume per neonate	18.5 mL

Conditions during test

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
0	19	19	9.2	8.9	7.9	7.7	341	1030	0	0

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
6.25	19	19	9.2	8.9	7.9	7.8	896	1030	0	0

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
12.5	19	19	9.2	8.9	7.9	7.8	1369	1030	0	0

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
25	19	19	9.2	8.9	7.8	7.8	2391	1030	0	0

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
50	19	19	9.3	8.9	7.8	7.8	4310	1030	0	0

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
100	19	19	9.6	8.8	7.7	7.8	8101	1030	0	0

Mortality and immobility information

Concentration (‰v/v)	Mean number of daphnids in 48th hour		Mean rate of daphnids in 48th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Median lethal concentration results

LC_{50}	> 100 %v/v
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
EC_{50}	> 100 %v/v
EC_{50} lower 95% confidence limit	
EC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Zinc
Date reference toxicant test initiated	2023-12-29
Recent 48-hour reference toxicant test LC_{50}	0.22 mg/L
LC_{50} lower 95% confidence limit	0.1 mg/L
LC_{50} upper 95% confidence limit	0.5 mg/L
Historic geometric mean LC_{50}	0.43 mg/L
Lower warning limit (-2 values of S.D.)	0.22 mg/L
Upper warning limit (+2 values of S.D.)	0.84 mg/L

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/01/03
Collection time	06:00
Collection method	Grab
Collector name (required)	Kailey Painchaud-Niemi

Note	Date	User name
No data available		

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Harris Industrial Testing Service Ltd.
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/01/08
Test start time(required)	08:30
Person(s) performing the test (required)	H. Nickel
Person(s) verifying the test (required)	J. Fraser

Conditions in effluent sample

Temperature	14.5 °C
Dissolved oxygen	108 %
Electrical conductivity	8000 µS/cm
pH	7.8
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	6.5 ± 1 mL/(min*L)
Aeration time before	90 minutes
Stock tank mortality	0 %
	Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	16 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.42 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	14.5	15	10	10	7.8	7.6	365	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	14.5	15	10.3	9.6	7.8	7.5	844	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	14	15	10	9.7	8	7.5	1385	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	15	15.5	10.4	9.9	7.8	7.6	2740	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	14.5	15	10.2	9.6	7.8	7.7	4450	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	14.5	15.5	10	9.7	7.8	7.8	7970	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	43 mm
Lower range fork length	38 mm
Upper range fork length	47 mm
Mean wet weight	0.67 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2023-12-20
Recent 96-hour reference toxicant test LC_{50}	10.1 mg/L
LC_{50} lower 95% confidence limit	8.63 mg/L
LC_{50} upper 95% confidence limit	11.7 mg/L
Historic geometric mean LC_{50}	9.2 mg/L
Lower warning limit (-2 values of S.D.)	7.59 mg/L
Upper warning limit (+2 values of S.D.)	11.2 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q1
Version	2

Final discharge point	Collection date
No data available	

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/02/07
Collection time	05:35
Collection method	Grab
Collector name (required)	Kailey Niami

Note	Date	User name
No data available		

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	Test met all conditions for test validity.
Test lab name (required)	Harris Industrial Testing Services
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/02/09
Test start time(required)	12:12
Person(s) performing the test (required)	Janetta Fraser
Person(s) verifying the test (required)	K. Marks

Conditions in effluent sample

Temperature	15.5 °C
Dissolved oxygen	103 %
Electrical conductivity	10380 µS/cm
pH	7.6
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	6.5 ± 1 mL/(min*L)
Aeration time before	90 minutes
Stock tank mortality	0 %
	Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	20 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.46 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	15	15.5	9.6	9.6	7.6	8	10480	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	15	15.5	10	9.5	7.7	7.9	5550	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	15	15.5	10.1	9.3	7.7	7.8	3100	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	15	15.5	10.1	9.3	7.8	7.8	1682	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.5	15	15.5	10	9.5	7.8	7.6	1243	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	15	15.5	10.1	9.8	7.2	7.6	371	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.5%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	46 mm
Lower range fork length	37 mm
Upper range fork length	50 mm
Mean wet weight	0.92 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-02-22
Recent 96-hour reference toxicant test LC_{50}	8.93 mg/L
LC_{50} lower 95% confidence limit	8.08 mg/L
LC_{50} upper 95% confidence limit	9.86 mg/L
Historic geometric mean LC_{50}	9.4 mg/L
Lower warning limit (-2 values of S.D.)	7.55 mg/L
Upper warning limit (+2 values of S.D.)	11.6 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q1
Version	2

Final discharge point	Collection date
No data available	

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/03/06
Collection time	04:50
Collection method	Grab
Collector name (required)	William Nalley

Note	Date	User name
No data available		

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	N/A
Test lab name (required)	Harris Industrial Testing Service Ltd.
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/03/08
Test start time(required)	12:55
Person(s) performing the test (required)	J. Fraser
Person(s) verifying the test (required)	K. Marks

Conditions in effluent sample

Temperature	15.5 °C
Dissolved oxygen	112 %
Electrical conductivity	11230 µS/cm
pH	7.6
pH adjustment to sample or solution?	No
pH adjustment procedure	N/A
Aeration rate before	6.5 ± 1 mL/(min*L)
Aeration time before	90 minutes
Stock tank mortality	0 %

Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	18 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.44 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	15	15.5	10.2	9.9	7.6	8	11180	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	14.5	15.5	10.4	9.7	7.8	7.8	6010	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	14.5	15.5	10.3	9.7	7.8	7.8	3310	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	14.5	15.5	10.3	9.8	7.8	7.7	1835	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	14	15	10.3	9.8	7.8	7.6	1236	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	14	15	10.2	9.9	7.8	7.6	380	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	41 mm
Lower range fork length	31 mm
Upper range fork length	49 mm
Mean wet weight	0.8 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-02-15
Recent 96-hour reference toxicant test LC_{50}	11.3 mg/L
LC_{50} lower 95% confidence limit	10.2 mg/L
LC_{50} upper 95% confidence limit	12.5 mg/L
Historic geometric mean LC_{50}	9.4 mg/L
Lower warning limit (-2 values of S.D.)	7.31 mg/L
Upper warning limit (+2 values of S.D.)	12.2 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q1
Version	2

Final discharge point	Collection date
No data available	

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Hope Bay Project - Quarterly effluent monitoring report - Version 2 - 2024-Q2

Report details

Facility name	Hope Bay Project
Reporting period	2024-Q2
Version	2
Status	Submitted
Last modified	2024/10/03 12:46 (MST)
Submission date	2024/10/03 12:48 (MST)

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

History

Status	Version	Last modified	Submission date
Submitted	2	2024/10/03 12:46 (MST)	2024/10/03 12:48 (MST)
Archived	1	2024/07/20 13:23 (MST)	2024/07/20 13:52 (MST)

Deleterious substances

Facility name Hope Bay Project

Reporting period 2024-Q2

Final discharge point	Reporting month	Was there deposit?
RBD-1	2024 - 04	Yes
RBD-1	2024 - 05	Yes
RBD-1	2024 - 06	Yes

Quarterly mass loading

Final discharge point	Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia [1] (kg)
RBD-1	1.4828	16.7268	28.3692	0.147	7.4679	15.2143	775.645	6.5671	0.7084

[1]Note: The quarterly mass loading for un-ionized ammonia is calculated for collection dates as of June 1st, 2021.

