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# Summary Review of **Performance of Metal Mines**

Subject to the *Metal Mining Effluent Regulations*

in 2012

I/MM/22 – January 2014  
Mining Section  
Mining and Processing Division  
Industrial Sectors Directorate  
Environmental Stewardship Branch  
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## REVIEW NOTICE

This performance summary of metal mines subject to the *Metal Mining Effluent Regulations* has been reviewed by officials of the Mining Section, Environment Canada, and approved for public release. Approval does not necessarily signify that the contents reflect the views and policies of Environment Canada.

The data used in this summary review were provided to Environment Canada under section 22 of the Regulations, which requires mines to submit annual reports to Environment Canada. The data were compiled by staff of the Mining Section of Environment Canada and are presented as provided by the mines from their submitted annual reports. In some cases, quarterly reports were used by Environment Canada staff to complete missing information that was not properly reported by the owners or operators of some mines.

This summary has been compiled to inform the regulated community, other stakeholders and the interested public on the performance of mines subject to the Regulations in 2012. The material has been prepared for informational purposes only. For all purposes of interpreting and applying the law, users should consult the *Metal Mining Effluent Regulations*, as registered by the Clerk of the Privy Council and published in Part II of the *Canada Gazette*.

## **ABSTRACT**

This review summarizes the performance of Canadian metal mines with respect to selected standards prescribed by the *Metal Mining Effluent Regulations*, which were registered on June 6, 2002, and came fully into force on December 6, 2002.

This is the tenth annual summary of performance with respect to the Regulations. In addition to detailed mine effluent quality data, the report includes various tables and graphs synthesizing the compliance data based on exceedances, jurisdictions and mining subsectors. Summary tables are also provided on the same basis for both rainbow trout acute lethality and *Daphnia magna* monitoring tests. This performance review of mines is limited in that it does not include an overview of the main requirements of the Regulations. The electronic version of this summary review is available through Environment Canada's online publications catalogue at [www.ec.gc.ca](http://www.ec.gc.ca).

## RÉSUMÉ

La présente évaluation sommaire porte sur la performance des mines de métaux canadiennes et repose sur certaines normes prescrites par le *Règlement sur les effluents des mines de métaux*, lequel a été enregistré le 6 juin 2002 et est entré en vigueur dans son ensemble le 6 décembre 2002.

Elle constitue la dixième évaluation sommaire annuelle de la performance relativement au *Règlement*. Outre des données détaillées sur la qualité des effluents, le rapport comprend divers tableaux et graphiques dans lesquels les données sur la conformité sont résumées, selon les dépassements, la province ou le territoire et le sous-secteur minier. Il comprend également des tableaux sommaires dans lesquels on présente de la même manière les résultats des essais de détermination de la létalité aiguë chez la truite arc-en-ciel et des essais de suivi avec bioessais sur la *Daphnia magna*. La portée de la présente évaluation sommaire est limitée, c'est-à-dire qu'elle ne renferme aucun aperçu des principales exigences figurant dans le *Règlement*. La version électronique de cette évaluation sommaire est disponible à partir du répertoire des publications en ligne d'Environnement Canada à l'adresse : [www.ec.gc.ca](http://www.ec.gc.ca).

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## SUMMARY

This review summarizes the performance of Canadian metal mines with respect to the selected standards prescribed by the *Metal Mining Effluent Regulations*, which came fully into force on December 6, 2002.

The Regulations require sampling of effluent and the submission of quarterly and annual reports of results within specified time limits. The data used in this review were provided to Environment Canada under section 22 of the Regulations, which requires mines to submit annual reports to Environment Canada. The format for these reports is specified in Schedule 6 of the Regulations. The reports include:

- monthly mean concentrations for metals and total suspended solids;
- monthly pH range; and
- summary results of rainbow trout acute lethality tests and *Daphnia magna* monitoring tests.

In 2012, 117 mining facilities operating in Canada were subject to the Regulations. No metal mines were subject to the Regulations in Alberta or Prince Edward Island. Those facilities subject to the Regulations are listed in Table 1, and their locations are illustrated in Figure 1. Additional information on the facilities is provided in Appendix B.

## **OVERALL COMPLIANCE ASSESSMENT FOR PRESCRIBED DELETERIOUS SUBSTANCES AND PH IN 2012**

- Overall, the metal mining sector is achieving over 99% compliance with the prescribed limits for arsenic, copper, nickel, zinc, radium 226 and pH, close to 99% for cyanide and a 100% compliance rate for lead.
- Only a few sporadic exceedances were reported for arsenic, copper, cyanide, nickel, zinc, radium 226 and pH.
- The cyanide limit was exceeded by Pine Cove Mine on multiple occasions.
- On numerous occasions, Edwards Mine exceeded the prescribed limits for copper, nickel, zinc, total suspended solids and radium 226. Stock Mine and Mill Complex also exceeded the limits for arsenic, nickel and total suspended solids.
- In 2012, the overall compliance rate achieved by the metal mining sector with respect to meeting the total suspended solids limits was 96.3%. Beaver Brook Mine, Bucko Lake Mine, Complexe métallurgique Sorel-Tracy and Wabush Mines Joint Venture – Scully Mine failed to consistently meet total suspended solids limits.

