



Status Report on  
the **Performance of  
Mines** Subject to the  
***Metal and Diamond  
Mining Effluent  
Regulations*** in 2018



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## REVIEW NOTICE

This summary of the performance of mines subject to the *Metal and Diamond Mining Effluent Regulations* (Regulations) has been reviewed by staff of the Mining and Processing Division of Environment and Climate Change Canada and approved for public release. Approval for release does not necessarily signify that the content reflects the views and policies of Environment and Climate Change Canada.

The data used in this summary were provided to Environment and Climate Change Canada under sections 21 and 22 of the Regulations, which requires mining facilities to submit reports to Environment and Climate Change Canada. The data were compiled by staff of the Mining Section of Environment and Climate Change Canada and are presented as provided by the facilities from their submitted reports.

This summary has been compiled to inform the regulated community, other stakeholders and the general public on the performance of mining facilities subject to the Regulations. The material has been prepared for informational purposes only. For all purposes of interpreting and applying the law, users should consult the *Metal and Diamond Mining Effluent Regulations*, as registered by the Clerk of the Privy Council and published in Part II of the *Canada Gazette*.

## EXECUTIVE SUMMARY

This status report presents a summary of the performance of Canadian mines in 2018 with respect to the prescribed limits and requirements of the *Metal and Diamond Mining Effluent Regulations* (MDMER). This is the 16th annual report since the publication of the Regulations. The report provides information on mining facilities subject to the Regulations, effluent data, compliance performance and water bodies designated as tailing impoundment areas.

The *Metal Mining Effluent Regulations* (MMER) came into force in 2002 under the *Fisheries Act* to regulate the deposit of mine effluent and mine waste into waters frequented by fish. The Regulations set out limits for certain deleterious substances and pH, prohibit the discharge of effluent that is acutely lethal to rainbow trout, and specify the requirements for carrying out effluent sampling, reporting and environmental effects monitoring. In 2018, the MMER were amended to include diamond mines, thus becoming the MDMER.

In 2018, the first year diamond mines reported under the amended MDMER, 5 diamond mining facilities and 140 metal mining facilities in Canada were subject to the MDMER. These facilities are located in all provinces and territories except Alberta and Prince Edward Island. Most facilities were located in Ontario and Quebec, which have 48 and 37 facilities, respectively. It was determined that 62 mining facilities subject to the Regulations (43%) provided incomplete effluent monitoring information, including 7 mining facilities that did not provide any effluent monitoring reports in 2018. The vast majority of reporting issues were attributed to one or more missing acute lethality and radium-226 test results. The compliance statistics presented in this report were compiled on the basis of the information provided in the annual report submissions and do not include unreported data.

Overall, 99.6% of data reported in 2018 were in compliance with the prescribed monthly mean limits for metals, cyanide, total suspended solids (TSS), and pH, which is consistent with the compliance rate measured in 2017 (99.7%). Most of the exceedances reported in 2018 were for TSS (51%) and pH (24%). All of the reported deleterious substances and pH limits had a compliance rate of at least 99%, except for TSS, which had a compliance rate of 97.8%. Of the exceedances reported, most were from facilities in the iron metal mining subsector.

Overall, 91.6% of test data reported in 2018 showed mining facilities to be in compliance with the requirement that effluent not be acutely lethal to rainbow trout. This is a decrease from the 2017 compliance rate of 98.6%. A high number of failed tests at a mine located in Quebec contributed to the overall decline in reported compliance for rainbow trout toxicity test results between 2017 and 2018. Additionally, 89.6% of *Daphnia magna* monitoring test results reported in 2018 showed a mortality rate of less than 50%, which is a decline from the 2017 rate of 95.8%.

Schedule 2 of the Regulations lists water bodies designated as tailings impoundment areas. In 2018, 9 new water bodies were added to the 37 water bodies already listed on Schedule 2 of the Regulations. These 46 water bodies are associated with the activities of 21 mining facilities.

The MDMER are enforced by Environment and Climate Change Canada in accordance with the Compliance and Enforcement Policy for the Habitat Protection and Pollution Prevention Provisions of the *Fisheries Act* (Environment Canada 2001c). As part of the quality review of this report, the data and comments in Appendix D were reviewed by Enforcement Branch personnel.

The electronic version of this status report is available through Environment and Climate Change Canada's online publications catalogue at <http://publications.gc.ca/site/eng/9.832748/publication.html>. More information on the MDMER is available on the webpage: [canada.ca/metal-diamond-mining-effluent](http://canada.ca/metal-diamond-mining-effluent).

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# 1. INTRODUCTION

The *Metal and Diamond Mining Effluent Regulations* (MDMER) were developed under subsections 34(2), 36(5) and 38(9) of the *Fisheries Act* to regulate the deposit of mine effluent and mine waste into waters frequented by fish. The *Metal Mining Effluent Regulations* (MMER) were first published on June 6, 2002, and came into force on December 6, 2002. Amendments to the MMER, now known as the MDMER, came into force beginning on June 1, 2018. More information about the regulatory amendments is published in Part II of the *Canada Gazette* and is available online at: <https://gazette.gc.ca/rp-pr/p2/2018/2018-05-30/html/sor-dors99-eng.html>. For additional information, visit the Metal and Diamond Mining Effluent website at: [Canada.ca/metal-diamond-mining-effluent](http://Canada.ca/metal-diamond-mining-effluent).

Metal and diamond mining facilities are authorized under section 4 and 5 of the Regulations and according to prescribed conditions to discharge mine effluent containing specified deleterious substances into waters frequented by fish and to deposit mine waste into water bodies listed in Schedule 2 of the Regulations. The Regulations are administered by Environment and Climate Change Canada and apply to metal and diamond mining facilities that have deposited more than 50 m<sup>3</sup> of effluent per day at any time since the Regulations came into force.

Mining facilities are required to manage all their effluent and to only discharge effluent through a final discharge point (FDP). All effluent must meet the concentration-based limits for the eight substances listed in Schedule 4 of the Regulations and the minimum and maximum allowable pH, and must not be acutely lethal as specified in subsection 4(1) of the Regulations. The Regulations also specify effluent testing, reporting and environmental effects monitoring requirements for facilities.

The 2018 amendments to the Regulations include:

- the expansion of the scope of the Regulations to cover diamond mines;
- the introduction of threespine stickleback as an alternative acute lethality test species to rainbow trout for mines depositing saline effluent into marine receiving environment; and
- the reporting of cyanide at all final discharge points if cyanide was ever used as a process reagent at the facility.

The full text of the Regulations outlining all the requirements is published in Part II of the *Canada Gazette* and is available online at: <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2002-222/index.html>.

This report is a summary of the performance of mining facilities in meeting the monthly mean limits of Schedule 4, the pH limits and the acute lethality testing requirements of the MDMER. The performance summary is presented in Section 2 of this status report. Section 2 also summarizes the compliance of mining facilities with the reporting requirements needed to complete the performance analysis of this report. In addition, the mining facilities that are associated with water bodies on Schedule 2 of the MDMER are presented in Section 3. Supplementary information on individual facilities is provided in the appendices.

This report was developed on the basis of the data provided by the owners and operators of mining facilities. Sections 21 and 22 of the Regulations require facilities to submit annual and quarterly reports of the effluent sampling results required under the Regulations. Each mining facility subject to the MDMER is required to provide these reports until the facility becomes a recognized closed mine as per Part 4 of the Regulations. Annual reports provided by the mining facilities are due by March 31 of the following year and include the following information for each final discharge point:

- monthly mean concentrations for deleterious substances including metals, cyanide and total suspended solids;
- monthly pH range;
- monthly effluent volume; and
- summary results of rainbow trout or threespine stickleback acute lethality tests, and *Daphnia magna* monitoring tests.

The information from the 2018 annual reports was compiled by the Mining Section of Environment and Climate Change Canada and was used to calculate the compliance statistics presented in Section 2 of this status report. The data contained in this status report are presented as submitted by the owners or operators of the mining facilities in their annual reports. The compliance statistics in this status report do not include data that were missing from both the annual and quarterly reports. An annual summary of the compliance data for each final discharge point is included in Appendix D.

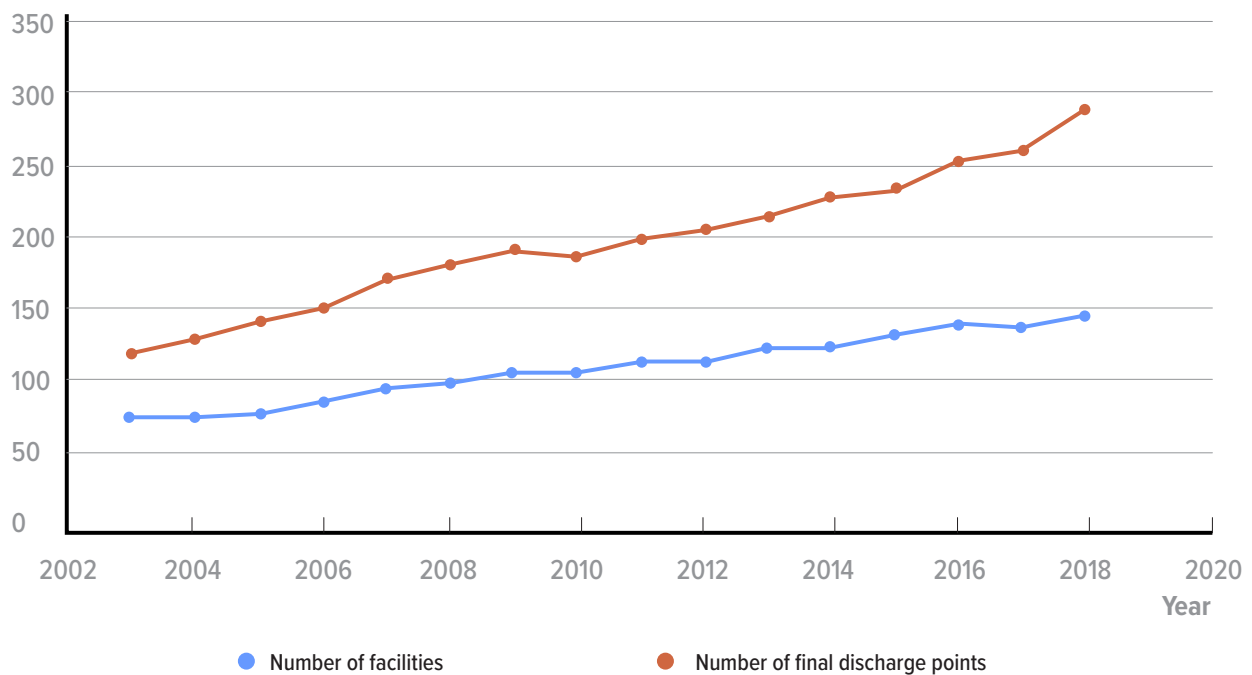
As part of the quality review of this report, the data and comments presented in Appendix D were reviewed by regional Enforcement Branch personnel. The MDMER are enforced by Environment and Climate Change Canada in accordance with the provisions of the Compliance and Enforcement Policy for the Habitat Protection and Pollution Prevention Provisions of the *Fisheries Act* (Environment Canada 2001c). ECC's Enforcement Branch administers the provisions of the *Fisheries Act* and accompanying regulations with an emphasis on preventing harm to fish, fish habitat or human use of fish caused by physical alteration or pollution of waters frequented by fish. The policy sets out a range of possible responses to offences that can be used by enforcement inspectors, including warnings, inspector's directions, ministerial orders, injunctions, prosecution and civil suits by the Crown for the recovery of costs. When there is evidence of an alleged violation, an enforcement officer, considers the following criteria in order to determine the appropriate response: nature of the alleged offence, effectiveness in achieving the desired result with the alleged offender, and consistency in enforcement.

## 2. ASSESSMENT OF PERFORMANCE IN MEETING MDMER REQUIREMENTS

### 2.1. OVERVIEW OF MINING FACILITIES SUBJECT TO THE REGULATIONS

In 2018, 140 metal mining facilities and 5 diamond mining facilities in Canada were subject to the Regulations<sup>1</sup>, compared to 137 in 2017, and 73 in 2003 (the first full year of reporting). Nine new facilities (four metal mines and five diamond mines) became subject to the Regulations; and three facilities became recognized closed mines (see Appendix A for a list of facilities with new regulatory status in 2018). In 2018, the facilities subject to the Regulations reported having 289 final discharge points (FDPs), compared with 263 in 2017 and 119 in 2003. As illustrated in Figure 1, there has been a 99% increase of mining facilities subject to the Regulations since 2003.

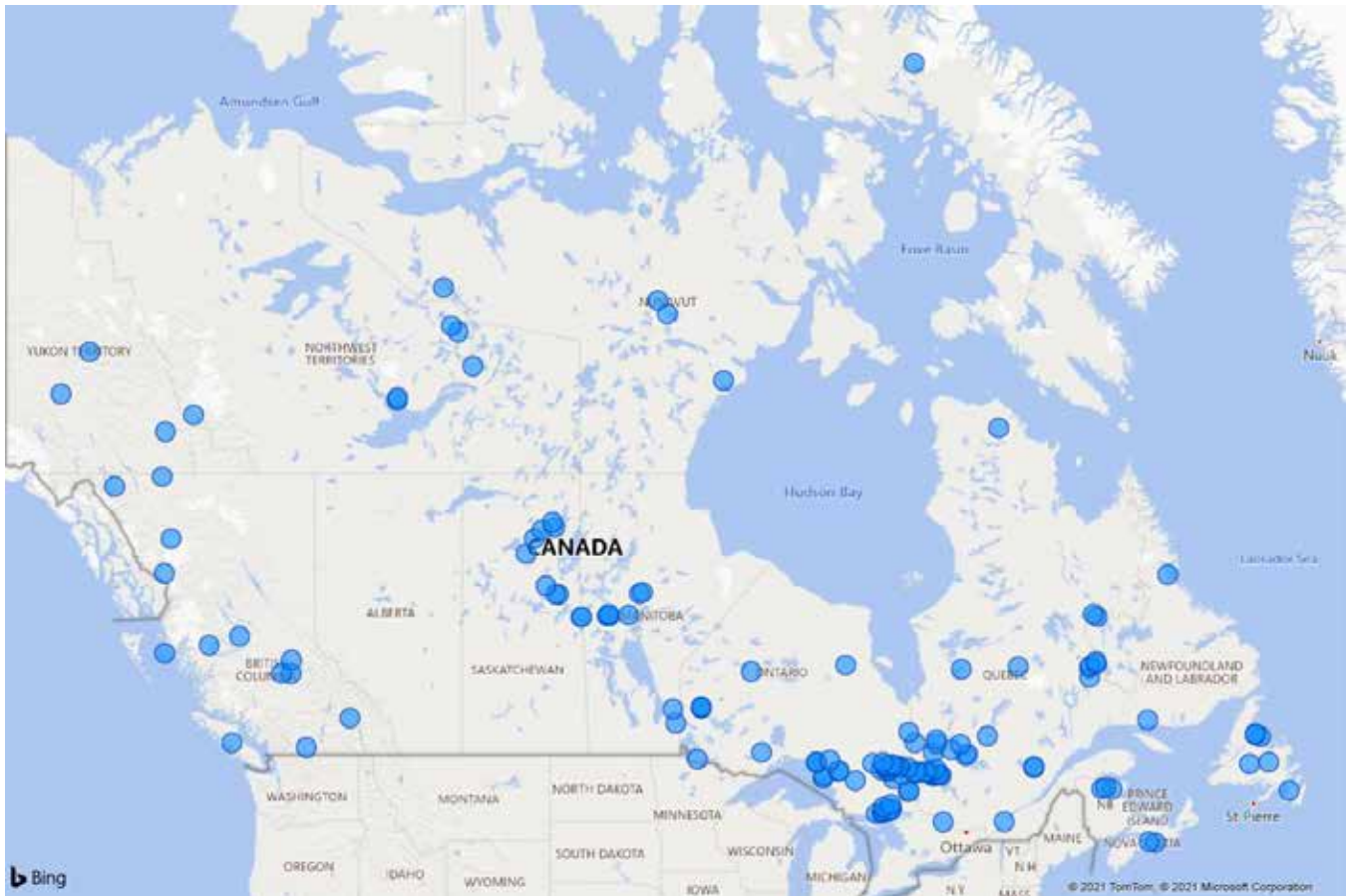
**Figure 1: Number of Facilities subject to the MDMER and FDPs from 2003 to 2018**



Mining facilities subject to the Regulations are located in all provinces and territories except for Alberta and Prince Edward Island. Most facilities were located in Ontario and Quebec, which have 48 and 37 facilities, respectively. A complete list of the facilities subject to the Regulations is provided in Appendix B, and a map illustrating their location is presented in Figure 2. The distribution of mining facilities and final discharge points per jurisdiction is shown in Table 1. The number of FDPs per facility ranged from 1 to 15, as detailed in Table 2. Of the mining facilities having reported under the MDMER, 82 FDPs released effluent in 12 months of the year, 128 FDPs released effluent in 1 to 11 months of the year, and 79 FDPs had no releases in 2018.

<sup>1</sup> For the purpose of this report, the number of mining facilities subject to the MDMER refers to the facilities subject to the effluent monitoring conditions set out in Division 2 of the MDMER and excludes any facility that obtained a recognized closed mine status in accordance with Part 4 of the MDMER

Figure 2: Location of All Mining Facilities Subject to the Metal and Diamond Mining Effluent Regulations in 2018



For a more detailed analysis of mining facility distribution within Canada, visit the Open data platform hosted by the Government of Canada, via the following link: <https://open.canada.ca/data/en/dataset/6ceba940-efaa-4994-bee7-3ea1930bedad>

**Table 1: Distribution of Mining Facilities and Final Discharge Points in 2018, by Jurisdiction**

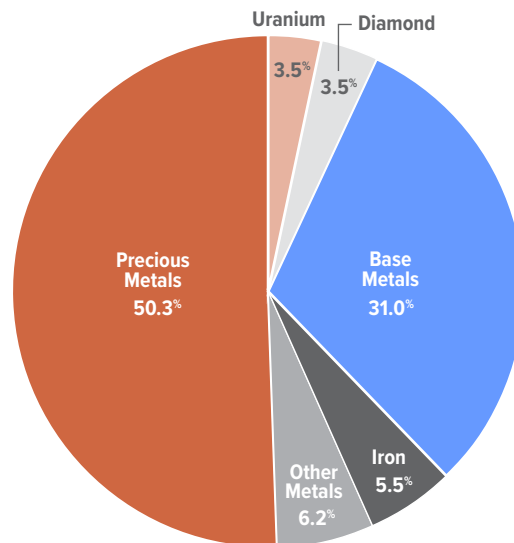
Jurisdiction	Number of mining facilities	Number of final discharge points
British Columbia	13	35
Yukon	3	3
Saskatchewan	8	18
Manitoba	10	13
Northwest Territories	6	12
Nunavut	5	8
Ontario	48	78
Quebec	37	83
New Brunswick	2	2
Newfoundland and Labrador	11	35
Nova Scotia	2	2
<b>Total</b>	<b>145</b>	<b>289</b>

**Table 2: Distribution of Final Discharge Points in 2018, per Mining Facility**

NUMBER OF FINAL DISCHARGE POINTS	NUMBER OF FACILITIES
1	91
2	23
3	13
4	7
5	1
6	3
7	4
8	1
11	1
15	1

The distribution of mining facilities with respect to the type of mining activity conducted is as follows (Figure 3). There are 73 (50.3% of the 145 mining facilities subject to the MDMER) precious<sup>2</sup> metal mining facilities, 45 (31.0%) base metal mining facilities<sup>3</sup>, 9 (6.2%) other metal<sup>4</sup> mining facilities, 8 (5.5%) iron ore mining facilities, 5 (3.5%) uranium mining facilities, and 5 (3.5%) diamond mining facilities. Mining facilities that produce more than one metal are assigned the mining subsector of the metal whose production represents the highest monetary value for the facility.

**Figure 3: Mining Facilities per Subsector in 2018**



## 2.2. COMPLIANCE ASSESSMENT FOR REPORTING REQUIREMENTS

Environment and Climate Change Canada staff reviewed the data included in the annual reports provided by the owners or operators of mining facilities and evaluated compliance with key reporting requirements of the MDMER. The following types of missing information were identified and described in the comment section of Appendix D for each FDP:

- No annual report was submitted;
- One or more quarterly reports were not submitted;
- No test results were provided for one or more deleterious substances for one or more months;
- No pH results were provided for one or more months;
- No rainbow trout, threespine stickleback or *Daphnia magna* acute lethality test results were provided for one or more months; and
- No effluent volume was provided for one or more months.

<sup>2</sup> For the purpose of this report, the precious metals subsector includes gold, palladium, platinum and silver.

<sup>3</sup> The base metals subsector includes copper, lead, molybdenum, nickel and zinc.

<sup>4</sup> The other metals subsector includes metals such as antimony, cadmium, cesium, calcium, cobalt, indium, lithium, magnesium, niobium, rubidium, selenium, strontium, tantalum, tellurium, titanium and tungsten.

This missing information was tallied and used to determine that 62 mining facilities (43% of the overall 145 facilities subject to the MDMER) provided incomplete effluent monitoring information for 89 different FDPs. The majority of reporting issues were attributed to missing acute lethality and radium-226 test results.

Of the 62 mining facilities missing some information, the following 7 provided no quarterly or annual effluent monitoring reports in 2018 and were not included in the calculation of compliance statistics:

- Edwards Mine, Strike Minerals Inc.;
- Haley Plant, Timminco Limited;
- Lockerby Mine, First Nickel Incorporated;
- McWatters Mine, Northern Sun Mining Corporation;
- Podolsky Mine, FNX Mining Company Incorporated;
- Yellow Giant Mine, Banks Island Gold Limited;
- Yukon Refinery, Yukon (36569) Inc.

### **2.3. COMPLIANCE ASSESSMENT FOR PRESCRIBED DELETERIOUS SUBSTANCES AND PH**

Overall, 99.6%<sup>5</sup> of data reported in 2018 were in compliance with the prescribed monthly mean limits<sup>6</sup> for metals, cyanide, total suspended solids (TSS), and the pH limits<sup>7</sup>, compared to 99.7% in 2017. In 2018, most of the exceedances reported were TSS (51%), pH (24%) followed by zinc at 13% and nickel at 10%. In 2017, most of the exceedances reported were for TSS (79%), pH (8%) and both radium-226 and zinc at 5%.

From 2003 to 2018, there has generally been a decrease in the total number of exceedances with the prescribed monthly mean limits for metals, cyanide, total suspended solids and the pH limits despite the number of facilities having increased, as shown in Figure 4. However, from 2017 to 2018, there was an increase of 44% in the total number of exceedances. This increase is mostly the result of the higher number of exceedances for TSS, nickel and the pH limits in 2018.

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<sup>5</sup> This percentage represents the average of all the compliance rates listed in Table 4.

<sup>6</sup> The maximum authorized monthly mean concentrations for the eight prescribed deleterious substances are listed in column 2 of Schedule 4 of the MDMER. The Regulations also set maximum concentrations for each sample (column 3 and 4 of Schedule 4). The compliance analysis in this report only examines exceedances on a monthly average basis.

<sup>7</sup> The minimum and maximum allowable pH in any effluent sample is specified in paragraph 4(1)(b) of the MDMER. The compliance analysis in this report only takes into consideration the lowest and highest pH values for each month.

Figure 4: Total Number of Exceedances for Deleterious Substances and pH, and Facilities from 2003 to 2018

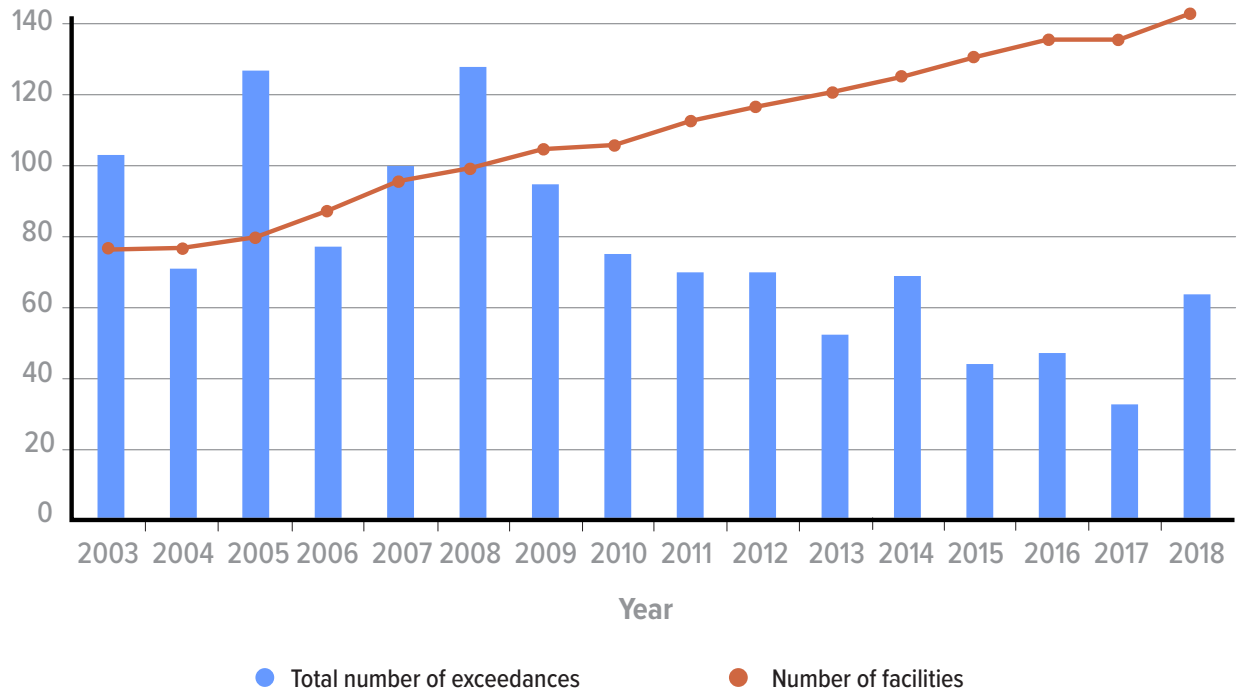


Table 3: The Number of Exceedances for Deleterious Substances and pH from 2003 to 2018

Substance/ Parameter	Number of Exceedances Each Year															
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Arsenic	2	3	5	2	2	2	0	1	2	2	3	1	0	0	0	0
Copper	2	4	3	0	1	4	6	1	1	3	4	4	1	2	0	0
Cyanide	0	0	0	0	0	3	0	0	1	5	3	1	1	0	0	1
Lead	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nickel	4	8	13	17	16	9	6	9	5	5	3	9	2	1	1	7
Zinc	2	1	9	3	2	4	4	3	4	4	3	6	0	1	2	9
TSS	80	50	86	52	73	81	71	57	53	51	30	35	29	30	30	35
Radium226	7	0	1	0	0	7	0	2	1	1	7	4	5	6	2	0
pH Low	3	3	8	4	5	11	7	3	4	2	3	10	10	10	3	12
pH High	5	6	4	3	4	9	4	3	3	1	1	3	1	2	0	4
<b>Total</b>	<b>106</b>	<b>75</b>	<b>129</b>	<b>81</b>	<b>103</b>	<b>130</b>	<b>98</b>	<b>79</b>	<b>74</b>	<b>74</b>	<b>57</b>	<b>73</b>	<b>49</b>	<b>52</b>	<b>38</b>	<b>68</b>



In 2018, the compliance rate for arsenic, copper, lead and radium-226 remained unchanged at 100% from the previous year. The compliance rate for cyanide decreased from 100% in 2017 to 99.8% in 2018. The compliance rate for nickel decreased from 99.9% in 2017 to 99.5% in 2018. The compliance rate for zinc decreased from 99.9% in 2017 to 99.4% in 2018.

In 2018, the reported monthly means for total suspended solids were 97.8% compliant with the prescribed limit for TSS, slightly less than in 2017 (98%). Although the majority of TSS exceedances reported were sporadic, the two facilities that reported the most frequent TSS exceedances in 2018 were the Fire Lake Mine in Quebec and Bellekeno Mine in the Yukon Territory.

In 2018, 99.3% of the facilities' lowest reported pH value for each month met the minimum pH limit, which is a decrease from 2017 (99.8%). The Mont-Wright Mine in Quebec reported the most pH values below the minimum pH limit. In 2018, 99.8% of the facilities' highest reported pH value for each month met the maximum pH limit, which is also a decrease from 2017 (100%).

Summaries of the numbers of exceedances and compliance rates for the prescribed monthly concentration limits and pH limits are presented in Tables 4 and 5.

**Table 4: Compliance Summary for Prescribed Deleterious Substances and pH in 2018**

Parameter	As	Cu	CN	Pb	Ni	Zn	TSS	Ra-226	pH Low	pH High
Number of exceedances	0	0	1	0	7	9	35	0	12	4
Total number of months for which results were reported	1463	1474	478	1466	1464	1483	1616	940	1615	1615
<b>Compliance rate (%)</b>	<b>100</b>	<b>100</b>	<b>99.8</b>	<b>100</b>	<b>99.5</b>	<b>99.4</b>	<b>97.8</b>	<b>100</b>	<b>99.3</b>	<b>99.8</b>

**Table 5: Summary of Exceedances to Prescribed Limits in 2018**

Substance / Parameter	# of Exceedances	% of Total Exceedances	# of Mining Facilities
Arsenic	0	0%	0
Copper	0	0%	0
Cyanide	1	1%	1
Lead	0	0%	0
Nickel	7	10%	2
Zinc	9	13%	2
TSS	35	51%	19
Radium 226	0	0%	0
pH	16	24%	6
<b>Total</b>	<b>68</b>	<b>100%</b>	<b>N/A*</b>

\*Note: The total number of facilities cannot be summed because some facilities had exceedances in several deleterious substances, which may create redundancy. N/A denotes not applicable.

In 2018, 25 mining facilities (17% of the 145 facilities subject to the MDMER) reported at least one exceedance of the prescribed limits for metals, cyanide and TSS and of the pH limits. The most exceedances were reported at Mont-Wright Mine, which reported 22 exceedances (32% of 68 total exceedances), followed by the Fire Lake Mine, which reported 9 exceedances (13% of 68 total exceedances). The distribution of reported exceedances in 2018 per jurisdiction is as follows:

- 42 (62% of 68 total exceedances) occurred from facilities located in Quebec;
- 6 (9% of 68 total exceedances) occurred from facilities located in British Columbia;
- 6 (9% of 68 total exceedances) occurred from facilities located in Newfoundland and Labrador;
- 5 (7% of 68 total exceedances) occurred from facilities located in Ontario;
- 5 (7% of 68 total exceedances) occurred from New Brunswick;
- 3 (4% of 68 total exceedances) occurred from facilities located in Yukon; and
- 1 (2% of 68 total exceedances) occurred from a facility located in Manitoba.

No exceedances of prescribed monthly mean limits for metals, cyanide and TSS or of the pH limits were reported in 2018 from mining facilities located in Northwest Territories, Saskatchewan, Nova Scotia and Nunavut. Distributions of facilities and exceedances of the prescribed limits and pH limits per jurisdiction are presented in figures 5 and 6, and Table 6.

Figure 5: Distribution of Mining Facilities for which Exceedances Were Reported in 2018, by Jurisdiction

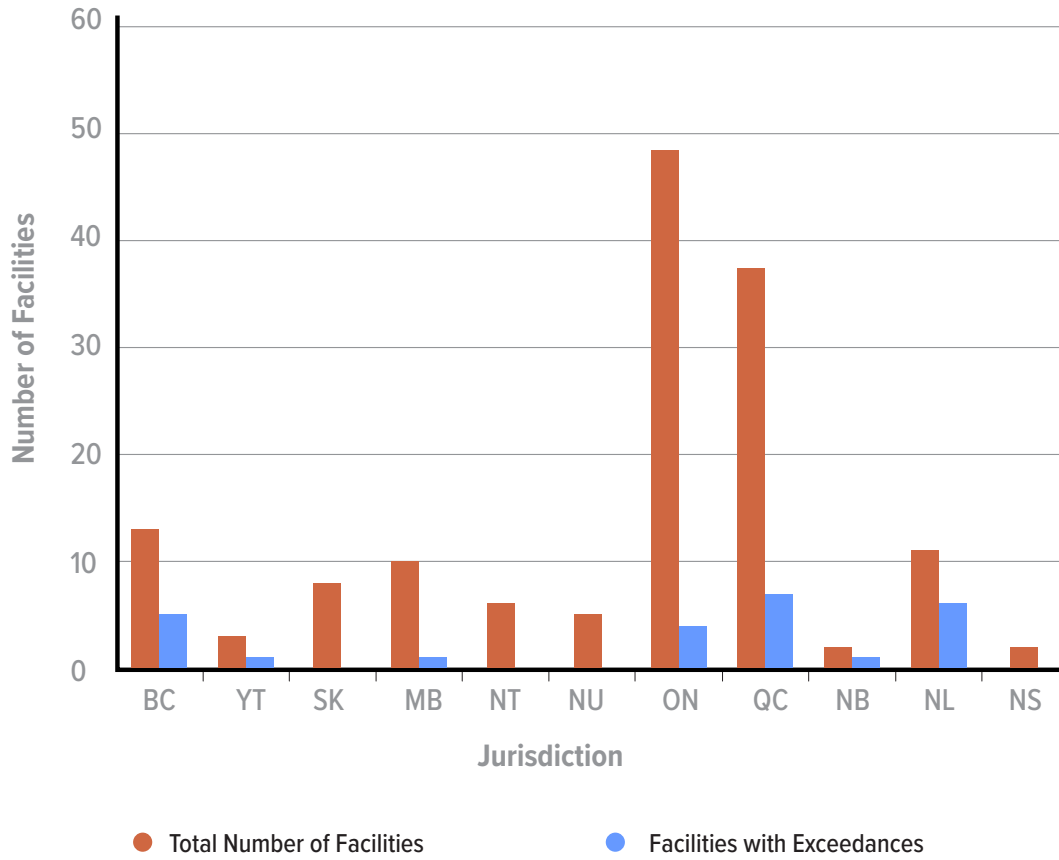
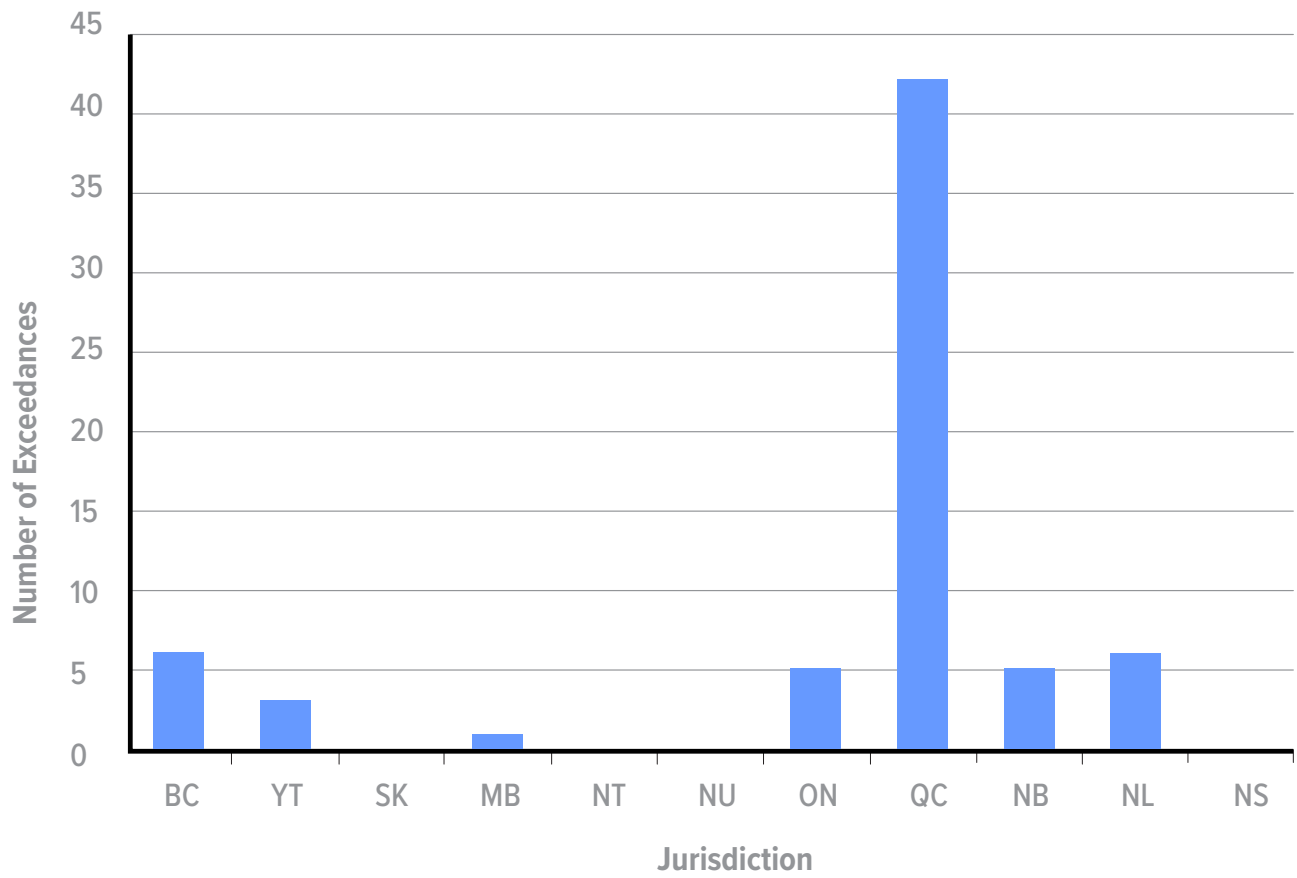


Figure 6: Distribution of Exceedances in 2018, by Jurisdiction



**Table 6: Distribution of Exceedances in 2018, by Jurisdiction**

Jurisdiction	As	Cu	CN	Pb	Ni	Zn	TSS	Ra-226	pH	Total	# of Facilities
British Columbia	0	0	0	0	0	0	6	0	0	6	5
Yukon	0	0	0	0	0	0	3	0	0	3	1
Saskatchewan	0	0	0	0	0	0	0	0	0	0	0
Manitoba	0	0	0	0	0	0	0	0	1	1	1
Northwest Territories	0	0	0	0	0	0	0	0	0	0	0
Nunavut	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	1	0	1	0	3	0	0	5	4
Quebec	0	0	0	0	6	6	17	0	13	42	7
New Brunswick	0	0	0	0	0	3	0	0	2	5	1
Newfoundland and Labrador	0	0	0	0	0	0	6	0	0	6	6
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>9</b>	<b>35</b>	<b>0</b>	<b>16</b>	<b>68</b>	<b>25</b>

The distribution of reported exceedances in 2018 by mining subsector is as follows:

- 34 (50% of 68 total exceedances) occurred from the iron ore subsector;
- 13 (19% of 68 total exceedances) occurred from the base metals subsector;
- 12 (18% of 68 total exceedances) occurred from the precious metals subsector;
- 9 (13% of 68 total exceedances) occurred from mining facilities producing other metals.

The uranium and diamond subsectors did not have any exceedances for 2018. The distribution of reported exceedances of prescribed monthly mean limits for metals, cyanide and TSS and pH limits by mining subsector in 2018 is presented in Table 7.

The performance of each final discharge point at all the mining facilities are detailed in Appendix C (Table C1) and Appendix D.

**Table 7: Distribution of Exceedances in 2018, by Mining Subsector**

Subsector	As	Cu	CN	Pb	Ni	Zn	TSS	Ra-226	pH	Total	# of Facilities
Base Metals	0	0	0	0	0	3	4	0	6	13	7
Precious Metals	0	0	1	0	1	0	10	0	0	12	8
Uranium	0	0	0	0	0	0	0	0	0	0	0
Iron	0	0	0	0	6	6	14	0	8	34	5
Other Metals	0	0	0	0	0	0	7	0	2	9	5
Diamond	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>9</b>	<b>35</b>	<b>0</b>	<b>16</b>	<b>68</b>	<b>25</b>

#### **2.4. ASSESSMENT OF RESULTS OF RAINBOW TROUT ACUTE LETHALITY AND DAPHNIA MAGNA MONITORING TESTS**

Overall, 91.6% of test data reported in 2018 showed mining facilities to be in compliance with the requirement that effluent not be acutely lethal to rainbow trout. This is a decrease from the 2017 compliance rate of 98.6%. In 2018, nine facilities reported a total of 111 rainbow trout acute lethality test results with a mortality rate above 50%. Seven of these facilities were in Quebec, one was in Ontario and one was in New Brunswick. In Quebec, the Mont-Wright Mine failed 90 rainbow trout acute lethality tests. Nine acutely lethal failures were reported by Caribou Mine (NB), five by Langlois Mine (QC) and two by Barry Mine (QC). The remainder of the facilities failed only one test each. The facilities that reported failure of the acute lethality test in 2018 were divided among the base metals, iron ore, precious metals and other metal mining subsectors (Table 9).

It should be noted that the 2018 amendments to the Regulations introduced threespine stickleback as an alternative acute lethality test species to rainbow trout for mines depositing saline effluent into marine receiving environment, however, no test results were reported by mining facilities for this species in 2018.

Overall, 89.6% of *Daphnia magna* monitoring test results reported in 2018 showed a mortality rate of less than 50%, a decrease from 95.8% in 2017. In 2018, 23 facilities reported a total of 138 *Daphnia magna* monitoring test results showing a mortality rate above 50%. Most *Daphnia magna* monitoring tests that resulted in a mortality rate above 50% occurred in mining facilities located in Quebec (77.5% of 138 total tests above 50% mortality rate), Manitoba (6.5% of 138 total tests above 50% mortality rate) and New Brunswick (6.5% of 138 total tests above 50% mortality rate). Mont-Wright Mine had the most tests above 50% mortality rate with 91 tests above this rate. This was followed by Caribou Mine in New Brunswick, which reported nine tests above 50% mortality rate. The facilities that reported failures of the *Daphnia magna* monitoring test in 2018 were mainly in the iron mining subsector (Table 9).

Summaries of the 2018 performance of mining facilities in meeting the requirement that effluent not be acutely lethal to rainbow trout and the requirement to monitor for acute lethality to *Daphnia magna* are presented in tables 8 and 9.

The performance of each final discharge point at all facilities in meeting the requirement that effluent not be acutely lethal to rainbow trout and the results of each *Daphnia magna* monitoring test are presented in Appendix C (Table C2) and Appendix D.

**Table 8: Performance Summary: Rainbow Trout Acute Lethality and *Daphnia magna* Monitoring Tests in 2018, by Jurisdiction**

Jurisdiction	Rainbow Trout Acute Lethality Tests			<i>Daphnia magna</i> Monitoring Tests		
	Total # of Tests	>50% Mortality		Total # of Tests	>50% Mortality	
		# of Tests	# of Facilities		# of Tests	# of Facilities
British Columbia	114	0	0	116	2	2
Yukon	16	0	0	16	0	0
Saskatchewan	45	0	0	45	0	0
Manitoba	52	0	0	54	9	3
Northwest Territories	44	0	0	46	1	1
Nunavut	16	0	0	15	1	1
Ontario	254	1	1	259	5	4
Quebec	599	101	7	600	107	8
New Brunswick	28	9	1	28	9	1
Newfoundland and Labrador	133	0	0	133	4	3
Nova Scotia	12	0	0	12	0	0
<b>Total</b>	<b>1313</b>	<b>111</b>	<b>9</b>	<b>1324</b>	<b>138</b>	<b>23</b>

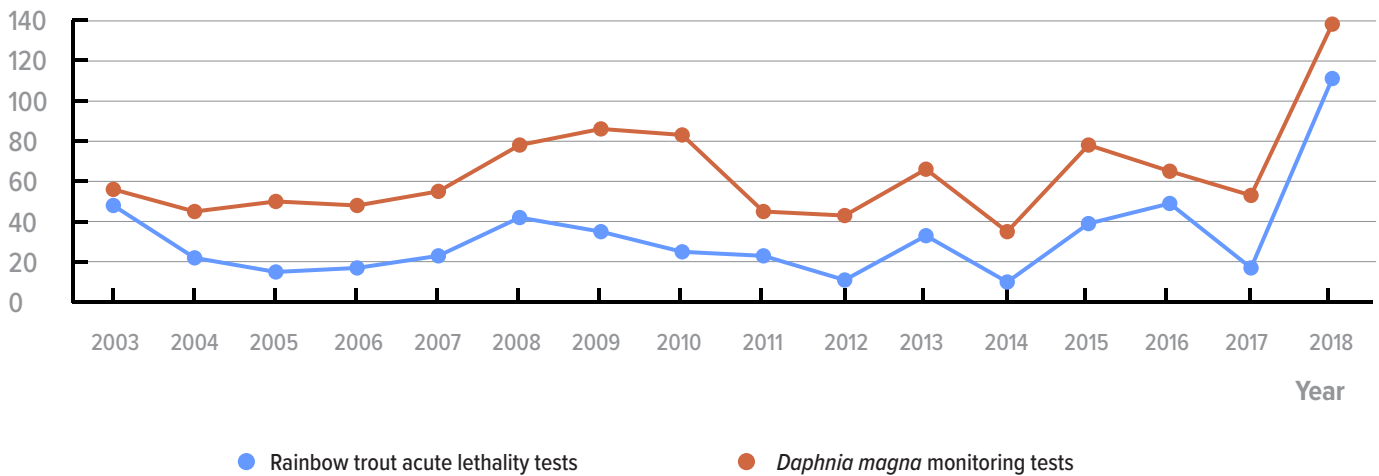
**Table 9: Performance Summary: Rainbow Trout Acute Lethality and *Daphnia magna* Monitoring Tests in 2018, by Mining Subsector**

Subsector	Rainbow Trout Acute Lethality Tests			<i>Daphnia magna</i> Monitoring Tests		
	Total # of Tests	>50% Mortality		Total # of Tests	>50% Mortality	
		# of Tests	# of Facilities		# of Tests	# of Facilities
Base Metals	302	15	3	304	32	10
Precious Metals	488	4	3	495	9	8
Uranium	30	0	0	30	0	0
Iron	331	91	2	333	94	3
Other Metals	136	1	1	136	3	2
Diamond	26	0	0	26	0	0
<b>Total</b>	<b>1313</b>	<b>111</b>	<b>9</b>	<b>1324</b>	<b>138</b>	<b>23</b>

The total number of failures of rainbow trout acute lethality tests has varied over the years with the highest number of failures reported in 2018 at 111 and the lowest number of failures reported in 2014 at 10. The total number of *Daphnia magna* acute lethality tests with a mortality rate exceeding 50% has also varied over the years with the highest number of tests with mortality exceeding 50% reported in 2018 at 138 and the lowest reported in 2014 at 35, as shown in Figure 7. In 2018, there was a substantial increase in the number of reported acute lethality failures for both rainbow trout and *Daphnia magna*. As indicated previously, this increase is mainly the result of the number of failures at the Mont-Wright mine.

**Figure 7: Total Number of Tests Above 50% Mortality Rate for Lethality Tests from 2003 to 2018**

**Total Number of Tests Above 50% Mortality Rate**





### 3. WATER BODIES DESIGNATED AS TAILINGS IMPOUNDMENT AREAS

The MDMER regulate the deposit of mine waste (effluent, waste rock, tailings, low-grade ore and overburden) into waters frequented by fish. Schedule 2 of the MDMER lists water bodies designated as tailings impoundment areas (TIAs). TIAs are water bodies into which waste may be disposed that does not meet the prescribed limits in the MDMER. Water bodies are added to Schedule 2 via a regulatory amendment of the MDMER. Additional information on the process for adding a water body to Schedule 2 via an amendment to the MDMER is provided in the Guidelines for the Assessment of Alternatives for Mine Waste Disposal (Environment Canada 2013) and is available through Environment and Climate Change Canada’s online publications catalogue at [www.canada.ca/en/environment-climate-change/services/managing-pollution/publications/guidelines-alternatives-mine-waste-disposal.html](http://www.canada.ca/en/environment-climate-change/services/managing-pollution/publications/guidelines-alternatives-mine-waste-disposal.html).

In 2018, 9 new water bodies were added to the 37 water bodies previously listed on Schedule 2 of the MDMER. These 46 water bodies are associated with the activities of 21 metal mining facilities (Table 10). Figure 8 illustrates the locations of facilities where water bodies have been designated as tailings impoundment areas.

**Figure 8: Facilities with Water Bodies Listed on Schedule 2 of the MDMER (As of December 31, 2018)**



\*Note: The numbers in Figure 8 correspond to the first item # in Table 10 for each mine or project.

**Table 10: Water Bodies Listed on Schedule 2 of the MDMER**

Mining Facility Name	Prov. / Terr.	Item #*	Water Body Name*	Year Added to Schedule 2
Arnaud Mine	QC	38	A portion of an unnamed tributary to Petit lac du Portage	2018
		39	An unnamed headwater pond of ruisseau Clet and its unnamed tributaries	2018
		40	A portion of ruisseau Clet and its unnamed tributaries	2018
		41	An unnamed watercourse that is a tributary to Rivière Hall	2018
		42	Portions of an unnamed creek	2018
Young-Davidson Mine	ON	43	Davidson Lake	2018
Mont-Wright Mine	QC	44	All waters located within the area described in column 2 of Schedule 2, located approximately 15 km west of Fermont	2018
		45	A portion of an unnamed canal located approximately 15 km west of Fermont	2018
		46	All waters located within the area described in column 2 of Schedule 2, located approximately 15 km west of Fermont	2018
KSM Mine	BC	28	A portion of South Teigen Creek	2017
		29	A portion of North Treaty Creek	2017
Blackrock Mine	QC	30	An unnamed watercourse that is a tributary to Lake Jean, located approximately 25 km southeast of Chibougamau	2017
		31	A portion of an unnamed watercourse that is a tributary to the watercourse referred to in item 30	2017
		32	A portion of an unnamed watercourse that is a tributary to the watercourse referred to in item 30	2017
		33	An unnamed pond east of Lake Bernadette and a portion of its outlet	2017

Rainy River Project	ON	34	A portion of an unnamed creek (locally known as Loslo Creek), and of its unnamed tributaries, that is tributary to Pinewood River	2017
		35	A portion of an unnamed creek (locally known as Marr Creek), and of its unnamed tributaries, that is tributary to Pinewood River	2017
		36	A portion of an unnamed creek (locally known as Marr Creek), other than the portion referred to in item 35, that is tributary to Pinewood River	2017
Dumont Project	QC	37	A portion of an unnamed stream and its unnamed tributaries located approximately 25 km northwest of the town of Amos	2017
Red Chris Mine	BC	24	A portion of Trail Creek	2016
Mont-Wright Mine	QC	25	Lake Hesse	2016
		26	An unnamed lake approximately 20 km west of Fermont, Quebec and a portion of its outlet	2016
		27	A portion of an unnamed stream tributary to an unnamed lake (other than item 26), 20 km west of Fermont, Quebec	2016
Detour Lake Mine	ON	20	An unnamed headwater pond of an unnamed tributary of East Creek	2015
		21	A portion of an unnamed tributary to East Creek	2015
		22	A portion of an unnamed tributary to Linden Creek	2015
		23	A portion of an unnamed tributary to an unnamed lake in the Linder Creek watershed	2015
Jolu Mill Site	SK	19	Mallard Lake	2011
Mt. Milligan Mine	BC	16	A portion of King Richard Creek	2010
		17	A portion of an unnamed tributary to Alpine Lake	2010
		18	A portion of an unnamed tributary to Alpine Lake	2010
Carol Project	NL	10	A portion of Wabush Lake	2009

Scully Mine	NL	11	Flora Lake	2009
		12	A portion of an unnamed tributary stream to Flora Lake	2009
		13	A portion of an unnamed tributary stream to Flora Lake	2009
		14	A portion of an unnamed tributary stream to Flora Lake	2009
Vale Hydrometallurgical Facility	NL	15	Sandy Pond	2009
Meadowbank Division	NU	8	The northwest arm of Second Portage Lake	2008
Doris Project	NU	9	Tail Lake	2008
Snow Lake Mill	MB	1	Anderson Lake	2006
Polaris Mine	NU	2	Garrow Lake	2006
Kemess South Mine	BC	3	South Kemess Creek	2006
Eskay Creek Mine	BC	4	Albino Lake	2006
		5	Tom MacKay Lake	2006
Duck Pond Operations	NL	6	Trout Pond	2006
		7	The headwater pond of a tributary to Gill's Pond Brook	2006

\*Note: The Item # in Table 10 identifies the item number as specified in Schedule 2 of the MDMER. For the official names and complete description of the water body listings, please consult the full text of the MDMER.

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## LIST OF ACRONYMS AND ABBREVIATIONS

As	arsenic
BC	British Columbia
CN	cyanide
Cu	copper
DM	<i>Daphnia magna</i>
FDP	final discharge point
m <sup>3</sup>	cubic metre(s)
MB	Manitoba
mg/L	milligram(s) per litre
MDMER	Metal and Diamond Mining Effluent Regulations
MMER	Metal Mining Effluent Regulations
NB	New Brunswick
ND	no deposit
Ni	nickel
NL	Newfoundland and Labrador
NMR	no measurement required
NS	Nova Scotia
NT	Northwest Territories
NU	Nunavut
ON	Ontario
Pb	lead
QC	Quebec
Ra-226	radium-226
RT	rainbow trout
SK	Saskatchewan
TSS	total suspended solids
YT	Yukon
Zn	zinc

## Appendix A: Mining Facilities with New Regulatory Status in 2018

MINING FACILITIES NEWLY SUBJECT TO THE MDMER IN 2018		MINING FACILITIES THAT BECAME RECOGNIZED CLOSED MINES IN 2018	
Facility Name	Jurisdiction	Facility Name	Jurisdiction
Borden Gold Project	Ontario	James	Newfoundland and Labrador
Diavik Diamond Mine (2012) Incorporated	Northwest Territories	Mouska	Quebec
Ekati Diamond Mine	Northwest Territories	Montcalm Project <sup>8</sup>	Ontario
Gahcho Kué Mine	Northwest Territories		
Mine Renard	Quebec		
Projet Windfall	Quebec		
Touquoy Mine	Nova Scotia		
Victor Diamond Mine	Ontario		
Whale Tail Project	Nunavut		

<sup>8</sup> This mine became a recognized closed mine in 2013, but continued to report up until the first quarter of 2018..