Deleterious substances report — 2024-Q2 — Version 2

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 04**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	30	
Total effluent volume deposited (conditionally required)	259679	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	◉	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	◉	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/04/03	Grab	No
2024/04/09	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/04/16	Grab	No
2024/04/23	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0018	0.0197	0.0531	0.0002	0.0095	0.025	1	0.0096	0.0013	7.42	7.59

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.4674	5.1222	13.7954	0.0406	2.4624	6.505	259.679	2.4994	0.3376

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name Hope Bay Project

Final discharge point RBD-1

Reporting month 2024 - 04

Collection date (required) 2024/04/03

Collection method (required) Grab

Value	<	Value	Units
Arsenic		0.00174	mg/L
Copper		0.0284	mg/L
Cyanide	<	0.2	mg/L
Lead	<	0.0005	mg/L
Nickel		0.0126	mg/L
Zinc		0.038	mg/L
Suspended solids	<	2	mg/L
Radium-226	<	0.005	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.47	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name Hope Bay Project

Final discharge point RBD-1

Reporting month 2024 - 04

Collection date (required) 2024/04/09

Collection method (required) Grab

Value	<	Value	Units
Arsenic		0.0019	mg/L
Copper		0.0234	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.0102	mg/L
Zinc		0.0397	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.006	Bq/L
Un-ionized ammonia		0.0037	mg/L expressed as nitrogen (N)
pH		7.47	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 04
Collection date (required)	2024/04/16
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00182	mg/L
Copper		0.0137	mg/L
Cyanide	<	0.2	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00789	mg/L
Zinc		0.015	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.02	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.42	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name Hope Bay Project

Final discharge point RBD-1

Reporting month 2024 - 04

Collection date (required) 2024/04/23

Collection method (required) Grab

Value	<	Value	Units
Arsenic		0.00174	mg/L
Copper		0.0134	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00724	mg/L
Zinc	<	0.015	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.59	

Note	Date	User name
No data available		

Deleterious substances report — 2024-Q2 — Version 2

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 05**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	31	
Total effluent volume deposited (conditionally required)	242737	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	◉	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	○	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/05/01	Grab	No
2024/05/07	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/05/14	Grab	No
2024/05/21	Grab	No
2024/05/28	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0018	0.0254	0.046	0.0002	0.0092	0.0203	1	0.0069	0.0009	7.26	7.82

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.4491	6.1704	11.1659	0.0546	2.2342	4.9324	242.737	1.6749	0.2282

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 05
Collection date (required)	2024/05/01
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00176	mg/L
Copper		0.0191	mg/L
Cyanide	<	0.2	mg/L
Lead	<	0.0005	mg/L
Nickel		0.00795	mg/L
Zinc	<	0.003	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.006	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.67	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 05
Collection date (required)	2024/05/07
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.002	mg/L
Copper		0.0613	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.001	mg/L
Nickel		0.0116	mg/L
Zinc	<	0.06	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.26	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 05
Collection date (required)	2024/05/14
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00181	mg/L
Copper		0.0154	mg/L
Cyanide	<	0.2	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00821	mg/L
Zinc		0.0278	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.006	Bq/L
Un-ionized ammonia		0.0019	mg/L expressed as nitrogen (N)
pH		7.82	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 05
Collection date (required)	2024/05/21
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00169	mg/L
Copper		0.0149	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00867	mg/L
Zinc		0.0224	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.0013	mg/L expressed as nitrogen (N)
pH		7.75	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 05
Collection date (required)	2024/05/28
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00199	mg/L
Copper		0.0164	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00959	mg/L
Zinc		0.0199	mg/L
Suspended solids	<	2	mg/L
Radium-226	<	0.005	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.8	

Note	Date	User name
No data available		

Deleterious substances report — 2024-Q2 — Version 2

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 06**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	30	
Total effluent volume deposited (conditionally required)	273229	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	◉	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	○	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/06/05	Grab	No
2024/06/11	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/06/18	Grab	No
2024/06/25	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0021	0.0196	0.0106	0.0002	0.0102	0.0135	1	0.0089	0.0005	7.47	8.12

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.5697	5.3416	2.8962	0.0512	2.7863	3.6818	273.229	2.4249	0.1366

Note	Date	User name
Changed increased frequency to normal. This was an error in the first version.	2024/10/03 11:50 (MST)	Brett Fairbairn

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 06
Collection date (required)	2024/06/05
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00226	mg/L
Copper		0.0172	mg/L
Cyanide		0.0154	mg/L
Lead	<	0.0005	mg/L
Nickel		0.00834	mg/L
Zinc	<	0.03	mg/L
Suspended solids	<	2	mg/L
Radium-226	<	0.005	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.47	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 06
Collection date (required)	2024/06/11
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00243	mg/L
Copper		0.0266	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.0005	mg/L
Nickel		0.0146	mg/L
Zinc	<	0.03	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.007	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		8.12	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 06
Collection date (required)	2024/06/18
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00193	mg/L
Copper		0.0146	mg/L
Cyanide		0.0074	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00837	mg/L
Zinc	<	0.015	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.006	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.75	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q2 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 06
Collection date (required)	2024/06/25
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00172	mg/L
Copper		0.0198	mg/L
Cyanide		0.0096	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00948	mg/L
Zinc		0.0164	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.02	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.88	

Note	Date	User name
No data available		

Acute lethality test

Facility name Hope Bay Project

Reporting period 2024-Q2

Final discharge point	Collection date/time	Test type	Mortality
RBD-1	2024/04/03 05:40	Rainbow trout	0%
RBD-1	2024/05/01 05:50	Rainbow trout	0%
RBD-1	2024/06/05 05:45	Rainbow trout	0%

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/04/03
Collection time	05:40
Collection method	Grab
Collector name (required)	K. Niemi & J. Inkster