## **OVERALL ASSESSMENT OF RESULTS OF RAINBOW TROUT ACUTE LETHALITY AND *DAPHNIA MAGNA* MONITORING TESTS IN 2012**

- Overall, the metal mining sector has achieved a compliance rate of 98.8% with respect to effluent that is non-acutely lethal to rainbow trout. A low compliance rate was achieved by the Vezza Mine facility in Quebec.
- In 95.4% of the *Daphnia magna* monitoring tests, the mortality rate was less than the targeted level of 50%.

## **COMPARISON OF PERFORMANCE OF METAL MINES IN 2011 AND 2012**

- In 2012, 117 mines were subject to the Regulations compared to 112 in 2011. Seven new mines became subject to the Regulations while two mines ceased to be subject to the Regulations (Appendix A).
- In 2012, 206 final discharge points were subject to the Regulations, compared with 199 in 2011.
- The total number of exceedances for metals, pH and total suspended solids remained unchanged from 2011 to 2012, at 74.
- In 2012, metal mines achieved a 100% compliance rate for lead. Compliance rate for copper dropped slightly from 99.9% in 2011 to 99.8% in 2012. Compliance rate for cyanide dropped from 99.7% in 2011 to 98.6% in 2012. Compliance rate for arsenic, nickel, zinc and radium 226 remained unchanged: 99.8%, 99.6%, 99.7% and 99.9% respectively in both years.
- The compliance rate for total suspended solids (TSS) slightly increased from 96.1% in 2011 to 96.3% in 2012. Although the majority of TSS exceedances reported were sporadic, four facilities seemed to have chronic TSS exceedances from at least one of their effluents in 2012. The problematic facilities were the Bucko Lake Mine in Manitoba, the Complexe métallurgique Sorel-Tracy in Quebec, and the Beaver Brook Mine and Wabush Mines Joint Venture (Scully Mine) in Newfoundland. Enforcement actions are being taken and appropriate remediation measures are being examined/implemented in order to fix the problems.
- In 2012, the compliance rate for non-acutely lethal effluents to rainbow trout was 98.8%, compared with 97.5% in 2011. A low compliance rate was achieved by the Vezza Mine facility in Quebec and Young-Davidson Mine facility in Ontario. Enforcement actions are being taken and appropriate remediation measures are being examined/implemented in order to fix the problems.
- Between 2011 and 2012, a slight improvement was observed in *Daphnia magna* monitoring tests. More specifically, 95.4% of the tests showed the mortality rate was less than 50% in 2012 compared with 95.0% of the tests in 2011. As for 2011, the numerous tests conducted by Bucko Lake Mine and Voisey's Bay Mine – Mill, for which the mortality rate was greater than 50%, contributed to decreasing the overall compliance rate of the sector.

## **PERFORMANCE DATA AND COMPLIANCE SUMMARY FOR 2012**

The data were compiled by the Mining Section of Environment Canada. Except where noted, data are generally presented as provided by the owners or operators of the mines in their submitted annual reports. Occasionally, quarterly reports were used to correct or complete missing information that had not been properly reported by the owner or operator of a mine. For these facilities, a comment was added in the appropriate summary tables presented in Appendix E to identify which missing information had not been submitted as part of the annual report.

Pursuant to sections 9 and 10 of the Regulations, 206 final discharge points were identified as being subject to the Regulations. The distribution of facilities and final discharge points per jurisdiction is shown in Table 2. The number of final discharge points per facility ranged from 1 to 11, as illustrated in Table 3. Reported data indicate that 77 final discharge points had continuous discharge, 82 had intermittent discharge and 47 did not have any discharge in 2012.

The tables presented in Appendix D summarize the effluent quality data for mines subject to the Regulations in 2012. Table D1 summarizes the distribution of the non-compliant parameters for metals and pH, whereas Table D2 summarizes the results of rainbow trout acute lethality tests and *Daphnia magna* monitoring tests. Data for each individual final discharge point for mines subject to the Regulations in 2012 are listed in Appendix E.

Overall, the metal mining sector achieved over 99% compliance with the prescribed limits for metals and pH and close to 99% for cyanide. Only a few sporadic exceedances were reported for arsenic, copper, cyanide, nickel, zinc and radium 226. Metal mines achieved 100% compliance for prescribed limits for lead. Four mines were challenged to routinely meet total suspended solids limits, and the overall compliance rate was 96.3% (Table 4).