## Appendix B: Mining Facilities Subject to the *Metal and Diamond Mining Effluent Regulations* in 2018

FACILITY NAME	OPERATOR	PROVINCE / TERRITORY	SUBSECTOR	PRODUCTS	NPRI ID*
Anderson Dam	Hudbay Minerals Incorporated	MB	Base Metals	Copper, zinc, selenium, tellurium, silver	3411
Aurbel (Mine)	QMX Gold Corporation	QC	Precious Metals	Gold	8719
Barry (Mine)	Ressources Métanor Incorporé	QC	Precious Metals	Gold	8809
Beaufor	Mines Richmond Incorporé / Monarques Gold	QC	Precious Metals	Gold	8610
Beaver Brook Antimony Mine Incorporated	Hunan Nonferrous Company	NL	Other Metals	Antimony	NA
Bell Creek Mine and Mill Facility	Lake Shore Gold Corporation	ON	Precious Metals	Gold	11796
Bellekeno Mine	Alexco Keno Hill Mining Corporation	YT	Precious Metals	Silver, lead, zinc	NA
Birchtree Mine	Vale Canada Limited	MB	Base Metals	Nickel, copper	NA
Black Fox Mill	McEwen Ontario	ON	Precious Metals	Gold	11743
Black Fox Mine	McEwen Ontario	ON	Precious Metals	Gold	3810
Bonanza Ledge Mine	Barkerville Gold Mines Ltd	BC	Precious Metals	Gold	NA
Borden Gold Project	Goldcorp Incorporated	ON	Precious Metals	Gold	29877
Brucejack Mine Site	Pretium Resources Incorporated	BC	Precious Metals	Silver, gold	29072
Bucko Lake Mine	CaNickel Mining Limited	MB	Base Metals	Nickel	23274
Camflo (Usine)	Mines Richmond Incorporé / Monarques Gold	QC	Precious Metals	Gold	8519
Campbell Mine	Goldcorp Canada Limited	ON	Precious Metals	Gold	2710
Canadian Malartic	Canadian Malartic GP	QC	Precious Metals	Gold	25188
Cantung Mine	North American Tungsten Corporation Limited	NT	Other Metals	Tungsten	20225
Caribou Mine	Trevali Mining (New Brunswick) Limited - Caribou Mine (Bathurst, NB)	NB	Base Metals	Zinc, lead, silver	8078
Carol Project	Iron Ore Company of Canada	NL	Iron	Iron ore	5013
Casa Berardi	Hecla Québec Incorporé	QC	Precious Metals	Gold	8600
Chisel North Mine	Hudbay Minerals Incorporated	MB	Base Metals	Zinc	21543
Cigar Lake Operation	Cameco Corporation	SK	Uranium	Uranium	19397
Clavos Mine	Sage Gold Incorporated	ON	Precious Metals	Gold	NA
Complexe métallurgique Sorel-Tracy	Rio Tinto Fer et Titane Incorporé	QC	Other Metals	Ilmenite, iron ore, titanium	4806
Con Mine	Miramar Northern Mining Limited	NT	Precious Metals	Gold	2548



Copper Cliff Complex (includes Clarabelle Mill, smelter, Copper Cliff North, Copper Cliff South, Creighton, Gertrude, Froid, and Stobie Mines)	Vale Canada Limited	ON	Base Metals	Nickel, copper, cobalt, platinum, palladium	1465; 444; 10203; 10204; 10204; 10201; 26263
Copper Mountain Mine	Copper Mountain Mine (BC) Limited	BC	Base Metals	Copper	NA
Copper Rand (Mine)	CBay Minerals Incorporated	QC	Base Metals	Copper, gold	8580
Crean Hill Mine	Vale Canada Limited	ON	Base Metals	Nickel, copper, cobalt, platinum, palladium	11877
David Bell Mine	Barrick Gold Corporation - DB Operating Corporation	ON	Precious Metals	Gold	2869
Detour Lake Mine	Detour Gold Corporation	ON	Precious Metals	Gold	11867
Diavik Diamond Mines (2012) Inc.	Rio Tinto PLC	NT	Diamonds	Diamonds	18241
Doyon (Mine)	IAMGOLD Corporation	QC	Precious Metals	Gold	1608
Duck Pond Operations	Teck Resources Limited	NL	Base Metals	Copper, zinc, silver, gold	8084
Eagle River Mill (Mill, Mishi Pit, and Magnacon Mine)	Wesdome Gold Mines Limited	ON	Precious Metals	Gold	10010
Eagle River Mine	Wesdome Gold Mines Limited	ON	Precious Metals	Gold	11123
Edwards Mine	Strike Minerals Incorporated	ON	Precious Metals	Gold	NA
Ekati Diamond Mine	Dominion Diamond Mines ULC	NT	Diamonds	Diamonds	5236
Elder (Mine)	Mines Abcourt Incorporated	QC	Precious Metals	Gold	NA
Éléonore (Mine)	Goldcorp Incorporé	QC	Precious Metals	Gold	8803
Elross Lake Area Iron Ore Mine	Tata Steel Minerals Canada Limited	NL	Iron	Iron ore	26423
Endako Mines	Thompson Creek Mining-Sojitz Moly Resources	BC	Base Metals	Molybdenum	2794
Fire Lake (Mine)	ArcelorMittal Exploitation minière Canada s.e.n.c.	QC	Iron	Iron ore	8778
Flin Flon Complex	Hudbay Minerals Incorporated	MB	Base Metals	Copper, zinc, gold, silver	3414
Fonderie Horne	Glencore Canada Corporation	QC	Base Metals	Copper	3623
Francoeur (Mine)	Entreprises Minières Globex Incorporée	QC	Precious Metals	Gold	8789
Gahcho Kué Mine	De Beers Canada Incorporated	NT	Diamonds	Diamonds	29004
Garson Mine	Vale Canada Limited	ON	Base Metals	Nickel, copper, cobalt, platinum, palladium	10202

Géant Dormant (Mine)	Mines Aurbec Incorporated / Mines Abcourt Incorporated	QC	Precious Metals	Gold	1143
Giant Mine	Department of Indian Affairs and Northern Development	NT	Precious Metals	Gold	4221
Gibraltar Mines Limited	Taseko Mines Limited	BC	Base Metals	Copper, molybdenum, silver	1303
Golden Giant Mine	Newmont Canada Corporation	ON	Precious Metals	Gold	1400
Goldex (Mine)	Mines Agnico-Eagle Limitée	QC	Precious Metals	Gold	8757
Haley Plant	Timminco Limited - Timminco Metals Haley Plant (Haley, ON)	ON	Other Metals	Magnesium, calcium, strontium	4419
Hislop Mine	St. Andrew Goldfields Limited	ON	Precious Metals	Gold	NA
Holloway Mine	Holloway Mining Company	ON	Precious Metals	Gold	7051
Huckleberry Mine	Huckleberry Mines Limited	BC	Base Metals	Copper, molybdenum	5146
Island Gold Mine	Richmont Mines Incorporated	ON	Precious Metals	Gold	11454
James Mine	Labrador Iron Mines Limited	NL	Iron	Iron ore	25157
Jolu Mill	Golden Band Resources Incorporated	SK	Precious Metals	Gold	25159
Key Lake Operation	Cameco Corporation	SK	Uranium	Uranium	1148
Kidd Metallurgical Division	Glencore Canada Corporation	ON	Base Metals	Copper, zinc, silver	2815
Kidd Mining Division	Glencore Canada Corporation	ON	Base Metals	Copper, zinc, silver	10153
Kiena (Mine)	Mines d'Or Wesdome Limitée	QC	Precious Metals	Gold	2935
Lac Bachelor	Ressources Métanor Incorporé	QC	Precious Metals	Gold	8769
Lac Bloom (Mine)	Minerai de Fer Québec Incorporé	QC	Iron	Iron ore	8783
Lac Des Iles Mine	North American Palladium Limited	ON	Precious Metals	Palladium, platinum, gold, copper, nickel	7369
Lac Herbin (Mine)	QMX Gold Corporation	QC	Precious Metals	Gold	8719
Langlois (Mine)	Ressources Breakwater Limitée	QC	Base Metals	Zinc, copper, silver, gold	4922
Lapa (Mine)	Mines Agnico-Eagle Limitée	QC	Precious Metals	Gold	8765
LaRonde (Mine)	Mines Agnico-Eagle Limitée	QC	Precious Metals	Gold, silver, copper, zinc	99
Lockerby Mine	First Nickel Incorporated	ON	Base Metals	Copper, nickel	11238
Long Harbour Operations	Vale Newfoundland and Labrador	NL	Base Metals	Nickel, copper, cobalt	28761
Lupin Mine	Lupin Mines Incorporated	NU	Precious Metals	Gold	NA
Macassa Mine	Kirkland Lake Gold Incorporated	ON	Precious Metals	Gold	1568
Mary River Project	Baffinland Iron Mines	NU	Iron	Iron ore	28456

Matagami (Mine)	Glencore Canada Corporation	QC	Base Metals	Zinc, copper	1611
McAlpine Mill Site	SMC (Canada) Limited	ON	Precious Metals	Gold, silver, platinum, palladium	10622
McArthur River Operation	Cameco Corporation	SK	Uranium	Uranium	1149
McClellan Lake Operation	Areva Resources Canada Incorporated//Orano Canada Incorporated	SK	Uranium	Uranium	4866
McWatters Mine	Northern Sun Mining Corporation	ON	Base Metals	Nickel	11740
Meadowbank Division	Agnico-Eagle Mines Limited	NU	Precious Metals	Gold	24216
Meliadine	Agnico-Eagle Mines Limited	NU	Precious Metals	Gold	29389
Ming Mine	Rambler Metals and Mining Canada Limited	NL	Base Metals	Copper, gold	27063
Minto Mine	Minto Explorations Limited	YT	Base Metals	Copper, gold, silver	20189
Monique (Projet)	Mines Richmont Incorporé / Monarques Gold	QC	Precious Metals	Gold	27760
Montcalm Project	Glencore Canada Corporation	ON	Base Metals	Nickel, copper	11032
Mont-Wright (Mine)	ArcelorMittal Exploitation minière Canada s.e.n.c.	QC	Iron	Iron ore	6217
Mount Polley Mine	Mount Polley Mining Corporation	BC	Base Metals	Copper, gold, silver	5102
Mouska (Mine)	IAMGOLD Corporation	QC	Precious Metals	Gold	8624
Musselwhite Mine	Goldcorp Canada Limited	ON	Precious Metals	Gold	5656
Myra Falls Operations	Nyrstar Myra Falls Limited	BC	Base Metals	Zinc, copper, lead, silver, gold	2372
Niobec (Mine)	Magris Resources	QC	Other Metals	Niobium	2100
Nugget Pond Facility	Rambler Metals and Mining Canada Limited	NL	Precious Metals	Gold, copper	8015
Nunavik Nickel (Projet)	Nunavik Nickel (Projet)	QC	Base Metals	Nickel, copper, cobalt, platinum, palladium, gold	27059
Phoenix Gold Project	Rubicon Minerals Corporation	ON	Precious Metals	Gold	11852
Pine Cove Property	Anaconda Mining Incorporated	NL	Precious Metals	Gold	NA
Podolsky Mine	FNX Mining Company Incorporated	ON	Base Metals	Copper, nickel, palladium, platinum, gold	11466

Porcupine Gold Mines (Dome Mine)	Goldcorp Canada Limited	ON	Precious Metals	Gold	1941
Porcupine Gold Mines (Hollinger Mine)	Goldcorp Canada Limited	ON	Precious Metals	Gold	1941
Porcupine Gold Mines (Owl Creek Pit)	Goldcorp Canada Limited	ON	Precious Metals	Gold	1941
Porcupine Gold Mines (Pamour Mine)	Goldcorp Canada Limited	ON	Precious Metals	Gold	1941
Quebec Lithium (Mine)	Lithium Amérique du Nord Incorporée	QC	Other Metals	Lithium	28726
Rabbit Lake Operation	Cameco Corporation	SK	Uranium	Uranium	1147
Raglan (Mine)	Glencore Canada Corporation	QC	Base Metals	Nickel, copper	5448
Rainy River Project	New Gold Incorporated	ON	Precious Metals	Gold, silver	29548
Red Chris Mine	Red Chris Development Company Limited	BC	Base Metals	Copper, gold	NA
Red Lake Mine	Goldcorp Canada Limited	ON	Precious Metals	Gold	2710
Redstone Mine	Northern Sun Mining Corporation	ON	Base Metals	Nickel	11514
Renard (Mine)	Les Diamants Stornoway (Canada) Incorporated	QC	Diamonds	Diamonds	29606
Restigouche Mine	Blue Note Mining Inc. / Province of New Brunswick	NB	Base Metals	Zinc, lead, silver, copper	8083
Rice Lake Gold Mine / True North Gold Mine	Klondex Canada Limited / Havilah Mining Canada Limited	MB	Precious Metals	Gold	11623
RioTinto Alcan Usine Vaudreuil	RioTinto Alcan	QC	Other Metals	Alumina	2978
Santoy 8 Mine	SGO Mining Incorporated	SK	Precious Metals	Gold	23273
Scotia Mine	ScoZinc Limited	NS	Base Metals	Zinc, lead	NA
Scully Mine	TACORA Resources Incorporated	NL	Iron	Iron ore	5460
Seabee Gold Mine	SGO Mining Incorporated	SK	Precious Metals	Gold	23273
Shakespeare Nickel Mine	URSA Major Minerals Incorporated	ON	Base Metals	Nickel, copper, cobalt, gold, platinum, palladium	NA
Sigma (Mine)	Or Integra (Québec) Incorporée	QC	Precious Metals	Gold	3276
Silvertip Mine	JDS Silver	BC	Precious Metals	Silver, lead, zinc	29381
Snow Lake Mine	Hudbay Minerals Incorporated	MB	Precious Metals	Gold	5219

Sudbury Integrated Nickel Operations - Smelter	Glencore Canada Corporation	ON	Base Metals	Nickel, copper, cobalt, platinum, palladium	1236; 11588
Sudbury Integrated Nickel Operations - Strathcona (includes Fraser, Strathcona Mine and Mill, Craig and Onaping Mines; also includes Inco's Coleman and McCreehy East Mines)	Glencore Canada Corporation	ON	Base Metals	Nickel, copper, cobalt, platinum, palladium	1233; 10199; 11154; 11608
Sugar Zone Project	Harte Gold Corporation	ON	Precious Metals	Gold	29897
Tanco Mine	Tantalum Mining Corporation of Canada Limited	MB	Other Metals	Tantalum, lithium, cesium, rubidium	2278
Taylor Mine	St. Andrew Goldfields Limited	ON	Precious Metals	Gold	7051
Thompson Complex	Vale Canada Limited	MB	Base Metals	Nickel, copper	1473
Timmins West Complex	Lake Shore Gold – A Division of Tahoe Resources Inc.	ON	Precious Metals	Gold	11794
Tio (Mine)	Rio Tinto Fer et Titane Incorporé	QC	Other Metals	Ilmenite, iron ore, titanium	6425
Totten Mine	Vale Canada Limited	ON	Base Metals	Nickel, copper, platinum, gold, silver	11878
Touquoy Mine	Atlantic Mining NS Corporation	NS	Precious Metals	Gold	NA
Trout Lake Mine	Hudbay Minerals Incorporated	MB	Base Metals	Copper, zinc, gold, silver	21544
Veza (Mine)	Entrepreneur Minier Promec Incorporated	QC	Precious Metals	Gold	NA
Victor Diamond Mine	De Beers Canada Incorporated	ON	Diamonds	Diamonds	10984
Voisey's Bay Mine	Vale Newfoundland & Labrador Limited	NL	Base Metals	Nickel, copper, cobalt	6093
Whale Tail Project	Agnico Eagle Mines Limited	NU	Precious Metals	Gold	NA
WillaMax Project	Discovery Ventures Incorporated	BC	Base Metals	Molybdenum	20174
Williams Mine	Barrick Gold Corporation - Williams Operating Corporation	ON	Precious Metals	Gold	3197
Windfall (Projet)	Minière Osisko Incorporated	QC	Precious Metals	Gold	NA
Wolverine Project	Yukon Zinc Corporation	YT	Base Metals	Zinc, copper, lead, silver, gold	NA

Yellow Giant Mine	Banks Island Gold Limited	BC	Precious Metals	Gold	NA
Yellowjacket Gold Mine	African Queen Mines Limited	BC	Precious Metals	Gold	NA
Young-Davidson Mine	Alamos Gold Incorporated	ON	Precious Metals	Gold	26132
Yukon Refinery	Yukon (36569) Incorporated - Yukon Refinery (North Cobalt, ON)	ON	Base Metals	Nickel, cobalt, silver, gold	NA

\*NPRI ID refers to the ID number assigned to a facility for reporting under the National Pollutant Release Inventory (NPRI). Mining facilities subject to the MDMER may have multiple NPRI ID numbers or may share NPRI IDs with other facilities; this is because of the differences in facility and mine definitions between the MDMER and the NPRI. For more information on the NPRI, please see [www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory.html](http://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory.html). NA denotes not applicable.

## Appendix C: Performance Summary of Mine Effluents in 2018

### Note to the Reader

The tables presented in this appendix summarize the effluent quality data reported by mining facilities subject to the MDMER in 2018. The summaries include site identification (i.e., mine/mill name and final discharge point name) and number of months of discharge. Table C1 summarizes the distribution of the non-compliant parameters for metals and pH, whereas Table C2 summarizes the results of failed rainbow trout acute lethality tests and *Daphnia magna* monitoring tests.

Metal exceedances represent the number of monthly mean concentrations that exceeded the prescribed limits for a given month, whereas pH exceedances represent the number of months that the pH range was exceeded. The parameters included are arsenic (As), copper (Cu), cyanide (CN), lead (Pb), nickel (Ni), zinc (Zn), total suspended solids (TSS), total radium-226 (Ra-226) and pH.

**TABLE C1: SUMMARY OF EXCEEDANCES FOR FACILITIES SUBJECT TO THE MDMER IN 2018: PRESCRIBED PARAMETERS AND PH**

Site Identification		Number of Months of Discharge	As	Cu	CN	Pb	Ni	Zn	TSS	Ra-226	pH	pH
Mining Facility Name	Final Discharge Point Name		0.5	0.3	1	0.2	0.5	0.5	15	0.37	Low	High
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Bq/L	6	9.5
Beaver Brook Antimony Mine Incorporated	Site 16 - Polishing Pond Discharge	12	0	0	0	0	0	0	1	0	0	0
Bellekeno Mine	Be.KV43 - Bellekeno 625 Treatment Pond Decant	12	0	0	0	0	0	0	3	0	0	0
Bonanza Ledge Mine	Sediment Control Pond	6	0	0	0	0	0	0	2	0	0	0
Caribou Mine	Polishing Pond Effluent	12	0	0	0	0	0	3	0	0	0	2
Carol Project	Pumphouse Sediment Pond Discharge	6	0	0	0	0	0	0	1	0	0	0
Complexe métallurgique Sorel-Tracy	EFF2.2-P84	12	0	0	0	0	0	0	0	0	0	1
Copper Mountain Mine	Co.SW27 - E Dam Seepage	12	0	0	0	0	0	0	1	0	0	0
Detour Lake Mine	MRS2-A-FDP	2	0	0	0	0	0	0	1	0	0	0
Elross Lake Area Iron Ore Mine	Outlet of Sedimentation Pond 2	2	0	0	0	0	0	0	1	0	0	0

Fire Lake (Mine)	Effluent Final FL-BC (Fossé B et Fossé C)	12	0	0	0	0	0	0	1	0	0	0
Fire Lake (Mine)	Effluent final FLG-2 (chemin d'accès au garage)	3	0	0	0	0	0	0	3	0	0	0
Fire Lake (Mine)	Effluent final FLG / Effluent final garage Fire-Lake (FLG-1)	3	0	0	0	0	0	0	3	0	0	0
Fire Lake (Mine)	Fire Lake-7 (FL-7)	10	0	0	0	0	0	0	1	0	0	0
Fire Lake (Mine)	Fosse Beaver - Déversoir (FL-2)	11	0	0	0	0	0	0	1	0	0	0
Holloway Mine	Final Discharge Point	2	0	0	0	0	1	0	0	0	0	0
Huckleberry Mine	HU.SC8 - Sediment Control Structure 8	1	0	0	0	0	0	0	1	0	0	0
Island Gold Mine	IG-2	8	0	0	1	0	0	0	0	0	0	0
Ming Mine	Waste Water Treatment System Discharge	12	0	0	0	0	0	0	1	0	0	0
Mont-Wright (Mine)	Point HS-1	12	0	0	0	0	0	0	1	0	0	0
Mont-Wright (Mine)	Effluent final MS-6	11	0	0	0	0	0	0	1	0	1	0
Mont-Wright (Mine)	Effluent RDT-7	6	0	0	0	0	3	3	0	0	3	0
Mont-Wright (Mine)	Effluent RDT-8	6	0	0	0	0	3	3	0	0	3	0
Mont-Wright (Mine)	Point MS-5	1	0	0	0	0	0	0	0	0	1	0
Niobec (Mine)	Effluent Pluvial	12	0	0	0	0	0	0	1	0	0	0
Niobec (Mine)	Effluent Urgence	10	0	0	0	0	0	0	2	0	0	0
Nunavik Nickel (Projet)	Effluent final Expo	4	0	0	0	0	0	0	0	0	1	0
Nunavik Nickel (Projet)	Effluent final Mésamax	2	0	0	0	0	0	0	0	0	2	0
Pine Cove Property	Polishing Pond	1	0	0	0	0	0	0	1	0	0	0
Red Chris Mine	North Reclaim Dam Discharge	3	0	0	0	0	0	0	1	0	0	0
RioTinto Alcan Usine Vaudreuil	Émissaire-B	12	0	0	0	0	0	0	1	0	0	0



RioTinto Alcan Usine Vaudreuil	Émissaire-C	12	0	0	0	0	0	0	1	0	0	0
Scully Mine	Flora Lake Discharge	12	0	0	0	0	0	0	1	0	0	0
Silvertip Mine	Effluent Discharge 1	12	0	0	0	0	0	0	1	0	0	0
Sugar Zone Project	Sugar Zone Project Effluent	11	0	0	0	0	0	0	2	0	0	0
Thompson Complex	Station B	12	0	0	0	0	0	0	0	0	0	1
Tio (Mine)	Ancienne-Croix	7	0	0	0	0	0	0	1	0	1	0
		<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>9</b>	<b>35</b>	<b>0</b>	<b>12</b>	<b>4</b>

**TABLE C2: SUMMARY OF TOXICITY TEST FAILURES FOR FACILITIES SUBJECT TO THE MDMER IN 2018: RAINBOW TROUT (RT) ACUTE LETHALITY AND *DAPHNIA MAGNA* (DM) MONITORING TESTS**

Site Identification		Number of Months of Discharge	RT	RT	DM	DM
Mining Facility Name	Final Discharge Point Name		Total	Fail	Total	Fail
Aurbel (Mine)	Effluent final Aurbel	8	6	0	6	1
Barry (Mine)	V-Notch	9	11	2	10	0
Birchtree Mine	Birchtree Effluent Treatment Plant	12	4	0	4	2
Bucko Lake Mine	Settling Pond Discharge	5	5	0	5	5
Campbell Mine	Wetout	5	8	0	8	1
Caribou Mine	Polishing Pond Effluent	12	23	9	23	9
Con Mine	Surveillance Network Program Station 40-1	2	2	0	4	1
Fire Lake (Mine)	Effluent final FLG / Effluent final garage Fire-Lake (FLG-1)	3	10	1	10	0
Fire Lake (Mine)	Fire Lake-7 (FL-7)	10	19	0	19	1
Fire Lake (Mine)	Fosse Beaver - Déversoir (FL-2)	11	32	0	33	1
Flin Flon Complex	North Weir Discharge	12	4	0	4	2
Huckleberry Mine	Hu.TRO - Tahtsa Reach Outfall	10	8	0	8	1
Island Gold Mine	IG-2	8	9	1	9	1

Langlois (Mine)	Effluent final principal	11	17	5	17	2
Mary River Project	MS-08	4	3	0	3	1
Ming Mine	Waste Water Treatment System Discharge	12	12	0	12	1
Mont-Wright (Mine)	Effluent final MS-6	11	21	0	20	1
Mont-Wright (Mine)	Effluent RDT-6	6	26	1	26	0
Mont-Wright (Mine)	Effluent RDT-7	6	89	89	91	90
Niobec (Mine)	Effluent final	12	4	0	4	1
Nugget Pond Facility	Polishing Pond Effluent	10	10	0	10	1
Nunavik Nickel (Projet)	Effluent final Expo	4	10	1	10	3
Nunavik Nickel (Projet)	Effluent final Mésamax	2	4	0	4	1
Quebec Lithium (Mine)	Effluent final	4	10	1	10	2
Raglan (Mine)	Dir-SPOON	2	2	0	2	1
Raglan (Mine)	DIR-UT	7	7	0	7	2
Raglan (Mine)	DIR-Z3	5	5	0	5	1
Red Lake Mine	G2	4	6	0	6	1
Silvertip Mine	Effluent Discharge 1	12	10	0	10	1
Sugar Zone Project	Sugar Zone Project Effluent	11	13	0	16	2
Veza (Mine)	Bassin de polissage	12	16	1	16	0
Voisey's Bay Mine	Treated Effluent Final Discharge Point	12	4	0	4	2
		<b>Total:</b>		<b>111</b>		<b>138</b>

## Appendix D: Effluent Quality Data for Mining Facilities in 2018

### Note to the Reader

The tables in Appendix D show summarized monthly data for each final discharge point (FDP) for each mining facility that was subject to the *Metal and Diamond Mining Effluent Regulations* (MDMER) in 2018. Identifying information includes:

- mine/mill name
- mine/mill operator name
- mine/mill product(s) (main product listed first)
- mine/mill address
- FDP identification

There is one page for each FDP showing the monthly mean data reported by the mining facility owner or operator to Environment and Climate Change Canada as per section 22 of the Regulations. The tables are sorted in alphabetical order based on mine/mill name.

Each row in the tables represents a parameter for which testing is required under the MDMER and the numbers shown in the table are the averages of all of the reported data for each month, for each parameter. The limits for each parameter are also shown in the second data column in the table. Parameters that exceeded the regulatory limits are highlighted in the tables for ease of identification.

Results of testing for acute lethality in rainbow trout (as per section 14 of the Regulations) and for *Daphnia magna* monitoring (section 17 of the Regulations) are shown in the four rows near the bottom of the tables. A “pass” for the rainbow trout acute lethality test and the *Daphnia magna* monitoring test indicates that the percentage of mortality was less than or equal to 50%. A “fail” indicates that the percentage of mortality was greater than 50%.

The additional notations used in the tables are explained at the bottom of each page, including “ND” for No Deposit, “RF” for Reduced Frequency, “NCU” for No Cyanide Used, and a “-” when no data was reported but the data was expected<sup>9</sup>.

“No Deposit (ND)” is used in the case where the mine reports no effluent flow from a final discharge point in a given month.

“Reduced Frequency (RF)” indicates that the mining facility has reported that it met the requirements of subsections 13(1),13(2) or 16(1) of the MDMER, which allow the facility to conduct the testing of effluent and acute lethality on a quarterly basis (versus weekly, as is otherwise required). Given this, the mining facility was not required to report on the given parameter in that month.

“No Cyanide Used (NCU)” indicates that the mining facility reported cyanide not being used or never having been used as a process reagent and was not required to record the concentration of that substance as per subsection 12(3) of the MDMER.

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<sup>9</sup> The mines are required to report effluent data, or ND or RF or NCU in the case no sampling was required.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Anderson Dam												
Operator	Hudbay Minerals Incorporated												
Product(s)	Copper, zinc, selenium, tellurium, silver												
Address	P.O. Box 1500, Flin Flon, Manitoba R8A 1N9												
Effluent Discharge Point	Anderson Lake Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.003	0.010	0.002	0.002	0.004	0.009	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.009	0.006	0.006	0.007	0.012	0.023	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.002	0.002	0.000	0.001	0.002	0.006	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.001	0.001	0.001	0.001	0.001	0.001	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.167	0.155	0.156	0.195	0.324	0.297	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	2.58	1.52	3.48	1.75	2.18	1.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.020	0.020	RF	RF	0.003	RF	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	7.1	6.9	7.4	6.9	7.1	8.8	ND
pH High	≤9.5	ND	ND	ND	ND	ND	8.2	7.8	7.9	7.7	7.7	8.8	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	648,674	833,275	1,475,968	643,382	514,390	267,885	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	0	0	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Aurbel (Mine)												
Operator	QMX Gold Corporation												
Product(s)	Gold												
Address	1900 Brador Road, Val-d'Or, Quebec J9P 0A4												
Effluent Discharge Point	Effluent final Aurbel												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.007	0.006	0.032	-	0.045	0.025	0.043	0.018
Cu (mg/L)	0.3	ND	ND	ND	ND	0.021	0.058	0.179	-	0.180	0.130	0.113	0.117
CN (mg/L)	1	ND	ND	ND	ND	0.001	0.002	0.014	NCU	0.010	0.003	0.003	0.003
Pb (mg/L)	0.2	ND	ND	ND	ND	0.008	0.000	0.000	-	0.000	0.002	0.000	0.000
Ni (mg/L)	0.5	ND	ND	ND	ND	0.003	0.005	0.009	-	0.011	0.009	0.009	0.008
Zn (mg/L)	0.5	ND	ND	ND	ND	0.028	0.008	0.007	-	0.180	0.013	0.011	0.018
TSS (mg/L)	15	ND	ND	ND	ND	2.00	4.29	5.38	5.00	14.00	8.50	4.18	4.50
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.001	0.010	0.005	-	0.003	0.002	0.001	0.001
pH Low	≥6.0	ND	ND	ND	ND	8.0	7.8	7.8	8.3	8.2	8.2	8.0	7.5
pH High	≤9.5	ND	ND	ND	ND	8.2	9.3	9.0	8.4	8.2	8.4	8.3	8.1
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	4,284	25,272	43,090	4,080	100	22,700	42,900	43,000
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	1	-	-	1	1	1
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	0	-	-	0	0	0
Daphnia magna	Pass	ND	ND	ND	ND	1	1	0	-	-	1	1	1
Monitoring Test	Fail	ND	ND	ND	ND	0	0	1	-	-	0	0	0
Comments:	<p>The owner/operator reported to be in 'normal frequency' for acute lethality testing, arsenic, copper, lead, nickel, zinc, and radium-226, however, no test results were submitted for the month of August. The owner/operator reported to be in 'normal frequency' for acute lethality testing for the month of September, however, no results were submitted.</p>												
<b>NOTES:</b>	<p><b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> &gt;50% Mortality <b>-</b> : No data reported                  Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.                  A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.</p>												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Barry (Mine)												
Operator	Ressources Métanor Incorporé												
Product(s)	Gold												
Address	200 Mine Road, Desmaraisville, Quebec JOY 1H0												
Effluent Discharge Point	V-Notch												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	ND
Cu (mg/L)	0.3	ND	ND	0.002	0.006	0.004	0.002	0.003	0.002	0.002	0.002	0.003	ND
CN (mg/L)	1	ND	ND	NCU	NCU	NCU	0.002	NCU	NCU	0.006	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	ND
Ni (mg/L)	0.5	ND	ND	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.003	ND
Zn (mg/L)	0.5	ND	ND	0.004	0.007	0.010	0.007	0.007	0.004	0.004	0.006	0.009	ND
TSS (mg/L)	15	ND	ND	7.00	1.33	4.50	1.00	0.50	0.63	0.75	0.93	0.75	ND
Ra-226 (Bq/L)	0.37	ND	ND	0.001	RF	RF	0.002	RF	RF	0.002	RF	0.005	ND
pH Low	≥6.0	ND	ND	7.5	7.6	7.3	7.6	8.0	8.1	8.0	7.6	7.6	ND
pH High	≤9.5	ND	ND	7.8	8.0	8.0	8.2	8.1	8.2	8.4	8.1	7.9	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	4,822	11,947	33,545	15,302	17,630	17,317	52,876	43,366	11,082	ND
Rainbow Trout	Pass	ND	ND	1	1	1	1	1	1	1	2	0	ND
Acute Lethality Test	Fail	ND	ND	0	0	0	0	0	0	1	0	1	ND
Daphnia magna	Pass	ND	ND	1	1	1	1	1	1	2	1	1	ND
Monitoring Test	Fail	ND	ND	0	0	0	0	0	0	0	0	0	ND

**Comments:**

The owner/operator did not complete an equal number of Daphnia magna acute lethality tests as Rainbow trout acute lethality tests in the month of October.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Beaufor												
Operator	Mines Richmond Incorpor� / Monarques Gold												
Product(s)	Gold												
Address	776 Perron Road, Val-d'Or, Quebec J9P 0C3												
Effluent Discharge Point	Effluent Final												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.001	0.000	0.000	0.000	0.000
Cu (mg/L)	0.3	0.010	0.013	0.010	0.010	0.015	0.012	0.011	0.010	0.012	0.013	0.014	0.011
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.001	0.000	0.000	0.000	0.001	0.002	0.001	0.001	0.001	0.000	0.000	0.001
Ni (mg/L)	0.5	0.004	0.003	0.002	0.003	0.003	0.008	0.004	0.003	0.005	0.004	0.005	0.002
Zn (mg/L)	0.5	0.008	0.010	0.007	0.012	0.009	0.006	0.008	0.006	0.006	0.008	0.010	0.008
TSS (mg/L)	15	6.40	9.25	11.00	11.40	13.88	10.25	13.20	10.50	14.50	10.80	8.00	6.50
Ra-226 (Bq/L)	0.37	0.008	RF	RF	RF	0.009	RF	0.007	RF	RF	RF	0.009	RF
pH Low	≥6.0	7.9	7.9	7.9	7.3	7.5	8.2	8.1	8.1	8.1	8.2	8.0	8.0
pH High	≤9.5	8.0	8.0	8.0	8.1	8.1	8.3	8.2	8.1	8.3	8.2	8.3	8.1
Flow (m <sup>3</sup> /month)	-	25,827	22,000	24,195	24,382	34,888	26,053	25,817	25,276	27,744	36,555	29,425	25,927
Rainbow Trout	Pass	1	-	-	-	1	-	1	RF	RF	RF	1	RF
Acute Lethality Test	Fail	0	-	-	-	0	-	0	RF	RF	RF	0	RF
Daphnia magna	Pass	1	-	-	-	1	-	1	RF	RF	RF	1	RF
Monitoring Test	Fail	0	-	-	-	0	-	0	RF	RF	RF	0	RF
Comments:	<p>The owner/operator reported to be in 'normal frequency' for acute lethality testing for the months of February, March, April, and June, however, no test results were submitted for these months. Ownership was transferred from Mines Richmond Incorpor� to Monarques Gold.</p>												
<b>NOTES:</b>	<p><b>ND:</b> No Deposit    <b>RF:</b> Reduced Frequency    <b>NCU:</b> No Cyanide Used    <b>Pass:</b> ≤50% Mortality    <b>Fail:</b> &gt;50% Mortality    <b>-</b> : No data reported  Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.</p>												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Beaver Brook Antimony Mine Incorporated												
Operator	Hunan Nonferrous Company												
Product(s)	Antimony												
Address	P.O. Box 160, Glenwood, Newfoundland and Labrador A0G 2K0												
Effluent Discharge Point	Site 16 - Polishing Pond Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.122	0.153	0.095	0.185	0.113	0.094	0.109	0.134	0.103	0.097	0.161	0.076
Cu (mg/L)	0.3	0.001	0.002	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.002
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.001	0.004	0.001	0.009	0.003	0.000	0.000	0.000	0.000	0.000	0.005	0.001
Ni (mg/L)	0.5	0.017	0.017	0.014	0.013	0.011	0.010	0.010	0.009	0.009	0.009	0.009	0.009
Zn (mg/L)	0.5	0.006	0.009	0.008	0.006	0.003	0.004	0.003	0.003	0.003	0.004	0.003	0.007
TSS (mg/L)	15	0.88	7.00	2.80	16.50	9.40	1.75	1.25	1.00	1.00	2.40	9.75	1.25
Ra-226 (Bq/L)	0.37	RF	RF	0.009	RF	RF	0.008	0.003	0.003	RF	0.003	RF	0.007
pH Low	≥6.0	8.1	8.0	8.1	7.8	7.9	8.1	8.0	8.3	8.1	7.9	8.0	8.1
pH High	≤9.5	8.2	8.1	8.2	8.2	8.3	8.3	8.4	8.5	8.4	8.4	8.2	8.1
Flow (m <sup>3</sup> /month)	-	13,116	16,316	12,969	59,008	45,753	31,463	48,167	11,842	12,281	14,028	34,059	20,644
Rainbow Trout	Pass	RF	RF	1	RF	1	RF	1	1	RF	1	RF	1
Acute Lethality Test	Fail	RF	RF	0	RF	0	RF	0	0	RF	0	RF	0
Daphnia magna	Pass	RF	RF	1	RF	1	RF	1	1	RF	1	RF	1
Monitoring Test	Fail	RF	RF	0	RF	0	RF	0	0	RF	0	RF	0
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency												
<b>NCU:</b> No Cyanide Used	<b>Pass:</b> ≤50% Mortality												
<b>Fail:</b> >50% Mortality	<b>--:</b> No data reported												
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Bell Creek Mine and Mill Facility												
Operator	Lake Shore Gold Corporation												
Product(s)	Gold												
Address	800 Florence Street, Porcupine, Ontario P0N 1C0												
Effluent Discharge Point	Effluent Treatment Plant Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>--</b> : No data reported												
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Bell Creek Mine and Mill Facility												
Operator	Lake Shore Gold Corporation												
Product(s)	Gold												
Address	800 Florence Street, Porcupine, Ontario P0N 1C0												
Effluent Discharge Point	Phase 1 and 2 Seepage Collection Ditch												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit													
<b>RF:</b> Reduced Frequency													
<b>NCU:</b> No Cyanide Used													
<b>Pass:</b> ≤50% Mortality													
<b>Fail:</b> >50% Mortality													
<b>-</b> : No data reported													
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Bell Creek Mine and Mill Facility												
Operator	Lake Shore Gold Corporation												
Product(s)	Gold												
Address	800 Florence Street, Porcupine, Ontario P0N 1C0												
Effluent Discharge Point	Phase 3 Seepage Collection Ditch												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test:	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency												
<b>NCU:</b> No Cyanide Used	<b>Pass:</b> ≤50% Mortality												
<b>Fail:</b> >50% Mortality	<b>—:</b> No data reported												
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Bell Creek Mine and Mill Facility												
Operator	Lake Shore Gold Corporation												
Product(s)	Gold												
Address	800 Florence Street, Porcupine, Ontario P0N 1C0												
Effluent Discharge Point	Polishing Pond												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	0.034	0.029	0.012	0.012	0.020	ND	0.020	0.018	0.021	0.023
Cu (mg/L)	0.3	ND	ND	0.003	0.002	0.007	0.006	0.008	ND	0.010	0.008	0.005	0.005
CN (mg/L)	1	ND	ND	0.006	0.005	0.008	0.012	0.017	ND	0.004	0.003	0.002	0.004
Pb (mg/L)	0.2	ND	ND	0.001	0.001	0.001	0.000	0.000	ND	0.000	0.000	0.000	0.000
Ni (mg/L)	0.5	ND	ND	0.028	0.021	0.013	0.007	0.005	ND	0.005	0.006	0.009	0.016
Zn (mg/L)	0.5	ND	ND	0.005	0.003	0.003	0.003	0.005	ND	0.008	0.006	0.007	0.014
TSS (mg/L)	15	ND	ND	3.47	2.00	6.40	3.95	3.97	ND	0.25	2.25	2.32	1.40
Ra-226 (Bq/L)	0.37	ND	ND	0.005	RF	RF	0.005	RF	ND	0.005	RF	0.005	RF
pH Low	≥6.0	ND	ND	6.9	6.9	6.9	6.9	6.9	ND	7.0	6.7	6.7	6.7
pH High	≤9.5	ND	ND	7.3	7.2	7.1	7.1	7.1	ND	7.0	7.0	7.2	6.8
Flow (m <sup>3</sup> /month)	-	ND	ND	71,855	71,487	128,647	142,189	79,281	ND	1,824	85,934	168,334	31,812
Rainbow Trout	Pass	ND	ND	1	1	1	1	1	ND	1	1	1	1
Acute Lethality Test	Fail	ND	ND	0	0	0	0	0	ND	0	0	0	0
Daphnia magna	Pass	ND	ND	1	1	1	1	1	ND	1	1	1	1
Monitoring Test	Fail	ND	ND	0	0	0	0	0	ND	0	0	0	0
Comments:													
<b>NOTES:</b>													
ND: No Deposit	RF: Reduced Frequency	NCU: No Cyanide Used	Pass: ≤50% Mortality	Fail: >50% Mortality	-	No data reported							
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Bellekeno Mine												
Operator	Alexco Keno Hill Mining Corporation												
Product(s)	Silver, lead, zinc												
Address	Box 7, Site 2, Elsa, Yukon Y0B 1J0												
Effluent Discharge Point	Be.KV43 - Bellekeno 625 Treatment Pond Decant												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001
Cu (mg/L)	0.3	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	0.000	0.002	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.001	0.001
Ni (mg/L)	0.5	0.020	0.016	0.018	0.016	0.017	0.016	0.013	0.013	0.011	0.007	0.012	0.025
Zn (mg/L)	0.5	0.102	0.064	0.049	0.054	0.093	0.160	0.072	0.228	0.142	0.056	0.143	0.216
TSS (mg/L)	15	3.70	4.50	3.15	7.98	5.88	8.23	5.30	17.20	13.70	6.62	15.53	16.08
Ra-226 (Bq/L)	0.37	RF	0.004	RF	RF	0.007	RF	RF	RF	0.004	0.009	RF	RF
pH Low	≥6.0	8.4	8.6	8.5	8.6	8.3	8.3	8.4	8.4	8.7	8.8	8.8	8.4
pH High	≤9.5	8.7	8.7	8.7	8.9	8.8	8.5	9.1	9.2	9.0	9.2	9.1	9.4
Flow (m <sup>3</sup> /month)	-	5,920	4,84	5,215	5,841	7,502	5,702	3,964	7,166	7,064	8,186	5,653	6,377
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Comments:													
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>--</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Birchtree Mine												
Operator	Vale Canada Limited												
Product(s)	Nickel, copper												
Address	P.O. Box 5000, Thompson, Manitoba R8N 1P3												
Effluent Discharge Point	Birchtree Effluent Treatment Plant												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cu (mg/L)	0.3	0.030	0.028	0.025	0.023	0.028	0.001	0.001	0.001	0.001	0.001	0.000	0.001
CN (mg/L)	1	NCU	0.001	NCU	NCU	0.001	NCU	0.001	NCU	0.001	0.001	NCU	NCU
Pb (mg/L)	0.2	0.015	0.019	0.015	0.019	0.015	0.000	0.000	0.000	0.000	0.001	0.000	0.000
Ni (mg/L)	0.5	0.012	0.015	0.013	0.010	0.012	0.014	0.030	0.046	0.057	0.146	0.143	0.013
Zn (mg/L)	0.5	0.005	0.006	0.008	0.005	0.005	0.006	0.002	0.002	0.003	0.044	0.002	0.002
TSS (mg/L)	15	1.48	1.55	2.40	1.45	3.12	3.75	1.00	1.25	1.25	1.00	3.25	1.25
Ra-226 (Bq/L)	0.37	0.206	0.155	0.210	0.175	0.234	0.248	0.200	0.178	0.130	0.124	0.110	0.121
pH Low	≥6.0	7.3	7.3	7.4	7.4	7.3	7.6	7.2	7.4	7.1	7.4	7.4	7.3
pH High	≤9.5	7.5	7.6	7.9	7.5	7.6	7.7	7.8	7.8	7.6	7.7	7.6	7.6
Flow (m <sup>3</sup> /month)	-	15,777	15,631	17,551	23,919	11,896	8,029	14,239	31,455	38,137	23,300	19,621	19,501
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	RF	0	RF	RF	1	RF	1	RF	RF	0	RF	RF
Monitoring Test	Fail	RF	1	RF	RF	0	RF	0	RF	RF	1	RF	RF
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency												
<b>NCU:</b> No Cyanide Used	<b>Pass:</b> ≤50% Mortality												
<b>Fail:</b> >50% Mortality	<b>—</b> : No data reported												
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Black Fox Mill												
Operator	McEwen Ontario												
Product(s)	Gold												
Address	Rural Route 2, Matheson, Ontario P0K 1N0												
Effluent Discharge Point	Direct Tailings Pond Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit													
<b>RF:</b> Reduced Frequency													
<b>NCU:</b> No Cyanide Used													
<b>Pass:</b> ≤50% Mortality													
<b>Fail:</b> >50% Mortality													
<b>-</b> : No data reported													
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Black Fox Mill												
Operator	McEwen Ontario												
Product(s)	Gold												
Address	Rural Route 2, Matheson, Ontario P0K 1N0												
Effluent Discharge Point	Polishing Pond Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.065	0.092	0.107	ND	0.065	0.040	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.014	0.012	0.010	ND	0.019	0.017	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	0.024	0.033	0.029	ND	0.040	0.111	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0030	0.0003	0.0003	ND	0.0030	0.0030	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.057	0.072	0.069	ND	0.105	0.180	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.006	0.014	0.008	ND	0.009	0.006	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	1.00	0.50	2.13	ND	0.50	0.50	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.005	RF	0.005	ND	0.005	RF	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	7.0	6.9	7.2	ND	8.1	7.2	ND
pH High	≤9.5	ND	ND	ND	ND	ND	7.7	8.1	8.1	ND	8.1	7.8	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	55,433	90,833	32,605	ND	45,368	52,322	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	ND	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	0	ND	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	1	ND	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	0	ND	0	0	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Black Fox Mine												
Operator	McEwen Ontario												
Product(s)	Gold												
Address	2839 Highway 101 E, Matheson, Ontario P0K 1N0												
Effluent Discharge Point	Pike River Discharge Point												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.189	0.130	0.080	0.081	0.126	0.172	0.149	0.172	0.136	0.216	0.265	0.129
Cu (mg/L)	0.3	0.002	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.001	0.001	0.001
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.001	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ni (mg/L)	0.5	0.038	0.033	0.032	0.035	0.026	0.018	0.013	0.038	0.015	0.024	0.033	0.035
Zn (mg/L)	0.5	0.030	0.021	0.025	0.025	0.025	0.103	0.064	0.044	0.026	0.019	0.037	0.020
TSS (mg/L)	15	7.40	3.63	2.50	1.75	2.20	3.50	0.75	3.00	2.88	1.60	4.25	2.25
Ra-226 (Bq/L)	0.37	RF	RF	RF	RF	0.005	RF	RF	0.011	RF	0.005	RF	RF
pH Low	≥6.0	7.1	7.5	7.1	7.0	6.9	7.1	7.3	6.7	7.5	6.8	7.2	6.9
pH High	≤9.5	8.4	8.3	7.7	7.5	7.8	8.3	8.3	8.1	8.1	7.9	7.7	8.1
Flow (m <sup>3</sup> /month)	-	69,765	46,146	63,820	96,085	172,011	86,517	79,437	77,843	112,382	167,365	90,606	66,402
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Comments:	The owner/operator did not report measurement of radium-226 within the first quarter.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>—</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Black Fox Mine												
Operator	McEwen Ontario												
Product(s)	Gold												
Address	2839 Highway 101 E, Matheson, Ontario P0K 1N0												
Effluent Discharge Point	Salve Creek Transitional Period Discharge Point												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency												
<b>NCU:</b> No Cyanide Used	<b>Pass:</b> ≤50% Mortality												
<b>Fail:</b> >50% Mortality	<b>- :</b> No data reported												
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Bonanza Ledge Mine												
Operator	Barkerville Gold Mines Ltd												
Product(s)	Gold												
Address	3700 Ski Hill Road, Box 247, Wells, British Columbia V0K 2R0												
Effluent Discharge Point	Sediment Control Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.003	0.002	0.001	0.001	ND	ND	ND	0.003	0.002
Cu (mg/L)	0.3	ND	ND	ND	0.004	0.004	0.002	0.002	ND	ND	ND	0.002	0.001
CN (mg/L)	1	ND	ND	ND	NCU	NCU	NCU	NCU	ND	ND	ND	NCU	NCU
Pb (mg/L)	0.2	ND	ND	ND	0.001	0.001	0.000	0.000	ND	ND	ND	0.001	0.000
Ni (mg/L)	0.5	ND	ND	ND	0.050	0.073	0.055	0.048	ND	ND	ND	0.049	0.059
Zn (mg/L)	0.5	ND	ND	ND	0.016	0.026	0.016	0.014	ND	ND	ND	0.009	0.013
TSS (mg/L)	15	ND	ND	ND	15.92	16.63	5.95	3.68	ND	ND	ND	9.69	2.47
Re-226 (Bq/L)	0.37	ND	ND	ND	RF	0.003	RF	0.020	ND	ND	ND	0.090	RF
pH Low	≥6.0	ND	ND	ND	7.4	6.8	6.9	6.8	ND	ND	ND	7.4	7.5
pH High	≤9.5	ND	ND	ND	8.0	7.5	7.5	7.6	ND	ND	ND	7.8	7.9
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	24,528	82,906	50,674	41,819	ND	ND	ND	11,170	547
Rainbow Trout	Pass	ND	ND	ND	2	2	1	1	ND	ND	ND	2	1
Acute Lethality Test	Fail	ND	ND	ND	0	0	0	0	ND	ND	ND	0	0
Daphnia magna	Pass	ND	ND	ND	2	2	1	1	ND	ND	ND	3	2
Monitoring Test	Fail	ND	ND	ND	0	0	0	0	ND	ND	ND	0	0
Comments:	<p>The owner/operator was reporting at a 'reduced frequency' for radium-226, however the deleterious substance concentration was measured as greater than 0.037 Bq/L, thus the mine no longer qualifies for reduced frequency.</p> <p><b>NOTES:</b>  <b>ND:</b> No Deposit    <b>RF:</b> Reduced Frequency    <b>NCU:</b> No Cyanide Used    <b>Pass:</b> ≤50% Mortality    <b>Fail:</b> &gt;50% Mortality    <b>--</b> : No data reported                      Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.                      A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.</p>												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Borden Gold Project												
Operator	Goldcorp Incorporated												
Product(s)	Gold												
Address	Highway 101 E, Chapleau, Ontario P0M 1K0												
Effluent Discharge Point	Effluent Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep	Oct	Nov.	Dec
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.003	0.003	0.002
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	0.004	0.002	0.002
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.016	0.014	0.012
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.007	0.009	0.009
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	5.50	2.55	3.15
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	7.1	6.7	7.0
pH High	≤9.5	-	-	-	-	-	-	-	-	-	7.1	7.2	7.3
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	2,617	18,839	15,271
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	1	1	1
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	0	0	0
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	1	1	1
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	0	0	0
Comments:	This mine became subject to the MDMR in 2018. The owner/operator did not report measurement of radium-226 within the fourth quarter.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Brucejack Mine Site												
Operator	Pretium Resources Incorporated												
Product(s)	Silver, gold												
Address	P.O. Box 49334, Vancouver, British Columbia V7X 1L4												
Effluent Discharge Point	Brucejack Lake outflow final discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.004	0.004	0.005	0.005	0.005	0.005	0.004	0.004	0.005	0.006	0.007	0.006
Cu (mg/L)	0.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0003	0.0002	0.0002	0.0002	0.0004	0.0003	0.0001	0.0005	0.0005	0.0008	0.001	0.0004
Ni (mg/L)	0.5	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Zn (mg/L)	0.5	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
TSS (mg/L)	15	1.24	0.63	0.78	1.06	1.88	0.93	0.80	2.80	2.25	6.24	6.73	3.03
Ra-226 (Bq/L)	0.37	RF	RF	0.0032	RF	RF	0.0027	RF	0.014	RF	RF	RF	0.003
pH Low	≥6.0	7.9	7.8	7.8	7.6	7.8	7.7	7.8	7.8	7.9	7.8	7.9	7.6
pH High	≤9.5	7.9	7.9	8.0	7.9	8.0	8.0	7.9	8.0	8.0	8.0	8.0	8.0
Flow (m <sup>3</sup> /month)	-	170,882	44,150	45,524	194,400	1,775,779	2,068,416	1,653,956	1,226,794	698,111	517,362	436,373	313,463
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF
Monitoring Test	Fail	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency												
<b>NCU:</b> No Cyanide Used	<b>Pass:</b> ≤50% Mortality												
<b>Fail:</b> >50% Mortality	<b>Fail:</b> >50% Mortality												
<b>--:</b> No data reported	<b>--:</b> No data reported												
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Bucko Lake Mine												
Operator	CaNickel Mining Limited												
Product(s)	Nickel												
Address	371 Flemming Drive, Wabowden, Manitoba R0B 1S0												
Effluent Discharge Point	Settling Pond Discharge												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	0.001	0.001	0.001	0.001	0.001	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.002	0.001	0.001	0.001	0.001	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.001	0.001	0.001	0.001	0.001	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.082	0.036	0.023	0.015	0.013	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.003	0.003	0.003	0.003	0.003	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	8.00	7.75	3.80	5.25	3.00	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.200	0.148	0.248	0.213	0.295	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	8.0	7.6	7.3	7.4	7.5	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	8.0	7.7	7.6	7.6	7.7	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	1,649	19,395	20,999	20,359	6,711	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	1	1	1	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	0	0	0	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	0	0	0	0	0	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	1	1	1	1	1	ND	ND	ND
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported													
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Camflo (Usine)												
Operator	Mines Richmond Incorpor� / Monarques Gold												
Product(s)	Gold												
Address	100 Road 117, P.O. Box 640, Malartic, Quebec J0Y 1Z0												
Effluent Discharge Point	Effluent Final												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.0003	0.0003	0.0015	0.0003	0.0006	0.0006	0.0004	0.0013	0.0003	0.0009	0.0004	0.0007
Cu (mg/L)	0.3	0.006	0.020	0.005	0.003	0.004	0.006	0.005	0.005	0.003	0.003	0.003	0.002
CN (mg/L)	1	0.089	0.099	0.085	0.053	0.024	0.064	0.036	0.046	0.106	0.060	0.071	0.073
Pb (mg/L)	0.2	0.0002	0.001	0.0004	0.0002	0.0014	0.0002	0.0002	0.0009	0.0005	0.0002	0.0002	0.0002
Ni (mg/L)	0.5	0.012	0.013	0.005	0.007	0.004	0.025	0.006	0.006	0.013	0.008	0.016	0.009
Zn (mg/L)	0.5	0.010	0.008	0.007	0.008	0.005	0.008	0.004	0.010	0.004	0.006	0.008	0.009
TSS (mg/L)	15	3.20	1.88	6.63	0.80	3.50	4.75	4.40	4.75	3.25	2.60	5.25	4.25
Ra-226 (Bq/L)	0.37	RF	0.001	RF	RF	0.005	RF	0.006	RF	RF	RF	0.003	RF
pH Low	≥6.0	7.1	7.1	7.1	7.2	7.3	7.5	7.5	7.4	7.5	7.4	7.2	7.2
pH High	≤9.5	7.3	7.3	7.3	8.1	8.1	7.9	8.0	7.8	7.6	7.7	7.5	7.4
Flow (m <sup>3</sup> /month)	-	21,914	11,093	23,692	57,671	147,408	37,081	262,811	124,633	40,128	76,734	38,399	20,233
Rainbow Trout	Pass	-	1	-	-	1	-	1	RF	RF	RF	1	RF
Acute Lethality Test	Fail	-	0	-	-	0	-	0	RF	RF	RF	0	RF
Daphnia magna	Pass	-	1	-	-	1	-	1	RF	RF	RF	1	RF
Monitoring Test	Fail	-	0	-	-	0	-	0	RF	RF	RF	0	RF
Comments:	The owner/operator reported to be in 'normal frequency' for acute lethality testing for the months of January, March, April, and June, however, no test results were submitted for these months. Ownership was transferred from Mines Richmond Incorpor� to Monarques Gold.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>--</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill	Campbell Mine												
Operator	Goldcorp Canada Name Limited												
Product(s)	Gold												
Address	10 Mine Road, Balmertown, Ontario P0V 1C0												
Effluent Discharge Point	Wetout												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.016	0.017	0.016	0.020	0.021	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.004	0.003	0.003	0.002	0.002	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	0.003	0.003	0.003	0.003	0.002	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0001	0.000	0.0005	0.000	0.000	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.029	0.034	0.032	0.033	0.040	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.005	0.005	0.005	0.006	0.006	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	1.43	3.22	1.78	1.49	1.14	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.004	0.004	0.008	0.010	0.015	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	6.1	6.8	6.5	6.3	6.0	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	7.4	7.8	7.6	7.3	6.4	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	75,062	169,854	199,936	226,410	182,196	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	2	2	2	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	0	0	0	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	1	2	2	1	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	0	0	0	1	ND	ND	ND
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit													
<b>RF:</b> Reduced Frequency													
<b>NCU:</b> No Cyanide Used													
<b>Pass:</b> ≤50% Mortality													
<b>Fail:</b> >50% Mortality													
<b>-</b> : No data reported													
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Canadian Malartic												
Operator	Canadian Malartic GP												
Product(s)	Gold												
Address	100 Mourier Lake Road, Malartic, Quebec JOY 1Z0												
Effluent Discharge Point	Effluent final												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
pH High	≤9.5	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Comments:	Final discharge point decommissioned in May 2018.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Canadian Malartic												
Operator	Canadian Malartic GP												
Product(s)	Gold												
Address	100 Mourier Lake Road, Malartic, Quebec J0Y 1Z0												
Effluent Discharge Point	Effluent final-E1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.005	0.0003	0.0003	0.0016	0.003	0.0003	0.0003	0.0003	0.0003	0.0004	0.0003	0.0003
Cu (mg/L)	0.3	0.014	0.007	0.008	0.008	0.005	0.005	0.008	0.007	0.023	0.169	0.209	0.019
CN (mg/L)	1	0.151	0.137	0.092	0.040	0.021	0.012	0.023	0.026	0.036	0.048	0.067	0.047
Pb (mg/L)	0.2	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.002	0.001	0.000	0.000	0.001
Ni (mg/L)	0.5	0.075	0.068	0.057	0.050	0.037	0.051	0.053	0.044	0.043	0.053	0.065	0.053
Zn (mg/L)	0.5	0.005	0.005	0.007	0.008	0.003	0.002	0.002	0.001	0.003	0.003	0.006	0.003
TSS (mg/L)	15	6.20	4.50	2.75	4.30	1.25	1.75	3.60	1.25	3.50	6.20	5.50	3.50
Ra-226 (Bq/L)	0.37	0.045	RF	RF	0.027	RF	RF	0.019	RF	RF	0.035	RF	RF
pH Low	≥6.0	6.8	6.8	6.7	6.9	7.0	7.0	6.9	7.0	7.0	6.7	6.5	6.5
pH High	≤9.5	7.0	7.0	6.8	7.2	7.4	7.8	7.1	7.1	7.4	7.3	7.0	6.6
Flow (m <sup>3</sup> /month)	-	177,810	43,010	384,960	421,620	817,640	424,300	568,520	708,410	1,640,600	2,119,990	1,063,770	912,285
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Comments:	The owner/operator was reporting at a 'reduced frequency', however the radium-226 concentration in January was measured as greater than 0.037 Bq/L, thus the mine no longer qualifies for reduced frequency.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Cantung Mine												
Operator	North American Tungsten Corporation Limited												
Product(s)	Tungsten												
Address	Tungsten, Northwest Territories												
Effluent Discharge Point	4-2-7-2 Culvert												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0004	0.0004	RF	0.0004	RF	RF	0.0004	RF	RF	0.0004	RF	RF
Cu (mg/L)	0.0-3	0.0003	0.0003	RF	0.0011	RF	RF	0.0006	RF	RF	0.0003	RF	RF
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.000	RF	0.000	RF	RF	0.000	RF	RF	0.000	RF	RF
Ni (mg/L)	0.5	0.0009	0.0009	RF	0.0007	RF	RF	0.0007	RF	RF	0.0007	RF	RF
Zn (mg/L)	0.5	0.003	0.002	RF	0.002	RF	RF	0.001	RF	RF	0.007	RF	RF
TSS (mg/L)	15	1.60	1.00	1.25	1.00	1.50	1.00	1.00	1.25	2.50	1.20	1.25	1.00
Ra-226 (Bq/L)	0.37	0.003	RF	RF	0.005	RF	RF	0.005	RF	RF	0.005	RF	RF
pH Low	≥6.0	7.9	7.8	7.9	7.7	7.7	7.7	7.5	7.8	7.8	7.8	7.8	7.8
pH High	≤9.5	8.0	8.0	8.0	7.9	8.1	8.1	7.8	8.1	8.0	7.9	7.9	7.9
Flow (m <sup>3</sup> /month)	-	24,014	17,490	10,964	9,469	19,332	57,968	66,618	48,801	43,888	44,485	23,991	25,395
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit													
<b>RF:</b> Reduced Frequency													
<b>NCU:</b> No Cyanide Used													
<b>Pass:</b> ≤50% Mortality													
<b>Fail:</b> >50% Mortality													
<b>-</b> : No data reported													
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Cantung Mine												
Operator	North American Tungsten Corporation Limited												
Product(s)	Tungsten												
Address	TungstTungsten, Northwest Territories												
Effluent Discharge Point	Polishing Pond Four and Bore Hole 4-28-1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0004	RF	RF	0.0005	RF	RF	0.0005	RF	RF	0.0004	RF	RF
Cu (mg/L)	0.3	0.0003	RF	RF	0.0003	RF	RF	0.0003	RF	RF	0.0003	RF	RF
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	RF	RF	0.000	RF	RF	0.000	RF	RF	0.000	RF	RF
Ni (mg/L)	0.5	0.009	RF	RF	0.008	RF	RF	0.008	RF	RF	0.009	RF	RF
Zn (mg/L)	0.5	0.009	RF	RF	0.006	RF	RF	0.006	RF	RF	0.008	RF	RF
TSS (mg/L)	15	3.40	2.75	2.75	2.40	3.00	1.50	2.40	1.50	2.75	2.00	3.00	2.20
Ra-226 (Bq/L)	0.37	0.003	RF	RF	0.010	RF	RF	0.005	RF	RF	0.005	RF	RF
pH Low	≥6.0	7.8	7.9	7.8	7.8	7.7	7.6	7.4	7.3	7.8	7.8	7.8	7.8
pH High	≤9.5	8.0	8.0	7.9	7.9	8.0	7.8	7.7	7.8	7.9	7.9	7.8	7.9
Flow (m <sup>3</sup> /month)	-	1,717	1,504	1,280	1,720	1,494	1,046	1,179	887	1,075	2,239	2,082	2,284
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency												
<b>NCU:</b> No Cyanide Used	<b>Pass:</b> ≤50% Mortality												
<b>Fail:</b> >50% Mortality	<b>Fail:</b> >50% Mortality												
<b>--:</b> No data reported	<b>--:</b> No data reported												
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Cantung Mine												
Operator	Portal Main North American Tungsten Corporation Limited												
Product(s)	Tungsten												
Address	Tungsten, Northwest Territories												
Effluent Discharge Point	Portal Main Adit 4-13												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0002	RF	RF	0.0003	RF	RF	0.0003	RF	RF	0.0003	RF	RF
Cu (mg/L)	0.3	0.0012	RF	RF	0.0011	RF	RF	0.0012	RF	RF	0.0007	RF	RF
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	RF	RF	0.000	RF	RF	0.000	RF	RF	0.000	RF	RF
Ni (mg/L)	0.5	0.0009	RF	RF	0.0009	RF	RF	0.0003	RF	RF	0.0003	RF	RF
Zn (mg/L)	0.5	0.005	RF	RF	0.005	RF	RF	0.004	RF	RF	0.004	RF	RF
TSS (mg/L)	15	2.40	1.00	2.75	1.00	1.50	1.75	1.20	1.75	1.00	1.00	1.25	1.00
Ra-226 (Bq/L)	0.37	0.003	RF	RF	0.001	RF	RF	0.005	RF	RF	0.005	RF	RF
pH Low	≥6.0	8.0	7.9	7.9	7.9	7.9	7.7	7.2	7.3	7.9	7.9	7.9	7.9
pH High	≤9.5	8.1	8.1	8.0	8.0	8.0	8.0	7.7	7.9	8.0	8.0	7.9	7.9
Flow (m <sup>3</sup> /month)	-	1,118	865	1,149	1,233	2,840	7,906	8,909	5,488	3,715	5,148	1,781	1,215
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency												
<b>NCU:</b> No Cyanide Used	<b>Pass:</b> ≤50% Mortality												
<b>Fail:</b> >50% Mortality	<b>—</b> : No data reported												
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Cantung Mine												
Operator	North American Tungsten Corporation Limited												
Product(s)	Tungsten												
Address	Tungsten, Northwest Territories												
Effluent Discharge Point	Settling Pond 5-2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0007	0.0006	0.0006	0.0007	0.0113	RF	RF	0.0001	RF	0.0005	RF	RF
Cu (mg/L)	0.3	0.0004	0.0006	0.0003	0.0064	0.0026	RF	RF	0.0002	RF	0.0003	RF	RF
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	0.000	0.000	0.000	0.000	RF	RF	0.000	RF	0.000	RF	RF
Ni (mg/L)	0.5	0.001	0.001	0.000	0.001	0.001	RF	RF	0.000	RF	0.001	RF	RF
Zn (mg/L)	0.5	0.006	0.024	0.004	0.004	0.009	RF	RF	0.002	RF	0.003	RF	RF
TSS (mg/L)	15	2.20	1.00	1.00	3.80	5.25	3.00	9.00	3.75	3.00	2.60	5.00	1.20
Ra-226 (Bq/L)	0.37	0.003	RF	RF	0.005	RF	RF	RF	0.005	RF	0.005	RF	RF
pH Low	≥6.0	8.0	8.0	8.0	7.9	7.9	7.9	7.7	7.3	7.9	7.9	7.9	7.9
pH High	≤9.5	8.1	8.1	8.1	8.1	8.1	7.9	7.7	7.9	7.9	8.0	8.0	8.0
Flow (m <sup>3</sup> /month)	-	6,459	4,264	1,557	2,607	16,398	40,736	1,582	18,671	13,399	15,616	9,128	7,469
Rainbow Trout	Pass	1	1	1	1	1	1	RF	1	RF	1	RF	RF
Acute Lethality Test	Fail	0	0	0	0	0	0	RF	0	RF	0	RF	RF
Daphnia magna	Pass	1	1	1	1	1	1	RF	1	RF	1	RF	RF
Monitoring Test	Fail	0	0	0	0	0	0	RF	0	RF	0	RF	RF
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit													
<b>RF:</b> Reduced Frequency													
<b>NCU:</b> No Cyanide Used													
<b>Pass:</b> ≤50% Mortality													
<b>Fail:</b> >50% Mortality													
<b>—:</b> No data reported													
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Caribou Mine												
Operator	Trevalli Mining (New Brunswick) Limited - Caribou Mine (Bathurst, NB)												
Product(s)	Zinc, lead, silver												
Address	9361 Route 180, Bathurst, New Brunswick E2A 3Z1												
Effluent Discharge Point	Polishing Pond Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.008	0.007	0.009	0.013	0.015	0.006	0.003	0.004	0.010	0.005	0.003	0.009
Cu (mg/L)	0.3	0.011	0.007	0.019	0.022	0.025	0.006	0.006	0.015	0.010	0.008	0.010	0.032
CN (mg/L)	1	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Pb (mg/L)	0.2	0.038	0.012	0.069	0.036	0.040	0.014	0.006	0.023	0.039	0.008	0.011	0.048
Ni (mg/L)	0.5	0.006	0.004	0.011	0.010	0.005	0.003	0.002	0.003	0.001	0.003	0.002	0.009
Zn (mg/L)	0.5	0.279	0.323	0.610	0.405	1.294	0.427	0.224	0.535	0.248	0.334	0.323	0.363
TSS (mg/L)	15	4.20	2.50	175	2.25	3.00	1.50	1.00	1.80	2.75	4.00	2.50	3.50
Ra-226 (Bq/L)	0.37	-	-	0.010	-	-	0.010	0.003	0.003	0.020	0.020	-	-
pH Low	≥6.0	6.4	6.4	6.5	7.1	7.0	7.3	7.2	6.6	7.2	6.6	6.4	6.5
pH High	≤9.5	7.2	6.8	7.2	8.7	9.9	7.5	7.3	7.4	9.6	7.6	7.4	7.5
Flow (m <sup>3</sup> /month)	-	92,031	14,040	59,082	331,489	1,148,430	5,940	5,468	5,468	213,101	16,011	15,494	162,256
Rainbow Trout	Pass	1	1	1	0	2	3	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	3	6	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	0	0	3	3	1	1	1	1	1	1
Monitoring Test	Fail	0	0	1	3	5	0	0	0	0	0	0	0
Comments:	The owner/operator reported to be in 'normal frequency' for radium-226 measurement during the months of January, February, April, May, November, and December; however, no test results were submitted for these months.												
NOTES:	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Carol Project												
Operator	Iron Ore Company of Canada												
Product(s)	Iron ore												
Address	P.O. Box 1000, Labrador City, Newfoundland and Labrador A2V 2L8												
Effluent Discharge Point	Hakim Culvert												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cu (mg/L)	0.3	0.001	0.001	0.001	0.001	0.004	0.001	0.001	0.001	0.001	0.001	0.001	0.003
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
Ni (mg/L)	0.5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Zn (mg/L)	0.5	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
TSS (mg/L)	15	0.50	0.50	0.78	1.34	1.73	1.75	0.70	0.95	3.63	0.50	0.88	1.18
Ra-226 (Bq/L)	0.37	RF	RF	0.005	RF	RF	0.005	RF	RF	RF	0.005	0.005	0.005
pH Low	≥6.0	7.8	7.8	7.7	7.8	7.8	7.9	7.7	7.9	7.9	7.8	7.8	7.7
pH High	≤9.5	8.1	7.9	7.9	7.9	8.0	8.0	8.1	7.9	8.0	8.0	8.0	8.1
Flow (m <sup>3</sup> /month)	-	581,585	465,132	684,161	628,080	1,226,204	1,056,932	846,751	858,967	905,698	432,332	443,542	638,742
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Comments:	The owner/operator did not report measurement of radium-226 within the third quarter.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Carol Project												
Operator	Iron Ore Company of Canada												
Product(s)	Iron ore												
Address	P.O. Box 1000, Labrador City, Newfoundland and Labrador A2V 2L8												
Effluent Discharge Point	Julienne Narrows												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cu (mg/L)	0.3	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ni (mg/L)	0.5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Zn (mg/L)	0.5	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
TSS (mg/L)	15	0.64	0.50	2.00	3.50	0.50	0.50	3.52	2.58	7.95	1.48	1.30	1.90
Ra-226 (Bq/L)	0.37	RF	RF	0.005	RF	RF	0.005	RF	RF	RF	0.005	0.005	0.005
pH Low	≥6.0	7.6	7.7	7.6	7.2	7.2	6.6	7.8	7.8	7.8	7.7	7.6	7.6
pH High	≤9.5	8.9	7.8	7.9	7.7	7.7	8.0	8.1	8.0	7.9	8.0	8.0	7.9
Flow (m <sup>3</sup> /month)	-	45592.26	23,992.41	15,266.88	8,973.50	33,866.35	250,701.48	163,650.24	103,453.20	89,683.20	64,656.57	54,413.48	37,084.36
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Comments:	The owner/operator did not report measurement of radium-226 within the third quarter.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Carol Project												
Operator	Iron Ore Company of Canada												
Product(s)	Iron ore												
Address	P.O. Box 1000, Labrador City, Newfoundland and Labrador: A2V 2L8												
Effluent Discharge Point	MD-30												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.001	0.001	ND	ND	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cu (mg/L)	0.3	0.001	0.003	ND	ND	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
CN (mg/L)	1	NCU	NCU	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	0.000	ND	ND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ni (mg/L)	0.5	0.001	0.001	ND	ND	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001
Zn (mg/L)	0.5	0.003	0.003	ND	ND	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.003
TSS (mg/L)	15	0.50	0.50	ND	ND	2.15	0.70	0.70	1.05	0.63	0.50	0.88	0.50
Ra-226 (Bq/L)	0.37	RF	RF	ND	ND	RF	0.005	0.005	RF	RF	0.005	0.005	0.005
pH Low	≥6.0	8.0	8.0	ND	ND	7.8	7.9	8.1	8.3	8.2	8.1	8.1	8.2
pH High	≤9.5	8.1	8.0	ND	ND	8.4	8.2	8.4	8.4	8.4	8.2	8.3	8.2
Flow (m <sup>3</sup> /month)	-	381,187	9,157	ND	ND	143,198	570,966	626,532	603,272	650,266	635,056	183,241	36,865
Rainbow Trout	Pass	1	1	ND	ND	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	ND	ND	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	ND	ND	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	ND	ND	0	0	0	0	0	0	0	0