Note	Date	User name
No data available		

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Harris Industrial Testing Ltd.
Test lab city (required)	Waverly
Test lab province (required)	Nova Scotia
Test start date (required)	2024/04/05
Test start time(required)	13:00
Person(s) performing the test (required)	H. Nickle & J. Fraser
Person(s) verifying the test (required)	J. Fraser

Conditions in effluent sample

Temperature	14.5 °C
Dissolved oxygen	105 %
Electrical conductivity	11380 µS/cm
pH	7.7
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	6.5 ± 1 mL/(min*L)
Aeration time before	90 minutes
Stock tank mortality	0.07 %
	Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	20 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.36 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	15.5	15.5	10	10	8.1	8.1	11310	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	15.5	15.5	10.1	10	8	8	6250	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	15.5	15	10.1	10	7.9	8	3280	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	15.5	15.5	10	10	7.8	8	1930	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	15.5	15.5	10	9.9	7.8	7.7	1134	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	16	16	10	9.9	7.6	7.6	397	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	41 mm
Lower range fork length	33 mm
Upper range fork length	46 mm
Mean wet weight	0.72 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-03-19
Recent 96-hour reference toxicant test LC_{50}	10.1 mg/L
LC_{50} lower 95% confidence limit	8.72 mg/L
LC_{50} upper 95% confidence limit	11.6 mg/L
Historic geometric mean LC_{50}	9.6 mg/L
Lower warning limit (-2 values of S.D.)	7.29 mg/L
Upper warning limit (+2 values of S.D.)	12.7 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q2
Version	2

Final discharge point	Collection date
No data available	

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/05/01
Collection time	05:50
Collection method	Grab
Collector name (required)	K. Niemi

Note	Date	User name
No data available		

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Harris Industrial Testing Ltd.
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/05/03
Test start time(required)	11:30
Person(s) performing the test (required)	J. Fraser & K. Marks
Person(s) verifying the test (required)	K. Marks

Conditions in effluent sample

Temperature	16 °C
Dissolved oxygen	107 %
Electrical conductivity	10600 µS/cm
pH	7.6
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	6.5 ± 1 mL/(min*L)
Aeration time before	90 minutes
Stock tank mortality	0 %
	Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	18 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.42 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	16	15.5	9.6	10	7.6	7.9	10550	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	16	15.5	9.9	10.2	7.8	7.8	5930	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	16	15.5	9.9	10.1	7.8	7.7	3180	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	16	15.5	10	10	7.7	7.7	2010	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	16	15.5	10	10	7.7	7.6	1228	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	15.5	15.5	10	10	7.5	7.3	397	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	41 mm
Lower range fork length	34 mm
Upper range fork length	46 mm
Mean wet weight	0.72 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-04-11
Recent 96-hour reference toxicant test LC_{50}	8.93 mg/L
LC_{50} lower 95% confidence limit	8.08 mg/L
LC_{50} upper 95% confidence limit	9.86 mg/L
Historic geometric mean LC_{50}	9.6 mg/L
Lower warning limit (-2 values of S.D.)	7.24 mg/L
Upper warning limit (+2 values of S.D.)	12.6 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q2
Version	2

Final discharge point	Collection date
No data available	

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/06/05
Collection time	05:45
Collection method	Grab
Collector name (required)	G. Hogarth/W. Nalley

Note	Date	User name
No data available		

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	None
Test lab name (required)	Harris Industrial Testing Services Ltd.
Test lab city (required)	Waverly
Test lab province (required)	Nova Scotia
Test start date (required)	2024/06/10
Test start time(required)	11:25
Person(s) performing the test (required)	J. Fraser
Person(s) verifying the test (required)	J. Fraser

Conditions in effluent sample

Temperature	14 °C
Dissolved oxygen	92 %
Electrical conductivity	8380 µS/cm
pH	7.4
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	
Aeration time before	
Stock tank mortality	0 %

Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	18 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.46 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	15	14.5	9.6	9.8	7.5	8.1	8240	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	16	14	9.8	10.1	7.6	7.9	4460	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	16	14.5	9.8	10	7.6	7.8	2470	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	16	14.5	9.8	10	7.5	7.8	1540	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	16	14.5	9.8	10.1	7.4	7.7	1156	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	15.5	14.5	9.8	10.2	7.4	7.6	334	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	42 mm
Lower range fork length	38 mm
Upper range fork length	46 mm
Mean wet weight	0.82 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-06-11
Recent 96-hour reference toxicant test LC_{50}	7.84 mg/L
LC_{50} lower 95% confidence limit	6.79 mg/L
LC_{50} upper 95% confidence limit	9.18 mg/L
Historic geometric mean LC_{50}	9.4 mg/L
Lower warning limit (-2 values of S.D.)	7.15 mg/L
Upper warning limit (+2 values of S.D.)	12.4 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q2
Version	2

Final discharge point	Collection date
No data available	

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Canada

Hope Bay Project - Quarterly effluent monitoring report - Version 2 - 2024-Q3

Report details

Facility name	Hope Bay Project
Reporting period	2024-Q3
Version	2
Status	Submitted
Last modified	2024/11/19 09:10 (MST)
Submission date	2024/11/19 09:12 (MST)

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

History

Status	Version	Last modified	Submission date
Submitted	2	2024/11/19 09:10 (MST)	2024/11/19 09:12 (MST)
Archived	1	2024/10/17 15:53 (MST)	2024/10/17 16:00 (MST)

Deleterious substances

Facility name Hope Bay Project

Reporting period 2024-Q3

Final discharge point	Reporting month	Was there deposit?
RBD-1	2024 - 07	Yes
RBD-1	2024 - 08	Yes
RBD-1	2024 - 09	Yes

Quarterly mass loading

Final discharge point	Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia [1] (kg)
RBD-1	1.2817	9.166	5.0192	0.0876	4.9732	8.6632	1517.155	6.2158	1.8745

[1]Note: The quarterly mass loading for un-ionized ammonia is calculated for collection dates as of June 1st, 2021.