With respect to rainbow trout acute lethality tests, the metal mining sector has achieved a non-acutely lethal effluent compliance rate of 98.8%. In 95.4% of *Daphnia magna* monitoring tests, the mortality rate was less than 50%.

In 2012, 74 exceedances of the prescribed limits for metals, pH and total suspended solids were reported (Table 5). Total suspended solids exceedances accounted for 68.9% of the total, metals for 27% of the total and pH for 4.1% of the total. Ninety-three facilities complied with the maximum authorized monthly mean concentrations for metals and total suspended solids, and pH limits at all times. Twenty-four facilities reported at least one exceedance in 2012. Figure 2 shows the distribution, by jurisdiction, of all the facilities subject to the Regulations in 2012, as well as the number of facilities for which exceedances were reported. The distribution of exceedances by jurisdiction is shown in Figure 3.

The distribution of exceedances that were reported in 2012 per jurisdiction is as follows:

- 35.1% occurred from facilities located in Ontario;
- 35.1% occurred from facilities located in Newfoundland and Labrador;
- 12.2% occurred from facilities located in Quebec;
- 8.1% occurred from facilities located in Manitoba;
- 6.8% occurred from facilities located in Saskatchewan;
- 2.7% occurred from facilities located in British Columbia.

No exceedances were reported from mines located in Northwest Territories, Nunavut, Yukon, Nova Scotia or New Brunswick (Table 6).

The distribution of exceedances by mining subsector is presented in Table 7. The precious metals subsector accounted for 45.2%, the base metals subsector for 30.1%, the iron ore subsector for 21.9% and the uranium subsector for 2.7%.

In 2012, 11 tests from 4 facilities were reported to be acutely lethal to rainbow trout (Table 8). Of those, 63.6% were from facilities located in Quebec, and 36.3% in Ontario. None of the effluent tested in the other jurisdictions (British Columbia, Yukon, Saskatchewan, Manitoba, Northwest Territories, Nunavut, New Brunswick, Newfoundland and Labrador, or Nova Scotia) was acutely lethal to rainbow trout. On a sectoral basis, 90.9% were from the precious metals subsector, and 9.1% from the base metals subsector. The uranium and iron ore subsectors had no rainbow trout acute lethality test failures (Table 9).

In 2012, 43 tests from 15 facilities had a *Daphnia magna* mortality rate greater than 50% (Table 8). Newfoundland and Labrador had the highest percentage (37.2%) of the tests in which *Daphnia magna* mortality was greater than 50%, followed by Manitoba (23.3%), Ontario and Quebec (16.3% each), British Columbia (4.6%), and Yukon (2.3%). Saskatchewan, New Brunswick, Northwest Territories, Nunavut and Nova Scotia had no *Daphnia magna* mortality rate greater than 50%. On a sectoral basis, 76.7% were from the base metals subsector, 16.3% from the precious metals subsector and 7.0% from the iron ore subsector. The uranium subsector had no *Daphnia magna* monitoring tests with a mortality rate greater than 50% (Table 9).

These Regulations are enforced by Environment Canada in accordance with the provisions of the Compliance and Enforcement Policy for the Habitat Protection and Pollution Prevention Provisions of the *Fisheries Act*. Enforcement personnel administer the provisions 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.

In verifying compliance with these Regulations, inspectors abide by the Enforcement and Compliance Policy, which sets out a range of possible responses to offenses, including warnings, inspector's directions, ticketing, ministerial orders, injunctions, prosecution and civil suits by the Crown for the recovery of costs. If an inspector confirms that an infraction has been committed, the inspector will select the appropriate response based on the following criteria: nature of the offense, effectiveness in achieving the desired result with the offender and consistency.