**Comments:**

The owner/operator did not report measurement of radium-226 within the first quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Carol Project												
Operator	Iron Ore Company of Canada												
Product(s)	Iron ore												
Address	P.O. Box 1000, Labrador City, Newfoundland and Labrador: A2V 2L8												
Effluent Discharge Point	MD-5												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	ND	ND	ND	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	ND	ND	ND	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	ND	ND	ND	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	ND	ND	ND	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	ND	ND	ND	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	ND	ND	ND	-	-	-	-	-	-	-	-	-
pH High	≤9.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	-	-	-	-	-	-	-	-	-
Rainbow Trout	Pass	ND	ND	ND	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	ND	ND	ND	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	ND	ND	ND	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	ND	ND	ND	-	-	-	-	-	-	-	-	-

Comments:

Final discharge point decommissioned in February 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Carol Project												
Operator	Iron Ore Company of Canada												
Product(s)	Iron ore												
Address	P.O. Box 1000, Labrador City, Newfoundland and Labrador A2V 2L8												
Effluent Discharge Point	Luca Lake Dewatering												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.001	0.001	0.001	0.001	0.001	0.001	ND	0.001	0.001	0.001	0.001	0.001
Cu (mg/L)	0.3	0.001	0.001	0.001	0.001	0.001	0.001	ND	0.001	0.001	0.001	0.001	0.001
CN (mg/L)	1	RF	RF	NCU	NCU	NCU	NCU	ND	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	0.000	0.000	0.000	0.000	0.000	ND	0.000	0.000	0.000	0.000	0.000
Ni (mg/L)	0.5	0.001	0.001	0.001	0.001	0.001	0.001	ND	0.001	0.001	0.001	0.001	0.001
Zn (mg/L)	0.5	0.003	0.003	0.003	0.003	0.003	0.005	ND	0.003	0.005	0.019	0.011	0.004
TSS (mg/L)	15	0.60	0.50	0.65	1.38	5.23	6.73	ND	2.47	5.95	11.86	8.75	6.04
Ra-226 (Bq/L)	0.37	0.005	0.005	0.005	0.005	0.005	0.005	ND	0.005	0.005	0.005	0.005	0.005
pH Low	≥6.0	7.8	7.9	7.8	7.6	7.7	7.9	ND	8.3	8.1	8.1	8.0	8.0
pH High	≤9.5	8.0	8.0	7.9	7.9	7.9	8.3	ND	8.4	8.4	8.3	8.3	8.1
Flow (m <sup>3</sup> /month)	-	1,103,161	2,287,008	3,220,636	16,742,678	15,066,629	1,498,507	ND	9,583,402	12,849,615	9,221,715	6,975,505	6,255,82
Rainbow Trout	Pass	1	1	1	1	1	1	ND	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	ND	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	ND	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	ND	0	0	0	0	0

Comments:  
New final discharge point registered in December 2017.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Carol Project												
Operator	Iron Ore Company of Canada												
Product(s)	Iron ore												
Address	P.O. Box 1000, Labrador City, Newfoundland and Labrador A2V 2L8												
Effluent Discharge Point	Pumphouse Sediment Pond Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	0.001	0.001	0.001	0.001	0.001	0.001
Cu (mg/L)	0.3	-	-	-	-	-	-	0.004	0.002	0.001	0.001	0.001	0.001
CN (mg/L)	1	-	-	-	-	-	-	RF	RF	RF	RF	RF	RF
Pb (mg/L)	0.2	-	-	-	-	-	-	0.000	0.000	0.000	0.000	0.000	0.000
Ni (mg/L)	0.5	-	-	-	-	-	-	0.004	0.001	0.001	0.001	0.001	0.001
Zn (mg/L)	0.5	-	-	-	-	-	-	0.005	0.003	0.003	0.003	0.003	0.003
TSS (mg/L)	15	-	-	-	-	-	-	24.20	5.60	6.30	4.36	1.48	2.50
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	0.005	0.005	0.005	0.005	0.005	0.005
pH Low	≥6.0	-	-	-	-	-	-	7.2	7.5	7.7	7.7	7.3	7.7
pH High	≤9.5	-	-	-	-	-	-	7.8	7.8	7.8	7.8	7.7	7.7
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	656,744	130,572	122,472	77,367	34,819	16,293
Rainbow Trout	Pass	-	-	-	-	-	-	1	1	1	1	1	1
Acute Lethality Test	Fail	-	-	-	-	-	-	0	0	0	0	0	0
Daphnia magna	Pass	-	-	-	-	-	-	1	1	1	1	1	1
Monitoring Test	Fail	-	-	-	-	-	-	0	0	0	0	0	0

Comments:  
New final discharge point registered in 2018.

**NOTES:**  
**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Carol Project												
Operator	Iron Ore Company of Canada												
Product(s)	Iron ore												
Address	P.O. Box 1000, Labrador City, Newfoundland and Labrador A2V 2L8												
Effluent Discharge Point	Wabush 3 Waste Rock Run-off												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	0.001	0.001	0.001	0.001	0.001	0.001
Cu (mg/L)	0.3	-	-	-	-	-	-	0.001	0.001	0.001	0.001	0.001	0.001
CN (mg/L)	1	-	-	-	-	-	-	RF	RF	RF	RF	RF	RF
Pb (mg/L)	0.2	-	-	-	-	-	-	0.000	0.000	0.000	0.000	0.000	0.000
Ni (mg/L)	0.5	-	-	-	-	-	-	0.001	0.001	0.001	0.001	0.001	0.001
Zn (mg/L)	0.5	-	-	-	-	-	-	0.003	0.003	0.003	0.003	0.003	0.003
TSS (mg/L)	15	-	-	-	-	-	-	0.50	0.78	0.50	1.40	0.64	3.02
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	0.005	0.005	0.005	0.005	0.005	0.005
pH Low	≥6.0	-	-	-	-	-	-	7.4	7.4	7.4	7.5	7.3	7.3
pH High	≤9.5	-	-	-	-	-	-	7.7	7.7	7.6	7.6	7.5	7.7
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	122,822	33,852	31,620	19,604	100	100
Rainbow Trout	Pass	-	-	-	-	-	-	1	1	1	1	1	1
Acute Lethality Test	Fail	-	-	-	-	-	-	0	0	0	0	0	0
Daphnia magna	Pass	-	-	-	-	-	-	1	1	1	1	1	1
Monitoring Test	Fail	-	-	-	-	-	-	0	0	0	0	0	0
Comments:	New final discharge point registered in 2018.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>--:</b> No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Casa Berardi												
Operator	Hecla Québec Incorporé												
Product(s)	Gold												
Address	659 2nd Street East, La Sarre, Quebec, J9Z 2Y9												
Effluent Discharge Point	Effluent final - Point A												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.126	0.122	0.133	0.144	0.089	0.113	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.019	0.019	0.017	0.016	0.026	0.065	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	0.006	0.008	0.002	0.003	0.007	0.020	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.000	0.001	0.000	0.004	0.000	0.000	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.023	0.019	0.026	0.027	0.031	0.040	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.005	0.007	0.003	0.002	0.005	0.010	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	7.50	4.22	2.11	2.00	5.63	2.69	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.001	0.003	0.003	0.002	0.003	0.002	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	8.0	7.8	7.5	8.5	7.8	7.7	ND
pH High	≤9.5	ND	ND	ND	ND	ND	8.4	8.3	8.2	8.5	8.5	8.1	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	75,315	926,785	536,469	57,291	364,566	561,978	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	0	0	ND
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency												
<b>NCU:</b> No Cyanide Used	<b>Pass:</b> ≤50% Mortality												
<b>Fail:</b> >50% Mortality	<b>— :</b> No data reported												
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Chisel North Mine												
Operator	Hudbay Minerals Incorporated												
Product(s)	Zinc												
Address	P.O. Box 130, Snow Lake, Manitoba R0B 1M0												
Effluent Discharge Point	Chisel North Mine Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cu (mg/L)	0.3	0.003	0.003	0.003	0.003	0.004	0.003	0.006	0.004	0.011	0.005	0.007	0.007
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000
Ni (mg/L)	0.5	0.002	0.002	0.002	0.003	0.004	0.001	0.001	0.000	0.000	0.000	0.001	0.001
Zn (mg/L)	0.5	0.280	0.246	0.161	0.160	0.159	0.112	0.217	0.192	0.129	0.183	0.262	0.155
TSS (mg/L)	15	2.68	14.73	10.93	2.00	3.03	2.30	2.90	1.45	1.70	2.58	1.33	4.28
Ra-226 (Bq/L)	0.37	0.104	0.103	0.108	0.080	0.055	0.098	0.182	0.160	0.245	0.126	0.173	0.210
pH Low	≥6.0	8.1	7.2	7.4	7.7	7.4	6.9	7.6	7.7	8.0	7.0	7.4	7.0
pH High	≤9.5	9.0	8.5	7.8	8.7	8.0	8.0	8.2	8.1	8.2	8.1	8.7	7.7
Flow (m <sup>3</sup> /month)	-	192,262	69,307	93,486	112,088	153,754	166,324	139,475	123,192	75,418	138,257	193,369	212,913
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	RF	1	RF	RF	1	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	RF	0	RF	RF	0	RF	0	RF	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Cigar Lake Operation												
Operator	Cameco Corporation												
Product(s)	Uranium												
Address	2121-11th Street West, Saskatoon, Saskatchewan S7M 1J3												
Effluent Discharge Point	Station 2.2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Cigar Lake Operation												
Operator	Cameco Corporation												
Product(s)	Uranium												
Address	2121-11th Street West, Saskatoon, Saskatchewan S7M 1J3												
Effluent Discharge Point	Station 2.2B												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.065	0.086	0.109	0.062	0.040	0.038	0.033	0.026	0.057	0.071	0.086	0.092
Cu (mg/L)	0.3	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ni (mg/L)	0.5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Zn (mg/L)	0.5	0.035	0.029	0.037	0.009	0.024	0.013	0.033	0.102	0.021	0.018	0.019	0.011
TSS (mg/L)	15	0.77	1.06	1.13	0.81	0.88	1.06	1.00	1.11	1.29	0.95	0.50	1.38
Ra-226 (Bq/L)	0.37	0.007	0.006	0.006	0.003	0.004	0.005	0.006	0.005	0.006	0.005	0.005	0.004
pH Low	≥6.0	7.3	7.1	7.1	7.0	7.0	7.1	7.0	7.1	7.0	7.3	7.0	6.5
pH High	≤9.5	7.8	7.7	7.3	7.5	7.5	7.3	7.4	7.5	7.5	7.6	7.5	7.5
Flow (m <sup>3</sup> /month)	-	29,695	20,288	18,977	37,908	47,096	30,974	35,248	28,895	35,578	32,220	19,637	24,017
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Cigar Lake Operation												
Operator	Cameco Corporation												
Product(s)	Uranium												
Address	2121-11th Street West, Saskatoon, Saskatchewan S7M 1J3												
Effluent Discharge Point	Station 2.2C												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Clavos Mine												
Operator	Sage Gold Incorporated												
Product(s)	Gold												
Address	Finn Road, German Township, Ontario P0K 1N0												
Effluent Discharge Point	Clavos Mine Drainage Area												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.053	0.066	0.098	0.132	0.092	0.141	0.211	0.120	0.094	-	-	-
Cu (mg/L)	0.3	0.001	0.001	0.001	0.003	0.001	0.001	0.001	0.001	0.002	-	-	-
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	-	-	-
Pb (mg/L)	0.2	0.0005	0.0005	0.0005	0.0005	0.0005	0.0004	0.0003	0.0003	0.0003	-	-	-
Ni (mg/L)	0.5	0.0010	0.0007	0.0005	0.0013	0.0024	0.0020	0.0024	0.0014	0.0016	-	-	-
Zn (mg/L)	0.5	0.004	0.004	0.004	0.004	0.006	0.007	0.015	0.009	0.005	-	-	-
TSS (mg/L)	15	0.71	0.52	1.07	1.15	4.14	4.37	6.98	4.55	2.53	-	-	-
Ra-226 (Bq/L)	0.37	0.005	0.005	0.005	0.005	0.005	0.004	0.005	0.005	0.005	-	-	-
pH Low	≥6.0	6.4	6.5	6.7	6.8	6.5	7.1	6.4	6.4	6.4	-	-	-
pH High	≤9.5	6.8	7.0	7.5	7.8	7.7	7.6	7.7	6.8	6.6	-	-	-
Flow (m <sup>3</sup> /month)	-	41,038	38,503	41,337	44,549	38,234	25,078	7,585	72,878	29,561	-	-	-
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	-	-	-
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	-	-	-
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	-	-	-
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	-	-	-

**Comments:**

The owner/operator did not report measurement of deleterious substance, pH, or acute lethality, within the fourth quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Complexe métallurgique Sorel-Tracy												
Operator	Rio Tinto Fer et Titane Incorporé												
Product(s)	Ilmenite, iron ore, titanium												
Address	1625 Marie-Victorin Road, Sorel-Tracy, Quebec J3R 1M6												
Effluent Discharge Point	EFF2.2-P84												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.002	0.002	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.002
Cu (mg/L)	0.3	0.015	0.012	0.015	0.013	0.010	0.007	0.004	0.003	0.003	0.004	0.010	0.014
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.005	0.0038	0.0045	0.0035	0.0017	0.0013	0.0004	0.0006	0.0005	0.0008	0.0018	0.0025
Ni (mg/L)	0.5	0.016	0.0145	0.0165	0.0145	0.0122	0.0100	0.0110	0.0073	0.0065	0.0088	0.011	0.015
Zn (mg/L)	0.5	0.035	0.033	0.035	0.029	0.020	0.011	0.007	0.006	0.040	0.008	0.016	0.030
TSS (mg/L)	15	5.80	5.50	6.75	8.50	7.60	12.50	2.80	1.13	4.00	0.67	1.40	2.60
Ra-226 (Bq/L)	0.37	RF	0.001	RF	RF	0.002	0.004	RF	0.005	RF	RF	0.005	RF
pH Low	≥6.0	7.7	8.7	9.0	8.4	8.4	9.0	8.4	8.1	7.9	7.9	7.7	7.4
pH High	≤9.5	9.0	9.1	9.3	8.9	9.1	9.6	9.2	8.3	8.4	8.2	8.0	7.9
Flow (m <sup>3</sup> /month)	-	7,339	13,085	16,213	30,986	16,186	16,082	4,879	858	517	1,299	6,621	1,037
Rainbow Trout	Pass	1	1	1	RF	1	RF	RF	1	RF	1	RF	RF
Acute Lethality Test	Fail	0	0	0	RF	0	RF	RF	0	RF	0	RF	RF
Daphnia magna	Pass	1	1	1	RF	1	RF	RF	1	RF	1	RF	RF
Monitoring Test	Fail	0	0	0	RF	0	RF	RF	0	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Complexe métallurgique Sorel-Tracy												
Operator	Rio Tinto Fer et Titane Incorporé												
Product(s)	Ilmenite, iron ore, titanium												
Address	1625 Marie-Victorin Road, Sorel-Tracy, Quebec J3R 1M6												
Effluent Discharge Point	Effluent final QIT (point 1.4)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.002	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.001	0.000	0.001
Cu (mg/L)	0.3	0.007	0.008	0.011	0.008	0.006	0.007	0.009	0.006	0.007	0.006	0.010	0.009
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.018	0.004	0.007	0.007	0.016	0.016	0.016	0.008	0.008	0.009	0.001	0.002
Ni (mg/L)	0.5	0.025	0.028	0.037	0.019	0.008	0.013	0.011	0.010	0.013	0.011	0.017	0.018
Zn (mg/L)	0.5	0.356	0.071	0.164	0.151	0.104	0.136	0.101	0.052	0.074	0.050	0.049	0.055
TSS (mg/L)	15	13.30	12.14	13.86	9.71	7.29	6.83	7.21	3.44	3.29	7.43	9.30	11.80
Ra-226 (Bq/L)	0.37	RF	0.001	RF	RF	RF	0.003	RF	RF	0.001	RF	0.003	RF
pH Low	≥6.0	7.3	7.2	7.2	7.5	7.5	7.8	7.9	6.6	7.9	7.8	7.7	7.5
pH High	≤9.5	8.0	7.9	7.8	8.2	8.1	8.1	8.1	8.2	8.2	8.3	8.1	7.9
Flow (m <sup>3</sup> /month)	-	2,532,923	2,236,152	3,912,723	3,331,457	3,724,902	4,121,770	5,584,110	4,810,177	4,026,696	3,540,748	2,778,816	2,229,59
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	RF	RF	1	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	RF	RF	0	RF	0	RF
Daphnia magna	Pass	RF	1	RF	RF	1	RF	RF	RF	1	RF	1	RF
Monitoring Test	Fail	RF	0	RF	RF	0	RF	RF	RF	0	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Con Mine												
Operator	Miramar Northern Mining Limited												
Product(s)	Gold												
Address	75 Con Road, Yellowknife, Northwest Territories X1A 2M1												
Effluent Discharge Point	Surveillance Network Program Station 40-1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.028	0.019	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	0.0063	0.0072	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	0.002	0.0025	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	0.000	0.000	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.010	0.036	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.011	0.050	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	1.00	1.00	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	0.008	0.014	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	6.6	7.3	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	7.6	7.7	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	131,899	131,306	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	1	1	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	0	0	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	1	2	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	1	1	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Cliff Complex												
Operator	Vale Canada Limited												
Product(s)	Nickel, copper, cobalt, platinum, palladium												
Address	155 Balsam Street, Copper Cliff, Ontario POM 1N0												
Effluent Discharge Point	Copper Cliff Waste Water Treatment Plant												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.001	0.001	0.001	0.001	0.002	0.001	0.001	ND	ND	0.001	0.001	0.001
Cu (mg/L)	0.3	0.009	0.004	0.010	0.016	0.007	0.003	0.005	ND	ND	0.004	0.004	0.007
CN (mg/L)	1	0.036	0.036	0.038	0.040	0.027	0.029	0.007	ND	ND	0.002	0.015	0.015
Pb (mg/L)	0.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	ND	ND	0.000	0.000	0.000
Ni (mg/L)	0.5	0.119	0.102	0.107	0.101	0.039	0.021	0.018	ND	ND	0.034	0.027	0.048
Zn (mg/L)	0.5	0.002	0.002	0.003	0.003	0.002	0.001	0.001	ND	ND	0.001	0.002	0.001
TSS (mg/L)	15	3.60	3.95	4.35	3.55	2.00	1.87	1.40	ND	ND	1.80	3.88	3.10
Ra-226 (Bq/L)	0.37	0.005	RF	RF	0.005	RF	RF	0.005	ND	ND	0.005	RF	RF
pH Low	≥6.0	7.6	8.5	8.4	7.4	8.3	8.3	7.0	ND	ND	6.3	7.4	8.3
pH High	≤9.5	8.5	8.7	8.8	9.3	8.9	8.7	9.0	ND	ND	8.7	9.1	9.3
Flow (m <sup>3</sup> /month)	-	3,846,50	3,413,45	3,244,164	3,286,188	4,058,610	1,590,262	1,378,832	ND	ND	3,805,708	4,457,234	4,383,14
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	ND	ND	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	ND	ND	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	ND	ND	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	ND	ND	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Cliff Complex												
Operator	Vale Canada Limited												
Product(s)	Nickel, copper, cobalt, platinum, palladium												
Address	155 Balsam Street, Copper Cliff, Ontario P0M 1N0												
Effluent Discharge Point	Nolin Creek Spillway												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Cliff Complex												
Operator	Vale Canada Limited												
Product(s)	Nickel, copper, cobalt, platinum, palladium												
Address	155 Balsam Street, Copper Cliff, Ontario POM 1N0												
Effluent Discharge Point	Nolin Creek Waste Water Treatment Plant												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.000	0.000	0.000	0.000	0.000	0.000	ND	0.000	0.000	0.000	0.000	0.000
Cu (mg/L)	0.3	0.046	0.038	0.043	0.057	0.026	0.024	ND	0.019	0.039	0.044	0.054	0.049
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	ND	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	0.000	0.0001	0.000	0.0003	0.0001	ND	0.0001	0.000	0.000	0.0001	0.000
Ni (mg/L)	0.5	0.192	0.242	0.233	0.201	0.095	0.171	ND	0.084	0.150	0.157	0.223	0.249
Zn (mg/L)	0.5	0.005	0.005	0.008	0.005	0.003	0.003	ND	0.003	0.003	0.004	0.006	0.005
TSS (mg/L)	15	1.84	3.85	3.35	1.95	1.40	2.40	ND	8.30	2.47	1.40	2.65	2.50
Ra-226 (Bq/L)	0.37	0.005	RF	RF	0.005	RF	RF	ND	0.005	RF	0.005	RF	RF
pH Low	≥6.0	7.5	8.3	8.1	7.9	7.7	8.2	ND	8.5	8.7	8.2	8.1	8.3
pH High	≤9.5	8.4	8.8	8.5	8.2	8.5	8.2	ND	9.0	9.0	8.6	8.3	8.6
Flow (m <sup>3</sup> /month)	-	494,913	229,847	289,209	647,005	688,575	50,693	ND	269,054	199,180	741,175	724,220	342,526
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	ND	1	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	ND	0	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	ND	1	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	ND	0	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Mountain Mine												
Operator	Copper Mountain Mine (BC) Limited												
Product(s)	Copper												
Address	20 km south of Highway 3, near Princeton, British Columbia VOX 1W0												
Effluent Discharge Point	Co.SW07 - W. Dam Seepage												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	0.001	RF	RF	0.001	RF	RF	0.001	RF	RF	0.001	RF
Cu (mg/L)	0.3	RF	0.002	RF	RF	0.003	RF	RF	0.003	RF	RF	0.002	RF
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	ND	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	RF	0.000	RF	RF	0.000	RF	RF	0.000	RF	RF	0.000	RF
Ni (mg/L)	0.5	RF	0.0013	RF	RF	0.0011	RF	RF	0.0016	RF	RF	0.0015	RF
Zn (mg/L)	0.5	RF	0.0015	RF	RF	0.0015	RF	RF	0.0015	RF	RF	0.0015	RF
TSS (mg/L)	15	1.38	1.15	1.45	0.96	2.33	1.40	1.58	1.14	1.20	1.56	1.54	1.08
Ra-226 (Bq/L)	0.37	RF	0.004	RF	RF	0.011	RF	RF	0.003	RF	RF	0.005	RF
pH Low	≥6.0	7.7	7.9	7.8	7.9	8.1	7.8	7.9	7.8	7.9	7.6	7.9	7.7
pH High	≤9.5	8.1	8.3	8.3	8.4	8.4	8.4	8.2	8.3	8.2	7.9	8.4	8.2
Flow (m <sup>3</sup> /month)	-	105,530	92,533	104,462	170,616	144,801	129,015	123,039	129,289	139,973	137,665	139,973	138,609
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF
Monitoring Test	Fail	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Mountain Mine												
Operator	Copper Mountain Mine (BC) Limited												
Product(s)	Copper												
Address	20 km south of Highway 3, near Princeton, British Columbia VOX 1W0												
Effluent Discharge Point	Co.SW09 - Level 6 Adit												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	0.002	RF	RF	0.002	RF	RF	0.002	RF	RF	0.002	RF
Cu (mg/L)	0.3	0.020	0.021	0.019	0.022	0.021	0.020	0.020	0.019	0.017	0.016	0.017	0.016
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	RF	0.000	RF	RF	0.000	RF	RF	0.000	RF	RF	0.000	RF
Ni (mg/L)	0.5	RF	0.002	RF	RF	0.002	RF	RF	0.001	RF	RF	0.001	RF
Zn (mg/L)	0.5	RF	0.005	RF	RF	0.004	RF	RF	0.004	RF	RF	0.004	RF
TSS (mg/L)	15	1.02	1.28	0.90	1.68	2.48	1.80	1.65	1.34	1.13	2.56	1.15	1.63
Ra-226 (Bq/L)	0.37	RF	0.009	RF	RF	0.010	RF	RF	0.006	RF	RF	0.004	RF
pH Low	≥6.0	8.0	8.0	8.0	8.0	8.0	8.1	8.1	8.1	8.0	8.0	8.1	8.1
pH High	≤9.5	8.2	8.3	8.3	8.2	8.2	8.3	8.3	8.3	8.1	8.1	8.3	8.2
Flow (m <sup>3</sup> /month)	-	22,921	38,577	36,557	59,508	39,874	23,640	19,445	16,046	13,455	17,044	16,823	14,500
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF
Monitoring Test	Fail	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Mountain Mine												
Operator	Copper Mountain Mine (BC) Limited												
Product(s)	Copper												
Address	20 km south of Highway 3, near Princeton, British Columbia VOX 1W0												
Effluent Discharge Point	Co.SW27 - E Dam Seepage												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	0.0013	RF	RF	0.0014	RF	RF	0.0013	RF	RF	0.0013	RF
Cu (mg/L)	0.3	RF	0.0012	RF	RF	0.0012	RF	RF	0.0011	RF	RF	0.0011	RF
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	RF	0.000	RF	RF	0.000	RF	RF	0.000	RF	RF	0.000	RF
Ni (mg/L)	0.5	RF	0.0003	RF	RF	0.0003	RF	RF	0.0003	RF	RF	0.0003	RF
Zn (mg/L)	0.5	RF	0.0015	RF	RF	0.0015	RF	RF	0.0015	RF	RF	0.0015	RF
TSS (mg/L)	15	1.30	6.70	1.15	1.78	1.95	2.10	1.43	20.35	1.30	2.50	1.60	1.50
Ra-226 (Bq/L)	0.37	RF	0.0032	RF	RF	0.0045	RF	RF	0.0029	RF	RF	0.0020	RF
pH Low	≥6.0	7.9	8.0	7.9	8.0	8.1	8.2	8.1	7.6	8.1	8.0	8.0	7.8
pH High	≤9.5	8.2	8.3	8.3	8.4	8.3	8.2	8.3	8.1	8.3	8.0	8.0	8.2
Flow (m <sup>3</sup> /month)	-	4,844	44,366	92,876	5,190	81,584	17,976	7,470	528	5,049	432	1,609	462
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	RF	RF	1	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	RF	RF	0	RF	0	RF
Daphnia magna	Pass	RF	1	RF	RF	1	RF	RF	RF	1	RF	1	RF
Monitoring Test	Fail	RF	0	RF	RF	0	RF	RF	RF	0	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Mountain Mine												
Operator	Copper Mountain Mine (BC) Limited												
Product(s)	Copper												
Address	20 km south of Highway 3, near Princeton, British Columbia VOX 1W0												
Effluent Discharge Point	Co.SW35A - Mill-1 drainage												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.001	0.001	RF	RF	0.001	RF	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	0.006	0.010	RF	RF	0.009	RF	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	0.000	0.000	RF	RF	0.000	RF	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	0.005	0.003	RF	RF	0.004	RF	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	0.002	0.002	RF	RF	0.002	RF	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	1.44	1.23	1.00	0.96	2.03	2.78	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	RF	0.005	RF	RF	0.004	RF	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	7.8	7.9	7.9	8.0	8.1	8.1	ND	ND	ND	ND	ND	ND
pH High	≤9.5	8.1	8.2	8.2	8.3	8.3	8.4	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	496	1708	2,108	2,754	674	248	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	1	RF	RF	RF	1	RF	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	0	RF	RF	RF	0	RF	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	1	RF	RF	RF	1	RF	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	0	RF	RF	RF	0	RF	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Mountain Mine												
Operator	Copper Mountain Mine (BC) Limited												
Product(s)	Copper												
Address	20 km south of Highway 3, near Princeton, British Columbia VOX 1W0												
Effluent Discharge Point	Co.SW45 - WRSA Collection Pond Outflow												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Mountain Mine												
Operator	Copper Mountain Mine (BC) Limited												
Product(s)	Copper												
Address	20 km south of Highway 3, near Princeton, British Columbia VOX 1W0												
Effluent Discharge Point	SW38												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	0.0004	RF	RF	0.0005	RF	RF	0.0006	RF	RF	0.0005	RF
Cu (mg/L)	0.3	0.0083	0.0012	RF	RF	0.0108	RF	RF	0.0111	RF	RF	0.0081	RF
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.000	0.000	RF	RF	0.000	RF	RF	0.000	RF	RF	0.000	RF
Ni (mg/L)	0.5	0.0003	0.0003	RF	RF	0.0003	RF	RF	0.0006	RF	RF	0.0005	RF
Zn (mg/L)	0.5	0.0015	0.0015	RF	RF	0.0015	RF	RF	0.0033	RF	RF	0.0030	RF
TSS (mg/L)	15	1.06	1.78	1.13	8.66	2.75	2.28	2.10	1.96	2.40	3.30	2.20	2.25
Ra-226 (Bq/L)	0.37	RF	0.0038	RF	RF	0.0037	RF	RF	0.0032	RF	RF	0.0075	RF
pH Low	≥6.0	8.1	8.0	8.1	8.0	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
pH High	≤9.5	8.3	8.3	8.3	8.3	8.1	8.2	8.2	8.2	8.1	8.1	8.3	8.2
Flow (m <sup>3</sup> /month)	-	3.429	7.567	7.045	23.778	23.064	12.338	6.510	3.088	3.990	3.900	3.165	2.728
Rainbow Trout	Pass	1	RF	RF	RF	1	RF	RF	1	RF	RF		RF
Acute Lethality Test	Fail	0	RF	RF	RF	0	RF	RF	0	RF	RF		RF
Daphnia magna	Pass	1	RF	RF	RF	1	RF	RF	1	RF	RF		RF
Monitoring Test	Fail	0	RF	RF	RF	0	RF	RF	0	RF	RF		RF
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Mountain Mine												
Operator	Copper Mountain Mine (BC) Limited												
Product(s)	Copper												
Address	20 km south of Highway 3, near Princeton, British Columbia VOX 1W0												
Effluent Discharge Point	SW10A - Ingerbelle Pit Outflow												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	0.0018	0.0019	0.0015	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	-	-	-	0.00245	0.0304	0.0300	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	-	-	-	NCU	NCU	NCU	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	-	-	-	0.000	0.000	0.000	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	-	-	-	0.0015	0.0013	0.0013	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	-	-	-	0.0033	0.0015	0.0015	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	-	-	-	0.50	2.26	3.70	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	-	-	-	0.0048	0.0054	0.0110	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	-	-	-	7.9	8.1	8.1	ND	ND	ND	ND	ND	ND
pH High	≤9.5	-	-	-	7.9	8.3	8.1	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	-	-	-	21.424	173.296	5.528	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	-	-	-	1	1	-	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	-	-	-	0	0	-	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	-	-	-	1	1	-	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	-	-	-	0	0	-	ND	ND	ND	ND	ND	ND
Comments:	New final discharge point registered in 2018. The owner/operator reported to be in 'normal frequency' for acute lethality testing in June, however, no test results were submitted for this month.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Copper Rand (Mine)												
Operator	CBay Minerals Incorporated												
Product(s)	Copper, gold												
Address	P.O. Box 400, Chibougamau, Quebec G8P 2X8												
Effluent Discharge Point	Point de Rejet Final 2.1c												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0003	0.0006	0.0003	0.0003	0.0006	0.0008	0.0007	0.0005
Cu (mg/L)	0.3	ND	ND	ND	ND	0.006	0.006	0.005	0.004	0.005	0.007	0.010	0.007
CN (mg/L)	1	ND	ND	ND	ND	NCU	0.001	0.001	0.001	NCU	NCU	0.001	NCU
Pb (mg/L)	0.2	ND	ND	ND	ND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ni (mg/L)	0.5	ND	ND	ND	ND	0.003	0.008	0.004	0.004	0.003	0.004	0.005	0.005
Zn (mg/L)	0.5	ND	ND	ND	ND	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001
TSS (mg/L)	15	ND	ND	ND	ND	1.40	0.67	1.33	1.13	1.25	1.40	2.38	1.50
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	RF	0.001	0.001	0.004	RF	RF	0.001	RF
pH Low	≥6.0	ND	ND	ND	ND	7.3	7.8	8.2	8.0	7.9	7.0	7.6	7.6
pH High	≤9.5	ND	ND	ND	ND	7.9	8.1	8.3	8.4	8.1	7.9	8.1	7.9
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	423,118	67,974	4,469	22,683	160,632	53,806	26,022	3,257
Rainbow Trout	Pass	ND	ND	ND	ND	-	1	1	-	-	-	1	-
Acute Lethality Test	Fail	ND	ND	ND	ND	-	0	0	-	-	-	0	-
Daphnia magna	Pass	ND	ND	ND	ND	-	1	1	-	-	-	1	-
Monitoring Test	Fail	ND	ND	ND	ND	-	0	0	-	-	-	0	-

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in May, August, September, October, and December, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Crean Hill Mine												
Operator	Vale Canada Limited												
Product(s)	Nickel, copper, cobalt, platinum, palladium												
Address	410 Crean Hill Road, Copper Cliff (Walden), Ontario POM 1N0												
Effluent Discharge Point	Crean Hill Mine Waste Water Treatment System												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0002	0.0002	0.0002	0.0002	0.0003	0.0002	0.0003	0.0001	0.0003	0.0001	0.0001	0.0002
Cu (mg/L)	0.3	0.0094	0.0040	0.0057	0.0080	0.0090	0.0050	0.0048	0.0037	0.0028	0.0155	0.0171	0.0183
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0000	0.0000	0.0002	0.0002	0.0005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ni (mg/L)	0.5	0.1686	0.1428	0.1200	0.1018	0.0584	0.0600	0.0817	0.0590	0.0548	0.1434	0.2163	0.2208
Zn (mg/L)	0.5	0.0034	0.0030	0.0028	0.0046	0.0020	0.0071	0.0027	0.0011	0.0009	0.0035	0.0043	0.0047
TSS (mg/L)	15	1.96	1.80	2.47	2.55	1.64	2.20	2.00	1.00	3.13	1.20	1.00	1.00
Ra-226 (Bq/L)	0.37	0.0160	RF	RF	0.0170	RF	RF	0.0200	RF	RF	0.0100	RF	RF
pH Low	≥6.0	7.5	7.9	8.0	7.4	7.4	8.3	8.1	8.4	7.7	7.6	7.7	8.4
pH High	≤9.5	8.4	8.5	8.2	8.5	8.7	8.6	8.3	8.4	8.4	8.3	8.0	8.5
Flow (m <sup>3</sup> /month)	-	39,638	18,667	14,686	130,461	112,492	22,117	18,563	1,214	13,784	83,992	55,032	35,543
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency												
<b>NCU:</b> No Cyanide Used	<b>Pass:</b> ≤50% Mortality												
<b>Fail:</b> >50% Mortality	<b>- :</b> No data reported												
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	David Bell Mine												
Operator	Barrick Gold Corporation - DB Operating Corporation												
Product(s)	Gold												
Address	Teck-Corona Road, Hwy 17, Marathon, Ontario P0T 2E0												
Effluent Discharge Point	Quarry Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0011	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0005	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0010	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0005	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0010	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0015	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.00	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0050	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.6	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.8	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	6,238	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	David Bell Mine												
Operator	Barrick Gold Corporation - DB Operating Corporation												
Product(s)	Gold												
Address	Teck-Corona Road, Hwy 17, Marathon, Ontario P0T 2E0												
Effluent Discharge Point	Sedimentation Pond Effluent												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	0.0005	0.0006	0.0010	ND	ND	0.0011	0.0005	0.0005	0.0009
Cu (mg/L)	0.3	ND	ND	ND	0.0044	0.0017	0.0018	ND	ND	0.0013	0.0022	0.0023	0.0024
CN (mg/L)	1	ND	ND	ND	0.0010	0.0013	0.0024	ND	ND	0.0010	0.0022	0.0026	0.0041
Pb (mg/L)	0.2	ND	ND	ND	0.0005	0.0005	0.0005	ND	ND	0.0005	0.0005	0.0005	0.0005
Ni (mg/L)	0.5	ND	ND	ND	0.0045	0.0051	0.0048	ND	ND	0.0033	0.0074	0.0075	0.0064
Zn (mg/L)	0.5	ND	ND	ND	0.1360	0.1128	0.1220	ND	ND	0.0934	0.1932	0.2190	0.1965
TSS (mg/L)	15	ND	ND	ND	8.00	1.00	1.00	ND	ND	1.00	1.00	1.00	1.00
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0050	0.0050	0.0050	ND	ND	0.0050	0.0050	0.0050	0.0050
pH Low	≥6.0	ND	ND	ND	7.7	7.5	7.8	ND	ND	7.4	7.7	7.6	7.3
pH High	≤9.5	ND	ND	ND	7.7	7.8	7.8	ND	ND	7.8	8.1	7.6	7.4
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	6,139	6,308	247	ND	ND	6,396	16,440	1,858	470
Rainbow Trout	Pass	ND	ND	ND	1	1	1	ND	ND	1	1	1	2
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	ND	ND
Comments:													
<b>NOTES:</b>													
<b>ND:</b> No Deposit	<b>RF:</b> Reduced Frequency	<b>NCU:</b> No Cyanide Used	<b>Pass:</b> ≤50% Mortality	<b>Fail:</b> >50% Mortality	<b>-</b> : No data reported								
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.													
A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.													