Deleterious substances report — 2024-Q3 — Version 2

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 07**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	24	
Total effluent volume deposited (conditionally required)	220945	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	◉	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	○	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/07/03	Grab	No
2024/07/10	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/07/17	Grab	No
2024/07/23	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0017	0.0163	0.012	0.0001	0.0083	0.0103	2.2	0.015	0.0005	7.82	7.93

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.385	3.6069	2.6513	0.0276	1.8261	2.2813	486.079	3.3142	0.1105

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 07
Collection date (required)	2024/07/03
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00176	mg/L
Copper		0.0142	mg/L
Cyanide		0.0084	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00728	mg/L
Zinc	<	0.015	mg/L
Suspended solids		2.5	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.82	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 07
Collection date (required)	2024/07/10
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00166	mg/L
Copper		0.0157	mg/L
Cyanide		0.0139	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00862	mg/L
Zinc	<	0.015	mg/L
Suspended solids		2.5	mg/L
Radium-226		0.02	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.93	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 07
Collection date (required)	2024/07/17
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00186	mg/L
Copper		0.0145	mg/L
Cyanide		0.0141	mg/L
Lead	<	0.00025	mg/L
Nickel		0.0073	mg/L
Zinc	<	0.015	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.88	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 07
Collection date (required)	2024/07/23
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00169	mg/L
Copper		0.0209	mg/L
Cyanide		0.0116	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00986	mg/L
Zinc		0.0188	mg/L
Suspended solids		2.8	mg/L
Radium-226		0.02	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.91	

Note	Date	User name
No data available		

Deleterious substances report — 2024-Q3 — Version 2

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 08**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	18	
Total effluent volume deposited (conditionally required)	146689	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	◉	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	○	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/08/07	Grab	No
2024/08/14	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/08/27	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0021	0.014	0.0075	0.0002	0.0087	0.0178	1.7667	0.0077	0.004	7.59	8.48

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.3134	2.0536	1.1002	0.0244	1.2767	2.616	259.1506	1.1246	0.5819

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 08
Collection date (required)	2024/08/07
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00185	mg/L
Copper		0.0171	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.0005	mg/L
Nickel		0.00959	mg/L
Zinc	<	0.03	mg/L
Suspended solids		2.2	mg/L
Radium-226		0.009	Bq/L
Un-ionized ammonia		0.0021	mg/L expressed as nitrogen (N)
pH		7.59	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 08
Collection date (required)	2024/08/14
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.0023	mg/L
Copper		0.0116	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00713	mg/L
Zinc		0.0161	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.007	Bq/L
Un-ionized ammonia		0.0024	mg/L expressed as nitrogen (N)
pH		7.99	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 08
Collection date (required)	2024/08/27
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00226	mg/L
Copper		0.0133	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00939	mg/L
Zinc		0.0224	mg/L
Suspended solids		2.1	mg/L
Radium-226		0.007	Bq/L
Un-ionized ammonia		0.0074	mg/L expressed as nitrogen (N)
pH		8.48	

Note	Date	User name
No data available		

Deleterious substances report — 2024-Q3 — Version 2

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 09**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	30	
Total effluent volume deposited (conditionally required)	263054	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	◉	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	○	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/09/04	Grab	No
2024/09/11	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/09/17	Grab	No
2024/09/24	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0022	0.0133	0.0044	0.0001	0.0067	0.013	3.25	0.0069	0.0044	8.16	8.45

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.5833	3.492	1.1509	0.0329	1.7592	3.4329	854.9255	1.8151	1.1706

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 09
Collection date (required)	2024/09/04
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00195	mg/L
Copper		0.0102	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00605	mg/L
Zinc	<	0.015	mg/L
Suspended solids		2.2	mg/L
Radium-226		0.009	Bq/L
Un-ionized ammonia		0.0061	mg/L expressed as nitrogen (N)
pH		8.45	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 09
Collection date (required)	2024/09/11
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00242	mg/L
Copper		0.0136	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00686	mg/L
Zinc	<	0.015	mg/L
Suspended solids		3.5	mg/L
Radium-226		0.0006	Bq/L
Un-ionized ammonia		0.004	mg/L expressed as nitrogen (N)
pH		8.43	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 09
Collection date (required)	2024/09/17
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00232	mg/L
Copper		0.0166	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00742	mg/L
Zinc		0.0181	mg/L
Suspended solids		4.2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.0046	mg/L expressed as nitrogen (N)
pH		8.28	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q3 — Version 2

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 09
Collection date (required)	2024/09/24
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00218	mg/L
Copper		0.0127	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00642	mg/L
Zinc		0.0191	mg/L
Suspended solids		3.1	mg/L
Radium-226		0.008	Bq/L
Un-ionized ammonia		0.0031	mg/L expressed as nitrogen (N)
pH		8.16	

Note	Date	User name
No data available		

Acute lethality test

Facility name Hope Bay Project

Reporting period 2024-Q3

Final discharge point	Collection date/time	Test type	Mortality
RBD-1	2024/09/11 05:40	*Daphnia magna*	0%
RBD-1	2024/07/03 04:46	Rainbow trout	0%
RBD-1	2024/07/10 05:05	Rainbow trout	0%
RBD-1	2024/08/07 05:30	Rainbow trout	0%
RBD-1	2024/09/04 05:40	Rainbow trout	0%

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/07/03
Collection time	04:46
Collection method	Grab
Collector name (required)	Brett Fairbairn

Note	Date	User name
No data available		

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Harris Industrial Testing Services Ltd.
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/07/04
Test start time(required)	12:45
Person(s) performing the test (required)	J. Fraser
Person(s) verifying the test (required)	K. Marks

Conditions in effluent sample

Temperature	16 °C
Dissolved oxygen	103 %
Electrical conductivity	10690 µS/cm
pH	7.5
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	6.5 ± 1 mL/(min*L)
Aeration time before	30 minutes
Stock tank mortality	0 %
	Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	20 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.39 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	16	14.5	9.8	9.7	7.5	7.8	10730	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	16	14.5	9.8	10	7.6	7.7	5940	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	16	14.5	9.8	10	7.7	7.7	3290	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	16	14	9.8	10.1	7.7	7.6	1771	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	16	14.5	9.8	10.1	7.6	7.5	1186	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	15	14.5	9.9	9.8	7.3	7.4	400	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	41 mm
Lower range fork length	33 mm
Upper range fork length	47 mm
Mean wet weight	0.79 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-06-18
Recent 96-hour reference toxicant test LC_{50}	9.29 mg/L
LC_{50} lower 95% confidence limit	8.28 mg/L
LC_{50} upper 95% confidence limit	10.4 mg/L
Historic geometric mean LC_{50}	9.5 mg/L
Lower warning limit (-2 values of S.D.)	7.24 mg/L
Upper warning limit (+2 values of S.D.)	12.4 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q3
Version	2

Final discharge point	Collection date
No data available	

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/07/10
Collection time	05:05
Collection method	Grab
Collector name (required)	Will Nalley

Note	Date	User name
No data available		

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Harris Industrial Testing Services Ltd.
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/07/11
Test start time(required)	14:05
Person(s) performing the test (required)	J. Fraser
Person(s) verifying the test (required)	J. Fraser

Conditions in effluent sample

Temperature	15 °C
Dissolved oxygen	96 %
Electrical conductivity	10650 µS/cm
pH	7.6
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	
Aeration time before	
Stock tank mortality	0 %

Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	18 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.5 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	15.5	15	9.4	9.5	7.7	8.1	10590	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	16	15	9.6	9.8	7.7	7.8	5410	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	16	15	9.7	9.7	7.8	7.7	3250	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	16	14.5	9.8	9.9	7.7	7.6	1756	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	15.5	15	9.8	9.7	7.7	7.5	1290	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	15	14.5	9.9	10	7.3	7.3	452	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	43 mm
Lower range fork length	40 mm
Upper range fork length	46 mm
Mean wet weight	0.9 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-06-18
Recent 96-hour reference toxicant test LC_{50}	9.29 mg/L
LC_{50} lower 95% confidence limit	8.28 mg/L
LC_{50} upper 95% confidence limit	10.4 mg/L
Historic geometric mean LC_{50}	9.5 mg/L
Lower warning limit (-2 values of S.D.)	7.24 mg/L
Upper warning limit (+2 values of S.D.)	12.4 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q3
Version	2

Final discharge point	Collection date
No data available	

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/08/07
Collection time	05:30
Collection method	Grab
Collector name (required)	Kailey Niemi and Rachael Sorochan

Note	Date	User name
No data available		

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Harris Industrial Testing Services Ltd.
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/08/09
Test start time(required)	13:40
Person(s) performing the test (required)	J. Fraser
Person(s) verifying the test (required)	k. Marks

Conditions in effluent sample

Temperature	14.5 °C
Dissolved oxygen	92 %
Electrical conductivity	9420 µS/cm
pH	7.7
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	
Aeration time before	
Stock tank mortality	0 %

Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	18 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.44 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	14.5	15	9.6	10	7.8	7.9	9610	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	15	15	9.9	10	7.8	7.8	4990	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	15.5	15	9.9	10	7.4	7.7	2940	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	15.5	15	10	10.1	7.7	7.6	1652	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	16	15	9.9	10.1	7.6	7.5	1020	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	16	15.5	9.9	10	7.2	7.4	299	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	42 mm
Lower range fork length	35 mm
Upper range fork length	50 mm
Mean wet weight	0.8 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-07-17
Recent 96-hour reference toxicant test LC_{50}	7.93 mg/L
LC_{50} lower 95% confidence limit	7.37 mg/L
LC_{50} upper 95% confidence limit	8.54 mg/L
Historic geometric mean LC_{50}	9.3 mg/L
Lower warning limit (-2 values of S.D.)	7.09 mg/L
Upper warning limit (+2 values of S.D.)	12.3 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q3
Version	2

Final discharge point	Collection date
No data available	

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/09/04
Collection time	05:40
Collection method	Grab
Collector name (required)	Brett Fairbairn and Kailey Niemi

Note	Date	User name
No data available		

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Harris Industrial Testing Services Ltd.
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/09/06
Test start time(required)	14:38
Person(s) performing the test (required)	J. Fraser
Person(s) verifying the test (required)	J. Fraser

Conditions in effluent sample

Temperature	16 °C
Dissolved oxygen	84 %
Electrical conductivity	8540 µS/cm
pH	8.3
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	
Aeration time before	
Stock tank mortality	0 %

Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	18 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.44 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	15.5	16	8.1	8.6	8.3	7.8	8500	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	15	16	8.6	8.8	8.2	7.6	4910	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	16	16	9	9.1	7.8	7.5	2540	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	16	16	9.1	9.3	7.6	7.4	1688	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	16	16	9.4	9.4	7.5	7.3	934	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	16	16	9.7	9.7	7.2	7.2	345	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	44 mm
Lower range fork length	35 mm
Upper range fork length	52 mm
Mean wet weight	0.79 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-08-27
Recent 96-hour reference toxicant test LC_{50}	8.58 mg/L
LC_{50} lower 95% confidence limit	7.96 mg/L
LC_{50} upper 95% confidence limit	9.25 mg/L
Historic geometric mean LC_{50}	9.3 mg/L
Lower warning limit (-2 values of S.D.)	7.08 mg/L
Upper warning limit (+2 values of S.D.)	12.3 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q3
Version	2

Final discharge point	Collection date
No data available	

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/09/11
Collection time	05:40
Collection method (required)	Grab
Collector name (required)	Kailey Niemi and Rachael Sorochan

Note	Date	User name
No data available		

Test facility information

Fish species tested	***Daphnia magna***
Test method (required)	**Multi concentration**
Species used in test	***Daphnia magna***
Reference method	**Daphnia magna EPS 1/RM/14**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Bureau Veritas
Test lab city (required)	Burnaby
Test lab province (required)	British Columbia
Test start date (required)	2024/09/12
Test start time (required)	13:31
Person(s) performing the test (required)	Dayna Lee and Melanie Mazziotti
Person(s) verifying the test (required)	Melissa Thompson

Conditions in effluent sample

Temperature	19 °C
Dissolved oxygen	119.7 %
Electrical conductivity	6459 µS/cm
pH	8.5
pH adjustment to sample or solution?	No
pH adjustment procedure	
Hardness adjustment to sample or solution?	No
Hardness before adjustment	830 mg/L as $CaCO_3$
Hardness after adjustment	830 mg/L as $CaCO_3$
Aeration rate before	37.5 ± 12.5 mL/(min*L)
Aeration time before	30 minutes
Days to first brood	8 days
Average neonates/brood	41
Percent mortality %	0 %
	Enter percent mortality during the seven-day period prior to a test

Common conditions

Volume tested per vessel	200 mL
Were any replication solutions used for control(s) and effluent concentrations?	No
Neonates per vessel	10
Volume per neonate	20 mL

Conditions during test

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
0	19	20	9	9	8.1	8.1	336	100	0	0

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
6.25	19	19	9.1	9	8.2	8.1	744		0	0

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
12.5	19	19	9.1	9	8.2	8.1	1147		0	0

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
25	19	19	9.2	9	8.3	8.2	1911		0	0

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
50	19	19	9.2	9	8.4	8.2	3441		0	0

* Concentration (‰v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Hardness (mg/L as $CaCO_3$)	Number of dead daphnids	Number of immobile daphnids
	Time of test observation									
	0th hour	48th hour	0th hour	48th hour	0th hour	48th hour	0th hour	0th hour	48th hour	48th hour
100	19	19	9.5	9.3	8.4	8.4	6496		0	0

Mortality and immobility information

Concentration (‰v/v)	Mean number of daphnids in 48th hour		Mean rate of daphnids in 48th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Median lethal concentration results