**Table 1: Mining Facilities Subject to the Metal Mining Effluent Regulations in 2012**

Facility	Jurisdiction	Facility	Jurisdiction
1 Myra Falls Operations	British Columbia	50 Hislop Mine	Ontario
2 Endako Mines	British Columbia	51 Timmins West Complex	Ontario
3 Huckleberry Mine	British Columbia	52 Stock Mine and Mill Complex	Ontario
4 Kermess South Mine	British Columbia	53 Bell Creek Mine and Mill	Ontario
5 MAX Molybdenum Mine and Mill	British Columbia	54 Black Fox Mine	Ontario
6 Copper Mountain Mine	British Columbia	55 Redstone Mine	Ontario
7 Yellowjacket Gold Mine	British Columbia	56 McWatters Mine	Ontario
8 Gibraltar Mine	British Columbia	57 Kidd Mining Division	Ontario
9 Minto Project	Yukon	58 Kidd Metallurgical Division	Ontario
10 Wolverine Project	Yukon	59 Montcalm Project	Ontario
11 Bellekerne Mine	Yukon	60 Macassa Mine	Ontario
12 Key Lake Operation	Saskatchewan	61 Detour Lake Mine	Ontario
13 McArthur River Operation	Saskatchewan	62 Young-Davidson Mine	Ontario
14 Cigar Lake Project	Saskatchewan	63 McAlpine Mill	Ontario
15 McClean Lake Operation	Saskatchewan	64 Lockerby Mine	Ontario
16 Rabbit Lake Operation	Saskatchewan	65 Strathcona Tailings Treatment System	Ontario
17 Seabee Mine	Saskatchewan	66 Copper Cliff Complex	Ontario
18 Jolu Mill	Saskatchewan	67 Xstrata Nickel Sudbury Smelter	Ontario
19 Santoy 7 Mine	Saskatchewan	68 Garson Mine	Ontario
20 Santoy 8 Mine	Saskatchewan	69 Crean Hill Mine	Ontario
21 Flin Flon Complex	Manitoba	70 Totten Mine	Ontario
22 Trout Lake Mine	Manitoba	71 Podolsky Mine	Ontario
23 Chisel North Mine	Manitoba	72 Shakespeare Nickel Mine	Ontario
24 Snow Lake Mill	Manitoba	73 Haley Plant	Ontario
25 Birchtree Mine	Manitoba	74 Langlois (Mine)	Quebec
26 Thompson Complex	Manitoba	75 Francoeur (Mine)	Quebec
27 Bucko Lake Mine	Manitoba	76 Matagami (Mine) (Xstrata Zinc Canada Division)	Quebec
28 Snow Lake Mine	Manitoba	77 Vezza (Mine)	Quebec
29 Tanco Mine	Manitoba	78 Éléonore (Mine)	Quebec
30 Rice Lake Gold Mine	Manitoba	79 Casa Berardi (Mine)	Quebec
31 Cantung Mine	Northwest Territories	80 Géant Dormant (Mine)	Quebec
32 Con Mine	Northwest Territories	81 Barry	Quebec
33 Giant Mine	Northwest Territories	82 Lac Bachelot	Quebec
34 Lupin Operations	Nunavut	83 Laronde (Mine)	Quebec
35 Meadowbank Mine	Nunavut	84 Lapa (Project)	Quebec
36 Red Lake Mine	Ontario	85 Mouska (Mine)	Quebec
37 Campbell Mine	Ontario	86 Doyon	Quebec
38 Musselwhite Mine	Ontario	87 Kiena (Mine)	Quebec
39 Lac des Iles Mine	Ontario	88 Canadian Malartic Mine	Quebec
40 Golden Giant Mine	Ontario	89 Sigma	Quebec
41 Williams Mine	Ontario	90 Goldex (Mine)	Quebec
42 David Bell Mine	Ontario	91 Beaufor	Quebec
43 Eagle River Mine	Ontario	92 Camflo (Mill)	Quebec
44 Eagle River Mill	Ontario		
45 Island Gold Project	Ontario		
46 Edwards Mine	Ontario		
47 Porcupine Gold Mines	Ontario		
48 Holloway Mine	Ontario		
49 Clavos Mine	Ontario		