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	David Bell Mine												
Operator	Barrick Gold Corporation - DB Operating Corporation												
Product(s)	Gold												
Address	Teck-Corona Road, Hwy 17, Marathon, Ontario P0T 2E0												
Effluent Discharge Point	Sedpond2 Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	0.0067	0.0205	ND	0.0212	ND	0.0094	0.0072	ND	0.0088	
Cu (mg/L)	0.3	ND	ND	0.0005	0.0008	ND	0.0005	ND	0.0005	0.0013	ND	0.0012	
CN (mg/L)	1	ND	ND	0.0010	0.0010	ND	0.0010	ND	0.0010	0.0010	ND	0.0010	
Pb (mg/L)	0.2	ND	ND	0.0005	0.0005	ND	0.0005	ND	0.0005	0.0005	ND	0.0005	
Ni (mg/L)	0.5	ND	ND	0.0010	0.0037	ND	0.0021	ND	0.0010	0.0028	ND	0.0032	
Zn (mg/L)	0.5	ND	ND	0.0015	0.0038	ND	0.0015	ND	0.0015	0.0036	ND	0.0010	
TSS (mg/L)	15	ND	ND	1.00	1.50	ND	1.00	ND	1.00	1.00	ND	2.50	
Ra-226 (Bq/L)	0.37	ND	ND	0.0050	0.0050	ND	0.0050	ND	0.0050	0.0050	ND	0.0050	
pH Low	≥6.0	ND	ND	7.8	7.6	ND	7.8	ND	7.8	7.6	ND	7.8	
pH High	≤9.5	ND	ND	7.8	7.7	ND	7.8	ND	7.9	7.8	ND	7.8	
Flow (m <sup>3</sup> /month)	-	ND	ND	824	3,550	ND	1,185	ND	12,025	17,211	ND	1,448	
Rainbow Trout	Pass	ND	ND	1	1	1	ND	ND	1	1	1	2	
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	0	ND	ND	
Daphnia magna	Pass	ND	ND	1	1	ND	1	ND	1	1	ND	1	
Monitoring Test	Fail	ND	ND	0	0	ND	0	ND	0	0	ND	0	

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Detour Lake Mine												
Operator	Detour Gold Corporation												
Product(s)	Gold												
Address	86 - 2nd Street, Cochrane, Ontario P0L 1C0												
Effluent Discharge Point	ECD												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	1ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Detour Lake Mine												
Operator	Detour Gold Corporation												
Product(s)	Gold												
Address	86 - 2nd Street, Cochrane, Ontario P0L 1C0												
Effluent Discharge Point	MRS1+B-FDP												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	1ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Detour Lake Mine												
Operator	Detour Gold Corporation												
Product(s)	Gold												
Address	86 - 2nd Street, Cochrane, Ontario P0L 1C0												
Effluent Discharge Point	MRS2-A-FDP												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0004	0.0003	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	0.0021	0.0021	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	0.0010	0.0010	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	0.0003	0.0002	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	0.0026	0.0023	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	0.0030	0.0052	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	18.80	6.20	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0050	0.0050	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	6.9	7.5	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	6.9	8.0	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	14,716	30,211	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	1	1	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	0	0	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	1	1	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	0	0	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Detour Lake Mine												
Operator	Detour Gold Corporation												
Product(s)	Gold												
Address	86 - 2nd Street, Cochrane, Ontario P0L 1C0												
Effluent Discharge Point	T4												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Diavik Diamond Mine (2012) Incorporated												
Operator	Rio Tinto PLC												
Product(s)	Diamond												
Address	P.O. Box 2498, Suite 300, 5201-50th Avenue, Northwest Territories X1A 2P8												
Effluent Discharge Point	1645-18												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	ND	ND	0.0025	0.0010	0.0020	0.0010	0.0009	0.0008	0.0012
Cu (mg/L)	0.3	-	-	-	ND	ND	0.0009	0.0010	0.0010	0.0005	0.0005	0.0003	0.0002
CN (mg/L)	1	-	-	-	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	ND	ND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ni (mg/L)	0.5	-	-	-	ND	ND	0.0029	0.0024	0.0040	0.0042	0.0038	0.0037	0.0041
Zn (mg/L)	0.5	-	-	-	ND	ND	0.0003	0.0005	0.0005	0.0005	0.0004	0.0004	0.0003
TSS (mg/L)	15	-	-	-	ND	ND	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ra-226 (Bq/L)	0.37	-	-	-	ND	ND	0.0367	0.0050	0.0086	0.0074	0.0050	0.0100	0.0050
pH Low	≥6.0	-	-	-	ND	ND	7.2	7.2	7.3	7.3	7.2	7.2	7.1
pH High	≤9.5	-	-	-	ND	ND	7.9	7.6	7.5	7.6	7.6	7.4	7.9
Flow (m <sup>3</sup> /month)	-	-	-	-	ND	ND	643,131	691,090	648,082	483,176	551,932	366,710	472,695
Rainbow Trout	Pass	-	-	-	ND	ND	1	1	1	1	1	1	1
Acute Lethality Test	Fail	-	-	-	ND	ND	0	0	0	0	0	0	0
Daphnia magna	Pass	-	-	-	ND	ND	1	1	1	1	1	1	1
Monitoring Test	Fail	-	-	-	ND	ND	0	0	0	0	0	0	0

Comments:  
This mine became subject to the MDMR in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Diavik Diamond Mine (2012) Incorporated												
Operator	Rio Tinto PLC												
Product(s)	Diamond												
Address	P.O. Box 2498, Suite 300, 5201-50th Avenue, Northwest Territories X1A 2P8												
Effluent Discharge Point	1645-18B												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	ND	ND	0.0008	0.0010	0.0019	0.0010	0.0009	0.0009	0.0013
Cu (mg/L)	0.3	-	-	-	ND	ND	0.0009	0.0010	0.0010	0.0005	0.0004	0.0005	0.0002
CN (mg/L)	1	-	-	-	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	ND	ND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ni (mg/L)	0.5	-	-	-	ND	ND	0.0029	0.0024	0.0041	0.0042	0.0037	0.0038	0.0041
Zn (mg/L)	0.5	-	-	-	ND	ND	0.0003	0.0004	0.0005	0.0004	0.0004	0.0006	0.0005
TSS (mg/L)	15	-	-	-	ND	ND	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ra-226 (Bq/L)	0.37	-	-	-	ND	ND	0.0397	0.0050	0.0050	0.0086	0.0050	0.0050	0.0050
pH Low	≥6.0	-	-	-	ND	ND	7.1	7.1	7.2	7.3	7.2	7.2	7.1
pH High	≤9.5	-	-	-	ND	ND	8.0	7.4	7.7	7.5	7.5	7.5	7.7
Flow (m <sup>3</sup> /month)	-	-	-	-	ND	ND	665,188	643,914	636,166	456,083	464,792	368,766	447,504
Rainbow Trout	Pass	-	-	-	ND	ND	1	1	1	1	1	1	1
Acute Lethality Test	Fail	-	-	-	ND	ND	0	0	0	0	0	0	0
Daphnia magna	Pass	-	-	-	ND	ND	1	1	1	1	1	1	1
Monitoring Test	Fail	-	-	-	ND	ND	0	0	0	0	0	0	0

Comments:  
This mine became subject to the MDMR in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported  
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Doyon (Mine)												
Operator	IAMGOLD Corporation												
Product(s)	Gold												
Address	P.O. Box 970, Rouyn-Noranda, Quebec J9X 5C8												
Effluent Discharge Point	Effluent final du bassin A (D-203)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0296	0.0003	0.0009	0.0003	0.0003	0.0003	0.0003	RF	0.0003	0.0003	0.0003	0.0003
Cu (mg/L)	0.3	0.0110	0.0090	0.0099	0.0171	0.0123	0.0069	0.0040	0.0067	0.0105	0.0111	0.0110	0.0078
CN (mg/L)	1	0.0104	0.0078	0.0093	0.0095	0.0019	0.0014	0.0245	0.0050	0.0005	0.0028	0.0039	0.0070
Pb (mg/L)	0.2	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0059	0.0002	0.0002	0.0002	0.0002	0.0002
Ni (mg/L)	0.5	0.0282	0.0273	0.0117	0.0212	0.0207	0.0447	0.0217	0.0014	0.0050	0.0209	0.0928	0.0141
Zn (mg/L)	0.5	0.0025	0.0030	0.0040	0.0005	0.0050	0.0005	0.0005	0.0050	0.0060	0.0060	0.0030	0.0005
TSS (mg/L)	15	6.20	5.25	11.50	6.25	6.80	4.00	2.40	12.00	4.00	3.40	3.75	5.75
Ra-226 (Bq/L)	0.37	0.0010	RF	RF	RF	0.0020	RF	0.0010	RF	RF	0.0090	RF	RF
pH Low	≥6.0	6.5	7.6	7.6	6.5	6.7	6.6	7.2	7.8	6.6	6.5	6.3	6.6
pH High	≤9.5	7.8	7.9	7.9	8.8	7.4	7.0	7.8	7.8	6.6	7.4	7.5	7.6
Flow (m <sup>3</sup> /month)	-	218,028	181,975	207,344	207,947	604,072	272,818	152,223	28,035	14,832	653,928	541,834	369,230
Rainbow Trout	Pass	1	RF	RF	RF	1	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	RF	0	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	RF	1	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	RF	0	RF	0	RF	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Duck Pond Operations												
Operator	Teck Resources Limited												
Product(s)	Copper, zinc, silver, gold												
Address	30-32 Route 370, Box 9, Millertown, Newfoundland and Labrador A0H 1V0												
Effluent Discharge Point	Polishing Pond Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0050	0.0088	0.0175	0.0050	0.0050	0.0113	0.0070	0.0063	ND	0.0050	0.0040	0.0063
Cu (mg/L)	0.3	0.0170	0.0128	0.0123	0.0115	0.0162	0.0210	0.0110	0.0113	ND	0.0250	0.0274	0.0180
CN (mg/L)	1	0.0036	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	ND	0.0025	0.0025	0.0025
Pb (mg/L)	0.2	0.0053	0.0035	0.0044	0.0035	0.0035	0.0035	0.0035	0.0046	ND	0.0035	0.0054	0.0035
Ni (mg/L)	0.5	0.0020	0.0055	0.0083	0.0038	0.0020	0.0025	0.0020	0.0020	ND	0.0020	0.0017	0.0035
Zn (mg/L)	0.5	0.2968	0.1915	0.1943	0.1310	0.1242	0.2028	0.1618	0.1990	ND	0.1150	0.1158	0.1233
TSS (mg/L)	15	1.20	1.25	1.00	1.25	2.00	1.75	1.60	2.25	ND	2.00	5.00	1.50
Ra-226 (Bq/L)	0.37	0.0050	0.0080	0.0085	0.0025	0.0050	0.0025	0.0100	0.0090	ND	0.0025	0.0025	0.0100
pH Low	≥6.0	7.4	7.4	7.7	7.3	6.9	7.2	7.3	7.5	ND	7.4	6.9	7.0
pH High	≤9.5	7.6	8.3	8.0	7.9	7.7	7.7	7.5	7.7	ND	7.4	7.6	7.8
Flow (m <sup>3</sup> /month)	-	104,376	120,876	89,090	190,424	16,970	582,574	617,478	191,342	ND	26,399	74,574	50,890
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	ND	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	ND	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	ND	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	ND	0	0	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Eagle River Mill												
Operator	Wesdome Gold Mines Limited												
Product(s)	Gold												
Address	93 Mission Road, P.O. Box 1520, Wawa, Ontario POS 1K0												
Effluent Discharge Point	Eagle River Mill												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0049	0.0058	0.0071	0.0079	ND	0.0087	0.0057	0.0044	0.0055
Cu (mg/L)	0.3	ND	ND	ND	0.0300	0.0395	0.0262	0.0302	ND	0.0338	0.0598	0.0393	0.0311
CN (mg/L)	1	ND	ND	ND	0.4630	0.2813	0.1000	0.0665	ND	0.0485	0.0338	0.0298	0.0206
Pb (mg/L)	0.2	ND	ND	ND	0.0012	0.0013	0.0005	0.0011	ND	0.0010	0.0013	0.0007	0.0006
Ni (mg/L)	0.5	ND	ND	ND	0.0706	0.0626	0.0199	0.0190	ND	0.0226	0.0352	0.0361	0.0317
Zn (mg/L)	0.5	ND	ND	ND	0.0118	0.0157	0.0426	0.0142	ND	0.0215	0.0446	0.0416	0.0522
TSS (mg/L)	15	ND	ND	ND	0.50	2.80	5.20	3.30	ND	14.47	4.23	3.40	3.30
Ra-226 (Bq/L)	0.37	ND	ND	ND	RF	RF	0.0050	RF	ND	0.0050	-	-	0.0050
pH Low	≥6.0	ND	ND	ND	7.2	7.2	8.0	7.7	ND	7.7	6.9	7.1	7.3
pH High	≤9.5	ND	ND	ND	7.2	7.3	8.0	8.0	ND	8.1	7.5	7.6	7.3
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	3,384	195,168	10,923	34,073	ND	80,661	106,146	86,757	84
Rainbow Trout	Pass	ND	ND	ND	RF	RF	1	1	ND	1	1	1	1
Acute Lethality Test	Fail	ND	ND	ND	RF	RF	0	0	ND	0	0	0	0
Daphnia magna	Pass	ND	ND	ND	RF	RF	1	1	ND	1	1	1	1
Monitoring Test	Fail	ND	ND	ND	RF	RF	0	0	ND	0	0	0	0

**Comments:**

The owner/operator reported to be in 'normal frequency' for radium-226 in the months of October and November, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Eagle River Mill												
Operator	Wesdome Gold Mines Limited												
Product(s)	Gold												
Address	93 Mission Road, P.O. Box 1520, Wawa, Ontario POS 1K0												
Effluent Discharge Point	Magnacon Mine												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Eagle River Mill												
Operator	Wesdome Gold Mines Limited												
Product(s)	Gold												
Address	93 Mission Road, P.O. Box 1520, Wawa, Ontario POS 1K0												
Effluent Discharge Point	Mishi Pit												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0018	0.0015	0.0038	ND	0.0025	0.0023	0.0037	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0012	0.0001	0.0003	ND	0.0003	0.0011	0.0010	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	NCU	ND	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0001	0.0000	0.0000	ND	0.0000	0.0001	0.0000	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0013	0.0015	0.0017	ND	0.0009	0.0013	0.0019	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0022	0.0015	0.0023	ND	0.0020	0.0015	0.0025	ND
TSS (mg/L)	15	ND	ND	ND	ND	0.90	1.80	0.50	ND	0.50	0.75	0.80	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	RF	RF	RF	ND	RF	RF	RF	ND
pH Low	≥6.0	ND	ND	ND	ND	7.4	8.0	8.2	ND	7.7	7.6	7.6	ND
pH High	≤9.5	ND	ND	ND	ND	7.8	8.0	8.2	ND	8.2	7.9	7.8	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	28.610	14.976	9.100	ND	17.110	26.957	13.360	ND
Rainbow Trout	Pass	ND	ND	ND	ND	RF	1	RF	ND	1	RF	RF	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	RF	0	RF	ND	0	RF	RF	ND
Daphnia magna	Pass	ND	ND	ND	ND	RF	1	RF	ND	1	RF	RF	ND
Monitoring Test	Fail	ND	ND	ND	ND	RF	0	RF	ND	0	RF	RF	ND
Comments:	The owner/operator did not report measurement of radium-226 or acute lethality testing within the fourth quarter.												
<b>NOTES:</b>	<p><b>ND:</b> No Deposit    <b>RF:</b> Reduced Frequency    <b>NCU:</b> No Cyanide Used    <b>Pass:</b> ≤50% Mortality    <b>Fail:</b> &gt;50% Mortality    <b>--:</b> No data reported</p> <p>Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.</p> <p>A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.</p>												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Eagle River Mine												
Operator	Wesdome Gold Mines Limited												
Product(s)	Gold												
Address	93 Mission Road, P.O. Box 1520, Wawa, Ontario POS 1K0												
Effluent Discharge Point	FDP1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005	0.0004	0.0004
Cu (mg/L)	0.3	0.0044	0.0047	0.0044	0.0059	0.0058	0.0044	0.0050	0.0036	0.0052	0.0046	0.0042	0.0048
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0005	0.0008	0.0006	0.0008	0.0017	0.0004	0.0006	0.0003	0.0006	0.0007	0.0006	0.0005
Ni (mg/L)	0.5	0.0064	0.0066	0.0051	0.0051	0.0049	0.0035	0.0035	0.0036	0.0039	0.0045	0.0043	0.0049
Zn (mg/L)	0.5	0.0138	0.0133	0.0119	0.0115	0.0113	0.0055	0.0059	0.0067	0.0065	0.0087	0.0103	0.0131
TSS (mg/L)	15	2.40	3.83	2.43	3.85	13.72	1.78	2.32	0.90	4.85	3.80	2.05	1.10
Ra-226 (Bq/L)	0.37	RF	0.0050	RF	RF	RF	0.0050	RF	0.0050	RF	RF	RF	0.0050
pH Low	≥6.0	7.2	7.0	7.3	7.1	7.2	7.4	7.4	7.0	7.3	7.1	7.0	6.8
pH High	≤9.5	7.8	7.7	7.5	7.5	7.6	7.5	7.7	7.4	7.6	7.5	7.6	7.1
Flow (m <sup>3</sup> /month)	-	24,241	25,129	25,291	24,531	44,943	29,577	25,168	30,964	32,197	39,773	35,926	30,204
Rainbow Trout	Pass	RF	1	RF	RF	RF	1	RF	1	RF	RF	RF	1
Acute Lethality Test	Fail	RF	0	RF	RF	RF	0	RF	0	RF	RF	RF	0
Daphnia magna	Pass	RF	1	RF	RF	RF	1	RF	1	RF	RF	RF	1
Monitoring Test	Fail	RF	0	RF	RF	RF	0	RF	0	RF	RF	RF	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Edwards Mine												
Operator	Strike Minerals Incorporated												
Product(s)	Gold												
Address	Goudreau Road, Jacobson, Ontario POS 1B0												
Effluent Discharge Point	Edwards Mine Effluent Discharge 1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	-	-	-
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:  
No submission of annual report.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Ekati Diamond Mine												
Operator	Dominion Diamond Mines ULC												
Product(s)	Diamond												
Address	900-4920 52 Street, Yellowknife, Northwest Territories X1A 3T1												
Effluent Discharge Point	Cell E of the Long Lake Containment Facility												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
pH High	≤9.5	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND

Comments:

This mine became subject to the MDMR in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Ekati Diamond Mine												
Operator	Dominion Diamond Mines ULC												
Product(s)	Diamond												
Address	900-4920 52 Street, Yellowknife, Northwest Territories X1A 3T1												
Effluent Discharge Point	King Pond Settling Facility												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	0.0020	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	-	-	-	-	-	-	0.0015	ND	ND	ND	ND	ND
CN (mg/L)	1	-	-	-	-	-	-	NCU	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	-	-	-	-	-	-	0.0000	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	-	-	-	-	-	-	0.0098	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	-	-	-	-	-	-	0.0015	ND	ND	ND	ND	ND
TSS (mg/L)	15	-	-	-	-	-	-	1.80	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	0.0039	ND	ND	ND	ND	ND
pH Low	≥6.0	-	-	-	-	-	-	8.2	ND	ND	ND	ND	ND
pH High	≤9.5	-	-	-	-	-	-	8.8	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	145,776	ND	ND	ND	ND	ND
Rainbow Trout	Pass	-	-	-	-	-	-	1	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	-	-	-	-	-	-	0	ND	ND	ND	ND	ND
Daphnia magna	Pass	-	-	-	-	-	-	1	ND	ND	ND	ND	ND
Monitoring Test	Fail	-	-	-	-	-	-	0	ND	ND	ND	ND	ND

Comments:

This mine became subject to the MDMR in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Ekati Diamond Mine												
Operator	Dominion Diamond Mines ULC												
Product(s)	Diamond												
Address	900-4920 52 Street, Yellowknife, Northwest Territories X1A 3T1												
Effluent Discharge Point	Two Rock Sedimentation Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	ND	0.0004	0.0003	ND	ND	ND
Cu (mg/L)	0.3	-	-	-	-	-	-	ND	0.0011	0.0064	ND	ND	ND
CN (mg/L)	1	-	-	-	-	-	-	ND	NCU	NCU	ND	ND	ND
Pb (mg/L)	0.2	-	-	-	-	-	-	ND	0.0001	0.0009	ND	ND	ND
Ni (mg/L)	0.5	-	-	-	-	-	-	ND	0.0009	0.0016	ND	ND	ND
Zn (mg/L)	0.5	-	-	-	-	-	-	ND	0.0015	0.0080	ND	ND	ND
TSS (mg/L)	15	-	-	-	-	-	-	ND	1.47	0.85	ND	ND	ND
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	ND	0.0041	0.0600	ND	ND	ND
pH Low	≥6.0	-	-	-	-	-	-	ND	7.0	7.1	ND	ND	ND
pH High	≤9.5	-	-	-	-	-	-	ND	7.6	7.2	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	ND	245.509	93.644	ND	ND	ND
Rainbow Trout	Pass	-	-	-	-	-	-	ND	1	1	ND	ND	ND
Acute Lethality Test	Fail	-	-	-	-	-	-	ND	0	0	ND	ND	ND
Daphnia magna	Pass	-	-	-	-	-	-	ND	1	1	ND	ND	ND
Monitoring Test	Fail	-	-	-	-	-	-	ND	0	0	ND	ND	ND

Comments:

This mine became subject to the MDMR in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Elder (Mine)												
Operator	Mines Abcourt Incorporated												
Product(s)	Gold												
Address	P.O. Box 459, Rouyn-Noranda, Quebec J0Y1Y1												
Effluent Discharge Point	EL-01												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	ND	ND	ND	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	ND	ND	ND	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	ND	ND	ND	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	ND	ND	ND	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	ND	ND	ND	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	ND	ND	ND	-	-	-	-	-	-	-	-	-
pH High	≤9.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	-	-	-	-	-	-	-	-	-
Rainbow Trout	Pass	ND	ND	ND	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	ND	ND	ND	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	ND	ND	ND	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	ND	ND	ND	-	-	-	-	-	-	-	-	-

Comments:  
Final discharge point decommissioned in May 2018..

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Elder (Mine)												
Operator	Mines Abcourt Incorporated												
Product(s)	Gold												
Address	P.O. Box 459, Rouyn-Noranda, Quebec J0Y1Y1												
Effluent Discharge Point	EL-02												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0145	0.0091	0.0003	0.0003	0.0009	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Cu (mg/L)	0.3	0.0071	0.0041	0.0112	0.0048	0.0059	0.0155	0.0089	0.0062	0.0096	0.0073	0.0065	0.0065
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0062	0.0002	0.0028	0.0003	0.0003	0.0002	0.0002	0.0009	0.0015	0.0020	0.0028	0.0010
Ni (mg/L)	0.5	0.0029	0.0032	0.0030	0.0091	0.0035	0.0042	0.0020	0.0029	0.0029	0.0028	0.0031	0.0030
Zn (mg/L)	0.5	0.0100	0.0068	0.0060	0.0084	0.0066	0.0034	0.0094	0.0056	0.0060	0.0039	0.0055	0.0049
TSS (mg/L)	15	10.60	5.50	4.50	6.25	9.40	6.50	9.60	4.50	4.75	11.60	10.75	7.00
Ra-226 (Bq/L)	0.37	RF	RF	0.0020	RF	RF	0.0030	RF	RF	RF	-	0.0140	0.0038
pH Low	≥6.0	7.7	7.6	7.7	7.7	7.7	7.9	7.9	8.0	7.9	8.7	7.9	7.5
pH High	≤9.5	7.9	7.9	7.9	7.9	8.2	8.0	8.1	8.2	8.3	9.1	9.0	8.4
Flow (m <sup>3</sup> /month)	-	14,808	11,064	13,214	10,607	22,227	13,939	23,760	20,415	19,452	12,838	12,266	13,214
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	2
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	2
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0

Comments:  
The owner/operator reported to be in 'normal frequency' for radium-226 measurement in October, however, no test results were submitted for this month. The owner/operator did not report measurement of radium-226 within the third quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported  
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Éléonore (Mine)												
Operator	Goldcorp Incorporé												
Product(s)	Gold												
Address	852 Rideau Boulevard, Rouyn-Noranda, Quebec J9Y 0G3												
Effluent Discharge Point	Effluent du bassin de sédimentation no 2												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Éléonore (Mine)												
Operator	Goldcorp Incorpoaré												
Product(s)	Gold												
Address	852 Rideau Boulevard, Rouyn-Noranda, Quebec J9Y 0G3												
Effluent Discharge Point	Effluent final de l'usine de traitement des eaux industrielles (UTEI)												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.0151	0.0017	0.0065	0.0048	0.0054	0.0003	0.0088	0.0060	0.0043	0.0136	0.0029	0.0031
Cu (mg/L)	0.3	0.0168	0.0201	0.0224	0.0187	0.0085	0.0120	0.0126	0.0120	0.0116	0.0078	0.0117	0.0064
CN (mg/L)	1	0.1118	0.2103	0.1693	0.0764	0.0710	0.0635	0.0586	0.0548	0.0552	0.0470	0.0715	0.1118
Pb (mg/L)	0.2	0.0007	0.0002	0.0010	0.0003	0.0002	0.0002	0.0005	0.0030	0.0030	0.0030	0.0004	0.0014
Ni (mg/L)	0.5	0.0468	0.0382	0.0319	0.0332	0.0247	0.0344	0.0274	0.0293	0.0269	0.0313	0.0331	0.0296
Zn (mg/L)	0.5	0.0027	0.0048	0.0025	0.0023	0.0010	0.0006	0.0029	0.0015	0.0020	0.0005	0.0023	0.0008
TSS (mg/L)	15	1.60	2.50	3.75	2.80	4.25	4.25	4.60	1.50	2.00	2.00	1.63	4.00
Ra-226 (Bq/L)	0.37	0.0210	0.0183	0.0165	0.0227	0.0465	0.0463	0.0394	0.0423	0.0575	0.0488	0.0352	0.0403
pH Low	≥6.0	7.1	7.4	7.4	7.4	7.3	7.4	7.4	7.1	7.5	7.1	6.4	7.3
pH High	≤9.5	7.7	7.6	7.6	7.5	7.6	7.6	7.6	7.6	7.8	7.4	7.6	7.5
Flow (m <sup>3</sup> /month)	-	177,021	141,836	147,235	189,045	233,439	179,768	202,343	247,853	176,547	231,284	176,643	164,949
Rainbow Trout	Pass	1	1	1	1	1	1	2	1	2	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	2	1	2	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Éléonore (Mine)												
Operator	Goldcorp Incorporé												
Product(s)	Gold												
Address	854 Rideau Boulevard, Rouyn-Noranda, Quebec J9Y 0G3												
Effluent Discharge Point	Effluent final du bassin de sédimentation du concentrateur no 1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Éléonore (Mine)												
Operator	Goldcorp Incorporé												
Product(s)	Gold												
Address	853 Rideau Boulevard, Rouyn-Noranda, Quebec J9Y 0G3												
Effluent Discharge Point	Effluent final halde à stérile												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Elross Lake Area Iron Ore Mine												
Operator	Tata Steel Minerals Canada Limited												
Product(s)	Iron ore												
Address	15 km NW of Schefferville, QC, Newfoundland and Labrador												
Effluent Discharge Point	DSO3 - sed 3												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Elross Lake Area Iron Ore Mine												
Operator	Tata Steel Minerals Canada Limited												
Product(s)	Iron ore												
Address	15 km NW of Schefferville, QC, Newfoundland and Labrador												
Effluent Discharge Point	Outlet of Sedimentation Pond 2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	-	0.0024	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	-	0.0026	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	-	0.0009	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	-	0.0016	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	-	0.0770	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	-	20.50	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	-	0.0025	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	-	6.5	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	-	6.9	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	52.503	91.923	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	-	1	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	-	0	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	-	1	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	-	0	ND	ND	ND	ND	ND	ND
Comments:	The owner/operator reported to be in 'normal frequency' for acute lethality testing and deleterious substances measurement, however, no test results were submitted for May.												
<b>NOTES:</b>	<p><b>ND:</b> No Deposit    <b>RF:</b> Reduced Frequency    <b>NCU:</b> No Cyanide Used    <b>Pass:</b> ≤50% Mortality    <b>Fail:</b> &gt;50% Mortality    <b>-</b> : No data reported</p> <p>Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.</p> <p>A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.</p>												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Endako Mines												
Operator	Thompson Creek Mining-Sojitz Moly Resources												
Product(s)	Molybdenum												
Address	Bag 4001, Fraser Lake, British Columbia V0J 1S0												
Effluent Discharge Point	En.A1 - Tailings Pond 1 South												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	0.0002	RF	0.0002	RF	RF	RF	0.0001	RF	RF	0.0002	RF
Cu (mg/L)	0.3	RF	0.0005	RF	0.0005	RF	RF	RF	0.0005	RF	RF	0.0005	RF
CN (mg/L)	1	NCU	0.0310	NCU	0.0148	NCU	NCU	NCU	0.0025	NCU	NCU	0.0025	NCU
Pb (mg/L)	0.2	RF	0.0001	RF	0.0001	RF	RF	RF	0.0001	RF	RF	0.0001	RF
Ni (mg/L)	0.5	RF	0.0005	RF	0.0005	RF	RF	RF	0.0005	RF	RF	0.0005	RF
Zn (mg/L)	0.5	RF	0.0030	RF	0.0030	RF	RF	RF	0.0030	RF	RF	0.0030	RF
TSS (mg/L)	15	3.90	3.20	2.48	2.35	2.92	4.50	3.64	2.98	2.73	3.88	2.65	5.10
Ra-226 (Bq/L)	0.37	RF	0.0042	RF	0.0023	RF	RF	RF	0.0077	RF	RF	0.0066	RF
pH Low	≥6.0	7.7	8.0	7.8	7.7	7.9	7.8	7.9	7.8	7.8	8.1	7.8	7.8
pH High	≤9.5	8.0	8.1	8.3	8.3	8.3	8.3	8.1	8.1	8.3	8.3	8.1	8.1
Flow (m <sup>3</sup> /month)	-	49,252	39,748	69,479	92,410	178,972	69,963	66,656	35,278	41,922	77,189	91,676	62,403
Rainbow Trout	Pass	RF	1	RF	1	RF	RF	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	0	RF	RF	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	1	RF	1	RF	RF	RF	1	RF	RF	1	RF
Monitoring Test	Fail	RF	0	RF	0	RF	RF	RF	0	RF	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name		Endako Mines											
Operator		Thompson Creek Mining-Sojitz Moly Resources											
Product(s)		Molybdenum											
Address		Bag 4001, Fraser Lake, British Columbia V0J 1S0											
Effluent Discharge Point		En.H1 - Tailings Pond 2 Higginbotham											
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	0.0003	RF	0.0003	RF	RF	RF	0.0003	RF	RF	0.0003	RF
Cu (mg/L)	0.3	RF	0.0005	RF	0.0005	RF	RF	RF	0.0013	RF	RF	0.0005	RF
CN (mg/L)	1	NCU	0.0649	NCU	0.0394	NCU	NCU	NCU	0.0475	NCU	NCU	0.0521	NCU
Pb (mg/L)	0.2	RF	0.0001	RF	0.0001	RF	RF	RF	0.0001	RF	RF	0.0001	RF
Ni (mg/L)	0.5	RF	0.0005	RF	0.0005	RF	RF	RF	0.0013	RF	RF	0.0005	RF
Zn (mg/L)	0.5	RF	0.0030	RF	0.0030	RF	RF	RF	0.0150	RF	RF	0.0030	RF
TSS (mg/L)	15	3.78	8.50	9.00	6.33	9.80	5.98	6.50	10.08	8.73	5.34	4.68	3.48
Ra-226 (Bq/L)	0.37	RF	0.0044	RF	0.0085	RF	RF	RF	0.0140	RF	RF	0.0029	RF
pH Low	≥6.0	7.8	7.9	7.9	7.8	7.4	7.8	7.7	7.7	8.1	7.9	7.8	7.9
pH High	≤9.5	8.0	8.0	8.3	8.3	8.3	8.4	8.2	8.0	8.3	8.3	8.3	8.2
Flow (m <sup>3</sup> /month)	-	31,440	30,135	32,410	40,069	174,874	29,551	29,707	27,946	26,566	31,531	35,392	32,558
Rainbow Trout	Pass	RF	1	RF	1	RF	RF	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	0	RF	RF	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	1	RF	1	RF	RF	RF	1	RF	RF	1	RF
Monitoring Test	Fail	RF	0	RF	0	RF	RF	RF	0	RF	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Endako Mines												
Operator	Thompson Creek Mining-Sojitz Moly Resources												
Product(s)	Molybdenum												
Address	Bag 4001, Fraser Lake, British Columbia V0J 1S0												
Effluent Discharge Point	En.N1 - Tailings Pond 1 North												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	RF	0.0001	RF	0.0001	RF	RF	RF	0.0003	RF	RF	0.0001	RF
Cu (mg/L)	0.3	RF	0.0005	RF	0.0005	RF	RF	RF	0.0013	RF	RF	0.0005	RF
CN (mg/L)	1	NCU	0.0226	NCU	0.0110	NCU	NCU	NCU	0.0068	NCU	NCU	0.0141	NCU
Pb (mg/L)	0.2	RF	0.0001	RF	0.0001	RF	RF	RF	0.0001	RF	RF	0.0001	RF
Ni (mg/L)	0.5	RF	0.0005	RF	0.0005	RF	RF	RF	0.0013	RF	RF	0.0005	RF
Zn (mg/L)	0.5	RF	0.0030	RF	0.0030	RF	RF	RF	0.0150	RF	RF	0.0030	RF
TSS (mg/L)	15	1.58	1.25	1.55	1.90	1.54	3.15	2.90	1.15	2.53	2.22	1.78	1.65
Ra-226 (Bq/L)	0.37	RF	0.0047	RF	0.0033	RF	RF	RF	0.0036	RF	RF	0.0039	RF
pH Low	≥6.0	7.8	7.9	7.9	8.0	7.7	8.0	8.1	8.0	8.2	8.1	8.0	7.9
pH High	≤9.5	8.2	8.1	8.3	8.3	8.3	8.4	8.3	8.2	8.3	8.3	8.4	8.2
Flow (m <sup>3</sup> /month)	-	83,245	74,066	108,906	125,873	146,461	88,746	81,536	71,676	82,728	85,186	104,964	88,029
Rainbow Trout	Pass	RF	1	RF	1	RF	RF	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	0	RF	RF	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	1	RF	1	RF	RF	RF	1	RF	RF	1	RF
Monitoring Test	Fail	RF	0	RF	0	RF	RF	RF	0	RF	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Endako Mines												
Operator	Thompson Creek Mining-Sojitz Moly Resources												
Product(s)	Molybdenum												
Address	Bag 4001, Fraser Lake, British Columbia V0J 1S0												
Effluent Discharge Point	En.S2 - Tailings Pond 2 South												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	0.0003	RF	0.0002	RF	RF	RF	0.0003	RF	RF	0.0001	RF
Cu (mg/L)	0.3	RF	0.0013	RF	0.0003	RF	RF	RF	0.0013	RF	RF	0.0005	RF
CN (mg/L)	1	NCU	0.0694	NCU	0.0276	NCU	NCU	NCU	0.0025	NCU	NCU	0.0095	NCU
Pb (mg/L)	0.2	RF	0.0001	RF	0.0000	RF	RF	RF	0.0001	RF	RF	0.0001	RF
Ni (mg/L)	0.5	RF	0.0013	RF	0.0003	RF	RF	RF	0.0013	RF	RF	0.0005	RF
Zn (mg/L)	0.5	RF	0.0150	RF	0.0015	RF	RF	RF	0.0150	RF	RF	0.0030	RF
TSS (mg/L)	15	1.50	1.87	1.38	3.10	1.70	2.83	2.16	1.45	1.70	2.46	3.00	2.28
Ra-226 (Bq/L)	0.37	RF	0.0030	RF	0.0040	RF	RF	RF	0.0039	RF	RF	0.0035	RF
pH Low	≥6.0	7.7	7.7	7.7	7.8	7.5	7.8	7.9	7.6	8.1	7.9	7.9	7.8
pH High	≤9.5	8.2	7.9	8.3	8.3	8.2	8.3	8.1	8.0	8.3	8.3	8.3	8.2
Flow (m <sup>3</sup> /month)	-	26,998	23,236	26,914	34,251	89,124	33,552	28,328	24,712	28,052	27,391	33,350	23,293
Rainbow Trout	Pass	RF	1	RF	1	RF	RF	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	0	RF	RF	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	1	RF	1	RF	RF	RF	1	RF	RF	1	RF
Monitoring Test	Fail	RF	0	RF	0	RF	RF	RF	0	RF	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Endako Mines												
Operator	Thompson Creek Mining-Sojitz Moly Resources												
Product(s)	Molybdenum												
Address	Bag 4001, Fraser Lake, British Columbia V0J 1S0												
Effluent Discharge Point	En.SBC - Endako Pit												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	0.0005	RF	0.0003	RF	RF	RF	0.0005	RF	RF	0.0005	RF
Cu (mg/L)	0.3	RF	0.0025	RF	0.0013	RF	RF	RF	0.0025	RF	RF	0.0025	RF
CN (mg/L)	1	NCU	0.0025	NCU	0.0146	NCU	NCU	NCU	0.0025	NCU	NCU	0.0025	NCU
Pb (mg/L)	0.2	RF	0.0003	RF	0.0001	RF	RF	RF	0.0003	RF	RF	0.0003	RF
Ni (mg/L)	0.5	RF	0.0025	RF	0.0013	RF	RF	RF	0.0025	RF	RF	0.0025	RF
Zn (mg/L)	0.5	RF	0.0300	RF	0.0150	RF	RF	RF	0.0300	RF	RF	0.0300	RF
TSS (mg/L)	15	2.10	3.05	2.70	2.53	1.70	2.58	2.28	2.43	1.73	2.24	2.25	1.50
Ra-226 (Bq/L)	0.37	RF	0.0032	RF	0.0036	RF	RF	RF	0.0036	RF	RF	0.0032	RF
pH Low	≥6.0	7.9	7.9	8.0	7.8	7.7	8.0	8.1	8.0	8.2	8.0	8.0	8.0
pH High	≤9.5	8.3	8.2	8.3	8.4	8.2	8.3	8.2	8.2	8.3	8.3	8.1	8.2
Flow (m <sup>3</sup> /month)	-	3,349	2,599	3,495	5,495	72,586	7,600	6,647	3,139	4,151	3,118	5,316	5,259
Rainbow Trout	Pass	RF	1	RF	1	RF	RF	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	0	RF	RF	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	1	RF	1	RF	RF	RF	1	RF	RF	1	RF
Monitoring Test	Fail	RF	0	RF	0	RF	RF	RF	0	RF	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Endako Mines												
Operator	Thompson Creek Mining-Sojitz Moly Resources												
Product(s)	Molybdenum												
Address	Bag 4001, Fraser Lake, British Columbia V0J 1S0												
Effluent Discharge Point	En.W2 - Denak West Pit												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0004	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	0.0014	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	0.0025	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	0.0001	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	0.0005	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	0.0030	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	0.50	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0033	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	8.3	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	8.3	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Fire Lake (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	389 Road, P.O. Box 1817, Mont-Wright, Quebec G0G 1J0												
Effluent Discharge Point	Effluent Final FL-BC (Fossé B et Fossé C)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cu (mg/L)	0.3	0.0010	0.0011	0.0008	0.0009	0.0063	0.0014	0.0052	0.0190	0.0020	0.0010	0.0016	0.0011
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0005	0.0006	0.0005	0.0005	0.0005	0.0005	0.0007	0.0011	0.0005	0.0005	0.0005	0.0005
Ni (mg/L)	0.5	0.0007	0.0010	0.0169	0.0012	0.0035	0.0011	0.0040	0.0014	0.0014	0.0007	0.0164	0.0006
Zn (mg/L)	0.5	0.0035	0.0035	0.0321	0.0035	0.0055	0.0035	0.0071	0.0180	0.0035	0.0035	0.0035	0.0051
TSS (mg/L)	15	0.93	0.63	0.68	1.13	9.50	3.00	16.67	1.25	2.13	0.86	0.54	0.71
Ra-226 (Bq/L)	0.37	0.0020	-	0.0010	0.0033	0.0035	0.0014	0.0028	0.0010	0.0045	0.0020	0.0020	0.0010
pH Low	≥6.0	7.5	7.1	7.1	7.3	6.8	7.4	7.5	7.6	7.5	7.1	7.3	7.2
pH High	≤9.5	7.7	7.8	7.5	7.8	7.7	8.1	7.8	8.1	8.0	8.1	7.8	7.9
Flow (m <sup>3</sup> /month)	-	23,195	13,700	13,042	35,437	384,985	195,060	137,130	148,821	89,924	61,718	32,146	23,805
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0

**Comments:**

The owner/operator reported to be in 'normal frequency' for radium-226 measurement in February, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Fire Lake (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	389 Road, P.O. Box 1817, Mont-Wright, Quebec G0G 1J0												
Effluent Discharge Point	Effluent final FLG-2 (chemin d'accès au garage)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0005	0.0005	0.0013	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	0.0190	0.0140	0.0280	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	NCU	NCU	NCU	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	0.0020	0.0010	0.0055	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	0.0270	0.0190	0.0320	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	0.0260	0.0230	0.0370	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	47.00	56.00	535.00	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0220	0.0140	0.0125	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	8.5	7.6	7.7	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	8.5	7.6	7.7	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	7	538	290	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	1	-	2	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	0	-	0	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	1	-	2	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	0	-	0	ND	ND	ND	ND	ND	ND

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in May, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Fire Lake (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	389 Road, P.O. Box 1817, Mont-Wright, Quebec G0G 1J0												
Effluent Discharge Point	Effluent final FLG / Effluent final garage Fire-Lake (FLG-1)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0005	0.0005	0.0005	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	0.0070	0.0053	0.0130	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	NCU	NCU	NCU	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	0.0010	0.0008	0.0013	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	0.0060	0.0048	0.0115	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	0.0200	0.0097	0.0635	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	20.00	21.50	63.00	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0040	0.0056	0.0105	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	7.9	7.3	7.6	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	7.9	8.3	8.0	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	65	13,142	34	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	1	7	1	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	0	0	1	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	1	7	2	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	0	0	0	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Fire Lake (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	389 Road, P.O. Box 1817, Mont-Wright, Quebec G0G 1J0												
Effluent Discharge Point	Fire Lake 5 (FL-5)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Fire Lake (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	389 Road, P.O. Box 1817, Mont-Wright, Quebec G0G 1J0												
Effluent Discharge Point	Fire Lake-6												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Fire Lake (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	389 Road, P.O. Box 1817, Mont-Wright, Quebec G0G 1J0												
Effluent Discharge Point	Fire Lake-7 (FL-7)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	ND	ND	0.0008	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cu (mg/L)	0.3	0.0007	ND	ND	0.0058	0.0010	0.0013	0.0014	0.0010	0.0005	0.0006	0.0015	0.0005
CN (mg/L)	1	NCU	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0005	ND	ND	0.0011	0.0022	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Ni (mg/L)	0.5	0.0011	ND	ND	0.0063	0.0019	0.0008	0.0006	0.0010	0.0005	0.0007	0.0136	0.0010
Zn (mg/L)	0.5	0.0035	ND	ND	0.0071	0.0042	0.0035	0.0035	0.0044	0.0035	0.0035	0.0063	0.0035
TSS (mg/L)	15	1.10	ND	ND	59.00	9.63	3.13	2.50	0.88	4.23	1.90	1.00	2.00
Ra-226 (Bq/L)	0.37	0.0020	ND	ND	0.0070	0.0020	0.0023	0.0012	0.0013	0.0055	0.0020	0.0013	0.0010
pH Low	≥6.0	7.0	ND	ND	7.1	7.1	7.1	7.5	7.5	7.6	7.4	7.2	7.3
pH High	≤9.5	7.8	ND	ND	7.9	7.7	7.8	7.8	7.7	7.9	7.7	7.6	7.3
Flow (m <sup>3</sup> /month)	-	1.716	ND	ND	1.226	4.610	2.318	5.521	1.244	2.298	2.375	2.298	185
Rainbow Trout	Pass	1	ND	ND	1	10	2	1	1	1	1	1	-
Acute Lethality Test	Fail	0	ND	ND	0	0	0	0	0	0	0	0	-
Daphnia magna	Pass	1	ND	ND	1	9	2	1	1	1	1	1	-
Monitoring Test	Fail	0	ND	ND	0	0	0	0	0	0	0	0	-

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in December, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Fire Lake (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	389 Road, P.O. Box 1817, Mont-Wright, Quebec G0G 1J0												
Effluent Discharge Point	Fosse Beaver - Déversoir (FL-2)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	ND	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cu (mg/L)	0.3	0.0125	ND	0.0270	0.0025	0.0061	0.0028	0.0020	0.0030	0.0025	0.0012	0.0028	0.0023
CN (mg/L)	1	NCU	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0005	ND	0.0005	0.0005	0.0007	0.0006	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005
Ni (mg/L)	0.5	0.0040	ND	0.0040	0.0060	0.0075	0.0040	0.0022	0.0050	0.0025	0.0038	0.0340	0.0050
Zn (mg/L)	0.5	0.0455	ND	0.0685	0.0232	0.0208	0.0170	0.0327	0.0787	0.0116	0.0103	0.0305	0.0345
TSS (mg/L)	15	1.50	ND	0.50	4.70	22.75	4.00	2.08	4.25	4.25	3.80	2.00	1.25
Ra-226 (Bq/L)	0.37	0.0010	ND	0.0010	0.0105	0.0087	0.0050	0.0032	0.0028	0.0105	0.0080	0.0040	0.0025
pH Low	≥6.0	7.2	ND	6.9	6.9	6.8	7.3	7.0	7.0	7.1	7.0	6.9	6.9
pH High	≤9.5	7.4	ND	7.1	7.2	7.6	7.5	7.5	7.5	7.6	7.1	7.3	6.9
Flow (m <sup>3</sup> /month)	-	90	ND	7.017	147.252	567.883	206.969	146.567	70.765	226.697	30.347	24.392	18.807
Rainbow Trout	Pass	1	ND	1	2	19	3	2	1	1	1	1	-
Acute Lethality Test	Fail	0	ND	0	0	0	0	0	0	0	0	0	-
Daphnia magna	Pass	1	ND	1	2	18	3	2	1	1	1	1	1
Monitoring Test	Fail	0	ND	0	0	1	0	0	0	0	0	0	0

**Comments:**

The owner/operator reported to be in 'normal frequency' for the Rainbow trout acute lethality testing in December, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Fire Lake (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	389 Road, P.O. Box 1817, Mont-Wright, Quebec G0G 1J0												
Effluent Discharge Point	Effluent FL-BC 2016 (temporaire)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Flin Flon Complex												
Operator	Hudbay Minerals Incorporated												
Product(s)	Copper, zinc, gold, silver												
Address	P.O. Box 1500, Flin Flon, Manitoba R8A 1N9												
Effluent Discharge Point	North Weir Discharge												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.0015	0.0026	0.0027	0.0020	0.0009	0.0009	0.0014	0.0013	0.0011	0.0009	0.0021	0.0054
Cu (mg/L)	0.3	0.0014	0.0035	0.0039	0.0191	0.0014	0.0027	0.0058	0.0032	0.0072	0.0028	0.0021	0.0025
CN (mg/L)	1	NCU	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0004	0.0007	0.0012	0.0004	0.0002	0.0001	0.0002	0.0002	0.0001	0.0002	0.0005	0.0010
Ni (mg/L)	0.5	0.0006	0.0009	0.0011	0.0015	0.0005	0.0007	0.0007	0.0005	0.0006	0.0004	0.0007	0.0005
Zn (mg/L)	0.5	0.1622	0.1850	0.1993	0.4396	0.1064	0.0975	0.1134	0.1157	0.0997	0.0630	0.0241	0.0305
TSS (mg/L)	15	3.04	5.83	5.20	4.68	2.18	2.38	1.00	1.55	2.30	1.28	1.00	1.00
Ra-226 (Bq/L)	0.37	RF	0.0100	RF	0.0100	RF	RF	0.0100	RF	RF	0.0300	RF	RF
pH Low	≥6.0	7.7	7.2	8.0	8.1	7.7	7.7	7.6	7.1	7.7	7.7	7.5	6.6
pH High	≤9.5	8.5	8.7	8.9	8.6	9.0	9.0	8.9	9.0	8.3	8.2	8.9	8.7
Flow (m <sup>3</sup> /month)	-	1,405,949	858,725	908,379	1,238,369	1,573,232	1,264,716	1,470,377	2,237,234	1,701,513	1,228,425	1,123,173	842,978
Rainbow Trout	Pass	RF	1	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	RF	0	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	RF	0	RF	1	RF	RF	0	RF	RF	1	RF	RF
Monitoring Test	Fail	RF	1	RF	0	RF	RF	1	RF	RF	0	RF	RF
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Fonderie Horne												
Operator	Glencore Canada Corporation												
Product(s)	Copper												
Address	P.O. Box 4000, Rouyn-Noranda, Quebec J9X 5B6												
Effluent Discharge Point	Effluent Final Secteur Pelletier												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0066	0.0091	0.0088	0.0045	0.0020	0.0015	0.0015	0.0013	0.0015	0.0020	0.0032	0.0034
Cu (mg/L)	0.3	0.0077	0.0066	0.0065	0.0128	0.0176	0.0076	0.0065	0.0057	0.0117	0.0314	0.0313	0.0143
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0010	0.0010	0.0016	0.0028	0.0027	0.0010	0.0006	0.0005	0.0021	0.0029	0.0060	0.0021
Ni (mg/L)	0.5	0.0068	0.0074	0.0071	0.0070	0.0045	0.0041	0.0028	0.0029	0.0030	0.0069	0.0088	0.0088
Zn (mg/L)	0.5	0.1222	0.1093	0.0983	0.1232	0.0765	0.0360	0.0168	0.0155	0.0768	0.2068	0.2740	0.1778
TSS (mg/L)	15	3.00	1.75	2.50	5.40	6.75	1.75	2.60	1.00	1.75	8.60	9.75	5.40
Ra-226 (Bq/L)	0.37	RF	RF	0.0050	0.0050	RF	RF	RF	0.0050	RF	RF	0.0050	RF
pH Low	≥6.0	7.2	7.3	7.3	6.9	7.7	7.7	7.4	6.5	7.0	7.7	8.2	8.0
pH High	≤9.5	7.6	7.9	7.4	7.5	8.0	8.0	8.2	7.7	7.5	8.0	8.5	8.3
Flow (m <sup>3</sup> /month)	-	164,932	163,142	149,653	2,046,600	7,239,089	1,782,930	956,784	528,984	342,120	9,056,898	2,653,777	219,852
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Francoeur (Mine)												
Operator	Entreprises Minières Globex Incorporée												
Product(s)	Gold												
Address	199 Provencher Avenue, P.O. 39, Rouyn-Noranda, Quebec J0Z 1B0												
Effluent Discharge Point	Effluent final Francoeur												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Gahcho Kué Mine												
Operator	De Beers Canada Incorporated												
Product(s)	Diamond												
Address	300-5120 49th Street, Yellowknife, Northwest Territories X1A 1P8												
Effluent Discharge Point	Lake N11 Discharge Diffuser												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	ND	ND	ND	ND	ND	0.0002	0.0002	ND	ND
Cu (mg/L)	0.3	-	-	-	ND	ND	ND	ND	ND	0.0007	0.0006	ND	ND
CN (mg/L)	1	-	-	-	ND	ND	ND	ND	ND	NCU	NCU	ND	ND
Pb (mg/L)	0.2	-	-	-	ND	ND	ND	ND	ND	0.0004	0.0000	ND	ND
Ni (mg/L)	0.5	-	-	-	ND	ND	ND	ND	ND	0.0038	0.0038	ND	ND
Zn (mg/L)	0.5	-	-	-	ND	ND	ND	ND	ND	0.0040	0.0043	ND	ND
TSS (mg/L)	15	-	-	-	ND	ND	ND	ND	ND	4.87	1.40	ND	ND
Ra-226 (Bq/L)	0.37	-	-	-	ND	ND	ND	ND	ND	0.0130	0.0046	ND	ND
pH Low	≥6.0	-	-	-	ND	ND	ND	ND	ND	8.0	6.9	ND	ND
pH High	≤9.5	-	-	-	ND	ND	ND	ND	ND	8.3	6.9	ND	ND
Flow (m <sup>3</sup> /month)	-	-	-	-	ND	ND	ND	ND	ND	578,518	3,771	ND	ND
Rainbow Trout	Pass	-	-	-	ND	ND	ND	ND	1	-	1	ND	ND
Acute Lethality Test	Fail	-	-	-	ND	ND	ND	ND	0	-	0	ND	ND
Daphnia magna	Pass	-	-	-	ND	ND	ND	ND	1	-	1	ND	ND
Monitoring Test	Fail	-	-	-	ND	ND	ND	ND	0	-	0	ND	ND
Comments:	<p>This mine became subject to the MDMR in 2018. The owner/operator reported to be in 'normal frequency' for acute lethality testing in September, however, no test results were submitted for this month.</p> <p><b>NOTES:</b>  <b>ND:</b> No Deposit    <b>RF:</b> Reduced Frequency    <b>NCU:</b> No Cyanide Used    <b>Pass:</b> ≤50% Mortality    <b>Fail:</b> &gt;50% Mortality    <b>-</b> : No data reported                      Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.                      A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.</p>												