LC_{50}	> 100 %v/v
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
EC_{50}	> 100 %v/v
EC_{50} lower 95% confidence limit	
EC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Zinc
Date reference toxicant test initiated	2024-09-10
Recent 48-hour reference toxicant test LC_{50}	0.56 mg/L
LC_{50} lower 95% confidence limit	0.21 mg/L
LC_{50} upper 95% confidence limit	0.78 mg/L
Historic geometric mean LC_{50}	0.36 mg/L
Lower warning limit (-2 values of S.D.)	0.16 mg/L
Upper warning limit (+2 values of S.D.)	0.82 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q3
Version	2

Final discharge point	Collection date
No data available	

Government of Canada / Gouvernement du Canada

Canada

Hope Bay Project - Quarterly effluent monitoring report - Version 1 - 2024-Q4

Report details

Facility name	Hope Bay Project
Reporting period	2024-Q4
Version	1
Status	Submitted
Last modified	2025/02/03 06:42 (MST)
Submission date	2025/02/03 06:48 (MST)

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

History

Status	Version	Last modified	Submission date
Submitted	1	2025/02/03 06:42 (MST)	2025/02/03 06:48 (MST)

Deleterious substances

Facility name Hope Bay Project

Reporting period 2024-Q4

Final discharge point	Reporting month	Was there deposit?
RBD-1	2024 - 10	Yes
RBD-1	2024 - 11	Yes
RBD-1	2024 - 12	Yes

Quarterly mass loading

Final discharge point	Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia [1] (kg)
RBD-1	0.7566	4.7889	4.6709	0.0783	3.4284	14.2758	2404.4112	6.0052	1.1361

[1]Note: The quarterly mass loading for un-ionized ammonia is calculated for collection dates as of June 1st, 2021.

Deleterious substances report — 2024-Q4 — Version 1

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 10**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	31	
Total effluent volume deposited (conditionally required)	225746	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	◉	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	○	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/10/02	Grab	No
2024/10/08	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/10/15	Grab	No
2024/10/23	Grab	No
2024/10/29	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0014	0.0075	0.0127	0.0002	0.0082	0.0353	7.68	0.0077	0.0012	7.19	8.07

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.3219	1.703	2.867	0.0451	1.8443	7.9779	1733.7293	1.7382	0.2709

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 10
Collection date (required)	2024/10/02
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00208	mg/L
Copper		0.0106	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00743	mg/L
Zinc		0.0247	mg/L
Suspended solids		10	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.002	mg/L expressed as nitrogen (N)
pH		8.07	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 10
Collection date (required)	2024/10/08
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00128	mg/L
Copper		0.00696	mg/L
Cyanide	<	0.1	mg/L
Lead	<	0.00025	mg/L
Nickel		0.0109	mg/L
Zinc		0.0502	mg/L
Suspended solids		2.5	mg/L
Radium-226		0.008	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.19	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 10
Collection date (required)	2024/10/15
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00105	mg/L
Copper		0.00528	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.0109	mg/L
Zinc		0.0502	mg/L
Suspended solids		4.5	mg/L
Radium-226	<	0.005	Bq/L
Un-ionized ammonia	<	0.001	mg/L expressed as nitrogen (N)
pH		7.36	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 10
Collection date (required)	2024/10/23
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00172	mg/L
Copper		0.00988	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00662	mg/L
Zinc		0.0216	mg/L
Suspended solids		12.2	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.0012	mg/L expressed as nitrogen (N)
pH		7.89	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 10
Collection date (required)	2024/10/29
Collection method (required)	Grab

Value	<	Value	Units
Arsenic	<	0.002	mg/L
Copper	<	0.01	mg/L
Cyanide		0.006	mg/L
Lead	<	0.001	mg/L
Nickel	<	0.01	mg/L
Zinc	<	0.06	mg/L
Suspended solids		9.2	mg/L
Radium-226		0.008	Bq/L
Un-ionized ammonia		0.0018	mg/L expressed as nitrogen (N)
pH		8.02	

Note	Date	User name
No data available		

Deleterious substances report — 2024-Q4 — Version 1

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 11**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	20	
Total effluent volume deposited (conditionally required)	105310	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	○	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	◉	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/11/16	Grab	No
2024/11/20	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/11/27	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0012	0.007	0.0075	0.0001	0.0054	0.0257	2.6667	0.0163	0.0029	7.8	8

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.1281	0.7326	0.7898	0.0132	0.568	2.71	280.8267	1.7201	0.3089

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 11
Collection date (required)	2024/11/16
Collection method (required)	Grab

Value	<	Value	Units
Arsenic	<	0.0005	mg/L
Copper		0.00346	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00489	mg/L
Zinc		0.0246	mg/L
Suspended solids	<	2	mg/L
Radium-226		0.02	Bq/L
Un-ionized ammonia		0.003	mg/L expressed as nitrogen (N)
pH		8	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 11
Collection date (required)	2024/11/20
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00134	mg/L
Copper		0.00551	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00368	mg/L
Zinc		0.0451	mg/L
Suspended solids		3	mg/L
Radium-226		0.02	Bq/L
Un-ionized ammonia		0.0044	mg/L expressed as nitrogen (N)
pH		7.99	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 11
Collection date (required)	2024/11/27
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00206	mg/L
Copper		0.0119	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00761	mg/L
Zinc	<	0.015	mg/L
Suspended solids		4	mg/L
Radium-226		0.009	Bq/L
Un-ionized ammonia		0.0014	mg/L expressed as nitrogen (N)
pH		7.8	

Note	Date	User name
No data available		

Deleterious substances report — 2024-Q4 — Version 1

Facility name	**Hope Bay Project**	
Final discharge point	**RBD-1**	
Reporting month	**2024 - 12**	
Was there a deposit during month? (required)	Yes	
Number of days effluent deposited (conditionally required)	31	
Total effluent volume deposited (conditionally required)	190634	m^3/month
Was cyanide ever used as a process reagent? (required)	Yes	

Monitoring frequency

Refer to subections 12(1) and 14(1) of the regulations for a description of *normal* frequency.
Refer to subections 13(1), (2) and 16(1) of the regulations for a description of *reduced* frequency.
Refer to subsection 15 (1) of the regulations for a description of *increased* frequency.