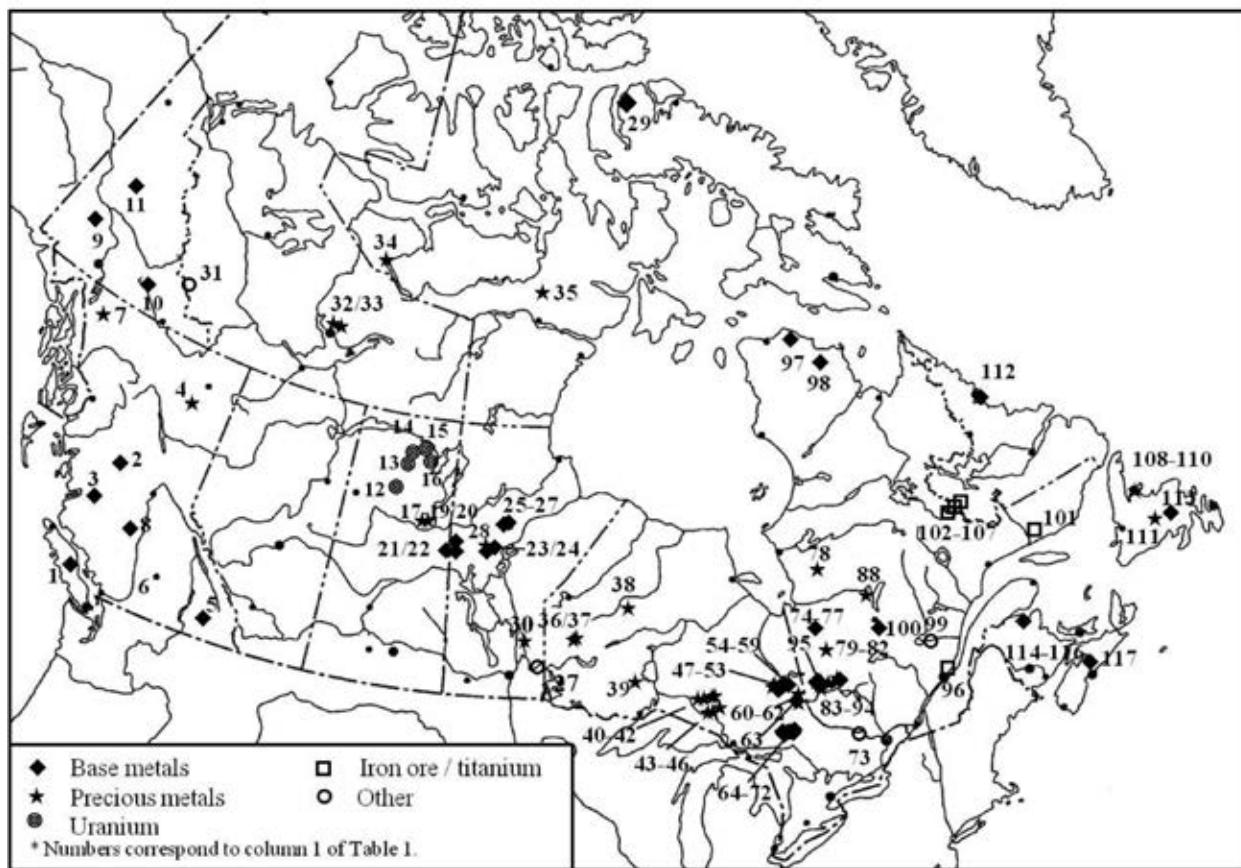
**Table 1: Mining Facilities Subject to the *Metal Mining Effluent Regulations* in 2012 (cont'd)**

Facility	Jurisdiction
93 Lac Herbin	Quebec
94 Aurbel (Mine)	Québec
95 Horne (Smelter)	Quebec
96 Copper Rand (Mine)	Quebec
97 Raglan (Mine)	Quebec
98 Nunavik Nickel (Project)	Quebec
99 Niobec (Mine)	Quebec
100 Complexe métallurgique Sorel-Tracy	Quebec
101 Tio (Mine)	Quebec
102 Mont-Wright (Mine)	Quebec
103 Fire Lake (Mine)	Quebec
104 Lac Bloom (Mine)	Quebec
105 James Mine	Newfoundland and Labrador
106 Wabush (Scully Mine)	Newfoundland and Labrador
107 Iron Ore Company of Canada – Carol Project	Newfoundland and Labrador

Facility	Jurisdiction
108 Nugget Pond Mine	Newfoundland and Labrador
109 Ming Mine	Newfoundland and Labrador
110 Pine Cove Mine	Newfoundland and Labrador
111 Duck Pond Mine	Newfoundland and Labrador
112 Voisey's Bay Mine – Mill	Newfoundland and Labrador
113 Beaver Brook Mine	Newfoundland and Labrador
114 Brunswick No. 12	New Brunswick
115 Caribou Mine and Mill	New Brunswick
116 Restigouche Mine	New Brunswick
117 Scozinc Mine and Mill	Nova Scotia

Note: Numbers in the first column refer to the numbers in Figure 1.

**Figure 1: Location of Mining Facilities Subject to the *Metal Mining Effluent Regulations* in 2012**



**Table 2: Distribution of Facilities and Final Discharge Points by Jurisdiction in 2012**

Jurisdiction	Number of Facilities	Number of Final Discharge Points
British Columbia	8	28
Yukon	3	3
Saskatchewan	9	17
Manitoba	10	12
Northwest Territories	3	5
Nunavut	2	3
Ontario	38	60
Quebec	31	48
New Brunswick	3	3
Newfoundland and Labrador	9	26
Nova Scotia	1	1
<b>Total</b>	<b>117</b>	<b>206</b>

**Table 3: Distribution of Final Discharge Points per Facility in 2012**

Number of Final Discharge Points	Number of Facilities
1	80
2	16
3	9
4	4
5	3
6	3
7	1
11	1