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name		Garson Mine											
Operator		Vale Canada Limited											
Product(s)		Nickel, copper, cobalt, platinum, palladium											
Address		60 Mine Road, Garson, Ontario P3L 1A2											
Effluent Discharge Point		Garson Mine											
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0003	0.0003	0.0004	0.0004	0.0010	0.0004	0.0004	0.0005	0.0003	0.0003	0.0003	0.0004
Cu (mg/L)	0.3	0.0040	0.0015	0.0010	0.0018	0.0034	0.0026	0.0008	0.0009	0.0002	0.0012	0.0018	0.0128
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0000	0.0000	0.0000	0.0000	0.0001	0.0002
Ni (mg/L)	0.5	0.1110	0.1068	0.1073	0.0960	0.0912	0.1343	0.0650	0.0843	0.0823	0.1264	0.1115	0.1593
Zn (mg/L)	0.5	0.0038	0.0038	0.0026	0.0040	0.0033	0.0034	0.0011	0.0015	0.0012	0.0022	0.0035	0.0059
TSS (mg/L)	15	1.20	1.00	1.25	2.83	1.46	2.33	2.23	2.15	1.30	2.40	1.00	1.43
Ra-226 (Bq/L)	0.37	0.0100	RF	RF	0.0050	RF	RF	0.0050	RF	RF	0.0050	RF	RF
pH Low	≥6.0	7.3	7.7	7.9	7.9	8.2	8.1	8.0	8.2	8.4	7.9	7.2	7.4
pH High	≤9.5	7.6	8.3	8.1	8.3	8.3	8.6	8.3	8.5	8.7	8.3	7.9	8.3
Flow (m <sup>3</sup> /month)	-	82,123	79,478	66,471	77,413	108,556	73,067	69,000	66,773	85,340	100,290	95,769	78,182
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Géant Dormant (Mine)												
Operator	Mines Auribec Incorporated / Mines Abcourt Incorporated												
Product(s)	Gold												
Address	Km 118, Road 109 North, Amos, Quebec J9T 3A3												
Effluent Discharge Point	GD-E01, Effluent final bassin d'eau de mine												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0028	0.0003	0.0012	0.0018	0.0003	0.0003	0.0003	0.0021	RF	0.0571	0.0003	0.0022
Cu (mg/L)	0.3	0.0050	0.0037	0.0036	0.0037	0.0036	0.0035	0.0055	0.0041	RF	0.0071	0.0139	0.2061
CN (mg/L)	1	RF	RF	0.0030	RF	RF	0.0005	RF	RF	RF	0.0010	NCU	NCU
Pb (mg/L)	0.2	0.0041	0.0002	0.0002	0.0002	0.0019	0.0002	0.0002	0.0016	RF	0.0002	0.0002	0.0002
Ni (mg/L)	0.5	0.0033	0.0020	0.0005	0.0013	0.0020	0.0026	0.0024	0.0029	RF	0.0102	0.0032	0.0057
Zn (mg/L)	0.5	0.0738	0.0625	0.0688	0.0602	0.0515	0.0880	0.0633	0.0884	0.0850	0.0512	0.0793	0.0900
TSS (mg/L)	15	1.70	1.50	1.00	1.30	1.38	2.25	0.80	0.90	0.88	0.60	0.63	0.63
Ra-226 (Bq/L)	0.37	RF	RF	0.0150	RF	RF	0.0090	RF	0.0190	RF	0.0140	RF	RF
pH Low	≥6.0	8.1	7.9	8.3	8.3	8.6	8.4	7.6	7.6	7.6	8.0	7.9	8.0
pH High	≤9.5	8.2	8.4	8.4	8.5	8.7	8.6	8.1	7.8	7.9	8.0	8.1	8.1
Flow (m <sup>3</sup> /month)	-	43,704	58,694	55,699	40,406	60,336	65,290	68,904	69,394	66,902	70,088	66,974	71,352
Rainbow Trout	Pass	RF	RF	1	RF	RF	1	RF	1	RF	1	RF	RF
Acute Lethality Test	Fail	RF	RF	0	RF	RF	0	RF	0	RF	0	RF	RF
Daphnia magna	Pass	RF	RF	1	RF	RF	1	RF	1	RF	1	RF	RF
Monitoring Test	Fail	RF	RF	0	RF	RF	0	RF	0	RF	0	RF	RF

**Comments:**

The owner/operator did not report measurement of cyanide within the third quarter. The owner/operator reported to be in 'reduced frequency' for arsenic and copper, however, the concentrations were measured as greater than 10% of the prescribed Schedule 4 limits in the months of October for arsenic and December for copper, thus the mine no longer qualifies for reduced frequency for these two substances.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Géant Dormant (Mine)												
Operator	Mines Aurbec Incorporated / Mines Abcourt Incorporated												
Product(s)	Gold												
Address	Km 118, Road 109 North, Amos, Quebec J9T 3A3												
Effluent Discharge Point	GD-E03, Bassin de polissage 2A												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0003	ND	ND	0.0003	0.0003	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0387	ND	ND	0.0569	0.0764	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	0.0010	ND	ND	0.0011	0.0005	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0002	ND	ND	0.0016	0.0002	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0172	ND	ND	0.0126	0.0101	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0210	ND	ND	0.0143	0.0110	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	8.00	ND	ND	4.50	4.00	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0020	ND	ND	0.0030	RF	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	7.8	ND	ND	7.3	7.0	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	7.8	ND	ND	7.7	7.0	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	21,910	ND	ND	166,596	19,599	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	ND	ND	1	-	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	ND	ND	0	-	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	ND	ND	1	-	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	ND	ND	0	-	ND	ND	ND

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in September, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Giant Mine												
Operator	Department of Indian Affairs and Northern Development												
Product(s)	Gold												
Address	Giant Minesite, Box 2951, Yellowknife, Northwest Territories X1A 2R2												
Effluent Discharge Point	Surveillance Network Program station 43-1												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.2928	0.2330	0.2290	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	0.0092	0.0059	0.0057	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	0.0025	0.0025	0.0025	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	0.0001	0.0001	0.0002	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0190	0.0163	0.0193	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0053	0.0030	0.0030	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	2.10	2.68	3.00	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	0.0040	0.0080	0.0060	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	6.8	6.9	7.5	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	8.1	8.1	7.5	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	155,710	194,119	6,554	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	1	1	1	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	0	0	0	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	1	1	1	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	0	0	0	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Gibraltar Mines Limited												
Operator	Taseko Mines Limited												
Product(s)	Copper, molybdenum, silver												
Address	10251 Gibraltar Mine Road, P.O. Box 130, McLeese Lake, British Columbia V0L 1P0												
Effluent Discharge Point	GiESAD - East Saddle Dam												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Gibraltar Mines Limited													
Operator	Taseko Mines Limited													
Product(s)	Copper, molybdenum, silver													
Address	10251 Gibraltar Mine Road, P.O. Box 130, McLeese Lake, British Columbia V0L 1P0													
Effluent Discharge Point	Gi.FRD - Fraser River Diffuser													
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.	
As (mg/L)	0.5	ND	ND	ND	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005	ND
Cu (mg/L)	0.3	ND	ND	ND	0.0027	0.0024	0.0019	0.0016	0.0013	0.0012	0.0016	0.0016	0.0016	ND
CN (mg/L)	1	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	0.0001	0.0001	0.0001	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	ND
Ni (mg/L)	0.5	ND	ND	ND	0.0005	0.0010	0.0005	0.0005	0.0007	0.0006	0.0007	0.0005	0.0005	ND
Zn (mg/L)	0.5	ND	ND	ND	0.0030	0.0028	0.0030	0.0029	0.0030	0.0030	0.0030	0.0030	0.0030	ND
TSS (mg/L)	15	ND	ND	ND	6.83	3.16	4.03	2.78	2.10	3.55	4.68	5.50	5.50	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0066	0.0037	0.0026	0.0034	0.0430	0.0033	0.0049	0.0240	0.0240	ND
pH Low	≥6.0	ND	ND	ND	8.3	7.1	7.2	7.2	7.2	6.9	7.0	6.7	6.7	ND
pH High	≤9.5	ND	ND	ND	8.6	8.1	7.7	7.6	7.6	7.3	7.9	6.9	6.9	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	251,581	472,986	470,766	474,664	434,446	473,047	501,128	159,178	159,178	ND
Rainbow Trout	Pass	ND	ND	ND	1	2	1	1	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	0	0	0	0	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	1	2	1	1	1	1	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	0	0	0	0	0	0	0	0	0	ND
Comments:														

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Golden Giant Mine												
Operator	Newmont Canada Corporation												
Product(s)	Gold												
Address	Yellow Brick Road, Hwy 17, P.O. Box 40, Marathon, Ontario POT 2EO												
Effluent Discharge Point	ITF Emergency Spillway												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Golden Giant Mine												
Operator	Newmont Canada Corporation												
Product(s)	Gold												
Address	Yellow Brick Road, Hwy 17, P.O. Box 40, Marathon, Ontario POT 2EO												
Effluent Discharge Point	Waste Water Treatment Plant Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0033	0.0043	0.0043	0.0045	0.0020	0.0025	0.0029	0.0035	ND	ND	0.0020	0.0029
Cu (mg/L)	0.3	0.0009	0.0010	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	ND	ND	0.0007	0.0008
CN (mg/L)	1	0.0055	0.0111	0.0068	0.0092	0.0466	0.0135	0.0050	0.0222	ND	ND	0.0046	0.0043
Pb (mg/L)	0.2	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	ND	ND	0.0000	0.0000
Ni (mg/L)	0.5	0.0066	0.0064	0.0062	0.0066	0.0067	0.0059	0.0049	0.0051	ND	ND	0.0063	0.0070
Zn (mg/L)	0.5	0.0011	0.0014	0.0017	0.0022	0.0017	0.0033	0.0014	0.0023	ND	ND	0.0031	0.0016
TSS (mg/L)	15	0.70	0.69	0.25	0.25	0.75	0.75	0.55	0.63	ND	ND	0.25	0.25
Ra-226 (Bq/L)	0.37	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	ND	ND	0.0050	0.0050
pH Low	≥6.0	7.1	7.1	7.1	7.1	7.2	7.2	7.2	7.2	ND	ND	7.1	7.1
pH High	≤9.5	7.3	7.2	7.2	7.2	7.4	7.5	7.4	7.3	ND	ND	7.4	7.2
Flow (m <sup>3</sup> /month)	-	44,453	32,181	43,628	43,097	51,326	40,881	44,172	23,179	ND	ND	28,932	45,966
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	ND	ND	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	ND	ND	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	ND	ND	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	ND	ND	0	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Goldex (Mine)												
Operator	Mines Agnico-Eagle Limitée												
Product(s)	Gold												
Address	1953 3rd Avenue West, P.O. Box 87, Val-d'Or, Quebec J9P 4N9												
Effluent Discharge Point	Effluent final												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Goldex (Mine)												
Operator	Mines Agnico-Eagle Limitée												
Product(s)	Gold												
Address	1953 3rd Avenue West, P.O. Box 87, Val-d'Or, Quebec J9P 4N9												
Effluent Discharge Point	Effluent final - Parc à résidus Goldex												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0014	ND	ND	ND	ND	0.0013	0.0003	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0014	ND	ND	ND	ND	0.0006	0.0017	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	ND	ND	ND	ND	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0002	ND	ND	ND	ND	0.0002	0.0002	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0021	ND	ND	ND	ND	0.0046	0.0052	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0030	ND	ND	ND	ND	0.0020	0.0015	ND
TSS (mg/L)	15	ND	ND	ND	ND	12.21	ND	ND	ND	ND	2.29	2.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0027	ND	ND	ND	ND	0.0020	0.0010	ND
pH Low	≥6.0	ND	ND	ND	ND	7.2	ND	ND	ND	ND	7.4	7.3	ND
pH High	≤9.5	ND	ND	ND	ND	8.9	ND	ND	ND	ND	7.5	7.5	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	582,491	ND	ND	ND	ND	307,115	62,573	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	ND	ND	ND	ND	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Goldex (Mine)												
Operator	Mines Agnico-Eagle Limitée												
Product(s)	Gold												
Address	1953 3rd Avenue West, P.O. Box 87, Val-d'Or, Quebec J9P 4N9												
Effluent Discharge Point	Effluent final puits No. 2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Halley Plant												
Operator	Timminco Limited - Timminco Metals Halley Plant (Halley, ON)												
Product(s)	Magnesium, calcium, strontium												
Address	962 Magnesium Road, Halley Station, Ontario K0J 1Y0												
Effluent Discharge Point	FDP 1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	-	-	-
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Comments:	No submission of annual report.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>--</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Hislop Mine												
Operator	St. Andrew Goldfields Limited												
Product(s)	Gold												
Address	80 km east of Timmins and 1 km west off Hwy 572, Timmins, Ontario P0K 1N0												
Effluent Discharge Point	Sedimentation Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Holloway Mine												
Operator	Holloway Mining Company												
Product(s)	Gold												
Address	Highway 101E of Matheson, West of Quebec border, Matheson, Ontario P2N 3H7												
Effluent Discharge Point	Final Discharge Point												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0030	0.0018	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0850	0.1050	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0323	0.1600	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0003	0.0003	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3725	0.5100	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0020	0.0020	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.00	3.75	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0050	0.0050	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.2	7.2	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.0	7.7	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,579,568	275,110	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Huckleberry Mine												
Operator	Huckleberry Mines Limited												
Product(s)	Copper, molybdenum												
Address	P.O. Box 3000, Houston, British Columbia V0J 1Z0												
Effluent Discharge Point	Hu.EZDD - East Zone Diversion Ditch												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Huckleberry Mine												
Operator	Huckleberry Mines Limited												
Product(s)	Copper, molybdenum												
Address	P.O. Box 3000, Houston, British Columbia V0J 1Z0												
Effluent Discharge Point	Hu.SC3 - Sediment Control Structure 3												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	0.0004	0.0004	0.0005	0.0007	0.0008	0.0008	0.0009	0.0006	0.0003	0.0005	0.0004
Cu (mg/L)	0.3	0.0199	0.0226	0.0201	0.0310	0.0283	0.0152	0.0122	0.0105	0.0091	0.0086	0.0116	0.0125
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0004	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000
Ni (mg/L)	0.5	0.0005	0.0007	0.0005	0.0005	0.0006	0.0010	0.0010	0.0013	0.0027	0.0013	0.0005	0.0010
Zn (mg/L)	0.5	0.0161	0.0159	0.0148	0.0140	0.0108	0.0137	0.0150	0.0123	0.0150	0.0150	0.0090	0.0130
TSS (mg/L)	15	1.80	1.93	1.45	2.68	1.38	1.80	2.82	2.03	1.08	2.16	1.70	1.05
Ra-226 (Bq/L)	0.37	RF	0.0070	RF	RF	0.0025	RF	RF	0.0025	RF	RF	0.0100	0.0055
pH Low	≥6.0	7.5	7.7	7.8	7.8	8.0	8.0	7.9	7.8	8.0	7.7	7.9	7.9
pH High	≤9.5	8.0	8.1	8.1	8.1	8.1	8.1	8.1	8.0	8.1	8.0	8.0	7.9
Flow (m <sup>3</sup> /month)	-	3,164	5,331	5,048	11,742	38,967	5,380	6,488	3,593	3,989	6,681	10,099	8,778
Rainbow Trout	Pass	RF	RF	1	RF	-	-	RF	RF	1	RF	RF	RF
Acute Lethality Test	Fail	RF	RF	0	RF	-	-	RF	RF	0	RF	RF	RF
Daphnia magna	Pass	RF	RF	1	RF	-	-	RF	RF	1	RF	RF	RF
Monitoring Test	Fail	RF	RF	0	RF	-	-	RF	RF	0	RF	RF	RF

Comments:

The owner/operator did not report acute lethality test results within the second and fourth quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Huckleberry Mine												
Operator	Huckleberry Mines Limited												
Product(s)	Copper, molybdenum												
Address	P.O. Box 3000, Houston, British Columbia V0J 1Z0												
Effluent Discharge Point	Hu.SC4 - Sediment Control Structure 4												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.0008	0.0007	0.0006	0.0006	0.0007	0.0008	0.0009	0.0011	0.0008	0.0006	0.0007	0.0006
Cu (mg/L)	0.3	0.0155	0.0104	0.0118	0.0143	0.0197	0.0199	0.0153	0.0108	0.0106	0.0113	0.0143	0.0148
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Ni (mg/L)	0.5	0.0067	0.0060	0.0057	0.0057	0.0067	0.0106	0.0085	0.0025	0.0055	0.0053	0.0053	0.0053
Zn (mg/L)	0.5	0.0053	0.0060	0.0030	0.0035	0.0024	0.0070	0.0051	0.0030	0.0030	0.0030	0.0044	0.0038
TSS (mg/L)	15	2.58	2.43	2.68	2.15	5.65	2.10	3.92	3.05	3.28	2.20	2.18	2.25
Ra-226 (Bq/L)	0.37	RF	0.0025	RF	RF	0.0025	RF	RF	0.0025	RF	RF	0.0070	0.0043
pH Low	≥6.0	7.9	8.1	8.0	8.1	8.1	8.2	8.2	8.0	8.1	8.0	8.1	8.1
pH High	≤9.5	8.1	8.2	8.2	8.2	8.2	8.2	8.3	8.2	8.2	8.1	8.2	8.2
Flow (m <sup>3</sup> /month)	-	209,297	253,722	256,494	243,864	262,971	267,395	320,414	40,797	73,366	207,346	169,415	196,313
Rainbow Trout	Pass	RF	RF	1	RF	1	RF	RF	RF	1	RF	RF	RF
Acute Lethality Test	Fail	RF	RF	0	RF	0	RF	RF	RF	0	RF	RF	RF
Daphnia magna	Pass	RF	RF	1	RF	1	RF	RF	RF	1	RF	RF	RF
Monitoring Test	Fail	RF	RF	0	RF	0	RF	RF	RF	0	RF	RF	RF

Comments:

The owner/operator did not report acute lethality test results within the fourth quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Huckleberry Mine												
Operator	Huckleberry Mines Limited												
Product(s)	Copper, molybdenum												
Address	P.O. Box 3000, Houston, British Columbia V0J 1Z0												
Effluent Discharge Point	HU.SC6 - Sediment Control Structure 6												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	0.0003	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0021	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0001	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0003	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0015	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	3.30	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	RF	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	7.8	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	7.8	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	2,611	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND

**Comments:**

The owner/operator did not report measurement of radium-226 within the second quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Huckleberry Mine												
Operator	Huckleberry Mines Limited												
Product(s)	Copper, molybdenum												
Address	P.O. Box 3000, Houston, British Columbia V0J 1Z0												
Effluent Discharge Point	HU.SC7 - Sediment Control Structure 7												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0019	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0043	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0002	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0009	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0024	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	9.20	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0025	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	8.1	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	8.1	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	6,729	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Huckleberry Mine												
Operator	Huckleberry Mines Limited												
Product(s)	Copper, molybdenum												
Address	P.O. Box 3000, Houston, British Columbia V0J 1Z0												
Effluent Discharge Point	HU.SC8 - Sediment Control Structure 8												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	0.0019	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0139	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0004	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0011	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0044	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	15.33	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0025	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	7.7	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	8.2	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	32.510	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Huckleberry Mine												
Operator	Huckleberry Mines Limited												
Product(s)	Copper, molybdenum												
Address	P.O. Box 3000, Houston, British Columbia V0J 1Z0												
Effluent Discharge Point	Hu.TRO - Tahtsa Reach Outfall												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0004	0.0004	0.0004	0.0004	0.0003	0.0003	0.0003	ND	ND	0.0004	0.0004	0.0004
Cu (mg/L)	0.3	0.0142	0.0155	0.0093	0.0090	0.0202	0.0279	0.0412	ND	ND	0.0280	0.0113	0.0104
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	ND	ND	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	ND	ND	0.0001	0.0001	0.0001
Ni (mg/L)	0.5	0.0331	0.0261	0.0206	0.0166	0.0110	0.0218	0.0437	ND	ND	0.0445	0.0338	0.0322
Zn (mg/L)	0.5	0.0117	0.0152	0.0081	0.0072	0.0120	0.0172	0.0265	ND	ND	0.0203	0.0045	0.0030
TSS (mg/L)	15	3.14	4.63	5.25	5.88	2.50	3.27	3.07	ND	ND	3.63	2.85	3.98
Ra-226 (Bq/L)	0.37	RF	0.0060	RF	RF	RF	RF	RF	ND	ND	RF	0.0090	0.0052
pH Low	≥6.0	7.6	7.8	7.8	7.9	8.2	8.1	7.9	ND	ND	8.1	8.1	8.0
pH High	≤9.5	7.9	8.2	8.1	8.1	8.2	8.3	8.3	ND	ND	8.2	8.1	8.1
Flow (m <sup>3</sup> /month)	-	475,300	319,275	368,934	329,310	47730	415,230	204,780	ND	ND	408,350	327,360	155,690
Rainbow Trout	Pass	1	1	1	1	-	-	1	ND	ND	1	1	1
Acute Lethality Test	Fail	0	0	0	0	-	-	0	ND	ND	0	0	0
Daphnia magna	Pass	1	1	1	1	-	-	0	ND	ND	1	1	1
Monitoring Test	Fail	0	0	0	0	-	-	1	ND	ND	0	0	0

**Comments:**

The owner/operator did not report measurement of radium-226 within the second and third quarter. The owner/operator reported to be in 'normal frequency' for acute lethality testing in May and June, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Island Gold Mine												
Operator	Richmont Mines Incorporated												
Product(s)	Gold												
Address	15 Goudreau Road, P.O. Box 456, Dubreuilville, Ontario P0S 1B0												
Effluent Discharge Point	IG-2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0055	0.0037	0.0068	0.0082	0.0065	0.0057	0.0055	0.0043	ND
Cu (mg/L)	0.3	ND	ND	ND	0.0070	0.0030	0.0410	0.0192	0.0178	0.0233	0.0633	0.0877	ND
CN (mg/L)	1	ND	ND	ND	0.0042	9.3600	0.0061	0.0145	0.0040	0.0063	0.0925	0.1537	ND
Pb (mg/L)	0.2	ND	ND	ND	0.0005	0.0005	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	ND
Ni (mg/L)	0.5	ND	ND	ND	0.0079	0.0035	0.0183	0.0088	0.0120	0.0184	0.0338	0.0417	ND
Zn (mg/L)	0.5	ND	ND	ND	0.0061	0.0048	0.0023	0.0013	0.0025	0.0067	0.0038	0.0077	ND
TSS (mg/L)	15	ND	ND	ND	0.68	0.35	2.35	1.50	0.90	2.98	6.74	6.23	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0050	RF	RF	RF	RF	0.0050	RF	0.0050	ND
pH Low	≥6.0	ND	ND	ND	6.9	8.0	7.9	8.0	6.9	7.5	6.9	7.4	ND
pH High	≤9.5	ND	ND	ND	7.2	8.0	8.0	8.1	7.9	7.8	7.5	7.7	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	109,653	44,037	225,385	98,313	254,689	431,163	571,106	344,716	ND
Rainbow Trout	Pass	ND	ND	ND	1	0	1	2	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	0	1	0	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	1	0	1	2	1	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	0	1	0	0	0	0	0	0	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	James Mine												
Operator	Labrador Iron Mines Limited												
Product(s)	Iron ore												
Address	3 km E of Schefferville, Newfoundland and Labrador M5J 2W4												
Effluent Discharge Point	Ruth Pit Outlet												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	0.0005	RF	RF	0.0005	RF	-	-	-	-	-	-
Cu (mg/L)	0.3	RF	0.0005	RF	RF	0.0005	RF	-	-	-	-	-	-
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	-	-	-	-	-	-
Pb (mg/L)	0.2	RF	0.0003	RF	RF	0.0003	RF	-	-	-	-	-	-
Ni (mg/L)	0.5	RF	0.0010	RF	RF	0.0010	RF	-	-	-	-	-	-
Zn (mg/L)	0.5	RF	0.0110	RF	RF	0.0140	RF	-	-	-	-	-	-
TSS (mg/L)	15	1.44	1.00	1.00	2.20	1.00	2.53	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	RF	0.0025	RF	RF	0.0025	RF	-	-	-	-	-	-
pH Low	≥6.0	7.9	7.4	7.8	7.7	7.6	7.8	-	-	-	-	-	-
pH High	≤9.5	7.9	7.9	7.9	7.9	8.0	7.9	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	316,074	166,567	200,525	200,049	247,015	300,828	-	-	-	-	-	-
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	-	-	-	-	-	-
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	-	-	-	-	-	-
Daphnia magna	Pass	RF	1	RF	RF	1	RF	-	-	-	-	-	-
Monitoring Test	Fail	RF	0	RF	RF	0	RF	-	-	-	-	-	-

Comments:  
Recognized closed mine as of June 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Jolu Mill Site												
Operator	Golden Band Resources Incorporated												
Product(s)	Gold												
Address	2911 - D, Cleveland Avenue, Saskatoon, Saskatchewan S7K 8A9												
Effluent Discharge Point	Mallard Tailings Management Facility - Cell C Outlet Berm												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0008	0.0007	ND	0.0007	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0355	0.0322	ND	0.0335	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	0.0190	0.0220	ND	0.0165	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0016	0.0015	ND	0.0014	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0038	0.0034	ND	0.0036	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0019	0.0015	ND	0.0009	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	13.75	9.40	ND	5.50	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0043	0.0025	ND	0.0025	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	6.3	6.6	ND	6.2	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	7.0	6.9	ND	6.8	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	128,649	98,928	ND	144,488	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	ND	1	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	ND	0	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	ND	1	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	ND	0	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Key Lake Operation												
Operator	Cameco Corporation												
Product(s)	Uranium												
Address	2121-11th Street West, Saskatoon, Saskatchewan S7M 1J3												
Effluent Discharge Point	Station 1.2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Cu (mg/L)	0.3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Ni (mg/L)	0.5	0.0140	0.0130	0.0123	0.0176	0.0145	0.0180	0.0200	0.0118	0.0165	0.0164	0.0175	0.0192
Zn (mg/L)	0.5	0.0010	0.0010	0.0008	0.0012	0.0008	0.0013	0.0013	0.0006	0.0010	0.0010	0.0015	0.0016
TSS (mg/L)	15	0.10	0.10	0.10	0.14	0.10	0.23	0.12	0.10	0.10	0.10	0.15	0.12
Ra-226 (Bq/L)	0.37	0.0025	0.0031	0.0031	0.0025	0.0036	0.0025	0.0025	0.0025	0.0025	0.0052	0.0054	0.0045
pH Low	≥6.0	6.5	6.7	6.8	6.8	6.7	6.6	6.6	6.2	6.2	6.2	6.1	6.2
pH High	≤9.5	6.8	7.1	7.0	6.9	7.0	7.0	6.8	6.9	6.7	6.9	6.5	6.6
Flow (m <sup>3</sup> /month)	-	485,470	432,485	506,655	415,908	425,439	429,187	380,936	330,818	373,625	450,587	462,737	429,341
Rainbow Trout	Pass	RF	-	1	RF	RF	1	RF	RF	1	RF	RF	-
Acute Lethality Test	Fail	RF	-	0	RF	RF	0	RF	RF	0	RF	RF	-
Daphnia magna	RF	-	1	RF	RF	1	RF	RF	1	RF	RF	-	-
Monitoring Test	RF	-	0	RF	RF	0	RF	RF	0	RF	RF	-	-

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in February, however, no test results were submitted for this month. The owner/operator did not report acute lethality testing within the fourth quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Key Lake Operation												
Operator	Cameco Corporation												
Product(s)	Uranium												
Address	2121-11th Street West, Saskatoon, Saskatchewan S7M 1J3												
Effluent Discharge Point	Station 1.4												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0061	0.0084	0.0009	0.0007	0.0018	0.0136	0.0106	0.0091	0.0110	0.0137	0.0054	0.0026
Cu (mg/L)	0.3	0.0038	0.0028	0.0013	0.0018	0.0026	0.0015	0.0007	0.0007	0.0006	0.0011	0.0009	0.0008
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0008	0.0004	0.0002	0.0002	0.0003	0.0004	0.0001	0.0001	0.0003	0.0002	0.0002	0.0003
Ni (mg/L)	0.5	0.2095	0.2778	0.2895	0.2526	0.2475	0.1543	0.3670	0.3560	0.2478	0.1786	0.1605	0.1293
Zn (mg/L)	0.5	0.0089	0.0086	0.0104	0.0098	0.0082	0.0033	0.0032	0.0037	0.0040	0.0032	0.0048	0.0052
TSS (mg/L)	15	3.66	3.00	1.90	1.66	1.90	1.48	0.97	3.50	0.83	3.45	2.35	4.21
Ra-226 (Bq/L)	0.37	0.0225	0.0090	0.0100	0.0540	0.0363	0.1188	0.0217	0.0288	0.0350	0.0090	0.0700	0.1375
pH Low	≥6.0	6.4	6.4	6.6	6.5	6.5	6.5	6.5	6.6	6.5	6.7	6.7	6.6
pH High	≤9.5	6.5	6.5	6.7	6.9	6.8	6.8	6.7	6.9	6.7	6.8	6.9	6.7
Flow (m <sup>3</sup> /month)	-	88,786	126,047	118,232	117,740	130,318	84,071	47,811	49,830	151,849	139,483	138,182	136,062
Rainbow Trout	Pass	-	-	1	RF	RF	1	RF	RF	1	RF	RF	-
Acute Lethality Test	Fail	-	-	0	RF	RF	0	RF	RF	0	RF	RF	-
Daphnia magna	RF	-	-	1	RF	RF	1	RF	RF	1	RF	RF	-
Monitoring Test	RF	-	-	0	RF	RF	0	RF	RF	0	RF	RF	-

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in January and February, however, no test results were submitted for these months. The owner/operator did not report acute lethality testing within the fourth quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Kidd Metallurgical Division												
Operator	Glencore Canada Corporation												
Product(s)	Copper, zinc, silver												
Address	10050 Highway 101 East, Hoyle Township, Timmins, Ontario P4N 7K1												
Effluent Discharge Point	Final Effluent Monitoring Point												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	0.0006	0.0010	0.0009	0.0017	0.0021	0.0030	ND	0.0038	0.0018	0.0009	0.0008
Cu (mg/L)	0.3	0.0034	0.0010	0.0018	0.0048	0.0040	0.0035	0.0031	ND	0.0033	0.0041	0.0033	0.0028
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	ND	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0010	0.0018	0.0003	0.0003	0.0001	0.0002	0.0001	ND	0.0001	0.0003	0.0001	0.0002
Ni (mg/L)	0.5	0.0010	0.0010	0.0007	0.0008	0.0010	0.0013	0.0017	ND	0.0008	0.0008	0.0008	0.0008
Zn (mg/L)	0.5	0.0068	0.0015	0.0108	0.0240	0.0123	0.0115	0.0085	ND	0.0130	0.0218	0.0158	0.0148
TSS (mg/L)	15	1.00	1.25	1.25	1.40	1.00	1.25	1.00	ND	1.00	0.80	0.63	1.00
Ra-226 (Bq/L)	0.37	RF	0.0080	RF	RF	0.0025	RF	RF	ND	0.0025	RF	0.0080	RF
pH Low	≥6.0	7.2	7.2	7.1	7.2	7.4	7.5	7.3	ND	8.2	8.0	7.4	7.3
pH High	≤9.5	7.4	7.8	7.2	7.4	7.7	8.0	7.8	ND	8.6	8.8	8.0	7.5
Flow (m <sup>3</sup> /month)	-	407,640	272,910	327,610	2,281,440	1,502,550	983,470	191,210	ND	957,300	2,778,420	914,750	488,160
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	RF	ND	1	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	RF	ND	0	RF	0	RF
Daphnia magna	RF	RF	1	RF	RF	1	RF	RF	ND	1	RF	1	RF
Monitoring Test	RF	RF	0	RF	RF	0	RF	RF	ND	0	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Kidd Mining Division												
Operator	Glencore Canada Corporation												
Product(s)	Copper, zinc, silver												
Address	Highway 655 North, Timmins, Ontario P4N 7K1												
Effluent Discharge Point	Treatment Pond Final Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0002	0.0004	0.0003	ND	0.0003	0.0003	0.0003	ND	ND	0.0003	0.0003	0.0004
Cu (mg/L)	0.3	0.0071	0.0044	0.0036	ND	0.0070	0.0096	0.0079	ND	ND	0.0079	0.0117	0.0130
CN (mg/L)	1	NCU	NCU	NCU	ND	NCU	NCU	NCU	ND	ND	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0000	0.0000	ND	0.0001	0.0002	0.0001	ND	ND	0.0002	0.0000	0.0001
Ni (mg/L)	0.5	0.0012	0.0009	0.0012	ND	0.0004	0.0003	0.0004	ND	ND	0.0006	0.0003	0.0008
Zn (mg/L)	0.5	0.2940	0.1740	0.2380	ND	0.1204	0.0475	0.0297	ND	ND	0.2106	0.1425	0.2247
TSS (mg/L)	15	1.20	1.00	2.00	ND	1.30	2.00	1.00	ND	ND	1.20	1.50	2.67
Ra-226 (Bq/L)	0.37	0.0050	RF	RF	ND	0.0100	RF	0.0100	ND	ND	RF	0.0090	RF
pH Low	≥6.0	7.9	8.5	8.8	ND	7.1	8.4	8.5	ND	ND	7.5	7.8	7.9
pH High	≤9.5	8.9	8.8	8.8	ND	8.9	8.6	8.6	ND	ND	8.6	8.7	8.4
Flow (m <sup>3</sup> /month)	-	543,860	422,760	105,480	ND	1,123,832	892,040	293,040	ND	ND	894,390	736,360	486,880
Rainbow Trout	Pass	1	RF	RF	ND	1	RF	1	ND	ND	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	ND	0	RF	0	ND	ND	0	RF	RF
Daphnia magna	RF	1	RF	RF	ND	1	RF	1	ND	ND	1	RF	RF
Monitoring Test	RF	0	RF	RF	ND	0	RF	0	ND	ND	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Kiena (Mine)												
Operator	Mines d'Or Wesdome Limitée												
Product(s)	Gold												
Address	950 Kienawisik Road, Val-d'Or, Quebec J9P 4P3												
Effluent Discharge Point	Effluent Final												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cu (mg/L)	0.3	ND	ND	ND	0.0075	0.0048	0.0034	0.0038	0.0034	0.0056	0.0047	0.0039	0.0027
CN (mg/L)	1	ND	ND	ND	0.0197	0.0028	0.0015	0.0019	0.0015	0.0015	0.0015	0.0037	0.0084
Pb (mg/L)	0.2	ND	ND	ND	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0007	0.0005	0.0004
Ni (mg/L)	0.5	ND	ND	ND	0.0080	0.0079	0.0064	0.0078	0.0078	0.0078	0.0074	0.0090	0.0130
Zn (mg/L)	0.5	ND	ND	ND	0.0035	0.0035	0.0035	0.0035	0.0035	0.0035	0.0127	0.0035	0.0035
TSS (mg/L)	15	ND	ND	ND	2.00	4.00	1.50	1.00	2.00	2.50	1.20	1.25	1.00
Ra-226 (Bq/L)	0.37	ND	ND	ND	RF	0.0025	RF	RF	0.0025	RF	0.0025	RF	RF
pH Low	≥6.0	ND	ND	ND	7.2	7.3	7.5	7.4	7.3	7.5	7.3	7.4	7.4
pH High	≤9.5	ND	ND	ND	7.4	7.8	7.6	7.7	7.6	7.5	7.8	7.8	8.2
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	41,337	89,700	99,192	257,286	166,471	67,894	233,859	121,770	10,682
Rainbow Trout	Pass	ND	ND	ND	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	ND	ND	ND	0	0	0	0	0	0	0	0	0
Daphnia magna	RF	ND	ND	ND	1	1	1	1	1	1	1	1	1
Monitoring Test	RF	ND	ND	ND	0	0	0	0	0	0	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Lac Bachelor												
Operator	Ressources Métanor Incorporé												
Product(s)	Gold												
Address	200 Mine Road, Desmaraisville, Quebec J0Y 1H0												
Effluent Discharge Point	Canal Parshall												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.0002	0.0009	0.0005	0.0002	0.0002	0.0002	0.0002	0.0007	0.0002	0.0002	0.0002	0.0003
Cu (mg/L)	0.3	0.0048	0.0036	0.0170	0.0865	0.0068	0.0057	0.0115	0.0209	0.0237	0.0350	0.0509	0.0450
CN (mg/L)	1	0.0464	0.0488	0.0943	0.2910	0.0298	0.0128	0.0317	0.0446	0.0552	0.1171	0.1488	0.1412
Pb (mg/L)	0.2	0.0010	0.0007	0.0004	0.0008	0.0006	0.0003	0.0002	0.0006	0.0009	0.0009	0.0008	0.0009
Ni (mg/L)	0.5	0.0022	0.0018	0.0033	0.0102	0.0025	0.0020	0.0015	0.0023	0.0027	0.0023	0.0026	0.0022
Zn (mg/L)	0.5	0.0106	0.0100	0.0086	0.0138	0.0046	0.0035	0.0035	0.0114	0.0066	0.0085	0.0086	0.0085
TSS (mg/L)	15	2.79	1.92	1.62	5.77	6.08	1.88	1.42	2.21	6.00	2.36	2.23	4.75
Ra-226 (Bq/L)	0.37	RF	0.0090	RF	RF	RF	0.0120	RF	RF	0.0120	0.0130	0.0100	0.0220
pH Low	≥6.0	7.6	7.5	7.4	7.2	7.8	7.7	7.6	7.9	7.9	7.9	7.6	7.5
pH High	≤9.5	8.1	8.3	8.2	8.3	8.1	8.0	8.2	8.2	8.5	8.1	8.1	7.9
Flow (m <sup>3</sup> /month)	-	73,367	55,836	61,814	60,464	64,044	63,578	179,530	181,465	161,906	158,970	173,031	165,089
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	RF	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	RF	0	0	0	0	0	0	0	0	0	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Lac Bloom (Mine)												
Operator	Minerai de Fer Québec Incorporated												
Product(s)	Iron ore												
Address	P.O. Box 880, Route 389, Fermeville, Quebec G1G 1J0												
Effluent Discharge Point	EFF-REC2 Effluent de l'unité de traitement des eaux usées de la mine et des bassins de recirculation												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	0.0005	0.0129	0.0003	0.0005	0.0003	0.0004	0.0006	0.0003	0.0002	ND
Cu (mg/L)	0.3	ND	ND	0.0020	0.0254	0.0013	0.0005	0.0008	0.0007	0.0011	0.0008	0.0005	ND
CN (mg/L)	1	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	0.0005	0.0129	0.0004	0.0005	0.0004	0.0007	0.0005	0.0004	0.0003	ND
Ni (mg/L)	0.5	ND	ND	0.0085	0.0060	0.0064	0.0050	0.0040	0.0036	0.0043	0.0042	0.0050	ND
Zn (mg/L)	0.5	ND	ND	0.0053	0.0061	0.0039	0.0055	0.0046	0.0031	0.0034	0.0044	0.0030	ND
TSS (mg/L)	15	ND	ND	4.00	2.50	3.80	2.25	3.75	3.00	2.75	2.60	1.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	0.0200	0.0080	RF	0.0025	0.0025	0.0070	RF	0.0025	RF	ND
pH Low	≥6.0	ND	ND	7.4	7.4	7.0	7.4	7.5	7.3	7.6	7.3	7.4	ND
pH High	≤9.5	ND	ND	7.5	7.5	7.5	8.0	7.9	7.6	7.9	7.7	7.4	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	849,060	1,413,211	2,289,342	2,205,95	2,268,04	1,420,126	1,289,05	1,373,970	158,290	ND
Rainbow Trout	Pass	ND	ND	1	1	1	1	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	0	0	0	0	0	0	0	0	0	ND
Daphnia magna	RF	ND	ND	1	1	1	1	1	1	1	1	1	ND
Monitoring Test	RF	ND	ND	0	0	0	0	0	0	0	0	0	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Lac Des Iles Mine												
Operator	North American Palladium Limited												
Product(s)	Palladium, platinum, gold, copper, nickel												
Address	P.O. Box 10547, Thunder Bay, Ontario P7B 6T9												
Effluent Discharge Point	FDP2 (Veolia) Discharge Point												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	RF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	RF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Lac Des Iles Mine												
Operator	North American Palladium Limited												
Product(s)	Palladium, platinum, gold, copper, nickel												
Address	P.O. Box 10547, Thunder Bay, Ontario P7B 6T9												
Effluent Discharge Point	Final Discharge Point 1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0002	0.0002	0.0002	0.0002	ND	0.0002	0.0002	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0011	0.0021	0.0027	0.0031	ND	0.0019	0.0012	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	NCU	NCU	ND	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0005	0.0001	0.0001	0.0000	ND	0.0002	0.0000	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0097	0.0086	0.0078	0.0168	ND	0.0081	0.0089	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0009	0.0021	0.0015	0.0015	ND	0.0035	0.0020	ND
TSS (mg/L)	15	ND	ND	ND	ND	4.80	3.38	3.13	7:17	ND	8.83	5.50	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0050	0.0050	0.0050	0.0050	ND	0.0050	0.0050	ND
pH Low	≥6.0	ND	ND	ND	ND	7.5	7.5	7.6	7.5	ND	7.5	7.4	ND
pH High	≤9.5	ND	ND	ND	ND	7.8	7.8	7.7	7.7	ND	7.7	7.6	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	255,326	251,256	191,677	42,957	ND	96,142	156,240	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	1	1	ND	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	0	0	ND	0	0	ND
Daphnia magna	RF	ND	ND	ND	ND	1	1	1	1	ND	1	1	ND
Monitoring Test	RF	ND	ND	ND	ND	0	0	0	0	ND	0	0	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Lac Herbin (Mine)												
Operator	QMX Gold Corporation												
Product(s)	Gold												
Address	1900 Brador Road, Val-d'Or, Quebec J9P 7A9												
Effluent Discharge Point	Effluent final 1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	RF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	RF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Lac Herbin (Mine)												
Operator	QMX Gold Corporation												
Product(s)	Gold												
Address	1900 Brador Road, Val-d'Or, Quebec J9P 7A9												
Effluent Discharge Point	Effluent final 2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	RF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	RF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Langlois (Mine)												
Operator	Ressources Breakwater Limitée												
Product(s)	Zinc, copper, silver, gold												
Address	Route 1000, Km 42, Lebel-sur-Quévillon, Quebec J0Y 1X0												
Effluent Discharge Point	Effluent final principal												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0035	0.0003	0.0025	0.0006	0.0007	0.0003	ND	0.0008	0.0003	0.0005	0.0014	0.0009
Cu (mg/L)	0.3	0.0095	0.0087	0.0070	0.0065	0.0060	0.0075	ND	0.0483	0.0062	0.0076	0.0166	0.0132
CN (mg/L)	1	NCU	0.0010	NCU	0.0020	0.0005	0.0005	ND	0.0005	NCU	NCU	0.0010	NCU
Pb (mg/L)	0.2	0.0008	0.0002	0.0010	0.0007	0.0041	0.0002	ND	0.0006	0.0013	0.0029	0.0060	0.0026
Ni (mg/L)	0.5	0.0043	0.0049	0.0012	0.0037	0.0030	0.0075	ND	0.0130	0.0061	0.0022	0.0057	0.0025
Zn (mg/L)	0.5	0.0666	0.0498	0.0338	0.0142	0.0328	0.0323	ND	0.0484	0.0443	0.1516	0.1840	0.1625
TSS (mg/L)	15	0.80	1.75	1.50	0.94	3.64	2.41	ND	1.87	2.08	1.46	1.62	1.63
Ra-226 (Bq/L)	0.37	RF	0.0020	RF	0.0017	0.0015	0.0020	ND	0.0010	RF	RF	0.0010	RF
pH Low	≥6.0	7.5	7.5	7.5	8.7	7.2	7.5	ND	7.2	7.5	6.6	6.6	7.3
pH High	≤9.5	7.9	7.7	7.9	9.5	9.1	8.6	ND	8.4	7.9	7.7	7.5	7.6
Flow (m <sup>3</sup> /month)	-	64,653	60,126	69,410	211,038	425,300	411,013	ND	226,049	203,583	407,911	219,601	206,791
Rainbow Trout	Pass	1	1	0	1	3	1	ND	1	1	1	1	1
Acute Lethality Test	Fail	0	0	1	4	0	0	ND	0	0	0	0	0
Daphnia magna	RF	1	1	1	3	3	1	ND	1	1	1	1	1
Monitoring Test	RF	0	0	0	2	0	0	ND	0	0	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Lapa (Mine)												
Operator	Mines Agnico-Eagle Limitée												
Product(s)	Gold												
Address	299 St.-Paul Boulevard North, Rivière-Éva, Quebec J0Y 2H0												
Effluent Discharge Point	Effluent final - bassin de sédimentation												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.1517	0.1373	0.0979	0.0892	0.0500	0.0808	0.0558	0.1011	0.1423	0.1329	0.0799	0.0636
Cu (mg/L)	0.3	0.0064	0.0058	0.0056	0.0045	0.0038	0.0043	0.0037	0.0044	0.0046	0.0030	0.0031	0.0040
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0006	0.0002	0.0007	0.0002	0.0007	0.0002	0.0003	0.0004	0.0005	0.0002	0.0002	0.0002
Ni (mg/L)	0.5	0.0574	0.0477	0.0355	0.0373	0.0343	0.0189	0.0140	0.0234	0.0264	0.0265	0.0302	0.0386
Zn (mg/L)	0.5	0.0360	0.0128	0.0102	0.0074	0.0063	0.0048	0.0060	0.0090	0.0090	0.0066	0.0083	0.0040
TSS (mg/L)	15	6.33	4.75	3.10	6.25	6.20	5.50	3.75	6.00	7.50	5.80	6.00	3.00
Ra-226 (Bq/L)	0.37	RF	RF	0.0180	RF	RF	0.0170	0.0160	0.0090	RF	0.0210	RF	RF
pH Low	≥6.0	7.3	7.3	6.9	6.9	6.9	7.3	7.1	7.4	7.1	6.8	6.7	6.5
pH High	≤9.5	7.4	7.8	7.1	7.2	7.4	8.1	7.8	7.8	7.6	7.1	7.0	6.9
Flow (m <sup>3</sup> /month)	-	7595	7500	6,635	10,552	13,982	10,312	7,929	13,902	14,472	21,499	9,252	4,829
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	RF	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	RF	0	0	0	0	0	0	0	0	0	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	LaRonde (Mine)												
Operator	Mines Agnico-Eagle Limitée												
Product(s)	Gold, silver, copper, zinc												
Address	10200 Preissac Road, Rouyn-Noranda, Quebec J0Y 1C0												
Effluent Discharge Point	Effluent final 3A												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.0173	0.0051	0.0012	0.0003	0.0011	0.0012	0.0003	0.0003	0.0003	0.0014	0.0019	0.0003
Cu (mg/L)	0.3	0.0423	0.0944	0.0464	0.0330	0.0213	0.0192	0.0214	0.0273	0.0269	0.0311	0.0357	0.0246
CN (mg/L)	1	0.0522	0.0660	0.0865	0.0935	0.0326	0.0110	0.0038	0.0038	0.0020	0.0042	0.0124	0.0220
Pb (mg/L)	0.2	0.0003	0.0002	0.0003	0.0002	0.0008	0.0002	0.0050	0.0002	0.0002	0.0002	0.0002	0.0002
Ni (mg/L)	0.5	0.1240	0.1237	0.0736	0.0631	0.0357	0.0532	0.0335	0.0407	0.0368	0.0491	0.0810	0.0881
Zn (mg/L)	0.5	0.0662	0.0700	0.0478	0.0273	0.0158	0.0135	0.0244	0.0160	0.0518	0.0584	0.0503	0.0650
TSS (mg/L)	15	4.60	5.75	4.50	5.25	10.80	8.75	7.20	12.75	8.00	5.00	4.75	9.00
Ra-226 (Bq/L)	0.37	0.0050	RF	0.0060	RF	RF	0.0040	RF	0.0020	0.0040	0.0140	RF	RF
pH Low	≥6.0	6.9	6.9	6.6	6.8	7.5	7.0	7.1	7.2	7.1	7.4	6.7	6.6
pH High	≤9.5	7.2	7.1	6.8	7.0	8.0	7.4	7.2	7.4	7.6	7.7	7.2	7.0
Flow (m <sup>3</sup> /month)	-	129,910	209,334	205,696	200,287	267,847	258,670	281,562	258,705	255,064	335,410	271,852	258,133
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	RF	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	RF	0	0	0	0	0	0	0	0	0	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Lockerby Mine												
Operator	First Nickel Incorporated												
Product(s)	Copper, nickel												
Address	N1-2 Lot 2 Concession 5, PCL 454, SWS Denison Twp., Whitefish, Ontario P0M 3E0												
Effluent Discharge Point	Number 4 Pond Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	-	-	-
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	RF	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	RF	-	-	-	-	-	-	-	-	-	-	-	-
Comments:	No submission of annual report.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Long Harbour Operations												
Operator	Vale Newfoundland and Labrador												
Product(s)	Nickel, copper, cobalt												
Address	1 Nickel Road, P.O. Box 39, Long Harbour, Newfoundland and Labrador A0B 2J0												
Effluent Discharge Point	Long Harbour Operations Marine Effluent Outfall												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	RF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	RF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Long Harbour Operations												
Operator	Vale Newfoundland and Labrador												
Product(s)	Nickel, copper, cobalt												
Address	1 Nickel Road, P.O. Box 39, Long Harbour, Newfoundland and Labrador A0B 2J0												
Effluent Discharge Point	Long Harbour Operations Lower Tier Storm Water Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0010	0.0010	0.0010	0.0010	0.0010	0.0012	0.0015	0.0011	0.0017	0.0011	0.0013	0.0013
Cu (mg/L)	0.3	0.0047	0.0036	0.0055	0.0083	0.0048	0.0028	0.0045	0.0047	0.0040	0.0070	0.0097	0.0158
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0003	0.0003	0.0004	0.0010	0.0008	0.0003	0.0003	0.0003	0.0003	0.0004	0.0006	0.0013
Ni (mg/L)	0.5	0.1408	0.0993	0.1055	0.0916	0.1005	0.1155	0.1140	0.1549	0.1567	0.2177	0.1399	0.1453
Zn (mg/L)	0.5	0.0025	0.0044	0.0035	0.0050	0.0031	0.0027	0.0057	0.0062	0.0112	0.0036	0.0050	0.0050
TSS (mg/L)	15	5.20	6.46	6.25	5.93	5.45	8.20	10.71	3.45	2.58	5.78	4.75	4.10
Ra-226 (Bq/L)	0.37	0.0080	0.0025	RF	0.0025	RF	0.0060	0.0025	RF	0.0090	0.0080	RF	RF
pH Low	≥6.0	6.9	6.9	6.9	7.4	7.1	7.3	7.3	7.2	7.1	7.0	7.2	7.1
pH High	≤9.5	7.6	7.4	7.7	7.8	7.5	7.7	7.8	7.7	7.7	7.6	7.4	7.6
Flow (m <sup>3</sup> /month)	-	311,147	273,477	504,815	637,287	633,075	678,514	616,642	577,944	514,523	109,023	505,877	663,792
Rainbow Trout	Pass	4	1	1	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	0	0	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	RF	4	1	1	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	RF	0	0	0	0	RF	RF	0	RF	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Lupin Mine												
Operator	Lupin Mines Incorporated												
Product(s)	Gold												
Address	Contwoyto Lake, Nunavut												
Effluent Discharge Point	LUP-10												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0032	0.0064	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	0.0024	0.0023	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	0.0025	0.0033	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	0.0000	0.0000	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0553	0.0553	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.1650	0.1747	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	1.75	1.73	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	0.0130	0.0118	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	7.7	6.5	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	7.7	7.0	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	703,428	1,244,42	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	1	1	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	0	0	ND	ND	ND
Daphnia magna	RF	ND	ND	ND	ND	ND	ND	ND	1	-	ND	ND	ND
Monitoring Test	RF	ND	ND	ND	ND	ND	ND	ND	0	-	ND	ND	ND

Comments:  
The owner/operator did not complete an equal number of Daphnia magna acute lethality tests as Rainbow trout acute lethality tests in September. The name of the final discharge point changed from Tailings Polishing Pond No. 2 to LUP-10.