Monitoring frequency	Increased	Normal	Reduced
Arsenic		◉	○
Copper		◉	○
Cyanide		◉	○
Lead		◉	○
Nickel		◉	○
Zinc		◉	○
Suspended solids		◉	○
Radium-226		◉	○
Un-ionized ammonia		◉	○
Acute lethality - Rainbow trout	○	◉	○
Acute lethality - *Daphnia magna*	○	○	○
Acute lethality - Threespine stickleback	○	○	○

Deleterious substances and pH data

Collection date	Collection method	Failed acute lethality test
2024/12/04	Grab	No
2024/12/11	Grab	No

Collection date	Collection method	Failed acute lethality test
2024/12/18	Grab	No
2024/12/24	Grab	No
2024/12/31	Grab	No

Monthly mean concentrations

Arsenic (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Suspended solids (mg/L)	Radium-226 (Bq/L)	Un-ionized ammonia (mg/L expressed as nitrogen (N))	Minimum pH	Maximum pH
0.0017	0.013	0.0067	0.0001	0.0062	0.021	3.48	0.0105	0.0024	7.7	7.91

Monthly mass loading

Arsenic (kg)	Copper (kg)	Cyanide (kg)	Lead (kg)	Nickel (kg)	Zinc (kg)	Suspended solids (kg)	Radium-226 (MBq)	Un-ionized ammonia (kg)
0.3256	2.4855	1.2696	0.0238	1.1728	4.0071	663.4063	2.0017	0.4575

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 12
Collection date (required)	2024/12/04
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.002	mg/L
Copper		0.0106	mg/L
Cyanide		0.0072	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00622	mg/L
Zinc	<	0.015	mg/L
Suspended solids		4.3	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.0024	mg/L expressed as nitrogen (N)
pH		7.83	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 12
Collection date (required)	2024/12/11
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00218	mg/L
Copper		0.0104	mg/L
Cyanide	<	0.005	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00601	mg/L
Zinc		0.0167	mg/L
Suspended solids		4.2	mg/L
Radium-226		0.02	Bq/L
Un-ionized ammonia		0.0026	mg/L expressed as nitrogen (N)
pH		7.81	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 12
Collection date (required)	2024/12/18
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00203	mg/L
Copper		0.0106	mg/L
Cyanide		0.0072	mg/L
Lead	<	0.00025	mg/L
Nickel		0.0061	mg/L
Zinc		0.0212	mg/L
Suspended solids		4.2	mg/L
Radium-226	<	0.005	Bq/L
Un-ionized ammonia		0.0032	mg/L expressed as nitrogen (N)
pH		7.72	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 12
Collection date (required)	2024/12/24
Collection method (required)	Grab

Value	<	Value	Units
Arsenic	<	0.0005	mg/L
Copper		0.00449	mg/L
Cyanide	<	0.02	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00494	mg/L
Zinc		0.0445	mg/L
Suspended solids		2.3	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.0017	mg/L expressed as nitrogen (N)
pH		7.7	

Note	Date	User name
No data available		

Deleterious substances details — 2024 — 2024-Q4 — Version 1

Facility name	Hope Bay Project
Final discharge point	RBD-1
Reporting month	2024 - 12
Collection date (required)	2024/12/31
Collection method (required)	Grab

Value	<	Value	Units
Arsenic		0.00208	mg/L
Copper		0.0291	mg/L
Cyanide		0.0064	mg/L
Lead	<	0.00025	mg/L
Nickel		0.00749	mg/L
Zinc		0.0152	mg/L
Suspended solids		2.4	mg/L
Radium-226		0.01	Bq/L
Un-ionized ammonia		0.0021	mg/L expressed as nitrogen (N)
pH		7.91	

Note	Date	User name
No data available		

Acute lethality test

Facility name Hope Bay Project

Reporting period 2024-Q4

Final discharge point	Collection date/time	Test type	Mortality
RBD-1	2024/10/02 05:10	Rainbow trout	0%
RBD-1	2024/12/04 05:30	Rainbow trout	0%
RBD-1	2024/11/20 04:30	Threespine stickleback	0%

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/10/02
Collection time	05:10
Collection method	Grab
Collector name (required)	William Nalley

Note	Date	User name
Salinity = 4 ppt	2025/02/03 06:42 (MST)	Brett Fairbairn

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Harris Industrial Testing services Ltd.
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/10/04
Test start time(required)	16:20
Person(s) performing the test (required)	J. Fraser and K. Marks
Person(s) verifying the test (required)	J. Fraser

Conditions in effluent sample

Temperature	16 °C
Dissolved oxygen	105 %
Electrical conductivity	7910 µS/cm
pH	8
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	6.5 ± 1 mL/(min*L)
Aeration time before	60 minutes
Stock tank mortality	0 %
	Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	18 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.42 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	15.5	15.5	9.7	9.7	7.9	7.8	7900	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	15.5	15.5	9.8	10	7.8	7.6	4130	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	15.5	15.5	10	10	7.7	7.4	2400	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	16	15.5	9.9	9.9	7.7	7.5	1448	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	16	15.5	9.9	10	7.6	7.5	981	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	15.5	15	10	10	7.4	7.4	362	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	41 mm
Lower range fork length	34 mm
Upper range fork length	48 mm
Mean wet weight	0.76 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-09-12
Recent 96-hour reference toxicant test LC_{50}	10.9 mg/L
LC_{50} lower 95% confidence limit	9.7 mg/L
LC_{50} upper 95% confidence limit	12.2 mg/L
Historic geometric mean LC_{50}	9.5 mg/L
Lower warning limit (-2 values of S.D.)	7.17 mg/L
Upper warning limit (+2 values of S.D.)	12.5 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q4
Version	1

Final discharge point	Collection date
No data available	

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/11/20
Collection time	04:30
Collection method	Grab
Collector name (required)	William Nalley
Temperature upon receipt	9.9 °C
Was there filtration?	No
Filtration notes	
Anything unusual about test	

Note	Date	User name
Salinity = 10.8 ppt	2025/02/02 14:50 (MST)	D. Jason Inkster

Test facility information

Fish species tested	**Threespine stickleback**
Test method (required)	**Multi concentration**
Species used in test	**Gasterosteus Aculeatus**
Reference method	**Threespine Stickleback EPS 1/RM/10**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Harris Industrial Testing Services Ltd.
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/11/21
* **Test start time (required)**	15:47
Person(s) performing the test (required)	J. Fraser and K. Marks
Person(s) verifying the test (required)	J. Fraser
Information on labelling or coding for each sample	
Date sample received at test facility (required)	2024/11/21
Time sample received at test facility (required)	12:50