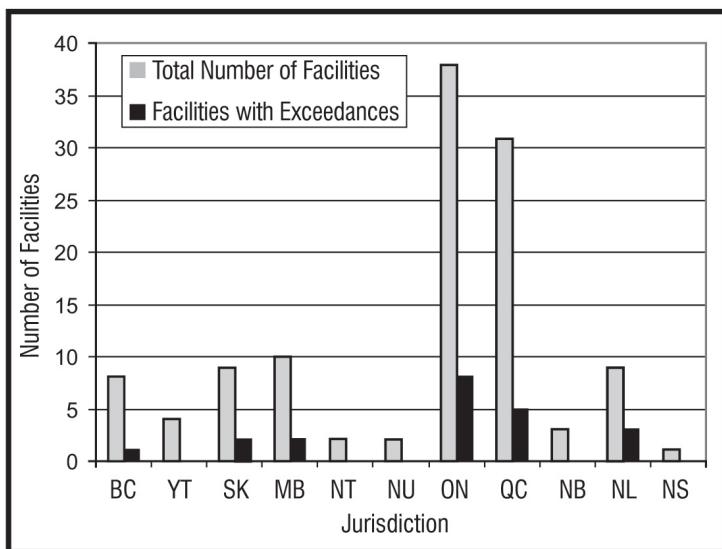
**Table 4: Compliance Summary for Prescribed Deleterious Substances and pH in 2012**

	As	Cu	CN	Pb	Ni	Zn	TSS	Ra-226	pH Low	pH High
Number of exceedances	2	3	5	0	5	4	51	1	2	1
Total number of months for which results were reported	1273	1293	354	1272	1280	1290	1394	782	1389	1389
Compliance rate (%)	99.8	99.8	98.6	100	99.6	99.7	96.3	99.9	99.9	99.9

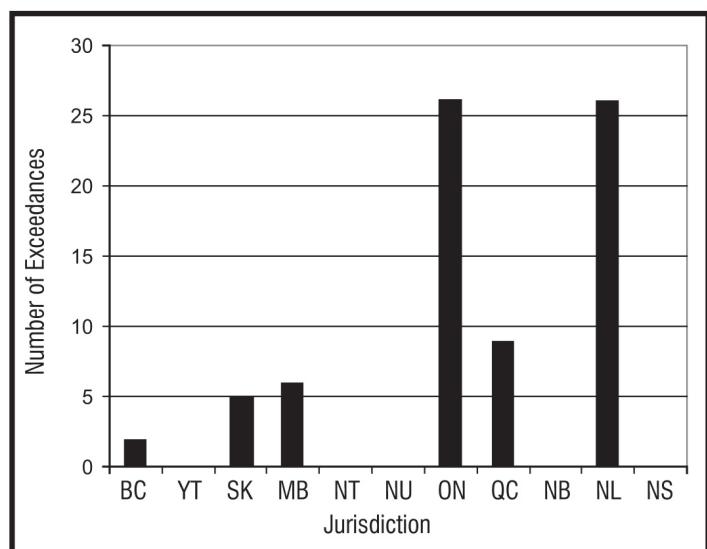
**Table 5: Performance Summary in 2012**

Exceedances of Limits Prescribed in Schedule 4		
Substance/Parameter	Number of Exceedances	Number of Facilities
Arsenic	2	1
Copper	3	2
Cyanide	5	3
Lead	—	—
Nickel	5	3
Zinc	4	2
TSS	51	22
Radium 226	1	1
pH	3	2
<b>Total</b>	<b>74</b>	<b>36</b>

**Figure 2: Distribution of Facilities by Jurisdiction for which Exceedances Were Reported in 2012**



**Figure 3: Distribution of Exceedances by Jurisdiction in 2012**



**Table 6: Distribution of Exceedances by Jurisdiction in 2012**

Jurisdiction	As	Cu	CN	Pb	Ni	Zn	TSS	Ra-226	pH	Total	Number of Facilities
British Columbia	-	-	-	-	-	-	2	-	-	2	1
Yukon	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan	-	-	-	-	-	-	3	-	2	5	3
Manitoba	-	-	-	-	-	-	5	-	1	6	2
Northwest Territories	-	-	-	-	-	-	-	-	-	-	-
Nunavut	-	-	-	-	-	-	-	-	-	-	-
Ontario	2	3	1	-	5	2	12	1	-	26	8
Quebec	-	-	-	-	-	-	9	-	-	9	5
New Brunswick	-	-	-	-	-	-	-	-	-	-	-
Newfoundland and Labrador	-	-	4	-	-	2	20	-	-	26	5
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>-</b>	<b>5</b>	<b>4</b>	<b>51</b>	<b>1</b>	<b>3</b>	<b>74</b>	<b>24</b>