**NOTES:**  
**ND:** No Deposit    **RF:** Reduced Frequency    **NCU:** No Cyanide Used    **Pass:** ≤50% Mortality    **Fail:** >50% Mortality    **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Macassa Mine												
Operator	Kirkland Lake Gold Incorporated												
Product(s)	Gold												
Address	Highway 66, #3 Shaft, Kirkland Lake, Ontario P2N 3J1												
Effluent Discharge Point	C Dam												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0009	0.0010	0.0006	0.0008	0.0014	0.0016	0.0014	0.0018	0.0026	0.0025	0.0015	0.0025
Cu (mg/L)	0.3	0.0046	0.0045	0.0045	0.0058	0.0580	0.0168	0.0113	0.0164	0.0132	0.0155	0.0225	0.0255
CN (mg/L)	1	0.0052	0.0038	0.0030	0.0050	0.0442	0.0074	0.0060	0.0026	0.0088	0.0332	0.0785	0.1493
Pb (mg/L)	0.2	0.0005	0.0005	0.0005	0.0005	0.0013	0.0004	0.0003	0.0006	0.0003	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	0.0020	0.0013	0.0023	0.0018	0.0028	0.0026	0.0011	0.0015	0.0017	0.0038	0.0045	0.0045
Zn (mg/L)	0.5	0.0052	0.0045	0.0038	0.0038	0.0130	0.0074	0.0035	0.0076	0.0048	0.0052	0.0070	0.0053
TSS (mg/L)	15	1.40	1.00	1.25	3.50	3.10	2.20	2.00	0.90	1.80	2.58	1.75	1.00
Ra-226 (Bq/L)	0.37	RF	RF	0.0050	RF	-	0.0035	RF	RF	0.0050	0.0050	RF	RF
pH Low	≥6.0	7.6	7.7	7.6	7.7	7.7	7.9	7.8	7.8	7.9	7.7	7.8	7.8
pH High	≤9.5	8.1	8.0	8.0	7.9	8.0	8.0	7.9	8.1	8.0	8.2	8.0	8.1
Flow (m <sup>3</sup> /month)	-	134,696	99,339	123,297	129,094	326,639	290,381	247,568	177,221	194,540	218,554	183,586	172,209
Rainbow Trout	Pass	-	-	-	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	-	-	-	0	0	0	0	0	0	0	0	0
Daphnia magna	RF	-	-	-	1	1	1	1	1	1	1	1	1
Monitoring Test	RF	-	-	-	0	0	0	0	0	0	0	0	0

**Comments:**

The owner/operator did not complete acute lethality testing within the first quarter. The owner/operator reported to be in 'normal frequency' for radium-226 measurement in May, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mary River Project												
Operator	Baffinland Iron Mines												
Product(s)	Iron ore												
Address	2274 Upper Middle Road East, Suite 300, Oakville, Ontario L6H 0C3												
Effluent Discharge Point	MS-06												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0001	0.0002	0.0001	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0009	0.0016	0.0032	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	0.0010	0.0010	0.0058	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0002	0.0001	0.0002	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0092	0.0081	0.0151	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0070	0.0118	0.0041	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	4.20	2.90	2.55	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0093	0.0283	0.0098	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	7.5	7.6	6.8	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	7.7	7.8	7.5	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	622	1,582	783	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	0	ND	ND	ND	ND
Daphnia magna	RF	ND	ND	ND	ND	ND	1	1	1	ND	ND	ND	ND
Monitoring Test	RF	ND	ND	ND	ND	ND	0	0	0	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mary River Project												
Operator	Baffinland Iron Mines												
Product(s)	Iron ore												
Address	2274 Upper Middle Road East, Suite 300, Oakville, Ontario L6H 0C3												
Effluent Discharge Point	MS-08												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0005	0.0005	0.0005	0.0050	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0050	0.0080	0.0192	0.1000	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	0.0063	0.0556	0.1108	0.2000	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0003	0.0003	0.0003	0.0025	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0153	0.0287	0.0359	0.0500	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0300	0.0300	0.0300	0.3000	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	6.40	5.75	10.50	10.80	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0480	0.0258	0.0294	0.0320	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	8.9	8.3	8.6	8.8	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	8.9	9.2	9.2	8.8	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	931	30,720	39,348	2,626	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	-	1	1	1	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	-	0	0	0	ND	ND	ND
Daphnia magna	RF	ND	ND	ND	ND	ND	-	1	1	0	ND	ND	ND
Monitoring Test	RF	ND	ND	ND	ND	ND	-	0	0	1	ND	ND	ND

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in June, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Matagami (Mine)												
Operator	Glencore Canada Corporation												
Product(s)	Zinc, copper												
Address	500 Industriel Boulevard, Matagami, Quebec JOY 2A0												
Effluent Discharge Point	Effluent final (WLD)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0009	0.0008	0.0004	0.0046	0.0019	0.0003	0.0005	0.0014	0.0005	0.0004	0.0003	0.0006
Cu (mg/L)	0.3	0.0048	0.0087	0.0026	0.0024	0.0056	0.0036	0.0036	0.0019	0.0046	0.0054	0.0023	0.0018
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0006	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0002	0.0002
Ni (mg/L)	0.5	0.0050	0.0026	0.0015	0.0015	0.0021	0.0080	0.0035	0.0062	0.0057	0.0049	0.0021	0.0026
Zn (mg/L)	0.5	0.0238	0.0076	0.0093	0.0115	0.0748	0.1100	0.0435	0.0171	0.0260	0.0742	0.1168	0.0470
TSS (mg/L)	15	3.20	2.50	3.75	8.50	6.60	2.13	0.88	2.00	2.50	2.00	2.38	2.00
Ra-226 (Bq/L)	0.37	0.0010	RF	RF	RF	0.0040	RF	0.0010	RF	RF	0.0050	RF	RF
pH Low	≥6.0	8.5	8.3	8.7	8.8	7.3	7.2	7.5	6.9	8.7	8.5	8.7	8.5
pH High	≤9.5	9.1	9.2	8.9	8.9	9.0	8.5	9.0	8.6	9.1	8.9	8.9	8.7
Flow (m <sup>3</sup> /month)	-	406,599	420,172	589,062	873,656	2,073,766	660,652	671,311	582,262	748,552	1,447,727	1,082,717	636,472
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	RF	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	RF	0	0	0	0	0	0	0	0	0	0	0	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	McAlpine Mill Site												
Operator	SMC (Canada) Limited												
Product(s)	Gold, silver, platinum, palladium												
Address	Lot 4, Concession 4, P.O. Box 710, Coleman Road, Cobalt, Ontario P0J 1C0												
Effluent Discharge Point	Polishing Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.1866	0.2053	0.1215	0.1916	0.1475	0.1125	0.1386	-	0.1228	0.0928	0.0925	0.0800
Cu (mg/L)	0.3	0.0094	0.0050	0.0020	0.0526	0.0354	0.0125	0.0100	-	0.0085	0.0081	0.0049	0.0048
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0029	0.0038	0.0027	0.0162	0.0115	0.0029	0.0029	-	0.0029	0.0029	0.0034	0.0029
Ni (mg/L)	0.5	0.0234	0.0227	0.0175	0.0236	0.0107	0.0033	0.0026	-	0.0035	0.0020	0.0163	0.0118
Zn (mg/L)	0.5	0.0058	0.0535	0.0058	0.0394	0.0653	0.0538	0.0450	-	0.0523	0.0080	0.0010	0.0418
TSS (mg/L)	15	2.40	2.00	1.25	3.20	5.00	2.50	2.20	-	3.25	3.40	3.50	3.40
Ra-226 (Bq/L)	0.37	RF	0.0025	RF	RF	0.0050	RF	RF	RF	0.0050	RF	0.0025	RF
pH Low	≥6.0	6.6	7.0	6.8	7.3	8.1	8.1	8.2	-	8.3	8.0	7.9	8.0
pH High	≤9.5	8.5	7.9	8.2	8.3	8.7	8.2	8.7	-	8.3	8.4	8.3	8.2
Flow (m <sup>3</sup> /month)	-	45,818	26,585	16,859	108,127	412,645	56,426	13,882	791	30,474	85,950	91,968	47,486
Rainbow Trout	Pass	-	1	-	-	1	-	-	-	1	-	1	-
Acute Lethality Test	Fail	-	0	-	-	0	-	-	-	0	-	0	-
Daphnia magna	RF	-	1	-	-	1	-	-	-	1	-	1	-
Monitoring Test	RF	-	0	-	-	0	-	-	-	0	-	0	-

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in January, March, April, June, July, August, October, and December, however, no test results were submitted for these months. The owner/operator reported to be in 'normal frequency' for arsenic, copper, lead, nickel, and zinc measurement in August, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	McArthur River Operation												
Operator	Cameco Corporation												
Product(s)	Uranium												
Address	2121-11th Street West, Saskatoon, Saskatchewan S7M 1J3												
Effluent Discharge Point	Station 2.1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Cu (mg/L)	0.3	0.0004	0.0003	0.0003	0.0002	0.0004	0.0006	0.0007	0.0004	0.0006	0.0003	0.0005	0.0002
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Ni (mg/L)	0.5	0.0013	0.0018	0.0016	0.0015	0.0016	0.0019	0.0016	0.0013	0.0017	0.0020	0.0019	0.0022
Zn (mg/L)	0.5	0.0011	0.0019	0.0014	0.0008	0.0008	0.0009	0.0006	0.0007	0.0009	0.0014	0.0011	0.0018
TSS (mg/L)	15	1.80	1.00	1.00	0.50	0.50	0.63	0.60	1.00	0.63	0.90	0.63	1.13
Ra-226 (Bq/L)	0.37	0.0800	0.3575	0.0800	0.0375	0.0340	0.0450	0.0320	0.0350	0.0375	0.0300	0.0350	0.0350
pH Low	≥6.0	7.3	7.5	6.8	7.5	7.4	7.6	7.3	7.5	7.5	7.4	7.4	7.4
pH High	≤9.5	7.5	7.6	7.5	7.7	7.8	8.0	7.7	7.7	7.8	7.8	7.7	7.7
Flow (m <sup>3</sup> /month)	-	196,972	179,100	190,619	199,720	213,872	193,863	198,735	195,485	181,919	196,535	220,364	200,096
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	McArthur River Operation												
Operator	Cameco Corporation												
Product(s)	Uranium												
Address	2121-11th Street West, Saskatoon, Saskatchewan S7M 1J3												
Effluent Discharge Point	Station 2.1B												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	RF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	RF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	McArthur River Operation												
Operator	Cameco Corporation												
Product(s)	Uranium												
Address	2121-11th Street West, Saskatoon, Saskatchewan S7M 1J3												
Effluent Discharge Point	Station 2.7												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002
Cu (mg/L)	0.3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0006	0.0007	0.0001	0.0001	0.0001
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Ni (mg/L)	0.5	0.0015	0.0016	0.0015	0.0015	0.0014	0.0013	0.0015	0.0012	0.0012	0.0012	0.0021	0.0019
Zn (mg/L)	0.5	0.0346	0.0363	0.0303	0.0275	0.0140	0.0093	0.0058	0.0058	0.0078	0.0128	0.0345	0.0283
TSS (mg/L)	15	0.50	1.50	0.50	0.50	1.60	0.50	0.83	0.63	0.88	0.88	0.75	1.88
Ra-226 (Bq/L)	0.37	0.1420	0.1300	0.1350	0.1175	0.1300	0.1175	0.0917	0.0875	0.0775	0.1050	0.1650	0.1300
pH Low	≥6.0	6.9	7.1	6.8	7.3	7.3	7.4	7.2	7.1	7.2	7.1	7.0	7.1
pH High	≤9.5	7.2	7.3	7.2	7.3	7.6	7.9	7.7	7.9	7.4	7.6	7.4	7.4
Flow (m <sup>3</sup> /month)	-	25,735	23,494	24,767	25,834	26,254	24,986	33,187	39,550	44,589	33,349	3,234	30,421
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	McClean Lake Operation												
Operator	Areva Resources Canada Incorporated//Orano Canada Incorporated												
Product(s)	Uranium												
Address	P.O. Box 9204, 817-45th Street West, Saskatoon, Saskatchewan S7K 3X5												
Effluent Discharge Point	CM01-B												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002
Cu (mg/L)	0.3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0006	0.0007	0.0001	0.0001	0.0001
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Ni (mg/L)	0.5	0.0015	0.0016	0.0015	0.0015	0.0014	0.0013	0.0015	0.0012	0.0012	0.0012	0.0021	0.0019
Zn (mg/L)	0.5	0.0346	0.0363	0.0303	0.0275	0.0140	0.0093	0.0058	0.0058	0.0078	0.0128	0.0345	0.0283
TSS (mg/L)	15	0.50	1.50	0.50	0.50	1.60	0.50	0.83	0.63	0.88	0.88	0.75	1.88
Ra-226 (Bq/L)	0.37	0.1420	0.1300	0.1350	0.1175	0.1300	0.1175	0.0917	0.0875	0.0775	0.1050	0.1650	0.1300
pH Low	≥6.0	6.9	7.1	6.8	7.3	7.3	7.4	7.2	7.1	7.2	7.1	7.0	7.1
pH High	≤9.5	7.2	7.3	7.2	7.3	7.6	7.9	7.7	7.9	7.4	7.6	7.4	7.4
Flow (m <sup>3</sup> /month)	-	25,735	23,494	24,767	25,834	26,254	24,986	33,187	39,550	44,589	33,349	3,234	30,421
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in April, May, August, and September, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	McClean Lake Operation												
Operator	Areva Resources Canada Incorporated//Orano Canada Incorporated												
Product(s)	Uranium												
Address	P.O. Box 9204, 817-45th Street West, Saskatoon, Saskatchewan S7K 3X5												
Effluent Discharge Point	CM03												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	McClean Lake Operation												
Operator	Areva Resources Canada Incorporated//Orano Canada Incorporated												
Product(s)	Uranium												
Address	P.O. Box 9204, 817-45th Street West, Saskatoon, Saskatchewan S7K 3X5												
Effluent Discharge Point	SC01												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0045	0.0037	0.0035	0.0248	0.0176	0.0113	0.0061
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0010	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
CN (mg/L)	1	ND	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0010	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0447	0.0239	0.0339	0.0949	0.0800	0.1074	0.1128
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0013	0.0007	0.0008	0.0010	0.0005	0.0005	0.0005
TSS (mg/L)	15	ND	ND	ND	ND	ND	0.67	0.58	0.50	1.25	1.17	0.63	0.50
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0072	0.0083	0.0064	0.0058	0.0053	0.0036	0.0037
pH Low	≥6.0	ND	ND	ND	ND	ND	7.1	6.9	7.1	7.2	6.7	7.0	7.0
pH High	≤9.5	ND	ND	ND	ND	ND	7.3	7.3	7.5	7.4	7.4	7.2	7.3
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	66,499	156,155	148,109	136,733	131,914	99,212	64,197
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	-	1	RF	RF
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	0	-	0	RF	RF
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	1	-	1	RF	RF
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	0	-	0	RF	RF

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in September, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	McClean Lake Operation												
Operator	Areva Resources Canada Incorporated//Orano Canada Incorporated												
Product(s)	Uranium												
Address	P.O. Box 9204, 817-45th Street West, Saskatoon, Saskatchewan S7K 3X5												
Effluent Discharge Point	SP01												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	McWatters Mine												
Operator	Northern Sun Mining Corporation												
Product(s)	Nickel												
Address	P.O. Box 5114, South Porcupine, Ontario P0N 1H0												
Effluent Discharge Point	MWD-2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	-	-	-
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Meadowbank Division												
Operator	Agnico-Eagle Mines Limited												
Product(s)	Gold												
Address	P.O. Box 540, Baker Lake, Nunavut X0C 0A0												
Effluent Discharge Point	East Dike Discharge												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.0025	0.0003	0.0003	0.0009	RF	RF	ND	0.0003	0.0003	0.0003	0.0003	RF
Cu (mg/L)	0.3	0.0023	0.0010	0.0013	0.0023	RF	RF	ND	0.0008	0.0003	0.0003	0.0006	RF
CN (mg/L)	1	0.0005	0.0005	0.0020	0.0005	NCU	NCU	ND	0.0010	0.0010	0.0005	0.0005	NCU
Pb (mg/L)	0.2	0.0002	0.0041	0.0008	0.0002	RF	RF	ND	0.0002	0.0002	0.0002	0.0002	RF
Ni (mg/L)	0.5	0.0005	0.0015	0.0003	0.0014	RF	RF	ND	0.0015	0.0003	0.0003	0.0003	RF
Zn (mg/L)	0.5	0.0050	0.0005	0.0020	0.0150	RF	RF	ND	0.0010	0.0005	0.0005	0.0005	RF
TSS (mg/L)	15	5.40	11.25	5.40	8.60	2.00	-	ND	0.75	1.13	1.70	2.13	2.33
Ra-226 (Bq/L)	0.37	RF	0.0010	RF	0.0010	RF	RF	ND	0.0050	0.0060	0.0050	0.0010	RF
pH Low	≥6.0	7.5	7.3	7.3	7.1	6.7	-	ND	7.5	7.2	6.3	7.0	7.7
pH High	≤9.5	8.5	8.3	7.6	7.8	7.3	-	ND	7.7	7.6	7.4	7.7	8.0
Flow (m <sup>3</sup> /month)	-	16,638	13,937	18,529	17,062	19,078	2,654	ND	5,084	13,372	12,078	11,226	10,968
Rainbow Trout	Pass	RF	1	RF	1	RF	RF	ND	RF	1	RF	RF	RF
Acute Lethality Test	Fail	RF	0	RF	0	RF	RF	ND	RF	0	RF	RF	RF
Daphnia magna	Pass	RF	1	RF	1	RF	RF	ND	RF	1	RF	RF	RF
Monitoring Test	Fail	RF	0	RF	0	RF	RF	ND	RF	0	RF	RF	RF

**Comments:**

The owner/operator did not report acute lethality testing within the fourth quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Meadowbank Division												
Operator	Agnico-Eagle Mines Limited												
Product(s)	Gold												
Address	P.O. Box 540, Baker Lake, Nunavut X0C 0A0												
Effluent Discharge Point	Vault Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

The owner/operator did not report acute lethality testing within the fourth quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Meadowbank Division												
Operator	Agnico-Eagle Mines Limited												
Product(s)	Gold												
Address	P.O. Box 540, Baker Lake, Nunavut X0C 0A0												
Effluent Discharge Point	Water Treatment Plant												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Meliadine												
Operator	Agnico-Eagle Mines Limited												
Product(s)	Gold												
Address	Rankin Inlet, Nunavut X0C 0G0												
Effluent Discharge Point	MEL-14												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0021	0.0014	0.0019	0.0024	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0023	0.0014	0.0027	0.0006	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	0.0003	0.0025	0.0025	0.0025	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0003	0.0001	0.0001	0.0001	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0031	0.0024	0.0024	0.0027	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0075	0.0049	0.0051	0.0025	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	5.00	10.60	7.38	14.00	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0025	0.0034	0.0039	0.0025	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	7.6	7.0	6.8	7.1	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	7.6	7.5	7.4	7.1	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	134,272	352,551	153,066	2,632	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	1	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	1	1	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	ND	ND	ND

Comments:  
New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Ming Mine												
Operator	Rambler Metals and Mining Canada Limited												
Product(s)	Copper, gold												
Address	Route 418 Ming's Bight Road, Baie Verte, Newfoundland and Labrador A0K 1B0												
Effluent Discharge Point	Waste Water Treatment System Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0016	0.0011	0.0012	0.0019	0.0016	0.0014	0.0013	0.0022	0.0017	0.0031	0.0015	0.0018
Cu (mg/L)	0.3	0.0207	0.0280	0.0442	0.0459	0.0261	0.0262	0.0533	0.0512	0.0118	0.0172	0.0223	0.0192
CN (mg/L)	1	0.0010	0.0048	0.0092	0.0072	0.0017	0.0153	0.0051	0.0020	0.0025	0.0034	0.0029	0.0035
Pb (mg/L)	0.2	0.0003	0.0003	0.0003	0.0003	0.0003	0.0005	0.0003	0.0003	0.0003	0.0013	0.0009	0.0006
Ni (mg/L)	0.5	0.0046	0.0156	0.0061	0.0064	0.0204	0.0132	0.0094	0.0059	0.0077	0.0112	0.0043	0.0100
Zn (mg/L)	0.5	0.0856	0.2596	0.1044	0.2557	0.2573	0.2013	0.1600	0.1320	0.0550	0.2242	0.1054	0.2100
TSS (mg/L)	15	0.88	3.07	1.20	1.27	16.50	1.47	3.73	2.50	1.80	0.90	1.13	3.00
Ra-226 (Bq/L)	0.37	0.0050	0.0050	0.0050	0.0050	0.0103	0.0097	0.0103	0.0110	0.0195	0.0062	0.0077	0.0200
pH Low	≥6.0	7.4	6.9	7.0	7.1	6.8	7.4	7.5	6.6	7.0	7.5	7.3	7.1
pH High	≤9.5	7.8	8.2	8.1	7.3	7.5	8.0	7.9	7.5	7.7	8.3	7.7	7.1
Flow (m <sup>3</sup> /month)	-	23,220	24,109	23,952	29,889	37,581	35,272	28,340	21,863	22,078	24,847	17,363	19,967
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	0	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	1	0	0	0	0	0	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Minto Mine												
Operator	Minto Explorations Limited												
Product(s)	Copper, gold, silver												
Address	P.O. Box 33174, Whitehorse, Yukon Y1A 6S1												
Effluent Discharge Point	MitW3 - Runoff Main Water Dam												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0002	0.0003	0.0002	0.0003	0.0004	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Cu (mg/L)	0.3	0.0022	0.0050	0.0065	0.0039	0.0211	0.0156	0.0086	0.0067	0.0032	0.0057	0.0053	0.0027
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ni (mg/L)	0.5	0.0009	0.0007	0.0006	0.0007	0.0016	0.0012	0.0010	0.0010	0.0010	0.0011	0.0009	0.0009
Zn (mg/L)	0.5	0.0015	0.0068	0.0110	0.0042	0.0015	0.0015	0.0015	0.0015	0.0015	0.0036	0.0034	0.0015
TSS (mg/L)	15	3.48	3.33	3.65	3.00	4.18	3.40	3.24	3.00	3.00	3.70	4.00	3.05
Ra-226 (Bq/L)	0.37	RF	0.0096	RF	RF	RF	0.0035	RF	0.0140	RF	RF	RF	RF
pH Low	≥6.0	8.0	7.9	8.1	8.2	8.2	8.4	8.1	8.1	8.2	8.1	8.1	7.8
pH High	≤9.5	8.3	8.1	8.3	8.5	8.5	8.5	8.4	8.3	8.4	8.3	8.4	8.3
Flow (m <sup>3</sup> /month)	-	7936	6,171	6,448	6,360	33,232	32,100	15,803	6,696	7,905	8,928	6,652	5,356
Rainbow Trout	Pass	RF	1	RF	RF	RF	1	RF	1	RF	1	RF	RF
Acute Lethality Test	Fail	RF	0	RF	RF	RF	0	RF	0	RF	0	RF	RF
Daphnia magna	Pass	RF	1	RF	RF	RF	1	RF	1	RF	1	RF	RF
Monitoring Test	Fail	RF	0	RF	RF	RF	0	RF	0	RF	0	RF	RF

Comments:

The owner/operator did not report measurement of radium-226 within the fourth quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Monique (Projet)												
Operator	Mines Richmond Incorporé / Monarques Gold												
Product(s)	Gold												
Address	25 km East of Val-d'Or, Val-d'Or, Quebec J9X 4P6												
Effluent Discharge Point	Effluent final Monique												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

Ownership was transferred from Mines Richmond Incorporé to Monarques Gold.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Montcalm Project												
Operator	Glencore Canada Corporation												
Product(s)	Nickel, copper												
Address	P.O. Box 2002, Hwy 655 North, Timmins, Ontario P4N 7K1												
Effluent Discharge Point	Montcalm Final Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	ND	ND	ND	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	ND	ND	ND	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	ND	ND	ND	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	ND	ND	ND	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	ND	ND	ND	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	ND	ND	ND	-	-	-	-	-	-	-	-	-
pH High	≤9.5	ND	ND	ND	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	-	-	-	-	-	-	-	-	-
Rainbow Trout	Pass	ND	ND	ND	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	ND	ND	ND	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	ND	ND	ND	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	ND	ND	ND	-	-	-	-	-	-	-	-	-
Comments:	This is a recognized closed mine.												
<b>NOTES:</b>	<p><b>ND:</b> No Deposit    <b>RF:</b> Reduced Frequency    <b>NCU:</b> No Cyanide Used    <b>Pass:</b> ≤50% Mortality    <b>Fail:</b> &gt;50% Mortality    <b>-</b> : No data reported</p> <p>Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.</p> <p>A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.</p>												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeont, Quebec G0G1J0												
Effluent Discharge Point	Point HS-1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	0.0005	0.0005	0.0009
Cu (mg/L)	0.3	0.0009	0.0015	0.0013	0.0064	0.0022	0.0015	0.0026	0.0011	0.0021	0.0011	0.0014	0.0021
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0006	0.0006	0.0005	0.0006	0.0008	0.0005	0.0008	0.0005	0.0094	0.0005	0.0005	0.0005
Ni (mg/L)	0.5	0.0032	0.0038	0.0035	0.0076	0.0063	0.0060	0.0096	0.0090	0.0085	0.0162	0.0268	0.0967
Zn (mg/L)	0.5	0.0035	0.0035	0.0035	0.0121	0.0066	0.0053	0.0081	0.0675	0.0195	0.0157	0.0335	0.0510
TSS (mg/L)	15	1.30	0.63	0.75	5.00	18.13	2.75	2.20	3.00	6.50	4.60	0.50	0.92
Ra-226 (Bq/L)	0.37	RF	0.0010	RF	0.0030	0.0042	0.0035	0.0020	0.0020	0.0040	0.0047	0.0127	0.0022
pH Low	≥6.0	6.7	7.0	7.2	6.8	7.1	7.0	7.0	7.3	7.5	7.4	7.0	6.5
pH High	≤9.5	7.5	7.3	7.3	7.4	7.6	8.1	7.8	7.6	7.9	7.8	7.4	6.9
Flow (m <sup>3</sup> /month)	-	1707161	1,343,495	2,085,34	3,631,779	12,510,008	11,585,234	11,499,274	10,797,927	11,263,709	4,951,584	1,216,518	1,242,672
Rainbow Trout	Pass	RF	1	RF	1	5	2	1	1	1	1	1	1
Acute Lethality Test	Fail	RF	0	RF	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	RF	1	RF	1	5	2	1	1	1	1	1	1
Monitoring Test	Fail	RF	0	RF	0	0	0	0	0	0	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeville, Quebec G0G1J0												
Effluent Discharge Point	Effluent ES-DLR-3												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	40176	40176	38,880	40176	3,880	40176
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:  
New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeville, Quebec G0G 1J0												
Effluent Discharge Point	Effluent ES-DLR-5												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	16,070	16,070	15,552	16,058	15,540	16,058
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:  
New final discharge point registered in 2018.

**NOTES:**  
**ND:** No Deposit    **RF:** Reduced Frequency    **NCU:** No Cyanide Used    **Pass:** ≤50% Mortality    **Fail:** >50% Mortality    **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermont, Quebec G0G1J0												
Effluent Discharge Point	Effluent ES-DLR-6 (ruisseau Rue-Tia)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	120,528	120,528	116,640	120,528	116,640	120,528
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:  
New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermont, Quebec G0G1J0												
Effluent Discharge Point	Effluent ES-DLR-7 (ruisseau Rue-T1b)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	8,035	8,035	7,776	8,029	7,770	8,029
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:  
New final discharge point registered in 2018.

**NOTES:**  
**ND:** No Deposit    **RF:** Reduced Frequency    **NCU:** No Cyanide Used    **Pass:** ≤50% Mortality    **Fail:** >50% Mortality    **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermont, Quebec G0G1J0												
Effluent Discharge Point	Effluent ES-SA-1 (ruisseau Ange-T2a)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	32,141	32,141	31,104	32,147	31,110	32,147
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:  
New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeont, Quebec G0G1J0												
Effluent Discharge Point	Effluent final MS-6												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	0.0013	0.0009	0.0008	0.0006	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	0.0013
Cu (mg/L)	0.3	ND	0.0045	0.0048	0.0056	0.0027	0.0028	0.0034	0.0033	0.0045	0.0034	0.0060	0.0048
CN (mg/L)	1	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	ND	0.0005	0.0006	0.0006	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006
Ni (mg/L)	0.5	ND	0.0708	0.0755	0.0732	0.0302	0.0234	0.0354	0.0383	0.0418	0.0454	0.0530	0.0632
Zn (mg/L)	0.5	ND	0.0463	0.0445	0.0460	0.0170	0.0148	0.0186	0.0193	0.0430	0.0282	0.0365	0.0408
TSS (mg/L)	15	ND	12.25	6.15	24.08	6.22	3.00	2.40	0.50	1.50	5.46	1.69	2.77
Ra-226 (Bq/L)	0.37	ND	0.0185	0.0165	0.0115	0.0104	0.0138	0.0080	0.0393	0.0170	0.0215	0.0070	0.0140
pH Low	≥6.0	ND	6.5	6.9	7.0	2.9	7.3	7.4	7.2	6.1	7.0	6.9	7.3
pH High	≤9.5	ND	8.2	7.5	7.4	7.7	7.6	8.9	7.8	7.3	8.2	8.0	8.7
Flow (m <sup>3</sup> /month)	-	ND	31,528	19,530	22,280	163,731	131,971	94,008	97,417	83,702	61,038	42,686	34,075
Rainbow Trout	Pass	ND	2	2	1	7	3	1	1	1	1	1	1
Acute Lethality Test	Fail	ND	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	ND	1	2	1	7	3	1	1	1	1	0	1
Monitoring Test	Fail	ND	0	0	0	0	0	0	0	0	0	1	0
Comments:	New final discharge point registered in 2018. The owner/operator did not complete an equal number of Daphnia magna acute lethality tests as Rainbow trout acute lethality tests in February.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeont, Quebec G0G1J0												
Effluent Discharge Point	Effluent HS-2 TEMP												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	ND	ND
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	ND	ND
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	-	ND	ND
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	ND	ND
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	ND	ND
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	ND	ND
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	ND	ND
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	ND	ND
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	ND	ND
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	ND	ND
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	-	ND	ND
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	ND	ND
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	ND	ND
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	ND	ND
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	ND	ND

Comments:

New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeville, Quebec G0G1J0												
Effluent Discharge Point	Effluent LW-2a												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	40176	40176	38,880	40176	38,880	40176
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:  
New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeville, Quebec G0G1J0												
Effluent Discharge Point	Effluent LW-2b												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	10,714	10,714	10,368	10,726	10,380	10,726
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:  
New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeville, Quebec G0G1J0												
Effluent Discharge Point	Effluent LW-3												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	16,070	16,070	15,532	16,058	15,540	16,058
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:  
New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeont, Quebec G0G1J0												
Effluent Discharge Point	Effluent RDT-6												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0005	0.0005	0.0013
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	0.0012	0.0010	0.0011
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	0.0005	0.0006	0.0005
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0027	0.0024	0.0034
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0049	0.0044	0.0069
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	0.98	0.88	1.82
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	0.0073	0.0055	0.0048
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	6.3	6.2	6.3
pH High	≤9.5	-	-	-	-	-	-	-	-	-	7.1	8.7	7.4
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	24,624	22,320	23,160	23,228	15,840	12,595
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	24	0	1
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	0	1	0
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	24	1	1
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	0	0	0

Comments:

New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeont, Quebec G0G1J0												
Effluent Discharge Point	Effluent RDT-7												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0005	0.0005	0.0007
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	0.0019	0.0019	0.0136
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	0.0005	0.0005	0.0005
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.9440	1.5410	1.5558
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	2.2225	3.3555	3.3019
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	2.26	0.90	2.34
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	0.0152	0.0098	0.0055
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	4.0	4.6	4.7
pH High	≤9.5	-	-	-	-	-	-	-	-	-	5.6	5.3	5.2
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	19,176	22,152	23,160	23,088	17,230	15,553
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	0	0	0
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	29	29	31
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	1	0	0
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	30	29	31

Comments:  
New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported  
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeville, Quebec G0G1J0												
Effluent Discharge Point	Effluent RDT-8												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0032	0.0040	0.0047
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	0.0089	0.0118	0.0092
CN (mg/L)	1	-	-	-	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	0.0005	0.0005	0.0005
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	2.0693	2.3497	2.6965
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	3.7384	4.1648	4.8968
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	0.60	0.59	1.31
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	0.0157	0.0142	0.0089
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	4.8	4.4	0.0
pH High	≤9.5	-	-	-	-	-	-	-	-	-	5.4	5.6	5.2
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	54,336	50,736	49,248	49,272	36,546	29,016
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:

New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mont-Wright (Mine)												
Operator	ArcelorMittal Exploitation minière Canada s.e.n.c.												
Product(s)	Iron ore												
Address	P.O. Box 1817, Route 389, Fermeont, Quebec G0G1J0												
Effluent Discharge Point	Point MS-5												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	0.0032	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	NCU	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	0.0005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	0.0633	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	0.0320	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	4.70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	0.0196	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	8.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	32,437	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mount Polley Mine												
Operator	Mount Polley Mining Corporation												
Product(s)	Copper, gold, silver												
Address	Bootjack Forest Service Road, Likely, British Columbia VOL 1N0												
Effluent Discharge Point	Quesnel Lake Discharge Diffusers												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0009	0.0007	0.0011	0.0007	0.0005	0.0012	0.0014	0.0017	0.0016	0.0014	0.0009	0.0011
Cu (mg/L)	0.3	0.0094	0.0050	0.0090	0.0123	0.0902	0.0074	0.0044	0.0045	0.0037	0.0052	0.0086	0.0105
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ni (mg/L)	0.5	0.0006	0.0004	0.0004	0.0010	0.0021	0.0007	0.0006	0.0003	0.0003	0.0003	0.0005	0.0006
Zn (mg/L)	0.5	0.0065	0.0051	0.0045	0.0041	0.0139	0.0034	0.0020	0.0015	0.0015	0.0034	0.0072	0.0041
TSS (mg/L)	15	10.23	6.70	9.74	7.98	6.06	5.81	4.50	4.15	4.93	4.74	6.53	10.48
Ra-226 (Bq/L)	0.37	RF	0.0032	RF	RF	0.0150	RF	RF	0.0046	RF	RF	0.0047	0.0037
pH Low	≥6.0	7.7	7.5	7.5	8.0	7.6	7.6	7.5	7.7	7.3	6.9	7.1	7.3
pH High	≤9.5	7.9	7.9	8.0	8.1	8.0	8.0	7.8	7.8	7.6	7.7	7.6	7.7
Flow (m <sup>3</sup> /month)	-	98,728	398,381	475,115	492,514	206,952	575,140	562,416	521,051	542,385	436,913	415,547	449,033
Rainbow Trout	Pass	1	1	1	1	-	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	-	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	-	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	-	0	0	0	0	0	0	0

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in May, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Mouska (Mine)												
Operator	IAMGOLD Corporation												
Product(s)	Gold												
Address	100 Pause Road, Cadillac, Quebec J9P 6M1												
Effluent Discharge Point	Effluent Final												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:  
Recognized closed mine as of March 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Muselwhite Mine												
Operator	Goldcorp Canada Limited												
Product(s)	Gold												
Address	P.O. Box 7500, Thunder Bay, Ontario P7E 6S8												
Effluent Discharge Point	EF-3												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0028	0.0023	0.0021	0.0018	0.0014	0.0013	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0017	0.0025	0.0028	0.0029	0.0025	0.0030	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	0.0030	0.0030	0.0016	0.0021	0.0022	0.0055	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0050	0.0043	0.0045	0.0073	0.0055	0.0061	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0002	0.0009	0.0006	0.0011	0.0009	0.0073	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	0.25	0.31	0.45	0.31	0.25	1.06	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.1000	0.0050	0.0050	0.0050	0.0050	0.0050	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	7.3	7.3	7.3	7.1	7.1	6.9	ND	ND
pH High	≤9.5	ND	ND	ND	ND	7.3	7.6	7.4	7.3	7.7	7.5	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	29,075	334,951	428,764	413,163	346,032	240,398	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	1	2	2	1	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	1	2	2	2	1	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Myra Falls Operations												
Operator	Nyrstar Myra Falls Limited												
Product(s)	Zinc, copper, lead, silver, gold												
Address	P.O. Box 8000, Campbell River, British Columbia V9W 5E2												
Effluent Discharge Point	MF11A - Runoff Myra Ponds Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0003	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0002	0.0003	0.0002	0.0003	0.0003
Cu (mg/L)	0.3	0.0189	0.0104	0.0056	0.0072	0.0063	0.0075	0.0097	0.0267	0.0277	0.0205	0.0328	0.0310
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0027	0.0007	0.0010	0.0028	0.0016	0.0015	0.0029	0.0023	0.0065	0.0037	0.0103	0.0048
Ni (mg/L)	0.5	0.0004	0.0003	0.0002	0.0002	0.0003	0.0004	0.0006	0.0007	0.0017	0.0006	0.0008	0.0009
Zn (mg/L)	0.5	0.1906	0.1070	0.0495	0.0617	0.0602	0.0764	0.1269	0.3256	0.3868	0.2292	0.3065	0.3093
TSS (mg/L)	15	5.78	6.88	3.83	5.65	3.74	3.80	1.40	6.48	6.48	6.20	9.05	9.75
Ra-226 (Bq/L)	0.37	RF	0.0050	RF	RF	0.0050	RF	RF	0.0050	RF	RF	0.0050	RF
pH Low	≥6.0	7.5	7.7	8.5	7.9	8.3	8.5	8.3	8.7	8.5	8.3	8.2	8.2
pH High	≤9.5	9.2	9.2	8.7	8.5	8.7	8.9	8.5	8.9	8.9	8.7	8.8	8.6
Flow (m <sup>3</sup> /month)	-	1,350,210	931,637	661,655	1,087,902	1,206,708	1,142,321	1,009,849	849,399	956,006	1,151,473	1,436,960	1,770,567
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF
Monitoring Test	Fail	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Niobec (Mine)												
Operator	Magris Resources												
Product(s)	Niobium												
Address	3400 Chemin du Columbium, St-Honoré de Chicoutimi, Quebec G0V 1L0												
Effluent Discharge Point	Effluent final												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	RF	0.0045	RF	0.0047	RF	RF	RF	0.0015	RF	0.0043	RF
Cu (mg/L)	0.3	RF	RF	0.0013	RF	0.0014	RF	RF	RF	0.0005	RF	0.0020	RF
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	RF	RF	0.0003	RF	0.0003	RF	RF	RF	0.0001	RF	0.0008	RF
Ni (mg/L)	0.5	RF	RF	0.0130	RF	0.0077	RF	RF	RF	0.0064	RF	0.0072	RF
Zn (mg/L)	0.5	0.0388	0.0428	0.0403	0.0355	0.0230	0.0243	0.0306	0.0353	0.0375	0.0446	0.0273	0.0258
TSS (mg/L)	15	7.02	7.50	6.15	7.60	10.46	5.56	4.56	5.40	7.55	7.34	7.48	5.93
Ra-226 (Bq/L)	0.37	0.1140	0.0963	0.1298	0.0785	0.0638	0.0533	0.1620	0.1425	0.1140	0.0668	0.1018	0.1158
pH Low	≥6.0	7.4	7.4	7.4	7.4	7.0	6.4	6.7	6.7	6.5	7.0	7.6	7.5
pH High	≤9.5	7.6	7.5	7.7	7.6	7.8	6.8	6.8	6.9	7.0	7.3	7.8	7.6
Flow (m <sup>3</sup> /month)	-	527,295	503,957	479,356	546,299	535,615	495,348	458,840	504,461	489,530	513,789	522,477	562,644
Rainbow Trout	Pass	RF	RF	1	-	1	-	-	-	1	-	1	-
Acute Lethality Test	Fail	RF	RF	0	-	0	-	-	-	0	-	0	-
Daphnia magna	Pass	RF	RF	1	-	1	-	-	-	0	-	1	-
Monitoring Test	Fail	RF	RF	0	-	0	-	-	-	1	-	0	-

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in April, June, July, August, October and December, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **- :** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Niobec (Mine)												
Operator	Magris Resources												
Product(s)	Niobium												
Address	3400 Chemin du Columbium, St-Honoré de Chicoutimi, Quebec G0V 1L0												
Effluent Discharge Point	Effluent Pluvial												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	RF	0.0005	RF	0.0005	RF	0.0005	RF	RF	RF	0.0005	RF
Cu (mg/L)	0.3	RF	RF	0.0015	RF	0.0005	RF	0.0029	RF	RF	RF	0.0190	RF
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	RF	RF	0.0003	RF	0.0003	RF	0.0003	RF	RF	RF	0.0003	RF
Ni (mg/L)	0.5	RF	RF	0.0035	RF	0.0029	RF	0.0010	RF	RF	RF	0.0028	RF
Zn (mg/L)	0.5	0.0396	0.0425	0.0438	0.0393	0.0274	0.0153	0.0086	0.0301	0.0032	0.0096	0.0198	0.0223
TSS (mg/L)	15	3.67	2.83	3.00	2.75	2.86	3.99	1.72	55.79	0.76	2.66	1.75	1.65
Ra-226 (Bq/L)	0.37	RF	RF	0.0025	RF	0.0050	RF	0.0100	RF	RF	RF	0.0253	RF
pH Low	≥6.0	7.4	7.5	7.5	7.6	7.7	7.6	7.7	7.6	7.8	7.8	7.6	7.3
pH High	≤9.5	7.7	7.7	7.8	7.7	7.8	7.8	7.9	8.1	8.0	7.9	7.7	7.7
Flow (m <sup>3</sup> /month)	-	11,466	8,170	15,685	74,670	41,506	22,202	8,684	8,959	8,140	11,533	8,234	9,465
Rainbow Trout	Pass	1	1	1	1	1	-	1	-	-	-	1	-
Acute Lethality Test	Fail	0	0	0	0	0	-	0	-	-	-	0	-
Daphnia magna	Pass	1	1	1	1	1	-	1	-	-	-	1	-
Monitoring Test	Fail	0	0	0	0	0	-	0	-	-	-	0	-

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in June, August, September, October and December, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—:** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Niobec (Mine)												
Operator	Magris Resources												
Product(s)	Niobium												
Address	3400 Chemin du Columbium, St-Honoré de Chicoutimi, Quebec G0V 1L0												
Effluent Discharge Point	Effluent Urgence												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	0.0005	0.0005	0.0005	0.0005	0.0005	0.0008	0.0006	0.0005	0.0005	0.0005
Cu (mg/L)	0.3	ND	ND	0.0005	0.0007	0.0011	0.0008	0.0008	0.0012	0.0005	0.0009	0.0010	0.0009
CN (mg/L)	1	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	ND	ND	0.0003	0.0003	0.0003	0.0003	0.0003	0.0007	0.0002	0.0007	0.0003	0.0001
Ni (mg/L)	0.5	ND	ND	0.0010	0.0021	0.0010	0.0010	0.0013	0.0019	0.0009	0.0014	0.0010	0.0009
Zn (mg/L)	0.5	ND	ND	0.0160	0.0063	0.0058	0.0066	0.0043	0.0091	0.0195	0.0077	0.0081	0.0068
TSS (mg/L)	15	ND	ND	2.20	1.73	4.10	5.10	2.74	18.13	3.58	19.81	2.20	1.13
Ra-226 (Bq/L)	0.37	ND	ND	0.0200	0.0135	0.0214	0.0365	0.0594	0.0548	0.0643	0.0318	0.0090	0.0368
pH Low	≥6.0	ND	ND	7.7	7.5	7.8	7.8	7.7	7.9	7.8	7.7	7.8	7.5
pH High	≤9.5	ND	ND	7.7	7.7	8.0	8.0	7.9	8.0	7.9	7.8	7.8	7.6
Flow (m <sup>3</sup> /month)	-	ND	ND	161	3,612	2,271	1,763	2,271	600	212	327	23	1,806
Rainbow Trout	Pass	ND	ND	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	ND	ND	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	ND	ND	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	ND	ND	0	0	0	0	0	0	0	0	0	0

Comments:

New final discharge point registered in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Nugget Pond Facility												
Operator	Rambler Metals and Mining Canada Limited												
Product(s)	Gold, copper												
Address	P.O. Box 291, Baie Verte, Newfoundland and Labrador A0K 1B0												
Effluent Discharge Point	Polishing Pond Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	0.0007	0.0008	0.0007	0.0013	0.0008	ND	ND	0.0010	0.0007	0.0007	0.0008
Cu (mg/L)	0.3	0.0035	0.0034	0.0030	0.0057	0.0074	0.0038	ND	ND	0.0029	0.0038	0.0040	0.0040
CN (mg/L)	1	0.0008	0.0024	0.0012	0.0011	0.0076	0.0025	ND	ND	0.0025	0.0023	0.0045	0.0035
Pb (mg/L)	0.2	0.0003	0.0004	0.0004	0.0003	0.0064	0.0012	ND	ND	0.0003	0.0007	0.0011	0.0010
Ni (mg/L)	0.5	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	ND	ND	0.0010	0.0010	0.0010	0.0008
Zn (mg/L)	0.5	0.0078	0.0073	0.0085	0.0092	0.0067	0.0086	ND	ND	0.0025	0.0036	0.0081	0.0050
TSS (mg/L)	15	0.50	0.50	0.50	0.50	2.35	0.63	ND	ND	0.50	0.87	0.80	3.00
Ra-226 (Bq/L)	0.37	0.0050	0.0067	0.0050	0.0050	0.0050	0.0050	ND	ND	0.0050	0.0050	0.0050	0.0025
pH Low	≥6.0	7.1	7.1	7.2	7.0	7.1	7.1	ND	ND	7.3	7.0	6.8	6.3
pH High	≤9.5	7.4	7.5	7.4	7.4	7.1	7.3	ND	ND	7.3	7.2	7.2	6.3
Flow (m <sup>3</sup> /month)	-	355,000	266,250	266,250	399,375	355,000	355,000	ND	ND	142,000	310,625	266,250	133,125
Rainbow Trout	Pass	1	1	1	1	1	1	ND	ND	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	ND	ND	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	0	ND	ND	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	1	ND	ND	0	0	0	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Nunavik Nickel (Projet)												
Operator	Nunavik Nickel (Projet)												
Product(s)	Nickel, copper, cobalt, platinum, palladium, gold												
Address	Ungava Peninsula region, Quebec H3B 1X9												
Effluent Discharge Point	Effluent final Expo												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0004	0.0004	0.0004	0.0004	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	0.0213	0.0258	0.0525	0.0383	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	NCU	NCU	NCU	NCU	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	0.0002	0.0002	0.0002	0.0002	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0393	0.0648	0.1900	0.1353	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0054	0.0030	0.0028	0.0025	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	0.34	0.51	0.25	0.49	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	0.0120	RF	RF	0.0025	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	5.7	6.5	6.4	7.6	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	7.6	8.0	8.1	8.7	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	314,232	421,948	468,493	195,054	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	1	3	2	3	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	1	0	0	0	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	0	4	1	2	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	1	0	1	1	ND	ND

**Comments:**

The owner/operator did not complete an equal number of Daphnia magna acute lethality tests as Rainbow trout acute lethality tests in July.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Nunavik Nickel (Projet)												
Operator	Nunavik Nickel (Projet)												
Product(s)	Nickel, copper, cobalt, platinum, palladium, gold												
Address	Ungava Peninsula region, Quebec H3B 1X9												
Effluent Discharge Point	Effluent final Mésamax												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0002	0.0003	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	0.0340	0.0203	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	NCU	NCU	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	0.0001	0.0001	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.3367	0.4075	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0049	0.0050	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	2.07	2.95	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	0.0025	0.0025	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	5.9	5.6	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	7.0	7.1	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	53,412	93,319	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	2	2	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	0	0	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	1	2	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	0	1	ND	ND	ND	ND
Comments:	The owner/operator did not complete an equal number of Daphnia magna acute lethality tests as Rainbow trout acute lethality tests in July.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>--:</b> No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Phoenix Gold Project												
Operator	Rubicon Minerals Corporation												
Product(s)	Gold												
Address	103 McMarmac Road, Cochenour, Ontario P0V 1L0												
Effluent Discharge Point	North Discharge Point												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0087	-	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0167	-	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0254	0.0616	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0001	-	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0161	-	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0008	-	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	7:15	5.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0050	-	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	7:1	-	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	7:3	-	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	13,513	8,499	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	ND
Comments:	The owner/operator reported to be in 'normal frequency' for arsenic, copper, lead, nickel, zinc, radium-226 measurement in November, however, no test results were submitted for this month.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>--</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Phoenix Gold Project												
Operator	Rubicon Minerals Corporation												
Product(s)	Gold												
Address	103 McMarmac Road, Cochenour, Ontario P0V 1L0												
Effluent Discharge Point	South Discharge Point												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Pine Cove Property												
Operator	Anaconda Mining Incorporated												
Product(s)	Gold												
Address	Pine Cove Road, Pine Cove, Newfoundland and Labrador A0K 1B0												
Effluent Discharge Point	Polishing Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	0.0005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	0.0865	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	0.0510	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	0.0007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	0.0024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	0.0025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	16.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	0.0050	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	5,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Pine Cove Property												
Operator	Anaconda Mining Incorporated												
Product(s)	Gold												
Address	Pine Cove Road, Pine Cove, Newfoundland and Labrador A0K 1B0												
Effluent Discharge Point	Stog'er Tight Expansion FDP												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	0.0005	0.0005	0.0005	ND	ND	0.0014
Cu (mg/L)	0.3	-	-	-	-	-	-	0.0058	0.0073	0.0027	ND	ND	0.0106
CN (mg/L)	1	-	-	-	-	-	-	0.0250	0.0637	0.0059	ND	ND	0.4800
Pb (mg/L)	0.2	-	-	-	-	-	-	0.0003	0.0010	0.0010	ND	ND	0.0003
Ni (mg/L)	0.5	-	-	-	-	-	-	0.0010	0.0010	0.0010	ND	ND	0.0010
Zn (mg/L)	0.5	-	-	-	-	-	-	0.0025	0.0034	0.0101	ND	ND	0.0025
TSS (mg/L)	15	-	-	-	-	-	-	2.60	7.07	0.50	ND	ND	6.00
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	0.0100	0.0050	ND	ND	0.0050
pH Low	≥6.0	-	-	-	-	-	-	7.9	8.0	7.9	ND	ND	7.9
pH High	≤9.5	-	-	-	-	-	-	7.9	8.1	7.9	ND	ND	7.9
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	1,320	1,743	1,088	ND	ND	2,280
Rainbow Trout	Pass	-	-	-	-	-	-	1	1	1	ND	ND	1
Acute Lethality Test	Fail	-	-	-	-	-	-	0	0	0	ND	ND	0
Daphnia magna	Pass	-	-	-	-	-	-	1	1	1	ND	ND	1
Monitoring Test	Fail	-	-	-	-	-	-	0	0	0	ND	ND	0

Comments:  
New final discharge point registered in 2018. The owner/operator reported to be in 'normal frequency' for radium-226 measurement in July, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Podolsky Mine												
Operator	FNX Mining Company Incorporated												
Product(s)	Copper, nickel, palladium, platinum, gold												
Address	Box 340, Portlance Road, Capreol, Ontario P0M 1H0												
Effluent Discharge Point	Norman North Bog Outlet												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	-	-	-
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Comments:	No submission of annual report.												