Conditions in effluent sample

Temperature	14 °C
Dissolved oxygen	107 %
Salinity	10.8 g/kg
Method used to measure salinity of effluent, control, and test solutions	Conductivity
Was there a salinity adjustment to sample or solution?	No
Salinity adjustment procedure	
pH	7.9
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	6.5 ± 1 mL/(min*L)
Aeration time before	30 minutes
Stock tank mortality	1.1 %
	Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	16 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.44 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Salinity (g/kg)	Total number of dead fish				Number of stressed fish
	Time of test observation											
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	24th hour	48th hour	72nd hour	96th hour	96th hour
100	15	15	9.1	9.3	8	8.1	10.6	0	0	0	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Salinity (g/kg)	Total number of dead fish				Number of stressed fish
	Time of test observation											
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	24th hour	48th hour	72nd hour	96th hour	96th hour
50	14.5	14.5	8.8	8.9	7.9	7.9	19.5	0	0	0	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Salinity (g/kg)	Total number of dead fish				Number of stressed fish
	Time of test observation											
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	24th hour	48th hour	72nd hour	96th hour	96th hour
25	14.5	14.5	8.5	8.5	7.9	7.8	24.7	0	0	0	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Salinity (g/kg)	Total number of dead fish				Number of stressed fish
	Time of test observation											
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	24th hour	48th hour	72nd hour	96th hour	96th hour
12.5	15	14.5	8.1	8.5	7.8	7.8	27	0	0	0	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Salinity (g/kg)	Total number of dead fish				Number of stressed fish
	Time of test observation											
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	24th hour	48th hour	72nd hour	96th hour	96th hour
6.25	15	14.5	8.3	8.5	7.8	7.8	28.3	0	0	0	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Salinity (g/kg)	Total number of dead fish				Number of stressed fish
	Time of test observation											
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	24th hour	48th hour	72nd hour	96th hour	96th hour
0	15	14.5	8	8.5	7.8	7.8	28.3	0	0	0	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	43 mm
Lower range fork length	37 mm
Upper range fork length	50 mm
Mean wet weight	0.7 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-11-19
Recent 48-hour reference toxicant test LC_{50}	13.4 mg/L
LC_{50} lower 95% confidence limit	10.8 mg/L
LC_{50} upper 95% confidence limit	16.6 mg/L
Historic geometric mean LC_{50}	15.5 mg/L
Lower warning limit (-2 values of S.D.)	12.2 mg/L
Upper warning limit (+2 values of S.D.)	19.7 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q4
Version	1

Final discharge point	Collection date
No data available	

Effluent information

Parent company

Parent company	Physical address
Agnico Eagle Mines Limited	400, 145 King, Street, East, Toronto, Ontario, M3C 2Y7, Canada

Facility name	Hope Bay Project
Facility city	Cambridge Bay
Facility province	Nunavut
Final discharge point	RBD-1
Final discharge point description	Effluent will be pumped and discharged to Roberts Bay through a single pipeline. The effluent stream will consist of water collected from contact water ponds, saline water from underground mines and excess water in the reclaim pond of the tailings impoundment area. The FDP is located at the upstream end of the pipeline, prior to discharge to Roberts Bay. On land portions of the pipeline are maintained by heat tracing to ensure reliability of the pipeline during freezing periods. Pumping, treatment and monitoring locations are located in heated buildings to maintain operational reliability. In-line TSS sensors are installed to continuously monitor effluent streams, enabling actions to be taken to direct non-compliant water to the TIA if required. The discharge system has the capability to suspend effluent discharge to Roberts Bay if required.
Effluent type	Tailings impoundment area effluent
Time zone	Mountain Time
Collection date	2024/12/04
Collection time	05:30
Collection method	Grab
Collector name (required)	K Niemi and B Fairbairn

Note	Date	User name
Salinity = 5 ppt	2025/02/02 15:26 (MST)	Brett Fairbairn

Test facility information

Fish species tested	**Rainbow trout**
Test method (required)	**Multi concentration**
Species used in test	**Oncorhynchus Mykiss**
Reference method	**Rainbow Trout EPS 1/RM/13**
Were there deviations from one or more "must" requirements in sections 2 to 7 in the method? (required)	No
Description of deviation (conditionally required)	
Test lab name (required)	Harris Industrial Testing Services Ltd
Test lab city (required)	Waverley
Test lab province (required)	Nova Scotia
Test start date (required)	2024/12/09
Test start time(required)	11:38
Person(s) performing the test (required)	J Fraser
Person(s) verifying the test (required)	D Robinson

Conditions in effluent sample

Temperature	15.5 °C
Dissolved oxygen	107 %
Electrical conductivity	8530 µS/cm
pH	7.7
pH adjustment to sample or solution?	No
pH adjustment procedure	
Aeration rate before	6.5 ± 1 mL/(min*L)
Aeration time before	90 minutes
Stock tank mortality	0 %
	Enter percentage mortality of fish in stock tank(s) from which test fish are taken, as recorded daily (or, as a minimum, for five of the seven days spanning a weekly period) for the seven day period immediately preceding the test

Common conditions

Aeration rate throughout test	6.5 ± 1 mL/(min*L)
Volume tested per vessel	10 L
Were any replication solutions used for control(s) and effluent concentrations?	No
Fish per vessel	10
Loading density	0.49 g/L

Conditions during test

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
100	15	15	9.9	8.9	7.8	7.8	8630	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
50	14.5	14.5	9.8	9.5	7.8	7.8	4760	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
25	14.5	14.5	9.9	9.6	7.8	7.6	2730	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
12.5	14.5	14.5	9.9	9.3	7.7	7.5	1717	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
6.25	14.5	14.5	9.9	9.7	7.6	7.4	959	0	0

* Concentration (%v/v) (required)	Temperature (°C)		Dissolved oxygen (mg/L)		pH		Electrical conductivity (µS/cm)	Total number of dead fish	Number of stressed fish
	Time of test observation								
	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	0th hour	96th hour	96th hour
0	14.5	14.5	9.9	10	7.6	7.2	351	0	0

Mortality and immobility information

Concentration (%v/v)	Mean number of fish in 96th hour		Mean rate of fish in 96th hour (%)	
	Dead	Immobile	Dead	Immobile
0%	0	0	0%	0%
6.25%	0	0	0%	0%
12.5%	0	0	0%	0%
25%	0	0	0%	0%
50%	0	0	0%	0%
100%	0	0	0%	0%

Result (Pass/Fail) **Pass**

Fork length and wet weight information

Mean fork length	39 mm
Lower range fork length	36 mm
Upper range fork length	44 mm
Mean wet weight	0.49 g

Median lethal concentration results

LC_{50}	Non-lethal
LC_{50} lower 95% confidence limit	
LC_{50} upper 95% confidence limit	
Statistical method	

Reference toxicant test results

Reference toxicant	Phenol
Date reference toxicant test initiated	2024-12-03
Recent 96-hour reference toxicant test LC_{50}	9.66 mg/L
LC_{50} lower 95% confidence limit	8.55 mg/L
LC_{50} upper 95% confidence limit	10.92 mg/L
Historic geometric mean LC_{50}	9.4 mg/L
Lower warning limit (-2 values of S.D.)	7.07 mg/L
Upper warning limit (+2 values of S.D.)	12.5 mg/L

Effluent characterization for acutely lethal effluent

Facility name	Hope Bay Project
Reporting period	2024-Q4
Version	1

Final discharge point	Collection date
No data available	