**Table 7: Distribution of Exceedances by Mining Subsector in 2012**

Subsector	As	Cu	CN	Pb	Ni	Zn	TSS	Ra-226	pH	Total	Number of Facilities
Base metals	-	-	-	-	-	2	19	-	1	22	8
Precious metals	2	3	5	-	5	2	15	1	-	33	13
Uranium	-	-	-	-	-	-	1	-	2	3	1
Iron	-	-	-	-	-	-	16	-	-	16	2
<b>Total</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>-</b>	<b>5</b>	<b>4</b>	<b>51</b>	<b>1</b>	<b>3</b>	<b>74</b>	<b>24</b>

**Table 8: Performance Summary: Rainbow Trout Acute Lethality and *Daphnia magna* Monitoring Tests, by Jurisdiction in 2012**

Jurisdiction	Rainbow Trout Acute Lethality Tests			<i>Daphnia magna</i> Monitoring Tests		
	Total Number of Tests	>50% Mortality		Total Number of Tests	>50% Mortality	
		Number of Tests	Number of Facilities		Number of Tests	Number of Facilities
British Columbia	117	—	—	116	2	1
Yukon	22	—	—	22	1	1
Saskatchewan	53	—	—	53	—	—
Manitoba	51	—	—	51	10	3
Northwest Territories	15	—	—	15	—	—
Nunavut	5	—	—	5	—	—
Ontario	256	4	2	261	7	3
Quebec	271	7	2	270	7	3
New Brunswick	26	—	—	26	—	—
Newfoundland and Labrador	118	—	—	118	16	4
Nova Scotia	8	—	—	8	—	—
<b>Total</b>	<b>942</b>	<b>11</b>	<b>4</b>	<b>945</b>	<b>43</b>	<b>15</b>

**Table 9: Performance Summary: Rainbow Trout Acute Lethality and *Daphnia magna* Monitoring Tests, by Mining Subsector in 2012**

Subsector	Rainbow Trout Acute Lethality Tests			<i>Daphnia magna</i> Monitoring Tests		
	Total Number of Tests	>50% Mortality		Total Number of Tests	>50% Mortality	
		Number of Tests	Number of Facilities		Number of Tests	Number of Facilities
Base metals	453	1	1	451	33	10
Precious metals	349	10	3	354	7	3
Uranium	32	—	—	32	—	—
Iron	108	—	—	108	3	2
<b>Total</b>	<b>942</b>	<b>11</b>	<b>4</b>	<b>945</b>	<b>43</b>	<b>15</b>

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## LIST OF ACRONYMS AND ABBREVIATIONS

As	arsenic
BC	British Columbia
Bq/L	becquerel(s) per litre
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
MMER	<i>Metal Mining Effluent Regulations</i>
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
t/d	tonne(s) per day
t/y	tonne(s) per year
TSS	total suspended solids
U <sub>3</sub> O <sub>8</sub>	uranium oxide
YT	Yukon
Zn	zinc

## **Appendix A: Mining Facilities with New Regulatory Status in 2012**

New Mining Facilities Subject to the MMER in 2012		Mining Facilities that Ceased to Be Subject to the MMER in 2012	
Facility	Jurisdiction	Facility	Jurisdiction
Santoy 8 Mine	Saskatchewan	Eskay Creek	British Columbia
Edwards Mine	Ontario	Joe Mann	Quebec
Éléonore Mine	Quebec		
Francoeur Mine	Quebec		
Nunavik Nickel Project	Quebec		
Vezza Mine	Quebec		
Beaver Brook Mine	Newfoundland and Labrador		