**NOTES:**  
**ND:** No Deposit    **RF:** Reduced Frequency    **NCU:** No Cyanide Used    **Pass:** ≤50% Mortality    **Fail:** >50% Mortality    **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Porcupine Gold Mines (Dome Mine)												
Operator	Goldcorp Canada Limited												
Product(s)	Gold												
Address	1 Gold Mine Road, P.O. Box 70, South Porcupine, Ontario P0N 1H0												
Effluent Discharge Point	Mine Effluent Treatment Plant												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0019	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	0.0147	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	0.0422	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	0.0003	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0124	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0026	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	1.70	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	0.0050	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	7.2	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	7.5	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	377,150	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	0	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	0	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Porcupine Gold Mines (Dome Mine)												
Operator	Goldcorp Canada Limited												
Product(s)	Gold												
Address	1 Gold Mine Road, P.O. Box 70, South Porcupine, Ontario P0N 1H0												
Effluent Discharge Point	Mine Effluent Treatment Plant												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0068	0.0082	0.0079	0.0069	0.0060	0.0146	0.0167	0.0196	0.0166	0.0126	0.0080	0.0080
Cu (mg/L)	0.3	0.0025	0.0049	0.0051	0.0097	0.0052	0.0054	0.0040	0.0032	0.0036	0.0104	0.0050	0.0054
CN (mg/L)	1	0.0036	0.0043	0.0063	0.0068	0.0043	0.0022	0.0044	0.0020	0.0017	0.0020	0.0025	0.0020
Pb (mg/L)	0.2	0.0005	0.0005	0.0005	0.0005	0.0005	0.0004	0.0003	0.0003	0.0003	0.0008	0.0003	0.0003
Ni (mg/L)	0.5	0.0269	0.0139	0.0072	0.0079	0.0048	0.0046	0.0050	0.0050	0.0049	0.0064	0.0060	0.0154
Zn (mg/L)	0.5	0.0186	0.0098	0.0067	0.0074	0.0044	0.0024	0.0035	0.0015	0.0029	0.0182	0.0030	0.0044
TSS (mg/L)	15	1.72	1.78	1.28	1.52	1.85	1.48	1.62	0.63	1.45	1.91	1.75	0.86
Ra-226 (Bq/L)	0.37	0.0050	RF	RF	0.0050	RF	RF	0.0050	RF	RF	0.0050	RF	RF
pH Low	≥6.0	7.9	7.9	7.8	7.8	7.9	8.0	7.9	8.0	8.0	7.8	8.0	7.8
pH High	≤9.5	8.1	8.4	8.0	8.0	8.1	8.1	8.3	8.1	8.2	8.1	8.1	8.0
Flow (m <sup>3</sup> /month)	-	59,628	51,977	61,440	61,721	46,109	52,010	104,237	50,311	53,148	66,187	65,645	65,952
Rainbow Trout	Pass	1	RF	-	RF	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	-	RF	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	-	RF	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	-	RF	RF	RF	0	RF	RF	0	RF	RF

**Comments:**

The owner/operator did not report acute lethality testing within the second quarter. The owner/operator reported to be in 'normal frequency' for acute lethality testing in March, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Porcupine Gold Mines (Hollinger Mine)												
Operator	Goldcorp Canada Limited												
Product(s)	Gold												
Address	4315 Gold Mine Road, South Porcupine, Ontario P0N 1H0												
Effluent Discharge Point	Little Pearl Mine Water												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0017	0.0015	0.0015	0.0015	0.0008	0.0011	0.0010	0.0008	0.0009	0.0012	0.0008	0.0005
Cu (mg/L)	0.3	0.0022	0.0023	0.0036	0.0025	0.0022	0.0025	0.0026	0.0016	0.0016	0.0024	0.0023	0.0015
CN (mg/L)	1	0.0020	0.0018	0.0029	0.0025	0.0026	0.0010	0.0033	0.0010	0.0013	0.0012	0.0015	0.0010
Pb (mg/L)	0.2	0.0005	0.0005	0.0005	0.0005	0.0005	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	0.0114	0.0121	0.0110	0.0110	0.0081	0.0069	0.0051	0.0056	0.0047	0.0086	0.0095	0.0090
Zn (mg/L)	0.5	0.0449	0.0726	0.0782	0.0696	0.0263	0.0055	0.0046	0.0062	0.0077	0.0220	0.0110	0.0088
TSS (mg/L)	15	1.72	1.19	1.38	1.96	2.45	1.88	1.32	1.45	1.83	2.07	1.85	1.54
Ra-226 (Bq/L)	0.37	0.0050	RF	RF	0.0050	-	-	0.0050	RF	RF	0.0050	RF	RF
pH Low	≥6.0	7.5	7.8	7.7	7.7	7.8	7.8	7.6	7.8	7.9	7.8	7.5	7.6
pH High	≤9.5	8.0	8.0	8.0	8.0	8.1	8.0	8.1	8.1	8.1	8.1	7.9	8.0
Flow (m <sup>3</sup> /month)	-	129,678	87,597	78,703	109,099	126,695	121,843	110,190	116,290	114,607	142,214	105,430	87,323
Rainbow Trout	Pass	1	-	-	1	-	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	-	-	0	-	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	-	-	1	-	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	-	-	0	-	RF	0	RF	RF	0	RF	RF

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in February, March, and May, however, no test results were submitted for these months. The owner/operator reported to be in 'normal frequency' for radium-226 measurement in May and June, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Porcupine Gold Mines (Owl Creek Pit)												
Operator	Goldcorp Canada Limited												
Product(s)	Gold												
Address	1 Gold Mine Road, P.O. Box 70, South Porcupine, Ontario P0N 1H0												
Effluent Discharge Point	Owl Creek Discharge 1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Porcupine Gold Mines (Owl Creek Pit)												
Operator	Goldcorp Canada Limited												
Product(s)	Gold												
Address	1 Gold Mine Road, P.O. Box 70, South Porcupine, Ontario P0N 1H0												
Effluent Discharge Point	Owl Creek Discharge 2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0013	0.0014	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0018	0.0022	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	0.0010	0.0010	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0005	0.0004	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0082	0.0075	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0090	0.0079	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	1.28	1.91	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0050	0.0035	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	8.0	8.1	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	8.2	8.1	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	49,084	117,248	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	1	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	0	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Porcupine Gold Mines (Pamour Mine)												
Operator	Goldcorp Canada Limited												
Product(s)	Gold												
Address	1 Gold Mine Road, P.O. Box 70, South Porcupine, Ontario P0N 1H0												
Effluent Discharge Point	Pamour Minewater												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0826	0.1347	-	0.1490	0.0216	0.0411	ND	ND	ND	ND	0.0260	0.0245
Cu (mg/L)	0.3	0.0033	0.0064	-	0.0020	0.0013	0.0090	ND	ND	ND	ND	0.0015	0.0028
CN (mg/L)	1	0.0125	0.0128	NCU	0.0066	0.0012	0.0026	ND	ND	ND	ND	0.0035	0.0028
Pb (mg/L)	0.2	0.0005	0.0005	-	0.0005	0.0005	0.0004	ND	ND	ND	ND	0.0003	0.0003
Ni (mg/L)	0.5	0.0255	0.0184	-	0.0149	0.0080	0.0065	ND	ND	ND	ND	0.0115	0.0150
Zn (mg/L)	0.5	0.0031	0.0081	-	0.0022	0.0026	0.0024	ND	ND	ND	ND	0.0025	0.0013
TSS (mg/L)	15	2.36	5.39	-	3.50	1.48	1.03	ND	ND	ND	ND	0.90	0.88
Ra-226 (Bq/L)	0.37	0.0050	RF	RF	0.0050	RF	0.0035	ND	ND	ND	ND	0.0050	RF
pH Low	≥6.0	7.4	7.4	-	7.2	7.4	7.6	ND	ND	ND	ND	7.5	7.0
pH High	≤9.5	7.8	7.9	-	7.9	8.2	8.3	ND	ND	ND	ND	7.9	7.7
Flow (m <sup>3</sup> /month)	-	2,222	1,084	38	3,188	26,171	6,055	ND	ND	ND	ND	27,354	5,684
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	RF	ND	ND	ND	1	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	RF	ND	ND	ND	0	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	RF	ND	ND	ND	1	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	RF	ND	ND	ND	0	RF

**Comments:**

The owner/operator reported to be in 'normal frequency' for arsenic, copper, lead, nickel, and zinc measurement in March, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Quebec Lithium (Mine)												
Operator	Lithium Amérique du Nord Incorporée												
Product(s)	Lithium												
Address	500 Route du Lithium, La Corne, Quebec JOY 1R0												
Effluent Discharge Point	Effluent BO_01												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Quebec Lithium (Mine)												
Operator	Lithium Amérique du Nord Incorporée												
Product(s)	Lithium												
Address	500 Route du Lithium, La Corne, Quebec JOY 1R0												
Effluent Discharge Point	Effluent BO_09												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0003
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0024
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NCU
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0002
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0018
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0005
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.00
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0010
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.8
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.8
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8,560
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Quebec Lithium (Mine)												
Operator	Lithium Amérique du Nord Incorporée												
Product(s)	Lithium												
Address	500 Route du Lithium, La Corne, Quebec JOY 1R0												
Effluent Discharge Point	Effluent BO_11												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0003	0.0003	0.0003	0.0007	0.0003	0.0004	0.0003	0.0003
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0353	0.0082	0.0055	0.0060	0.0067	0.0085	0.0059	0.0058
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	0.0200	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0014	0.0002	0.0002	0.0002	0.0002	0.0002	0.0004	0.0002
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0101	0.0075	0.0056	0.0059	0.0097	0.0104	0.0137	0.0128
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0050	0.0019	0.0088	0.0089	0.0154	0.0220	0.0284	0.0218
TSS (mg/L)	15	ND	ND	ND	ND	1.83	6.50	1.70	0.88	0.63	1.25	0.60	0.75
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0070	0.0050	0.0042	0.0023	0.0078	0.0180	0.0060	0.0048
pH Low	≥6.0	ND	ND	ND	ND	7.9	7.5	7.5	7.6	7.3	6.2	6.1	7.2
pH High	≤9.5	ND	ND	ND	ND	8.0	7.9	8.1	7.8	7.6	7.5	7.7	8.0
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	8,976	24,480	24,493	24,776	23,110	17,624	9,371	9,604
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	2	1	1	1	1	2
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	0	0
Daphnia magna	Pass	ND	ND	ND	ND	1	1	2	1	1	1	1	2
Monitoring Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Quebec Lithium (Mine)												
Operator	Lithium Amérique du Nord Incorporée												
Product(s)	Lithium												
Address	500 Route du Lithium, La Corne, Quebec JOY 1R0												
Effluent Discharge Point	Effluent Final												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0003	ND	0.0003	0.0003	0.0012
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	0.0034	ND	0.0101	0.0132	0.0100
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	NCU	ND	NCU	NCU	NCU
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	0.0020	ND	0.0075	0.0004	0.0002
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0022	ND	0.0036	0.0045	0.0087
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0260	ND	0.0742	0.0720	0.0513
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	1.67	ND	3.90	4.40	0.67
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	0.0160	ND	0.1670	0.1233	0.1027
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	6.3	ND	7.1	7.0	6.6
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	7.8	ND	7.8	7.8	7.7
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	11,219	ND	101,978	151,100	50,527
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	1	ND	2	3	3
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	1	ND	0	0	0
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	0	ND	2	3	3
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	2	ND	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Rabbit Lake Operation												
Operator	Cameco Corporation												
Product(s)	Uranium												
Address	2121-11th Street West, Saskatoon, Saskatchewan S7M 1J3												
Effluent Discharge Point	Station 2.3.3												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0007	0.0007	0.0007	0.0008	0.0010	0.0011	0.0013	0.0012	0.0011	0.0009	0.0008	0.0007
Cu (mg/L)	0.3	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	0.0004	0.0004	0.0003	0.0002	0.0003	0.0002
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Ni (mg/L)	0.5	0.0014	0.0015	0.0019	0.0018	0.0020	0.0015	0.0017	0.0013	0.0013	0.0013	0.0013	0.0013
Zn (mg/L)	0.5	0.0003	0.0003	0.0003	0.0004	0.0008	0.0003	0.0005	0.0003	0.0003	0.0003	0.0003	0.0003
TSS (mg/L)	15	0.50	0.63	0.63	0.50	0.60	0.50	1.30	0.75	0.50	0.80	0.50	0.63
Ra-226 (Bq/L)	0.37	0.0032	0.0073	0.0045	0.0025	0.0041	0.0063	0.0096	0.0048	0.0050	0.0025	0.0039	0.0041
pH Low	≥6.0	7.3	7.3	7.2	7.1	7.0	7.3	7.2	7.2	7.2	7.2	7.3	7.1
pH High	≤9.5	7.5	7.3	7.5	7.3	7.4	7.5	7.5	7.6	7.4	7.5	7.6	7.3
Flow (m <sup>3</sup> /month)	-	276,349	237,184	292,217	332,156	426,679	404,709	440,338	412,633	422,288	354,678	316,005	303,761
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Raglan (Mine)												
Operator	Glencore Canada Corporation												
Product(s)	Nickel, copper												
Address	120 Airport Avenue, Rouyn-Noranda, Quebec J9Y 0G1												
Effluent Discharge Point	DIR-HSA												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Raglan (Mine)												
Operator	Glencore Canada Corporation												
Product(s)	Nickel, copper												
Address	120 Airport Avenue, Rouyn-Noranda, Quebec J9Y 0G1												
Effluent Discharge Point	Dir-SPOON												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0005	0.0005	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	0.0243	0.0125	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	NCU	NCU	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	0.0004	0.0005	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.2700	0.2250	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0035	0.0078	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	2.40	1.00	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	0.0025	RF	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	6.8	6.8	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	8.0	8.0	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	197,005	48,464	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	1	1	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	0	0	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	0	1	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	1	0	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Raglan (Mine)												
Operator	Glencore Canada Corporation												
Product(s)	Nickel, copper												
Address	120 Airport Avenue, Rouyn-Noranda, Quebec J9Y 0G1												
Effluent Discharge Point	Dir-UT												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0060	0.0013	0.0014	0.0015	0.0026	0.0025	0.0016	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.2140	0.1925	0.2062	0.1575	0.2620	0.1123	0.0540	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0035	0.0035	0.0046	0.0035	0.0035	0.0035	0.0035	ND
TSS (mg/L)	15	ND	ND	ND	ND	3.80	2.50	13.80	2.00	1.80	2.00	1.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0025	RF	0.0025	RF	RF	0.0025	RF	ND
pH Low	≥6.0	ND	ND	ND	ND	7.1	7.7	6.9	7.6	7.0	7.2	7.9	ND
pH High	≤9.5	ND	ND	ND	ND	8.3	8.3	8.0	8.4	7.9	7.9	7.9	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	78,098	49,609	86,583	110,250	120,780	127,607	37,431	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	1	1	1	1	0	0	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	0	0	0	0	1	1	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Raglan (Mine)												
Operator	Glencore Canada Corporation												
Product(s)	Nickel, copper												
Address	120 Airport Avenue, Rouyn-Noranda, Quebec J9Y 0G1												
Effluent Discharge Point	Dir-Z3												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0005	0.0005	0.0005	0.0005	0.0005	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	0.0005	0.0008	0.0005	0.0005	0.0005	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	0.0003	0.0003	0.0003	0.0003	0.0003	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.2720	0.1925	0.3380	0.1875	0.2825	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0035	0.0062	0.0035	0.0035	0.0035	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	1.20	2.35	1.00	1.00	1.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	0.0025	RF	RF	0.0025	RF	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	7.6	7.3	8.0	8.3	8.1	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	7.9	8.6	8.4	8.4	8.5	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	184,916	195,521	191,526	192,985	166,544	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	1	0	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	0	1	0	0	0	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Rainy River Project												
Operator	New Gold Incorporated												
Product(s)	Gold, silver												
Address	5967 Highway 11/71, Emo, Ontario POW 1LO												
Effluent Discharge Point	North Pond												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Rainy River Project												
Operator	New Gold Incorporated												
Product(s)	Gold, silver												
Address	5967 Highway 11/71, Emo, Ontario POW 1L0												
Effluent Discharge Point	Overburden and West Mine Rock Stockpile Temp Ponds												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	0.0013	0.0027	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	0.0001	0.0005	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	0.0010	0.0032	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	1.00	0.0050	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	7.8	7.8	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	8.502	1	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	0	1	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	0	0	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	7.8	7.8	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	8.502	1	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	0	0	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	0	0	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	0	0	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	1	1	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	0	0	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Rainy River Project												
Operator	New Gold Incorporated												
Product(s)	Gold, silver												
Address	5967 Highway 11/71, Emo, Ontario POW 1LO												
Effluent Discharge Point	Process Plant Overburden Pile												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Rainy River Project												
Operator	New Gold Incorporated												
Product(s)	Gold, silver												
Address	5967 Highway 11/71, Emo, Ontario POW 1LO												
Effluent Discharge Point	Process Plant Site												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Rainy River Project												
Operator	New Gold Incorporated												
Product(s)	Gold, silver												
Address	5967 Highway 11/71, Emo, Ontario POW 1LO												
Effluent Discharge Point	South Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Rainy River Project												
Operator	New Gold Incorporated												
Product(s)	Gold, silver												
Address	5967 Highway 11/71, Emo, Ontario POW 1LO												
Effluent Discharge Point	Sump 3												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0020	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	0.0033	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	0.0003	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	0.0005	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	0.0022	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	0.0126	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	5.50	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0050	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	8.5	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	16,380	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Rainy River Project												
Operator	New Gold Incorporated												
Product(s)	Gold, silver												
Address	5967 Highway 11/71, Emo, Ontario POW 1LO												
Effluent Discharge Point	Sump 4												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0019	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	0.0040	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	0.0035	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	0.0005	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	0.0021	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	0.0115	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	3.25	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0050	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	8.1	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	20,244	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Red Chris Mine												
Operator	Red Chris Development Company Limited												
Product(s)	Copper, gold												
Address	25 km SE of Iskut, Iskut, British Columbia												
Effluent Discharge Point	North Reclaim Dam Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0014	0.0011	0.0009	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0063	0.0050	0.0032	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	NCU	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0005	0.0002	0.0001	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0034	0.0020	0.0012	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0039	0.0025	0.0015	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	17/18	6.28	4.43	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0073	0.0045	0.0057	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	8.1	8.0	8.2	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	8.8	8.5	8.5	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	24	10	3	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	-	1	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	-	0	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	-	1	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	-	0	ND	ND	ND	ND	ND

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in June, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Red Chris Mine												
Operator	Red Chris Development Company Limited												
Product(s)	Copper, gold												
Address	25 km SE of Iskut, Iskut, British Columbia												
Effluent Discharge Point	North Reclaim Pond Seepage												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0004	0.0003	0.0004
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	0.0005	0.0005	0.0005
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	0.0000	0.0000	0.0000
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0004	0.0004	0.0004
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0078	0.0056	0.0127
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	3.32	3.00	3.00
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	0.0034	-	0.0034
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	8.0	7.9	7.8
pH High	≤9.5	-	-	-	-	-	-	-	-	-	8.3	8.2	8.3
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	517	326	390
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	1	1	1
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	0	0	0
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	1	1	1
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	0	0	0
Comments:	New final discharge point registered in 2018. The owner/operator reported to be in 'normal frequency' for radium-226 measurement in November, however, no test results were submitted for this month.												
<b>NOTES:</b>	<p><b>ND:</b> No Deposit    <b>RF:</b> Reduced Frequency    <b>NCU:</b> No Cyanide Used    <b>Pass:</b> ≤50% Mortality    <b>Fail:</b> &gt;50% Mortality    <b>-</b> : No data reported</p> <p>Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.</p> <p>A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.</p>												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Red Chris Mine												
Operator	Red Chris Development Company Limited												
Product(s)	Copper, gold												
Address	25 km SE of Iskut, Iskut, British Columbia												
Effluent Discharge Point	North West Diversion Ditch												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	ND	ND
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	ND	ND
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	-	ND	ND
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	ND	ND
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	ND	ND
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	ND	ND
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	ND	ND
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	ND	ND
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	ND	ND
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	ND	ND
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	-	ND	ND
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	ND	ND
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	ND	ND
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	ND	ND
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	ND	ND
Comments:	New final discharge point registered in 2018.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Red Lake Mine												
Operator	Goldcorp Canada Limited												
Product(s)	Gold												
Address	General Delivery, Balmertown, Ontario P0V1C0												
Effluent Discharge Point	G1												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Red Lake Mine												
Operator	Goldcorp Canada Limited												
Product(s)	Gold												
Address	General Delivery, Balmertown, Ontario P0V 1C0												
Effluent Discharge Point	G2												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0636	0.0700	0.0750	0.0690	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	0.0021	0.0024	0.0020	0.0021	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	0.0033	0.0032	0.0020	0.0045	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	0.0018	0.0000	0.0000	0.0000	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0144	0.0110	0.0077	0.0101	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0015	0.0015	0.0015	0.0024	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	5.70	6.25	4.80	4.73	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	0.0027	0.0033	0.0029	0.0033	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	6.8	6.2	6.5	6.4	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	7.2	6.3	6.5	6.8	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	94,870	46,570	9,800	135,160	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	1	2	1	2	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	0	0	0	0	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	1	1	1	2	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	0	1	0	0	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Redstone Mine												
Operator	Northern Sun Mining Corporation												
Product(s)	Nickel												
Address	P.O. Box 398, South Porcupine, Ontario P0N 1H0												
Effluent Discharge Point	RSD-2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Renard (Mine)												
Operator	Les Diamants Stormoway (Canada) Incorporated												
Product(s)	Diamond												
Address	Km 650, route 167 Nord, Quebec												
Effluent Discharge Point	MIR-2 LAC												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	ND	ND	0.0013	0.0018	0.0009	0.0010	0.0009	0.0006	0.0005
Cu (mg/L)	0.3	-	-	-	ND	ND	0.0004	0.0004	0.0005	0.0008	0.0006	0.0007	0.0007
CN (mg/L)	1	-	-	-	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	ND	ND	0.0002	0.0003	0.0002	0.0002	0.0008	0.0002	0.0002
Ni (mg/L)	0.5	-	-	-	ND	ND	0.0061	0.0060	0.0061	0.0081	0.0035	0.0052	0.0049
Zn (mg/L)	0.5	-	-	-	ND	ND	0.0079	0.0080	0.0083	0.0063	0.0319	0.0071	0.0053
TSS (mg/L)	15	-	-	-	ND	ND	0.75	0.60	0.88	0.90	0.88	0.88	1.30
Ra-226 (Bq/L)	0.37	-	-	-	ND	ND	RF	RF	0.0030	0.0060	0.0038	0.0013	0.0010
pH Low	≥6.0	-	-	-	ND	ND	7.2	7.1	7.1	7.0	7.1	6.9	6.9
pH High	≤9.5	-	-	-	ND	ND	7.6	7.8	7.4	7.6	7.5	7.1	7.2
Flow (m <sup>3</sup> /month)	-	-	-	-	ND	ND	344,593	296,693	292,825	227,124	210,886	100,897	94,929
Rainbow Trout	Pass	-	-	-	ND	ND	1	1	1	1	1	1	1
Acute Lethality Test	Fail	-	-	-	ND	ND	0	0	0	0	0	0	0
Daphnia magna	Pass	-	-	-	ND	ND	1	1	1	1	1	1	1
Monitoring Test	Fail	-	-	-	ND	ND	0	0	0	0	0	0	0

**Comments:**

This mine became subject to the MDMR in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Restigouche Mine												
Operator	Blue Note Mining Inc. / Province of New Brunswick												
Product(s)	Zinc, lead, silver, copper												
Address	9361 Route 180, P.O. Box 26, Bathurst, New Brunswick E2A 3Z1												
Effluent Discharge Point	Mixing Structure Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0005	-	ND	ND	ND	ND	-	0.0005
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0005	0.0005	ND	ND	ND	ND	0.0013	0.0010
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	ND	ND	ND	ND	NCU	NCU
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0011	0.0002	ND	ND	ND	ND	0.0005	0.0013
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0005	-	ND	ND	ND	ND	-	0.0010
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0560	0.0360	ND	ND	ND	ND	0.1040	0.1140
TSS (mg/L)	15	ND	ND	ND	ND	5.00	5.00	ND	ND	ND	ND	5.00	5.00
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	-	-	ND	ND	ND	ND	-	-
pH Low	≥6.0	ND	ND	ND	ND	7.4	8.1	ND	ND	ND	ND	7.0	7.2
pH High	≤9.5	ND	ND	ND	ND	7.7	8.1	ND	ND	ND	ND	8.3	7.2
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	119,665	91,427	ND	ND	ND	ND	63,196	26,626
Rainbow Trout	Pass	ND	ND	ND	ND	2	1	ND	ND	ND	ND	1	1
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	ND	ND	ND	ND	0	0
Daphnia magna	Pass	ND	ND	ND	ND	2	1	ND	ND	ND	ND	1	1
Monitoring Test	Fail	ND	ND	ND	ND	0	0	ND	ND	ND	ND	0	0

Comments:  
The owner/operator reported to be in 'normal frequency' for radium-226 measurement in May, June, November and December, however, no test results were submitted for these months.  
The owner/operator reported to be in 'normal frequency' for arsenic and nickel measurement in June and November, however, no test results were submitted for these months.

**NOTES:**  
**ND:** No Deposit    **RF:** Reduced Frequency    **NCU:** No Cyanide Used    **Pass:** ≤50% Mortality    **Fail:** >50% Mortality    **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Rice Lake Gold Mine / True North Gold Mine												
Operator	Klondex Canada Limited / Havilah Mining Canada Limited												
Product(s)	Gold												
Address	63 San Antonio Road, Bissett, Manitoba ROE OVO												
Effluent Discharge Point	FDP1 - End of Pipe												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0016	0.0017	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.1100	0.1087	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	0.0037	0.0204	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0001	0.0002	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0069	0.0066	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0015	0.0032	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	1.00	1.00	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0036	0.0054	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	8.3	8.4	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	8.5	8.5	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	140,836	182,472	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	2	3	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	2	3	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	ND	ND	ND	ND	ND

Comments:

The owner/operator changed their name from Klondex Canada Limited to Havilah Mining Canada Limited.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	RioTinto Alcan Usine Vaudreuil												
Operator	RioTinto Alcan												
Product(s)	Alumina												
Address	1955 Mellon Blvd, Jonquière, Quebec G7S 4L2												
Effluent Discharge Point	Émissaire-B												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0130	RF	RF	0.0130	RF	RF	0.0130	RF	RF	0.0130	RF	RF
Cu (mg/L)	0.3	0.0130	RF	RF	0.0040	RF	RF	0.0060	RF	RF	0.0080	RF	RF
CN (mg/L)	1	0.0100	RF	RF	0.0050	RF	RF	0.0025	RF	RF	0.0025	RF	RF
Pb (mg/L)	0.2	0.0035	RF	RF	0.0035	RF	RF	0.0035	RF	RF	0.0035	RF	RF
Ni (mg/L)	0.5	0.0020	RF	RF	0.0060	RF	RF	0.0050	RF	RF	0.0120	RF	RF
Zn (mg/L)	0.5	0.0110	RF	RF	0.0110	RF	RF	0.0110	RF	RF	0.0110	RF	RF
TSS (mg/L)	15	3.18	3.25	3.60	6.40	9.70	11.15	10.15	16.68	7.73	6.24	3.50	3.75
Ra-226 (Bq/L)	0.37	0.0025	RF	RF	0.0025	RF	RF	0.0025	RF	RF	0.0025	RF	RF
pH Low	≥6.0	7.3	7.3	7.3	7.4	7.3	7.6	7.5	7.8	7.4	7.2	7.4	6.5
pH High	≤9.5	7.5	7.5	7.4	7.8	7.7	7.8	7.9	7.9	7.9	7.5	7.6	7.3
Flow (m <sup>3</sup> /month)	-	400,095	357,274	486,306	537,159	805,045	819,969	816,828	816,828	735,868	637,177	600,734	501,418
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	RioTinto Alcan Usine Vaudreuil												
Operator	RioTinto Alcan												
Product(s)	Alumina												
Address	1955 Mellon Blvd, Jonquière, Quebec G7S 4L2												
Effluent Discharge Point	Émissaire-C												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0130	RF	RF	0.0130	RF	RF	0.0130	RF	RF	0.0130	RF	RF
Cu (mg/L)	0.3	0.0110	RF	RF	0.0070	RF	RF	0.0100	RF	RF	0.0040	RF	RF
CN (mg/L)	1	0.0120	RF	RF	0.0070	RF	RF	0.0060	RF	RF	0.0025	RF	RF
Pb (mg/L)	0.2	0.0035	RF	RF	0.0035	RF	RF	0.0035	RF	RF	0.0035	RF	RF
Ni (mg/L)	0.5	0.0020	RF	RF	0.0110	RF	RF	0.0020	RF	RF	0.0090	RF	RF
Zn (mg/L)	0.5	0.0110	RF	RF	0.0110	RF	RF	0.0110	RF	RF	0.0130	RF	RF
TSS (mg/L)	15	1.56	5.80	11.48	19.60	7.80	7.80	8.95	4.08	3.60	4.12	2.88	1.13
Ra-226 (Bq/L)	0.37	0.0025	RF	RF	0.0025	RF	RF	0.0025	RF	RF	0.0050	RF	RF
pH Low	≥6.0	7.4	7.2	7.5	7.7	7.5	7.5	7.3	7.4	7.4	7.1	7.5	6.6
pH High	≤9.5	7.6	7.6	8.0	7.9	7.7	7.6	7.6	7.8	7.6	7.7	7.7	7.4
Flow (m <sup>3</sup> /month)	-	365,057	284,175	329,618	412,013	340,198	359,229	539,605	560,485	507,673	402,929	377,675	314,023
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Santoy 8 Mine												
Operator	SGO Mining Incorporated												
Product(s)	Gold												
Address	219 Robin Crescent, Saskatoon, Saskatchewan S7L 6M8												
Effluent Discharge Point	S8SP Final Discharge Point												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.0003	0.0002	0.0003	0.0003	0.0002	0.0002	0.0002	0.0003	0.0002	0.0002	0.0002	0.0003
Cu (mg/L)	0.3	0.0014	0.0017	0.0014	0.0013	0.0016	0.0017	0.0020	0.0023	0.0021	0.0020	0.0020	0.0019
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Ni (mg/L)	0.5	0.0052	0.0059	0.0055	0.0053	0.0042	0.0045	0.0047	0.0058	0.0057	0.0060	0.0066	0.0070
Zn (mg/L)	0.5	0.0034	0.0042	0.0039	0.0045	0.0028	0.0026	0.0026	0.0030	0.0031	0.0039	0.0050	0.0056
TSS (mg/L)	15	0.50	1.75	0.63	1.20	1.13	0.75	0.70	0.88	1.30	0.75	0.63	1.00
Ra-226 (Bq/L)	0.37	0.0160	0.0138	0.0200	0.0165	0.0085	0.0156	0.0220	0.0140	0.0145	0.0129	0.0131	0.0225
pH Low	≥6.0	7.1	7.7	7.5	7.4	7.7	8.0	7.3	7.7	7.5	7.4	7.4	6.9
pH High	≤9.5	7.7	7.8	7.8	7.8	7.9	8.5	8.1	7.9	8.2	8.0	7.7	7.9
Flow (m <sup>3</sup> /month)	-	9,719	999	4,036	6,394	7,682	10,287	23,448	21,933	19,445	15,363	10,355	6,463
Rainbow Trout	Pass	1	RF	RF	RF	1	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	RF	0	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	RF	1	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	RF	0	RF	0	RF	RF	0	RF	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scotia Mine												
Operator	ScoZinc Limited												
Product(s)	Zinc, lead												
Address	15601 Highway 224, Cooks Brook, Nova Scotia B0N 2H0												
Effluent Discharge Point	Polishing Pond Outlet												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0014	0.0031	0.0020	0.0020	0.0025	0.0017	0.0024	0.0026	ND	0.0017	0.0013	0.0024
Cu (mg/L)	0.3	0.0022	0.0022	0.0022	0.0026	0.0029	0.0028	0.0029	0.0029	ND	0.0036	0.0035	0.0023
CN (mg/L)	1	0.0011	0.0005	0.0025	0.0005	0.0005	0.0017	0.0011	0.0025	ND	0.0018	0.0021	0.0025
Pb (mg/L)	0.2	0.0021	0.0088	0.0032	0.0046	0.0013	0.0003	0.0007	0.0003	ND	0.0020	0.0015	0.0019
Ni (mg/L)	0.5	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	ND	0.0010	0.0010	0.0010
Zn (mg/L)	0.5	0.1044	0.1135	0.0813	0.0550	0.0516	0.0218	0.0119	0.0052	ND	0.0145	0.0325	0.0690
TSS (mg/L)	15	2.24	3.00	1.98	2.83	1.76	1.35	0.96	1.04	ND	2.33	2.03	1.65
Ra-226 (Bq/L)	0.37	RF	RF	0.0050	RF	RF	0.0050	RF	RF	ND	0.0050	RF	0.0050
pH Low	≥6.0	6.7	6.7	7.3	7.3	7.2	7.5	7.3	7.3	ND	7.1	6.9	7.0
pH High	≤9.5	7.9	7.2	7.5	7.4	7.9	7.8	7.7	7.9	ND	7.7	7.3	7.3
Flow (m <sup>3</sup> /month)	-	1,799,511	2,864,160	1,953,603	2,890,506	1,368,706	815,897	162,745	12,355	ND	548,192	2,496,453	1,694,714
Rainbow Trout	Pass	RF	RF	1	RF	1	-	RF	RF	ND	1	RF	1
Acute Lethality Test	Fail	RF	RF	0	RF	0	-	RF	RF	ND	0	RF	0
Daphnia magna	Pass	RF	RF	1	RF	1	-	RF	RF	ND	1	RF	1
Monitoring Test	Fail	RF	RF	0	RF	0	-	RF	RF	ND	0	RF	0

**Comments:**

The owner/operator did not report measurement of radium-226 or acute lethality testing within the third quarter. The owner/operator reported to be in 'normal frequency' for acute lethality testing in June, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	East Pit 1 Dewatering												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	East Pit 2 Dewatering												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	ND	ND	ND	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	ND
Cu (mg/L)	0.3	0.0010	ND	ND	ND	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	ND
CN (mg/L)	1	NCU	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	0.0003	ND	ND	ND	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	ND
Ni (mg/L)	0.5	0.0010	ND	ND	ND	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	ND
Zn (mg/L)	0.5	0.0025	ND	ND	ND	0.0025	0.0025	0.0025	0.0025	0.0025	0.0031	0.0025	ND
TSS (mg/L)	15	0.50	ND	ND	ND	2.40	1.35	1.34	1.28	2.23	1.14	0.50	ND
Ra-226 (Bq/L)	0.37	RF	ND	ND	ND	0.0050	RF	0.0050	0.0050	RF	0.0050	0.0050	ND
pH Low	≥6.0	7.1	ND	ND	ND	7.2	7.3	7.5	7.7	7.7	7.7	7.5	ND
pH High	≤9.5	7.1	ND	ND	ND	7.2	7.8	7.7	7.9	7.9	7.8	7.5	ND
Flow (m <sup>3</sup> /month)	-	4,948	ND	ND	ND	108,269	438,556	154,781	158,154	153,943	113,869	13,290	ND
Rainbow Trout	Pass	RF	ND	ND	ND	1	RF	1	RF	RF	1	RF	ND
Acute Lethality Test	Fail	RF	ND	ND	ND	0	RF	0	RF	RF	0	RF	ND
Daphnia magna	Pass	RF	ND	ND	ND	1	RF	1	RF	RF	1	RF	ND
Monitoring Test	Fail	RF	ND	ND	ND	0	RF	0	RF	RF	0	RF	ND

**Comments:**

The owner/operator did not report measurement of radium-226 or acute lethality testing within the first quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	East Pit/Dewatering East												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	Flora Lake Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cu (mg/L)	0.3	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0003	0.0111	0.0053	0.0081	0.0016	0.0031	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Zn (mg/L)	0.5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0128	0.0025	0.0025
TSS (mg/L)	15	0.94	2.05	2.55	1.60	5.14	42.75	7.12	2.70	2.63	1.36	0.80	1.26
Ra-226 (Bq/L)	0.37	0.0050	0.0050	RF	0.0050	RF	RF	RF	0.0050	RF	0.0050	0.0050	0.0050
pH Low	≥6.0	6.9	7.5	7.4	7.4	7.3	7.4	7.6	7.6	7.5	7.6	7.5	7.5
pH High	≤9.5	9.4	7.7	7.6	8.1	7.5	7.7	7.7	7.7	7.8	7.7	7.7	7.5
Flow (m <sup>3</sup> /month)	-	3,267,315	2,198,171	945,832	1,336,167	14,032,07	13,141,123	6,217,014	6,466,195	3,321,753	3,630,73	1,448,542	2,459,34
Rainbow Trout	Pass	1	RF	RF	1	RF	1	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	0	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	1	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	0	0	RF	RF	0	RF	RF
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	Knoll Lake Inflow												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0005	0.0005	ND	ND	0.0005	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0010	0.0010	ND	ND	0.0010	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	NCU	NCU	ND	ND	NCU	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0003	0.0003	ND	ND	0.0003	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0010	0.0010	ND	ND	0.0010	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0190	0.0120	ND	ND	0.1165	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	0.67	1.40	ND	ND	12.50	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0050	0.0050	ND	ND	0.0050	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	7.6	8.0	ND	ND	7.9	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	8.1	8.0	ND	ND	8.1	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	756	9	ND	ND	38,621	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	ND	ND	1	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	ND	ND	0	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	ND	ND	1	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	ND	ND	0	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	Loadout Ditch Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	Shops East Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	Shops South Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	Tailings Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	Tailings Line Emergency Dump Basin 1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0082	0.0870	0.0025	0.0025	0.0025	0.0025	0.0025	ND
TSS (mg/L)	15	ND	ND	ND	ND	1.37	6.40	1.50	1.10	0.72	0.50	0.50	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0050	RF	0.1000	0.0050	0.0050	0.0050	0.0050	ND
pH Low	≥6.0	ND	ND	ND	ND	7.1	7.7	7.7	7.8	8.0	8.0	8.0	ND
pH High	≤9.5	ND	ND	ND	ND	7.4	7.7	7.9	7.9	8.1	8.0	8.0	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	2,430	6	2,465	2,325	2,385	960	960	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	-	1	-	-	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	-	0	-	-	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	-	1	-	-	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	-	0	-	-	0	0	ND

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in June, August, and September, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Scully Mine												
Operator	TACORA Resources Incorporated												
Product(s)	Iron ore												
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0												
Effluent Discharge Point	West Pit Extension Settling Basin												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0005	0.0005	0.0005	0.0005	0.0005
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	0.0010	0.0010	0.0010	0.0010	0.0010
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	0.0003	0.0003	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0010	0.0010	0.0010	0.0010	0.0010
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0025	0.0025	0.0025	0.0069	0.0025
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	0.50	0.42	0.80	0.68	1.17
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	0.0050	0.0050	0.0050	0.0050	0.0050
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	7.4	7.7	7.6	7.3	7.4
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	7.7	7.7	7.6	7.8	7.7
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	613,024	919,959	566,976	421,859	556,982
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	-	-	1	-	-
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	-	-	0	-	-
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	-	-	1	-	-
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	-	-	0	-	-

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in August, September, November and December, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Seabee Gold Mine												
Operator	SGO Mining Incorporated												
Product(s)	Gold												
Address	P.O.Box 1230, La Ronge, Saskatchewan S0J 1L0												
Effluent Discharge Point	Final Discharge Point 1.2												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	ND	ND	ND
Cu (mg/L)	0.3	0.0096	0.0092	0.0089	0.0094	0.0180	0.0305	0.0200	0.0220	ND	ND	ND	ND
CN (mg/L)	1	0.0050	0.0005	0.0010	0.0005	0.0020	0.0005	0.0005	0.0010	ND	ND	ND	ND
Pb (mg/L)	0.2	0.0002	0.0004	0.0003	0.0001	0.0001	0.0001	0.0002	0.0002	ND	ND	ND	ND
Ni (mg/L)	0.5	0.0240	0.0230	0.0220	0.0160	0.0150	0.0125	0.0100	0.0120	ND	ND	ND	ND
Zn (mg/L)	0.5	0.0085	0.0063	0.0059	0.0034	0.0024	0.0041	0.0032	0.0030	ND	ND	ND	ND
TSS (mg/L)	15	4.60	8.00	3.38	0.88	1.20	113	2.70	2.00	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	0.0100	0.0100	0.0100	0.0025	0.0025	0.0048	0.0025	0.0060	ND	ND	ND	ND
pH Low	≥6.0	7.7	7.8	7.9	7.9	8.0	7.9	7.9	8.1	ND	ND	ND	ND
pH High	≤9.5	7.9	7.9	8.0	8.1	8.2	8.2	8.2	8.1	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	58,435	48,887	51,323	59,009	54,138	47,402	51,077	11,170	ND	ND	ND	ND
Rainbow Trout	Pass	1	RF	RF	RF	1	RF	1	RF	ND	ND	ND	ND
Acute Lethality Test	Fail	0	RF	RF	RF	0	RF	0	RF	ND	ND	ND	ND
Daphnia magna	Pass	1	RF	RF	RF	1	RF	1	RF	ND	ND	ND	ND
Monitoring Test	Fail	0	RF	RF	RF	0	RF	0	RF	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Seabee Gold Mine												
Operator	SGO Mining Incorporated												
Product(s)	Gold												
Address	P.O.Box 1230, La Ronge, Saskatchewan S0J 1L0												
Effluent Discharge Point	Final Discharge Point 1.3												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Seabee Gold Mine												
Operator	SGO Mining Incorporated												
Product(s)	Gold												
Address	P.O.Box 1230, La Ronge, Saskatchewan S0J 1L0												
Effluent Discharge Point	Final Discharge Point 1.5												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0006	0.0007	0.0008	0.0006	0.0007	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0268	0.0260	0.0260	0.0320	0.0310	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	0.0223	0.0526	0.0528	0.0410	0.0340	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0001	0.0002	0.0001	0.0001	0.0001	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0188	0.0186	0.0260	0.0260	0.0270	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0032	0.0024	0.0021	0.0018	0.0016	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	1.50	1.00	2.50	1.75	3.00	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0044	0.0064	0.0053	0.0048	0.0038	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	7.5	7.1	7.2	7.1	7.5	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	7.8	7.8	7.7	7.9	7.9	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	2,343	51,437	72,678	81,992	20,733	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	0	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	0	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Shakespeare Nickel Mine												
Operator	URSA Major Minerals Incorporated												
Product(s)	Nickel, copper, cobalt, gold, platinum, palladium												
Address	Lots 1 and 2, Concession 5, Shakespeare Township, Ontario												
Effluent Discharge Point	MISA monitoring weir at west end of Sedimentation Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0005	-	ND	ND	ND	ND	ND	0.0005	ND
Cu (mg/L)	0.3	ND	ND	ND	0.0021	-	ND	ND	ND	ND	ND	0.0030	ND
CN (mg/L)	1	ND	ND	ND	NCU	NCU	ND	ND	ND	ND	ND	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	0.0005	-	ND	ND	ND	ND	ND	0.0003	ND
Ni (mg/L)	0.5	ND	ND	ND	0.0660	-	ND	ND	ND	ND	ND	0.0790	ND
Zn (mg/L)	0.5	ND	ND	ND	0.0040	-	ND	ND	ND	ND	ND	0.0010	ND
TSS (mg/L)	15	ND	ND	ND	1.30	-	ND	ND	ND	ND	ND	0.34	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0050	-	ND	ND	ND	ND	ND	0.0050	ND
pH Low	≥6.0	ND	ND	ND	7.7	-	ND	ND	ND	ND	ND	8.1	ND
pH High	≤9.5	ND	ND	ND	7.7	-	ND	ND	ND	ND	ND	8.1	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	7,839	6,157	ND	ND	ND	ND	ND	25,632	ND
Rainbow Trout	Pass	ND	ND	ND	1	-	ND	ND	ND	ND	ND	1	ND
Acute Lethality Test	Fail	ND	ND	ND	0	-	ND	ND	ND	ND	ND	0	ND
Daphnia magna	Pass	ND	ND	ND	1	-	ND	ND	ND	ND	ND	1	ND
Monitoring Test	Fail	ND	ND	ND	0	-	ND	ND	ND	ND	ND	0	ND
Comments:	The owner/operator reported to be in 'normal frequency' for acute lethality testing and deleterious substances measurement in May, however, no test results were submitted for this month.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>-</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Sigma (Mine)												
Operator	Or Integra (Québec) Incorporée												
Product(s)	Gold												
Address	300 3rd Avenue, Val-d'Or, Quebec J9P 4N9												
Effluent Discharge Point	Effluent final EFF1												
<b>Parameters</b>	<b>Limits</b>	<b>Jan.</b>	<b>Feb.</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
As (mg/L)	0.5	0.0128	0.0009	0.0011	0.0014	0.0004	0.0003	0.0003	0.0003	0.0003	0.0010	0.0003	0.0005
Cu (mg/L)	0.3	0.0036	0.0041	0.0010	0.0013	0.0029	0.0155	0.0031	0.0045	0.0040	0.0032	0.0033	0.0028
CN (mg/L)	1	0.0327	0.0315	0.0370	0.0333	0.0081	0.0010	0.0046	0.0013	0.0020	0.0063	0.0100	0.0133
Pb (mg/L)	0.2	0.0024	0.0002	0.0006	0.0002	0.0008	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Ni (mg/L)	0.5	0.0057	0.0066	0.0019	0.0040	0.0034	0.0098	0.0032	0.0047	0.0058	0.0028	0.0055	0.0021
Zn (mg/L)	0.5	0.0048	0.0018	0.0014	0.0024	0.0017	0.0006	0.0008	0.0023	0.0010	0.0165	0.0043	0.0038
TSS (mg/L)	15	5.33	8.00	1.38	4.75	1.70	3.00	3.00	1.88	3.00	4.90	6.50	3.00
Ra-226 (Bq/L)	0.37	0.0020	0.0130	RF	RF	0.0040	RF	0.0030	RF	RF	RF	0.0010	RF
pH Low	≥6.0	7.2	7.3	7.4	7.3	7.4	7.6	7.7	7.3	7.5	7.8	7.4	6.8
pH High	≤9.5	7.4	7.4	7.5	7.4	8.1	8.2	7.9	7.9	8.1	8.2	7.7	7.3
Flow (m <sup>3</sup> /month)	-	65,401	80,506	68,643	110,829	373,766	330,766	353,894	214,310	214,116	212,788	286,833	124,374
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Silvertip Mine												
Operator	JDS Silver												
Product(s)	Silver, lead, zinc												
Address	900-999 West Hastings Street, Vancouver, British Columbia V6C 2W2												
Effluent Discharge Point	Effluent Discharge 1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0035	0.0024	0.0030	0.0016	0.0011	0.0013	0.0014	0.0020	0.0020	0.0048	0.0039	0.0041
Cu (mg/L)	0.3	0.0003	0.0003	0.0004	0.0011	0.0011	0.0013	0.0008	0.0007	0.0009	0.0009	0.0004	0.0004
CN (mg/L)	1	0.0006	0.0009	0.0005	NCU	NCU	NCU	0.0025	0.0025	0.0029	0.0025	0.0025	0.0025
Pb (mg/L)	0.2	0.0087	0.0069	0.0078	0.0094	0.0025	0.0022	0.0028	0.0061	0.0049	0.0112	0.0029	0.0037
Ni (mg/L)	0.5	0.0272	0.0371	0.0225	0.0569	0.0868	0.0435	0.0196	0.0380	0.0357	0.0132	0.0080	0.0187
Zn (mg/L)	0.5	0.0241	0.0327	0.0403	0.0849	0.0586	0.0333	0.3078	0.0858	0.1150	0.0560	0.0150	0.0392
TSS (mg/L)	15	0.83	1.63	2.13	1.26	0.59	0.65	35.01	0.69	1.19	1.70	1.00	0.60
Ra-226 (Bq/L)	0.37	RF	0.0050	RF	-	0.0050	-	-	0.0110	-	RF	0.0050	RF
pH Low	≥6.0	7.6	8.0	7.5	7.6	7.9	7.7	7.5	7.9	7.7	7.1	7.1	7.3
pH High	≤9.5	8.1	8.2	7.9	7.8	7.9	7.9	8.0	8.0	8.0	7.8	7.8	7.8
Flow (m <sup>3</sup> /month)	-	32,524	37,989	34,920	44,948	48,250	51,330	58,518	34,297	60,478	61,550	48,887	44,026
Rainbow Trout	Pass	1	1	1	1	-	-	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	-	-	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	-	-	1	1	1	1	0	1
Monitoring Test	Fail	0	0	0	0	-	-	0	0	0	0	1	0

**Comments:**

The owner/operator reported to be in 'normal frequency' for radium-226 measurement in April, June, July, and September, however, no test results were submitted for these months. The owner/operator reported to be in 'normal frequency' for acute lethality testing in May and June, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Snow Lake Mine												
Operator	Hudbay Minerals Incorporated												
Product(s)	Gold												
Address	P.O. Box 451, 114 Cedar Street, Snow Lake, Manitoba R0B 1M0												
Effluent Discharge Point	SWM-02												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0135	0.0145	0.0134	0.0159	0.0170	0.0192	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0121	0.0114	0.0091	0.0084	0.0100	0.0107	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0001	0.0001	0.0000	0.0001	0.0000	0.0000	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0017	0.0023	0.0012	0.0011	0.0014	0.0017	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0023	0.0047	0.0021	0.0015	0.0022	0.0015	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	1.00	1.60	1.00	1.00	1.00	1.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0200	0.0100	0.0025	0.0060	0.0025	RF	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	7.2	6.6	6.9	6.2	6.6	7.3	ND
pH High	≤9.5	ND	ND	ND	ND	ND	8.7	7.3	8.0	7.9	7.3	7.5	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	460	334	163	390	390	162	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	0	0	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Snow Lake Mine												
Operator	Hudbay Minerals Incorporated												
Product(s)	Gold												
Address	P.O. Box 451, 114 Cedar Street, Snow Lake, Manitoba R0B 1M0												
Effluent Discharge Point	SWM-03												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Snow Lake Mine												
Operator	Hudbay Minerals Incorporated												
Product(s)	Gold												
Address	P.O. Box 451, 114 Cedar Street, Snow Lake, Manitoba R0B 1M0												
Effluent Discharge Point	SWM-07												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	0.0706	0.0673	0.0784	0.0877	0.0845	0.0960	0.0899	0.1060	ND
Cu (mg/L)	0.3	ND	ND	ND	0.0063	0.0066	0.0079	0.0064	0.0062	0.0283	0.0071	0.0064	ND
CN (mg/L)	1	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	0.0000	0.0000	0.0001	0.0001	0.0000	0.0002	0.0000	0.0000	ND
Ni (mg/L)	0.5	ND	ND	ND	0.0008	0.0006	0.0009	0.0011	0.0006	0.0010	0.0012	0.0010	ND
Zn (mg/L)	0.5	ND	ND	ND	0.0015	0.0015	0.0025	0.0025	0.0015	0.0026	0.0025	0.0015	ND
TSS (mg/L)	15	ND	ND	ND	1.00	1.28	2.88	1.22	1.88	1.38	1.28	1.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0070	0.0100	0.0025	0.0100	0.0080	0.0025	0.0025	RF	ND
pH Low	≥6.0	ND	ND	ND	7.7	7.1	6.3	6.9	6.9	6.5	6.5	7.4	ND
pH High	≤9.5	ND	ND	ND	7.8	7.2	8.8	7.3	7.2	7.8	7.5	7.4	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	108	551	489	531	235	615	632	216	ND
Rainbow Trout	Pass	ND	ND	ND	1	-	1	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	0	-	0	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	1	-	1	1	1	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	0	-	0	0	0	0	0	0	ND

**Comments:**

The owner/operator reported to be in 'normal frequency' for acute lethality testing in May, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Sudbury Integrated Nickel Operations - Smelter												
Operator	Glencore Canada Corporation												
Product(s)	Nickel, copper, cobalt, platinum, palladium												
Address	1 Longyear Drive, Falconbridge, Ontario P0M 1S0												
Effluent Discharge Point	Final Effluent at NIR Road												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0023	0.0015	0.0015	0.0009	0.0035	0.0030	0.0116	0.0018	0.0015	0.0015	0.0020	0.0018
Cu (mg/L)	0.3	0.0021	0.0023	0.0025	0.0020	0.0026	0.0008	0.0009	0.0005	0.0009	0.0012	0.0012	0.0019
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0002	0.0002	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002
Ni (mg/L)	0.5	0.0769	0.0720	0.0798	0.0922	0.0673	0.0484	0.0312	0.0196	0.0228	0.0401	0.0738	0.0762
Zn (mg/L)	0.5	0.0022	0.0020	0.0027	0.0029	0.0026	0.0019	0.0011	0.0004	0.0008	0.0016	0.0021	0.0022
TSS (mg/L)	15	0.34	0.35	0.54	0.69	1.03	0.69	4.78	0.60	0.29	0.34	2.84	0.38
Ra-226 (Bq/L)	0.37	RF	RF	RF	0.0050	RF	RF	0.0050	RF	RF	0.0050	RF	RF
pH Low	≥6.0	6.8	7.0	6.9	6.8	6.9	6.9	6.9	7.0	7.1	7.1	6.7	6.8
pH High	≤9.5	7.1	7.3	7.2	7.2	7.1	7.1	7.3	7.4	7.6	7.3	7.2	7.0
Flow (m <sup>3</sup> /month)	-	466,707	380,188	528,907	847,450	518,805	238,485	189,532	606,067	689,840	1,240,266	926,717	629,380
Rainbow Trout	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Acute Lethality Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF
Daphnia magna	Pass	1	RF	RF	1	RF	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	0	RF	RF	0	RF	RF	0	RF	RF	0	RF	RF

**Comments:**

The owner/operator did not report measurement of radium-226 within the first quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Sudbury Integrated Nickel Operations - Strathcona												
Operator	Glencore Canada Corporation												
Product(s)	Nickel, copper, cobalt, platinum, palladium												
Address	Onaping, Ontario P0M 2R0												
Effluent Discharge Point	Fecunis RR Bridge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Cu (mg/L)	0.3	0.0009	0.0014	0.0062	0.0153	0.0135	0.0060	0.0108	0.0139	0.0089	0.0176	0.0243	0.0191
CN (mg/L)	1	0.0008	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Pb (mg/L)	0.2	0.0002	0.0001	0.0002	0.0004	0.0011	0.0002	0.0007	0.0001	0.0004	0.0004	0.0004	0.0003
Ni (mg/L)	0.5	0.0920	0.0882	0.0902	0.1062	0.0787	0.0438	0.0868	0.0720	0.0532	0.0579	0.0636	0.0816
Zn (mg/L)	0.5	0.0004	0.0010	0.0067	0.0058	0.0101	0.0015	0.0032	0.0019	0.0014	0.0022	0.0023	0.0228
TSS (mg/L)	15	0.11	0.17	0.18	0.34	0.31	0.35	1.74	0.73	0.61	0.21	0.20	0.23
Ra-226 (Bq/L)	0.37	RF	0.0025	RF	RF	RF	0.0060	RF	0.0025	RF	RF	0.0060	RF
pH Low	≥6.0	7.3	7.5	7.3	7.1	7.4	7.3	6.9	7.0	7.0	7.2	7.5	7.5
pH High	≤9.5	7.6	7.5	7.5	7.5	7.7	7.8	7.2	7.3	7.4	7.6	7.7	7.7
Flow (m <sup>3</sup> /month)	-	1,762,999	1,183,135	1,033,942	1,227,664	3,532,856	977,764	623,258	698,351	906,870	1,592,761	2,372,250	1,386,522
Rainbow Trout	Pass	RF	1	RF	RF	RF	1	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	RF	RF	0	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	1	RF	RF	RF	1	RF	1	RF	RF	1	RF
Monitoring Test	Fail	RF	0	RF	RF	RF	0	RF	0	RF	RF	0	RF

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Sugar Zone Project												
Operator	Harte Gold Corporation												
Product(s)	Gold												
Address	White River, Ontario P0M 3G0												
Effluent Discharge Point	Sugar Zone Project Effluent												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0004	0.0003	0.0003	0.0004	0.0005	0.0009	0.0008	0.0006	0.0010	0.0015	0.0005	ND
Cu (mg/L)	0.3	0.0022	0.0311	0.1002	0.0440	0.0800	0.0052	0.0106	0.0048	0.0050	0.0066	0.0005	ND
CN (mg/L)	1	0.0015	0.0010	0.0010	0.0010	0.0010	0.0038	0.0027	0.0055	0.0073	NCU	NCU	ND
Pb (mg/L)	0.2	0.0003	0.0003	0.0004	0.0010	0.0013	0.0006	0.0006	0.0007	0.0012	0.0055	0.0011	ND
Ni (mg/L)	0.5	0.0057	0.0039	0.0033	0.0056	0.0074	0.0055	0.0046	0.0048	0.0083	0.0136	0.0090	ND
Zn (mg/L)	0.5	0.0401	0.0304	0.0197	0.0408	0.0337	0.0343	0.0274	0.0198	0.0153	0.0243	0.0080	ND
TSS (mg/L)	15	1.60	1.25	2.68	2.33	5.85	1.45	2.18	4.25	18.67	34.71	5.00	ND
Ra-226 (Bq/L)	0.37	RF	RF	0.0050	RF	RF	0.0050	RF	0.0050	RF	RF	0.0050	ND
pH Low	≥6.0	7.8	7.7	7.7	7.7	7.6	8.0	7.9	7.9	8.0	7.0	7.7	ND
pH High	≤9.5	7.9	8.0	8.0	8.0	8.0	8.1	8.3	8.1	8.0	8.0	7.7	ND
Flow (m <sup>3</sup> /month)	-	6,204	3,997	2,984	6,892	11,744	10,174	6,686	7,150	7,928	8,178	1,835	ND
Rainbow Trout	Pass	1	1	1	2	1	1	1	1	2	1	1	ND
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	ND
Daphnia magna	Pass	1	1	1	3	1	1	1	1	2	1	1	ND
Monitoring Test	Fail	0	0	1	1	0	0	0	0	0	0	0	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Tanco Mine												
Operator	Tantalum Mining Corporation of Canada Limited												
Product(s)	Tantalum, lithium, cesium, rubidium												
Address	P.O. Box 2000, Lac du Bonnet, Manitoba R0E 1A0												
Effluent Discharge Point	West Discharge (compliance point)												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0027	RF	RF	RF	0.0059	RF	0.0087	0.0095	RF	0.0050	RF	RF
Cu (mg/L)	0.3	0.0014	RF	RF	RF	0.0011	RF	0.0009	0.0004	RF	0.0009	RF	RF
CN (mg/L)	1	0.0015	0.0010	0.0010	0.0010	0.0010	0.0038	0.0027	0.0055	0.0073	NCU	NCU	ND
Pb (mg/L)	0.2	0.0003	0.0003	0.0004	0.0010	0.0013	0.0006	0.0006	0.0007	0.0012	0.0055	0.0011	ND
Ni (mg/L)	0.5	0.0057	0.0039	0.0033	0.0056	0.0074	0.0055	0.0046	0.0048	0.0083	0.0136	0.0090	ND
Zn (mg/L)	0.5	0.0401	0.0304	0.0197	0.0408	0.0337	0.0343	0.0274	0.0198	0.0153	0.0243	0.0080	ND
TSS (mg/L)	15	1.60	1.25	2.68	2.33	5.85	1.45	2.18	4.25	18.67	34.71	5.00	ND
Ra-226 (Bq/L)	0.37	RF	RF	0.0050	RF	RF	0.0050	RF	0.0050	RF	RF	0.0050	ND
pH Low	≥6.0	7.8	7.7	7.7	7.7	7.6	8.0	7.9	7.9	8.0	7.0	7.7	ND
pH High	≤9.5	7.9	8.0	8.0	8.0	8.0	8.1	8.3	8.1	8.0	8.0	7.7	ND
Flow (m <sup>3</sup> /month)	-	6,204	3,997	2,984	6,892	11,744	10,174	6,686	7,150	7,928	8,178	1,835	ND
Rainbow Trout	Pass	1	1	1	2	1	1	1	1	2	1	1	ND
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	ND
Daphnia magna	Pass	1	1	1	3	1	1	1	1	2	1	1	ND
Monitoring Test	Fail	0	0	1	1	0	0	0	0	0	0	0	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Taylor Mine												
Operator	St. Andrew Goldfields Limited												
Product(s)	Gold												
Address	Highway 101 East, PO Box 609, Matheson, Ontario P0K 1N0												
Effluent Discharge Point	T3												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0153	0.0164	0.0056	0.0055	0.0046	0.0051	0.0057	0.0031	0.0055	0.0088	0.0045	0.0080
Cu (mg/L)	0.3	0.0024	0.0008	0.0007	0.0011	0.0009	0.0014	0.0010	0.0010	0.0010	0.0013	0.0011	0.0011
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0005	0.0005	0.0006	0.0005	0.0005	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	0.0402	0.0353	0.0386	0.0336	0.0294	0.0195	0.0167	0.0191	0.0262	0.0284	0.0305	0.0355
Zn (mg/L)	0.5	0.0022	0.0027	0.0005	0.0019	0.0015	0.0017	0.0023	0.0014	0.0013	0.0032	0.0053	0.0029
TSS (mg/L)	15	2.50	4.54	2.60	3.30	4.17	2.00	2.31	1.26	1.70	1.98	2.08	2.60
Ra-226 (Bq/L)	0.37	-	-	0.0050	-	-	0.0050	-	0.0050	-	-	0.0050	-
pH Low	≥6.0	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.8	7.0	6.9	6.9	6.8
pH High	≤9.5	7.1	7.2	7.2	7.1	7.1	7.1	7.2	7.3	7.1	7.1	7.2	7.1
Flow (m <sup>3</sup> /month)	-	25,115	21,264	22,664	26,703	33,927	19,742	18,830	22,773	35,738	45,191	41,143	38,402
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0

**Comments:**

The owner/operator reported to be in 'normal frequency' for radium-226 measurement in January, February, April, May, July, September, October, and December, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Thompson Complex												
Operator	Vale Canada Limited												
Product(s)	Nickel, copper												
Address	P.O. Box 5000, Thompson, Manitoba R8N 1P3												
Effluent Discharge Point	Misery Weir												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0076	0.0076	0.0079	0.0059	0.0047	0.0040	0.0037	0.0063	0.0043	0.0030	0.0030	0.0034
Cu (mg/L)	0.3	0.0160	0.0138	0.0150	0.0225	0.0200	0.0022	0.0043	0.0017	0.0014	0.0026	0.0010	0.0032
CN (mg/L)	1	NCU	0.0005	NCU	NCU	0.0005	NCU	0.0005	NCU	0.0005	0.0005	NCU	NCU
Pb (mg/L)	0.2	0.0150	0.0150	0.0150	0.0150	0.0150	0.0001	0.0002	0.0001	0.0001	0.0003	0.0001	0.0002
Ni (mg/L)	0.5	0.2360	0.2250	0.2075	0.2150	0.1760	0.1793	0.1620	0.1700	0.1725	0.2100	0.2525	0.2700
Zn (mg/L)	0.5	0.0050	0.0050	0.0050	0.0050	0.0080	0.0020	0.0031	0.0022	0.0015	0.0435	0.0015	0.0023
TSS (mg/L)	15	2.16	2.10	1.65	1.25	2.16	2.55	1.00	1.60	4.90	5.52	5.55	3.45
Ra-226 (Bq/L)	0.37	RF	0.0036	RF	RF	0.0025	RF	0.0069	RF	0.0028	0.0045	RF	RF
pH Low	≥6.0	8.7	9.0	8.8	7.8	7.9	8.5	7.1	7.9	8.0	8.0	8.2	8.1
pH High	≤9.5	9.0	9.1	9.0	8.7	8.5	8.6	8.4	8.2	8.3	8.2	8.3	8.4
Flow (m <sup>3</sup> /month)	-	1,860,028	1,660,864	1,468,562	1,357,775	2,774,562	2,125,916	2,824,471	5,017,005	5,149,902	2,023,50	2,255,164	2,194,899
Rainbow Trout	Pass	RF	RF	RF	RF	1	RF	RF	RF	RF	1	RF	RF
Acute Lethality Test	Fail	RF	RF	RF	RF	0	RF	RF	RF	RF	0	RF	RF
Daphnia magna	Pass	RF	1	RF	RF	1	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	RF	0	RF	RF	0	RF	0	RF	RF	0	RF	RF

**Comments:**

The owner/operator did not report acute lethality testing within the first and third quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Thompson Complex												
Operator	Vale Canada Limited												
Product(s)	Nickel, copper												
Address	P.O. Box 5000, Thompson, Manitoba R8N 1P3												
Effluent Discharge Point	Station B												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0063	0.0080	0.0056	0.0074	0.0253	0.0245	0.0122	0.0161	0.0101	0.0053	0.0066	0.0066
Cu (mg/L)	0.3	0.0880	0.0775	0.0925	0.0525	0.0760	0.0053	0.0084	0.0138	0.0022	0.0048	0.0054	0.0092
CN (mg/L)	1	NCU	0.0005	NCU	NCU	0.0005	NCU	0.0005	NCU	0.0005	0.0005	NCU	NCU
Pb (mg/L)	0.2	0.0150	0.0150	0.0150	0.0150	0.0150	0.0002	0.0003	0.0005	0.0001	0.0002	0.0002	0.0005
Ni (mg/L)	0.5	0.2160	0.2275	0.1300	0.1000	0.2600	0.1925	0.1740	0.1625	0.1725	0.1720	0.1275	0.0975
Zn (mg/L)	0.5	0.0420	0.0550	0.0350	0.0163	0.0220	0.0466	0.0032	0.0098	0.0015	0.0036	0.0029	0.0086
TSS (mg/L)	15	6.56	2.35	3.90	6.60	11.04	6.40	5.28	5.10	4.80	13.31	7.90	12.80
Ra-226 (Bq/L)	0.37	RF	0.0032	RF	RF	0.0041	RF	0.0024	RF	0.0033	0.0040	RF	RF
pH Low	≥6.0	7.5	7.5	7.0	6.9	7.1	7.4	6.8	7.8	8.2	7.3	7.2	7.2
pH High	≤9.5	7.8	8.5	7.6	8.8	8.7	9.3	8.9	9.1	9.7	8.2	7.3	7.4
Flow (m <sup>3</sup> /month)	-	685,295	618,977	685,295	663,189	992,601	1,207,763	1,751,260	923,900	1,112,778	210,135	154,629	159,783
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	RF	RF	RF	2	RF	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	RF	RF	RF	0	RF	RF
Daphnia magna	Pass	RF	1	RF	RF	1	RF	1	RF	RF	1	RF	RF
Monitoring Test	Fail	RF	0	RF	RF	0	RF	0	RF	RF	0	RF	RF
Comments:	The owner/operator did not report acute lethality testing within the third quarter. The owner/operator did not complete an equal number of Daphnia magna acute lethality tests as Rainbow trout acute lethality tests in October.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>- :</b> No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name		Timmins West Complex											
Operator		Lake Shore Gold – A Division of Tahoe Resources Inc.											
Product(s)		Gold											
Address		8215 Highway 101 West, Timmins, Ontario P4N 7H9											
Effluent Discharge Point		TR-1											
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0098	0.0143	0.0074	0.0052	0.0067	0.0137	0.0142	0.0130	0.0118	0.0126	0.0120	0.0205
Cu (mg/L)	0.3	0.0038	0.0038	0.0042	0.0040	0.0033	0.0042	0.0060	0.0048	0.0058	0.0050	0.0045	0.0053
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0005	0.0005	0.0005	0.0005	0.0005	0.0004	0.0003	0.0018	0.0003	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	0.0104	0.0115	0.0079	0.0053	0.0049	0.0058	0.0059	0.0075	0.0063	0.0068	0.0065	0.0085
Zn (mg/L)	0.5	0.0119	0.0085	0.0051	0.0111	0.0060	0.0083	0.0055	0.0066	0.0073	0.0214	0.0108	0.0118
TSS (mg/L)	15	3.26	2.45	2.69	5.41	4.60	3.03	2.70	3.02	2.26	3.71	4.60	3.60
Ra-226 (Bq/L)	0.37	RF	RF	0.0050	-	-	0.0035	RF	0.0050	RF	0.0050	RF	RF
pH Low	≥6.0	6.8	6.6	6.5	7.2	6.7	6.8	6.7	6.6	6.9	7.3	6.7	6.6
pH High	≤9.5	7.0	7.3	6.9	7.3	7.5	7.3	7.3	7.5	7.7	7.8	7.4	7.1
Flow (m <sup>3</sup> /month)	-	9,709	8,126	11,825	61,292	37,987	29,385	19,237	12,850	36,511	27,587	21,782	16,165
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0

**Comments:**

The owner/operator reported to be in 'normal frequency' for radium-226 measurement in April and May, however, no test results were submitted for these months.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Tio (Mine)												
Operator	Rio Tinto Fer et Titane Incorporé												
Product(s)	Ilmenite, iron ore, titanium												
Address	951 De l'Escale Boulevard, Havre-Saint-Pierre, Quebec G0G 1P0												
Effluent Discharge Point	Aiguillage Sud												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0002	0.0006	0.0004	0.0002	0.0002	0.0005	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Cu (mg/L)	0.3	0.0411	0.0771	0.0965	0.0903	0.0643	0.0508	0.0318	0.0236	0.0206	0.0419	0.0411	0.0344
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0003	0.0001	0.0003	0.0001	0.0001	0.0002	0.0001	0.0055	0.0001	0.0001	0.0001	0.0001
Ni (mg/L)	0.5	0.4680	0.4393	0.4043	0.4375	0.2818	0.3180	0.3172	0.2458	0.2215	0.2520	0.3078	0.3880
Zn (mg/L)	0.5	0.0758	0.0730	0.0703	0.0878	0.0530	0.0675	0.0508	0.0423	0.0360	0.1258	0.0545	0.0673
TSS (mg/L)	15	1.40	0.88	0.63	1.63	3.40	2.38	1.40	0.50	0.63	2.90	0.75	2.13
Ra-226 (Bq/L)	0.37	0.0010	RF	RF	RF	RF	0.0010	0.0020	RF	RF	0.0080	RF	RF
pH Low	≥6.0	7.2	6.7	7.0	7.3	6.7	7.1	7.1	7.1	7.2	7.0	7.4	7.2
pH High	≤9.5	7.3	7.3	7.8	7.5	8.1	7.2	7.3	7.3	7.4	7.5	7.5	7.6
Flow (m <sup>3</sup> /month)	-	8,400	2,753	2,472	48,021	137,278	53,634	16,316	2,556	1,133	22,984	30,191	15,600
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Tio (Mine)												
Operator	Rio Tinto Fer et Titane Incorporé												
Product(s)	Ilmenite, iron ore, titanium												
Address	952 De l'Escale Boulevard, Havre-Saint-Pierre, Quebec G0G 1P0												
Effluent Discharge Point	Ancienne-Croix												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0002	0.0004	0.0002	0.0005	0.0004	0.0003	0.0002	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0125	0.0153	0.0069	0.0064	0.0070	0.0130	0.0080	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0001	0.0003	0.0001	0.0008	0.0002	0.0001	0.0001	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.2187	0.2883	0.0562	0.0675	0.0598	0.2125	0.3435	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0430	0.0570	0.0099	0.0310	0.0110	0.0370	0.0630	ND
TSS (mg/L)	15	ND	ND	ND	ND	2.83	3.00	6.60	10.00	12.25	3.50	18.50	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	RF	0.0010	0.0010	RF	RF	0.0010	RF	ND
pH Low	≥6.0	ND	ND	ND	ND	6.1	4.8	6.6	6.7	6.7	6.2	6.1	ND
pH High	≤9.5	ND	ND	ND	ND	6.8	6.6	6.8	7.2	7.0	6.6	6.7	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	3,732	3,627	818	1,676	1,067	2,906	2,430	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	1	1	1	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	0	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Tio (Mine)												
Operator	Rio Tinto Fer et Titane Incorporé												
Product(s)	Ilmenite, iron ore, titanium												
Address	951 De l'Escale Boulevard, Havre-Saint-Pierre, Quebec G0G 1P0												
Effluent Discharge Point	E-Lac 166												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0002	0.0005	0.0002	0.0007	0.0002	0.0002	0.0002	0.0002
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0038	0.0013	0.0008	0.0007	0.0014	0.0011	0.0014	0.0179
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0014	0.0004	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002
Ni (mg/L)	0.5	ND	ND	ND	ND	0.2983	0.3570	0.4040	0.4085	0.3158	0.2826	0.3215	0.3257
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0390	0.0580	0.0554	0.0555	0.0473	0.0428	0.0490	0.0490
TSS (mg/L)	15	ND	ND	ND	ND	0.67	0.63	0.60	0.50	0.50	0.60	2.75	6.33
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	RF	0.0010	0.0010	RF	RF	0.0020	RF	RF
pH Low	≥6.0	ND	ND	ND	ND	6.9	6.7	6.4	6.7	6.8	6.4	6.6	6.9
pH High	≤9.5	ND	ND	ND	ND	7.0	6.9	6.7	6.9	6.9	6.7	6.9	7.1
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	24,920	20,377	8,107	5,620	6,833	18,370	11,438	2,674
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	0	0
Daphnia magna	Pass	ND	ND	ND	ND	1	1	1	1	1	1	1	1
Monitoring Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	0	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Tio (Mine)												
Operator	Rio Tinto Fer et Titane Incorporé												
Product(s)	Ilmenite, iron ore, titanium												
Address	951 De l'Escale Boulevard, Havre-Saint-Pierre, Quebec G0G 1P0												
Effluent Discharge Point	Lac 211.4												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0002	0.0005	0.0002	0.0005	0.0002	0.0002	0.0002	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0062	0.0066	0.0062	0.0063	0.0076	0.0060	0.0080	ND
CN (mg/L)	1	ND	ND	ND	ND	NCU	NCU	NCU	NCU	NCU	NCU	NCU	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.1175	0.1245	0.1368	0.1465	0.1618	0.1560	0.1850	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0180	0.0260	0.0230	0.0240	0.0295	0.0292	0.0338	ND
TSS (mg/L)	15	ND	ND	ND	ND	0.50	0.75	0.50	0.50	0.50	0.60	0.50	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	RF	0.0020	0.0010	RF	RF	0.0010	RF	ND
pH Low	≥6.0	ND	ND	ND	ND	6.7	6.3	7.1	7.2	7.1	6.7	7.0	ND
pH High	≤9.5	ND	ND	ND	ND	8.0	7.5	7.3	7.3	7.2	7.1	7.1	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	13,891	28,388	17,359	15,325	12,020	16,581	19,447	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	1	1	1	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	0	0	0	0	0	0	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Tio (Mine)												
Operator	Rio Tinto Fer et Titane Incorporé												
Product(s)	Ilmenite, iron ore, titanium												
Address	951 De l'Escale Boulevard, Havre-Saint-Pierre, Quebec G0G 1P0												
Effluent Discharge Point	Lac Grandin												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Tio (Mine)												
Operator	Rio Tinto Fer et Titane Incorporé												
Product(s)	Ilmenite, iron ore, titanium												
Address	951 De l'Escale Boulevard, Havre-Saint-Pierre, Quebec G0G 1P0												
Effluent Discharge Point	Régurgence Léo												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0002	0.0012	0.0011	0.0002	0.0004	0.0008	0.0002	0.0010	0.0002	0.0002	0.0002	0.0002
Cu (mg/L)	0.3	0.0052	0.0057	0.0052	0.0292	0.0028	0.0020	0.0040	0.0025	0.0023	0.0035	0.0081	0.0035
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001
Ni (mg/L)	0.5	0.1756	0.0860	0.2978	0.1805	0.1758	0.1570	0.2800	0.1518	0.2040	0.2568	0.1975	0.1600
Zn (mg/L)	0.5	0.0242	0.0118	0.0660	0.0374	0.0312	0.0280	0.0522	0.0258	0.0433	0.0526	0.0298	0.0277
TSS (mg/L)	15	2.10	1.13	1.00	1.38	1.20	1.50	1.50	1.13	1.50	1.60	3.00	0.83
Ra-226 (Bq/L)	0.37	0.0010	RF	RF	RF	RF	0.0010	0.0010	RF	RF	0.0020	RF	RF
pH Low	≥6.0	7.7	7.8	7.1	7.5	7.1	7.8	7.2	7.4	7.4	7.2	7.4	7.6
pH High	≤9.5	7.8	7.8	7.8	7.7	8.3	7.8	7.9	7.5	7.5	7.5	7.6	7.7
Flow (m <sup>3</sup> /month)	-	42,993	31,757	116,473	249,881	15,442	189,375	82,530	107,561	119,429	59,358	289,195	37,298
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Totten Mine												
Operator	Vale Canada Limited												
Product(s)	Nickel, copper, platinum, gold, silver												
Address	6 C. Johnson Road, Worthington, Ontario POM3H0												
Effluent Discharge Point	Totten Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0009	ND	ND	0.0009	0.0007	ND	ND	ND	ND	0.0007	0.0008	0.0008
Cu (mg/L)	0.3	0.0070	ND	ND	0.0080	0.0060	ND	ND	ND	ND	0.0033	0.0046	0.0053
CN (mg/L)	1	NCU	ND	ND	NCU	NCU	ND	ND	ND	ND	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0003	ND	ND	0.0010	0.0006	ND	ND	ND	ND	0.0002	0.0003	0.0003
Ni (mg/L)	0.5	0.0575	ND	ND	0.0878	0.0730	ND	ND	ND	ND	0.1360	0.1350	0.1547
Zn (mg/L)	0.5	0.0050	ND	ND	0.0077	0.0241	ND	ND	ND	ND	0.0036	0.0048	0.0051
TSS (mg/L)	15	3.50	ND	ND	10.50	5.40	ND	ND	ND	ND	3.77	4.55	2.90
Ra-226 (Bq/L)	0.37	RF	ND	ND	0.0280	RF	ND	ND	ND	ND	0.0200	RF	RF
pH Low	≥6.0	7.0	ND	ND	7.0	6.8	ND	ND	ND	ND	7.5	7.4	7.2
pH High	≤9.5	7.2	ND	ND	7.1	7.5	ND	ND	ND	ND	7.6	7.7	7.5
Flow (m <sup>3</sup> /month)	-	15,890	ND	ND	99,523	85,718	ND	ND	ND	ND	23,259	38,526	47,100
Rainbow Trout	Pass	RF	ND	ND	1	RF	ND	ND	ND	ND	1	RF	RF
Acute Lethality Test	Fail	RF	ND	ND	0	RF	ND	ND	ND	ND	0	RF	RF
Daphnia magna	Pass	RF	ND	ND	1	RF	ND	ND	ND	ND	1	RF	RF
Monitoring Test	Fail	RF	ND	ND	0	RF	ND	ND	ND	ND	0	RF	RF

**Comments:**

The owner/operator did not report measurement of radium-226 or acute lethality testing within the first quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Touquoy Mine												
Operator	Atlantic Mining NS Corporation												
Product(s)	Gold												
Address	6749 Moose River Road, Middle Musquodoboit, Nova Scotia B0N 1X0												
Effluent Discharge Point	SW-14												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	0.0270	0.0323	0.0308	0.0111	0.0065	0.0089
Cu (mg/L)	0.3	-	-	-	-	-	-	0.0020	0.0012	0.0004	0.0006	0.0010	0.0015
CN (mg/L)	1	-	-	-	-	-	-	0.1100	0.1253	0.1250	0.1433	0.1480	0.0325
Pb (mg/L)	0.2	-	-	-	-	-	-	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	-	-	-	-	-	-	0.0060	0.0037	0.0031	0.0031	0.0052	0.0054
Zn (mg/L)	0.5	-	-	-	-	-	-	0.0230	0.0062	0.0102	0.0030	0.0053	0.0086
TSS (mg/L)	15	-	-	-	-	-	-	10.00	6.97	7.90	1.53	0.64	2.07
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	0.0050	0.0066	0.0050	0.0050	0.0050	0.0050
pH Low	≥6.0	-	-	-	-	-	-	7.0	6.7	7.2	6.9	7.1	7.6
pH High	≤9.5	-	-	-	-	-	-	7.0	7.4	7.5	7.6	7.8	8.2
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	16,020	116,132	79,122	192,470	192,053	216,453
Rainbow Trout	Pass	-	-	-	-	-	-	1	1	1	1	2	2
Acute Lethality Test	Fail	-	-	-	-	-	-	0	0	0	0	0	0
Daphnia magna	Pass	-	-	-	-	-	-	1	1	1	1	2	2
Monitoring Test	Fail	-	-	-	-	-	-	0	0	0	0	0	0

Comments:  
This mine became subject to the MDMR in 2018.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Trout Lake Mine												
Operator	Hudbay Minerals Incorporated												
Product(s)	Copper, zinc, gold, silver												
Address	P.O. Box 1500, Flin Flon, Manitoba R8A 1N9												
Effluent Discharge Point	Trout Lake Surface Sump Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0031	0.0029	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	0.0048	0.0057	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	NCU	NCU	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	0.0002	0.0002	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0006	0.0005	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	0.0171	0.0143	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	2.20	1.55	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	0.2000	0.3250	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	7.4	7.6	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	7.6	7.9	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	16,100	27,964	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	RF	1	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	RF	0	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	RF	1	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	RF	0	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Vezza (Mine)												
Operator	Entrepreneur Minier Promec Incorporated												
Product(s)	Gold												
Address	Km 197, Road 109 North, Matagami, Quebec J0Y 2A0												
Effluent Discharge Point	Bassin de polissage												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0007	0.0133	0.0009	0.0020	0.0007	0.0003	0.0003	0.0049	0.0015	0.0010	0.0012	0.0013
Cu (mg/L)	0.3	0.0035	0.0026	0.0040	0.0012	0.0018	0.0014	0.0011	0.0019	0.0030	0.0028	0.0024	0.0012
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0011	0.0002	0.0007	0.0002	0.0004	0.0002	0.0002	0.0009	0.0002	0.0002	0.0002	0.0002
Ni (mg/L)	0.5	0.0498	0.0315	0.0284	0.0368	0.0329	0.0314	0.0308	0.0376	0.0168	0.0193	0.0210	0.0336
Zn (mg/L)	0.5	0.1146	0.0223	0.0652	0.0378	0.0823	0.0410	0.0446	0.0470	0.1248	0.1116	0.1305	0.1074
TSS (mg/L)	15	4.97	5.46	5.00	3.31	3.96	3.00	2.54	2.12	3.13	6.47	4.08	4.07
Ra-226 (Bq/L)	0.37	0.0010	RF	0.0020	RF	RF	RF	0.0010	RF	RF	RF	RF	RF
pH Low	≥6.0	6.3	7.3	6.7	6.1	6.9	6.7	6.6	6.7	6.1	6.1	6.3	6.2
pH High	≤9.5	7.9	8.1	7.9	7.8	8.9	7.7	7.8	7.7	7.3	7.1	6.9	6.8
Flow (m <sup>3</sup> /month)	-	10,855	12,141	11,623	10,438	12,457	10,348	8,806	10,120	9,541	18,870	12,026	8,067
Rainbow Trout	Pass	3	1	1	1	1	1	1	0	3	1	1	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	1	0	0	0	0
Daphnia magna	Pass	3	1	1	1	1	1	1	1	3	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0

**Comments:**

The owner/operator did not report measurement of radium-226 within the second and fourth quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—**: No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Victor Diamond Mine												
Operator	De Beers Canada Incorporated												
Product(s)	Diamond												
Address	James Bay Lowlands of Northern Ontario, approximately 90km west of the coastal community of Attawapiskat First Nation, Ontario												
Effluent Discharge Point	Attawapiskat River												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	0.0051	0.0023	0.0069	0.0052	0.0066	0.0096	0.0078	0.0113	0.0122
Cu (mg/L)	0.3	-	-	-	0.0053	0.0057	0.0073	0.0073	0.0061	0.0073	0.0072	0.0075	0.0072
CN (mg/L)	1	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	0.0005	0.0005	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	-	-	-	0.0082	0.0072	0.0092	0.0087	0.0066	0.0120	0.0128	0.0170	0.0110
Zn (mg/L)	0.5	-	-	-	0.0039	0.0005	0.0025	0.0026	0.0028	0.0024	0.0023	0.0030	0.0021
TSS (mg/L)	15	-	-	-	7.16	6.23	5.94	5.42	6.02	5.44	5.03	5.93	5.04
Ra-226 (Bq/L)	0.37	-	-	-	-	-	0.0290	0.0273	0.0358	0.0313	0.0274	0.0323	0.0285
pH Low	≥6.0	-	-	-	7.0	7.0	7.1	7.3	7.1	7.0	7.3	7.2	6.8
pH High	≤9.5	-	-	-	7.9	7.8	7.6	7.5	7.6	7.6	7.7	7.5	7.6
Flow (m <sup>3</sup> /month)	-	-	-	-	2,076.63	2,151,314	2,058,783	2,247,167	2,111,427	2,052,426	2,096,60	1,997,758	2,044,384
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-

Comments:

This mine became subject to the MDMR in 2018. No reporting of acute lethality testing throughout the year.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Voisey's Bay Mine												
Operator	Vale Newfoundland & Labrador Limited												
Product(s)	Nickel, copper, cobalt												
Address	10 Fort William Place, St. John's, Newfoundland and Labrador A1C 1K4												
Effluent Discharge Point	Port Site Sedimentation Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0010	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0060	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	NCU	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0003	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.2850	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0025	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	5.00	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0025	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	77	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	77	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	3,200	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Voisey's Bay Mine												
Operator	Vale Newfoundland & Labrador Limited												
Product(s)	Nickel, copper, cobalt												
Address	10 Fort William Place, St. John's, Newfoundland and Labrador A1C 1K4												
Effluent Discharge Point	Sedimentation Pond A Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Voisey's Bay Mine												
Operator	Vale Newfoundland & Labrador Limited												
Product(s)	Nickel, copper, cobalt												
Address	10 Fort William Place, St. John's, Newfoundland and Labrador A1C 1K4												
Effluent Discharge Point	Sedimentation Pond B												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Voisey's Bay Mine												
Operator	Vale Newfoundland & Labrador Limited												
Product(s)	Nickel, copper, cobalt												
Address	10 Fort William Place, St. John's, Newfoundland and Labrador A1C 1K4												
Effluent Discharge Point	South of Ovoid Final Discharge Point												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Voisey's Bay Mine												
Operator	Vale Newfoundland & Labrador Limited												
Product(s)	Nickel, copper, cobalt												
Address	10 Fort William Place, St. John's, Newfoundland and Labrador A1C 1K4												
Effluent Discharge Point	South Sedimentation Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Voisey's Bay Mine												
Operator	Vale Newfoundland & Labrador Limited												
Product(s)	Nickel, copper, cobalt												
Address	10 Fort William Place, St. John's, Newfoundland and Labrador A1C 1K4												
Effluent Discharge Point	Treated Effluent Final Discharge Point												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Cu (mg/L)	0.3	0.0026	0.0035	0.0029	0.0026	0.0025	0.0026	0.0073	0.0035	0.0029	0.0048	0.0029	0.0026
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	0.0005	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0022
Ni (mg/L)	0.5	0.0474	0.0532	0.0711	0.0603	0.0664	0.0987	0.0847	0.0609	0.0554	0.0662	0.0479	0.0413
Zn (mg/L)	0.5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0039	0.0025	0.0025	0.0025	0.0043	0.0058
TSS (mg/L)	15	5.52	7.18	5.45	8.07	5.87	6.09	9.56	3.77	3.91	4.50	5.27	4.39
Ra-226 (Bq/L)	0.37	RF	0.0050	0.0080	RF	0.0500	RF	RF	0.0025	RF	RF	0.0025	RF
pH Low	≥6.0	8.8	8.7	8.7	8.7	8.7	8.6	8.6	8.6	8.8	8.1	8.7	8.8
pH High	≤9.5	9.0	9.0	8.8	8.9	9.0	8.9	8.9	8.9	8.9	8.9	9.0	9.0
Flow (m <sup>3</sup> /month)	-	402,096	405,751	440,008	344,280	316,232	176,728	365,676	259,006	159,203	85,962	260,388	292,691
Rainbow Trout	Pass	RF	1	RF	RF	1	RF	RF	1	RF	RF	1	RF
Acute Lethality Test	Fail	RF	0	RF	RF	0	RF	RF	0	RF	RF	0	RF
Daphnia magna	Pass	RF	0	RF	RF	1	RF	RF	1	RF	RF	0	RF
Monitoring Test	Fail	RF	1	RF	RF	0	RF	RF	0	RF	RF	1	RF
Comments:	The owner/operator was reporting at a 'reduced frequency', however the deleterious substance concentration for radium-226 was measured as greater than 0.037 Bq/L, thus the mine no longer qualifies for reduced frequency.												
<b>NOTES:</b>	<p><b>ND:</b> No Deposit    <b>RF:</b> Reduced Frequency    <b>NCU:</b> No Cyanide Used    <b>Pass:</b> ≤50% Mortality    <b>Fail:</b> &gt;50% Mortality    <b>--:</b> No data reported</p> <p>Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.</p> <p>A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.</p>												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Whale Tail Project												
Operator	Agnico Eagle Mines Limited												
Product(s)	Gold												
Address	P.O. Box 540, Baker Lake, Nunavut X0C 0A0												
Effluent Discharge Point	ST-MDMER-4 Whale Tail North Basin												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	0.0003	ND	ND	ND	ND
Cu (mg/L)	0.3	-	-	-	-	-	-	-	0.0012	ND	ND	ND	ND
CN (mg/L)	1	-	-	-	-	-	-	NCU	0.0006	ND	ND	ND	ND
Pb (mg/L)	0.2	-	-	-	-	-	-	-	0.0008	ND	ND	ND	ND
Ni (mg/L)	0.5	-	-	-	-	-	-	-	0.0011	ND	ND	ND	ND
Zn (mg/L)	0.5	-	-	-	-	-	-	-	0.0034	ND	ND	ND	ND
TSS (mg/L)	15	-	-	-	-	-	-	-	4.38	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	0.0045	ND	ND	ND	ND
pH Low	≥6.0	-	-	-	-	-	-	-	6.6	ND	ND	ND	ND
pH High	≤9.5	-	-	-	-	-	-	-	7.3	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	39,680	281,857	ND	ND	ND	ND
Rainbow Trout	Pass	-	-	-	-	-	-	-	1	ND	ND	ND	ND
Acute Lethality Test	Fail	-	-	-	-	-	-	-	0	ND	ND	ND	ND
Daphnia magna	Pass	-	-	-	-	-	-	-	1	ND	ND	ND	ND
Monitoring Test	Fail	-	-	-	-	-	-	-	0	ND	ND	ND	ND

Comments:  
This mine became subject to the MDMER in 2018. The owner/operator reported to be in 'normal frequency' for acute lethality testing and deleterious substances measurement in July, however, no test results were submitted for this month.

**NOTES:**  
**ND:** No Deposit    **RF:** Reduced Frequency    **NCU:** No Cyanide Used    **Pass:** ≤50% Mortality    **Fail:** >50% Mortality    **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	WillaMax Project												
Operator	Discovery Ventures Incorporated												
Product(s)	Molybdenum												
Address	42 Westside Road, Trout Lake, British Columbia V0G 1R0												
Effluent Discharge Point	MM.SiteD - Mine Portal Settling Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	WillaMax Project												
Operator	Discovery Ventures Incorporated												
Product(s)	Molybdenum												
Address	42 Westside Road, Trout Lake, British Columbia V0G 1R0												
Effluent Discharge Point	MM.Sitel - Settling Ponds Decant												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	RF	0.0006	RF	0.0011	RF	RF	RF	0.0005	RF	RF	0.0006
Cu (mg/L)	0.3	RF	RF	0.0002	RF	0.0005	RF	RF	RF	0.0002	RF	RF	0.0005
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	RF	RF	0.0001	RF	0.0004	RF	RF	RF	0.0001	RF	RF	0.0002
Ni (mg/L)	0.5	RF	RF	0.0006	RF	0.0010	RF	RF	RF	0.0005	RF	RF	0.0004
Zn (mg/L)	0.5	RF	RF	0.0020	RF	0.0067	RF	RF	RF	0.0020	RF	RF	0.0020
TSS (mg/L)	15	-	-	2.50	-	5.50	-	-	-	1.00	-	-	1.00
Ra-226 (Bq/L)	0.37	RF	RF	0.0090	RF	0.0025	RF	RF	RF	0.0025	RF	RF	RF
pH Low	≥6.0	-	-	8.1	-	7.8	-	-	-	8.0	-	-	8.1
pH High	≤9.5	-	-	8.1	-	7.8	-	-	-	8.0	-	-	8.1
Flow (m <sup>3</sup> /month)	-	1,000	1,000	1,000	50,000	180,000	116,981	63,881	37,001	33,000	27,327	35,351	32,157
Rainbow Trout	Pass	RF	RF	RF	1	RF	RF	RF	RF	1	RF	RF	RF
Acute Lethality Test	Fail	RF	RF	RF	0	RF	RF	RF	RF	0	RF	RF	RF
Daphnia magna	Pass	RF	RF	RF	1	RF	RF	RF	RF	1	RF	RF	RF
Monitoring Test	Fail	RF	RF	RF	0	RF	RF	RF	RF	0	RF	RF	RF

Comments:  
The owner/operator did not report measurement of radium-226 within the fourth quarter. The owner/operator did not report acute lethality testing within the first and fourth quarter.

**NOTES:**  
**ND:** No Deposit    **RF:** Reduced Frequency    **NCU:** No Cyanide Used    **Pass:** ≤50% Mortality    **Fail:** >50% Mortality    **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	WillaMax Project												
Operator	Discovery Ventures Incorporated												
Product(s)	Molybdenum												
Address	42 Westside Road, Trout Lake, British Columbia V0G 1R0												
Effluent Discharge Point	MM,TP - Tailings Pond Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	RF	RF	0.0003	RF	0.0003	0.0005	RF	RF	0.0003	RF	RF	0.0003
Cu (mg/L)	0.3	RF	RF	0.0016	RF	0.0016	0.0011	RF	RF	0.0012	RF	RF	0.0020
CN (mg/L)	1	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	RF	RF	0.0001	RF	0.0001	0.0001	RF	RF	0.0001	RF	RF	0.0001
Ni (mg/L)	0.5	RF	RF	0.0008	RF	0.0005	0.0002	RF	RF	0.0006	RF	RF	0.0005
Zn (mg/L)	0.5	RF	RF	0.0020	RF	0.0020	0.0020	RF	RF	0.0020	RF	RF	0.0020
TSS (mg/L)	15	-	-	2.50	-	2.50	1.00	-	-	1.00	-	-	1.00
Ra-226 (Bq/L)	0.37	RF	RF	0.0025	RF	0.0025	RF	RF	RF	0.0025	RF	RF	RF
pH Low	≥6.0	-	-	8.0	-	7.7	7.4	-	-	7.9	-	-	8.0
pH High	≤9.5	-	-	8.0	-	7.7	7.4	-	-	7.9	-	-	8.0
Flow (m <sup>3</sup> /month)	-	2,700	9,420	3,855	6,808	1	38,156	29,840	1,444	2,200	4,263	4,604	4,757
Rainbow Trout	Pass	RF	RF	RF	1	1	RF	RF	RF	1	RF	RF	RF
Acute Lethality Test	Fail	RF	RF	RF	0	0	RF	RF	RF	0	RF	RF	RF
Daphnia magna	Pass	RF	RF	RF	1	1	RF	RF	RF	1	RF	RF	RF
Monitoring Test	Fail	RF	RF	RF	0	0	RF	RF	RF	0	RF	RF	RF

**Comments:**

The owner/operator did not report measurement of radium-226 within the fourth quarter. The owner/operator did not report acute lethality testing within the first and fourth quarter.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Williams Mine												
Operator	Barrick Gold Corporation - Williams Operating Corporation												
Product(s)	Gold												
Address	P.O. Bag 500, Marathon, Ontario POT 2E0												
Effluent Discharge Point	Polishing Pond Discharge CP 0400												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Williams Mine												
Operator	Barrick Gold Corporation - Williams Operating Corporation												
Product(s)	Gold												
Address	P.O. Bag 500, Marathon, Ontario POT 2E0												
Effluent Discharge Point	Stormwater Pond CP 0300												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	0.0025	ND	ND	ND	ND	0.0034	0.0037	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0011	ND	ND	ND	ND	0.0013	0.0012	ND
CN (mg/L)	1	ND	ND	ND	ND	0.0438	ND	ND	ND	ND	0.0056	0.0089	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0005	ND	ND	ND	ND	0.0005	0.0005	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0013	ND	ND	ND	ND	0.0029	0.0035	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0041	ND	ND	ND	ND	0.0059	0.0074	ND
TSS (mg/L)	15	ND	ND	ND	ND	170	ND	ND	ND	ND	1.00	1.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0050	ND	ND	ND	ND	0.0050	0.0050	ND
pH Low	≥6.0	ND	ND	ND	ND	7.3	ND	ND	ND	ND	7.5	7.5	ND
pH High	≤9.5	ND	ND	ND	ND	7.8	ND	ND	ND	ND	7.8	7.7	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	40,870	ND	ND	ND	ND	44,520	13,536	ND
Rainbow Trout	Pass	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	0	ND	ND	ND	ND	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	0	ND	ND	ND	ND	0	0	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name		Williams Mine											
Operator		Barrick Gold Corporation - Williams Operating Corporation											
Product(s)		Gold											
Address		P.O. Bag 500, Marathon, Ontario POT 2E0											
Effluent Discharge Point		Stormwater Pond CP 102											
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	0.0039	0.0015	0.0023	0.0030	0.0031	0.0028	0.0032	0.0038	0.0036	0.0028
Cu (mg/L)	0.3	ND	ND	0.0015	0.0014	0.0014	0.0011	0.0007	0.0005	0.0011	0.0014	0.0014	0.0046
CN (mg/L)	1	ND	ND	0.0032	0.0010	0.0010	0.0018	0.0010	0.0009	0.0017	0.0031	0.0033	0.0038
Pb (mg/L)	0.2	ND	ND	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Ni (mg/L)	0.5	ND	ND	0.0055	0.0020	0.0020	0.0010	0.0015	0.0014	0.0028	0.0054	0.0069	0.0104
Zn (mg/L)	0.5	ND	ND	0.0135	0.0032	0.0032	0.0015	0.0015	0.0015	0.0031	0.0091	0.0123	0.0413
TSS (mg/L)	15	ND	ND	5.00	1.90	1.90	1.00	1.63	1.00	3.03	1.50	1.38	1.00
Ra-226 (Bq/L)	0.37	ND	ND	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
pH Low	≥6.0	ND	ND	7.3	7.5	7.5	7.5	7.8	7.6	7.7	7.7	7.5	7.5
pH High	≤9.5	ND	ND	7.4	8.0	8.0	8.2	8.1	8.0	7.9	7.8	7.7	7.6
Flow (m <sup>3</sup> /month)	-	ND	ND	58,510	57,824	57,824	19,921	57,292	36,408	158,248	107,157	47,958	10,620
Rainbow Trout	Pass	ND	ND	1	1	1	1	1	1	1	1	1	1
Acute Lethality Test	Fail	ND	ND	0	0	0	0	0	0	0	0	0	0
Daphnia magna	Pass	ND	ND	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	ND	ND	0	0	0	0	0	0	0	0	0	0

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **—** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Williams Mine												
Operator	Barrick Gold Corporation - Williams Operating Corporation												
Product(s)	Gold												
Address	P.O. Bag 500, Marathon, Ontario POT 2E0												
Effluent Discharge Point	Stormwater Pond CP 400A												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	0.0023	0.0019	0.0018	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	0.0023	0.0029	0.0030	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	0.0010	0.0017	0.0020	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	0.0005	0.0005	0.0005	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	0.0010	0.0035	0.0031	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	0.0015	0.0085	0.0066	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	1.00	5.75	1.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	0.0050	0.0050	0.0050	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	7.9	7.3	7.6	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	7.9	7.8	7.6	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	8,212	31,471	339	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	0	0	0	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Williams Mine												
Operator	Barrick Gold Corporation - Williams Operating Corporation												
Product(s)	Gold												
Address	P.O. Bag 500, Marathon, Ontario POT 2E0												
Effluent Discharge Point	Treated Effluent CP 0201												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0015	0.0023	0.0025	0.0016	0.0008	0.0005	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0026	0.0017	0.0012	0.0011	0.0005	0.0009	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	0.0109	0.0071	0.0082	0.0071	0.0042	0.0050	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0089	0.0238	0.0323	0.0235	0.0133	0.0131	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0015	0.0015	0.0019	0.0015	0.0015	0.0015	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	1.00	1.00	1.00	1.00	1.00	1.00	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	7.5	7.4	7.2	7.3	6.9	7.1	ND
pH High	≤9.5	ND	ND	ND	ND	ND	7.8	7.6	7.5	7.6	7.4	7.1	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	322,338	425,634	415,652	421,025	421,025	195,302	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	1	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	0	0	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	1	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	0	0	0	0	0	0	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Windfall (Projet)												
Operator	Minière Osisko Incorporated												
Product(s)	Gold												
Address	km 115, Route 6000, Lebel-sur-Quévillon, Quebec J0Y 1X0												
Effluent Discharge Point	Effluent 1												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	0.0003	0.0003	0.0003	0.0004	0.0004	0.0004	0.0003
Cu (mg/L)	0.3	-	-	-	-	-	0.0011	0.0036	0.0017	0.0013	0.0011	0.0013	0.0008
CN (mg/L)	1	-	-	-	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU	NCU
Pb (mg/L)	0.2	-	-	-	-	-	0.0002	0.0010	0.0002	0.0004	0.0002	0.0003	0.0002
Ni (mg/L)	0.5	-	-	-	-	-	0.0041	0.0019	0.0029	0.0025	0.0053	0.0037	0.0030
Zn (mg/L)	0.5	-	-	-	-	-	0.0007	0.0019	0.0027	0.0015	0.0011	0.0026	0.0015
TSS (mg/L)	15	-	-	-	-	-	1.81	2.05	1.00	2.00	1.79	3.92	1.33
Ra-226 (Bq/L)	0.37	-	-	-	-	-	RF	RF	RF	RF	RF	RF	RF
pH Low	≥6.0	-	-	-	-	-	6.4	6.4	6.4	6.3	6.3	6.4	6.4
pH High	≤9.5	-	-	-	-	-	7.0	7.3	7.1	7.8	6.9	7.2	6.8
Flow (m <sup>3</sup> /month)	-	-	-	-	5,219	13,340	10,486	11,772	13,120	13,793	19,665	15,730	10,097
Rainbow Trout	Pass	-	-	-	-	-	1	2	1	1	1	1	1
Acute Lethality Test	Fail	-	-	-	-	-	0	0	0	0	0	0	0
Daphnia magna	Pass	-	-	-	-	-	1	2	1	1	1	1	1
Monitoring Test	Fail	-	-	-	-	-	0	0	0	0	0	0	0

**Comments:**

This mine became subject to the MDMER in 2018. The owner/operator did not report measurement of radium-226 within the third and fourth quarter. The owner/operator did not demonstrate that it qualified for the reduced frequency provision.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Wolverine Project												
Operator	Yukon Zinc Corporation												
Product(s)	Zinc, copper, lead, silver, gold												
Address	190 km NW of Watson Lake, Yukon												
Effluent Discharge Point	Wo.TSF - Tailings Storage Facility												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Comments:

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.



**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Yellow Giant Mine												
Operator	Banks Island Gold Limited												
Product(s)	Gold												
Address	300-1055 West Hastings St, Vancouver, British Columbia V6E 2E9												
Effluent Discharge Point	BRG-EFF - Barge Channel Outfall												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	-	-	-
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Comments:	No submission of annual report.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>--</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Yellowjacket Gold Mine												
Operator	African Queen Mines Limited												
Product(s)	Gold												
Address	44-12th Avenue S, Suite 200, Cranbrook, British Columbia VIC 2R7												
Effluent Discharge Point	Ye.TSF - Tailings Storage Facility												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CN (mg/L)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH Low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH High	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flow (m <sup>3</sup> /month)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acute Lethality Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Test	Fail	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comments:													

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **-** : No data reported  
 Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.  
 A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Young-Davidson Mine												
Operator	Alamos Gold Incorporated												
Product(s)	Gold												
Address	P.O. Box 187, Matachewan, Ontario P0K 1M0												
Effluent Discharge Point	Mine Water Pond Final Discharge												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	0.0019	0.0059	0.0017	0.0023	0.0061	0.0043	0.0048	0.0080	0.0029	0.0020	0.0025	0.0030
Cu (mg/L)	0.3	0.0068	0.0064	0.0436	0.0156	0.0083	0.0107	0.0063	0.0118	0.0090	0.0103	0.0083	0.0473
CN (mg/L)	1	0.1425	0.2625	0.1628	0.3675	0.1498	0.2430	0.110	0.1518	0.1565	0.0308	0.0173	0.2260
Pb (mg/L)	0.2	0.0005	0.0006	0.0008	0.0010	0.0005	0.0006	0.0006	0.0015	0.0005	0.0003	0.0003	0.0003
Ni (mg/L)	0.5	0.0068	0.0062	0.0143	0.0077	0.0091	0.0054	0.0072	0.0275	0.0193	0.0173	0.0130	0.0323
Zn (mg/L)	0.5	0.0108	0.0060	0.0065	0.0079	0.0062	0.0057	0.0196	0.1478	0.0645	0.0830	0.0858	0.1058
TSS (mg/L)	15	1.40	2.88	6.00	5.88	0.80	0.88	3.17	1.30	2.13	2.50	1.25	1.00
Ra-226 (Bq/L)	0.37	RF	-	0.0050	RF	0.0050	RF	RF	0.0050	RF	RF	0.0100	RF
pH Low	≥6.0	7.1	7.1	7.5	7.4	7.0	7.0	6.8	6.9	6.9	7.0	7.1	6.9
pH High	≤9.5	7.7	8.2	7.9	8.3	7.5	7.3	7.3	7.2	7.2	7.4	7.4	8.7
Flow (m <sup>3</sup> /month)	-	39,893	34,969	29,916	40,616	65,703	19,521	22,450	99,477	129,126	129,126	98,061	41,240
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	-	1
Acute Lethality Test	Fail	0	0	0	0	0	0	0	0	0	0	-	0
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1
Monitoring Test	Fail	0	0	0	0	0	0	0	0	0	0	0	0

**Comments:**

The owner/operator reported to be in 'normal frequency' for radium-226 measurement in February, however, no test results were submitted for this month. The owner/operator reported to be in 'normal frequency' for Rainbow trout acute lethality testing in November, however, no test results were submitted for this month.

**NOTES:**

**ND:** No Deposit **RF:** Reduced Frequency **NCU:** No Cyanide Used **Pass:** ≤50% Mortality **Fail:** >50% Mortality **--:** No data reported

Highlighted data indicate that a monthly effluent quality standard was exceeded for that month.

A "Pass" for the *Daphnia magna* monitoring test is not a requirement.

**METAL AND DIAMOND MINING EFFLUENT REGULATIONS (MDMER)  
2018 EFFLUENT COMPLIANCE**

Mine/Mill Name	Yukon Refinery												
Operator	Yukon (36569) Incorporated - Yukon Refinery (North Cobalt, ON)												
Product(s)	Nickel, cobalt, silver, gold												
Address	Lot 1, Concession 12, Highway 567, Lorraine Township North Cobalt, Ontario POJ 1R0												
Effluent Discharge Point	Secondary Pond												
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-
CN (mg/L)	1	-	-	-	-	-	-	-	-	-	-	-	-
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	-	-	-
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	-	-	-
pH Low	≥6.0	-	-	-	-	-	-	-	-	-	-	-	-
pH High	≤9.5	-	-	-	-	-	-	-	-	-	-	-	-
Flow (m <sup>3</sup> /month)	-	-	-	-	-	-	-	-	-	-	-	-	-
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-
Comments:	No submission of annual report.												
<b>NOTES:</b>	<b>ND:</b> No Deposit <b>RF:</b> Reduced Frequency <b>NCU:</b> No Cyanide Used <b>Pass:</b> ≤50% Mortality <b>Fail:</b> >50% Mortality <b>--</b> : No data reported Highlighted data indicate that a monthly effluent quality standard was exceeded for that month. A "Pass" for the <i>Daphnia magna</i> monitoring test is not a requirement.												