## Appendix B: Mining Facilities Subject to the *Metal Mining Effluent Regulations* in 2012

	Facility	Operator	Province/Territory (Location)	Products	Production Capacity	Process	Status
1	Myra Falls Operations	NVI Mining Ltd./Nyrstar	British Columbia (Vancouver Island)	Copper, zinc, lead, gold, silver	400 t/d	Flotation	Active
2	Endako Mines	Thompson Creek Mining Ltd.	British Columbia (west-central BC)	Molybdenum	27 000 t/d	Flotation	Active
3	Huckleberry Mine	Huckleberry Mines Ltd.	British Columbia (central BC, southwest of Houston)	Copper, molybdenum, gold, silver	21 000 t/d	Flotation	Active
4	Kemess South Mine	AuRico Gold Inc.	British Columbia (north-central BC)	Gold, copper	49 000 t/d	Flotation	Active
5	MAX Molybdenum Mine and Mill	Forty Two Metals Inc.	British Columbia (southeastern BC, 60 km southeast of Revelstoke)	Molybdenum	1 000 t/d (mill)	Flotation	Active
6	Copper Mountain Mine	Similco Mines Ltd.	British Columbia (southern BC, 20 km southeast of Princeton)	Copper, gold	35 000 t/d	Flotation	Active
7	Yellowjacket Gold Mine	Eagle Plains Resources Ltd./Yellowjacket Resources Ltd	British Columbia (northwestern BC, 9 km east of Atlin)	Gold	140 t/d	Gravity Concentration	Active
8	Gibraltar Mine	Taseko Mines Ltd.	British Columbia (south-central BC, 68 km north of Williams Lake)	Copper, molybdenum	55 000 t/d	Flotation	Active
9	Minto Project	Minto Explorations Ltd.	Yukon Territory (240 km northwest of Whitehorse)	Copper, gold, silver	3 600 t/d	Flotation	Active
10	Wolverine Project	Yukon Zinc Corporation	Yukon Territory (590 km northeast of Whitehorse)	Zinc, copper, lead, silver, gold	1 700 t/d	Flotation	Active
11	Bellekeno Mine	Alexco Keno Hill Mining Corporation	Yukon Territory (330 km north of Whitehorse)	Silver, lead, zinc	400 t/d	Flotation	Active
12	Key Lake Operation	Cameco Corporation	Saskatchewan (northern SK)	Uranium	Mill only – annual production capacity of 18 million pounds U <sub>3</sub> O <sub>8</sub>	Leaching and solvent extraction	Active
13	McArthur River Operation	Cameco Corporation	Saskatchewan (northern SK)	Uranium	150 t/d	Crushing only – processed at Key Lake	Active
14	Cigar Lake Project	Cameco Corporation	Saskatchewan (northern SK)	Uranium		Crushing only – processed at Key Lake	Mine under development
15	McClean Lake Operation	AREVA Ressources Canada Inc.	Saskatchewan (northeastern SK, Wollaston Lake area)	Uranium	300 t/d	Leaching and solvent extraction	Active
16	Rabbit Lake Operation	Cameco Corporation	Saskatchewan (northeastern SK, Wollaston Lake area)	Uranium	Annual production capacity of 16 million pounds U <sub>3</sub> O <sub>8</sub>	Leaching and solvent extraction	Active
17	Seabee Mine	Claude Resources Inc.	Saskatchewan (northern SK)	Gold	800 t/d	Cyanidation	Active
18	Jolu Mill	Golden Band Resources	Saskatchewan (northern SK)	Gold	700 t/d	Gravity, cyanidation	Active
19	Santoy 7 Mine	Claude Resources Inc.	Saskatchewan (northern SK)	Gold	Not available	Mining only – ore shipped to Seabee Mill	On care and maintenance

## Appendix B: Mining Facilities Subject to the *Metal Mining Effluent Regulations* in 2012 (cont'd)

	Facility	Operator	Province/Territory (Location)	Products	Production Capacity	Process	Status
20	Santoy 8 Mine	Claude Resources Inc.	Saskatchewan (northern SK)	Gold	500 t/d	Mining only – ore shipped to Seabee Mill	Active
21	Flin Flon Complex	Hudson Bay Mining and Smelting Co. Ltd.	Manitoba (west-central MB, in Flin Flon)	Copper, lead, zinc	5 500 t/d	Flotation	Active
22	Trout Lake Mine	Hudson Bay Mining and Smelting Co. Ltd.	Manitoba (west-central MB, near Flin Flon)	Copper, zinc, gold, silver	2 500 t/d	Flotation	Closed
23	Chisel North Mine	Hudson Bay Mining and Smelting Co. Ltd.	Manitoba (west-central MB, near Snow Lake)	Zinc	750 t/d	Mining only – ore shipped to Snow Lake Mill	Active
24	Snow Lake Mill	Hudson Bay Mining and Smelting Co. Ltd.	Manitoba (west-central MB, near Snow Lake)	Copper, zinc, selenium, tellurium, silver	3 600 t/d	Flotation	Active
25	Birchtree Mine	Vale Inco Ltd.	Manitoba (northern MB, near Thompson)	Nickel, copper	3 175 t/d	Mining only – ore shipped to Thompson Complex	Active
26	Thompson Complex	Vale Inco Ltd.	Manitoba (northern MB, in Thompson)	Nickel, copper	12 000 t/d	Flotation	Active
27	Bucko Lake Mine	CaNickel Mining Ltd.	Manitoba (northern MB, near Thompson)	Nickel	1 000 t/d	Flotation	Active
28	Snow Lake Mine	Alexis Minerals Corporation – QMX Gold Corporation	Manitoba (west-central MB, near Snow Lake)	Gold	2 150 t/d	Cyanidation	Active
29	Tanco Mine	Tantalum Mining Corporation of Canada Ltd.	Manitoba (southeastern MB, northeast of Winnipeg)	Tantalum, lithium, cesium, rubidium	700 t/d Varies by commodity	Gravity, flotation, dry grinding, leach	Active
30	Rice Lake Gold Mine	San Gold Corporation	Manitoba (southeast MB, Red Lake area)	Gold	1 250 t/d	Gravity concentration, flotation and carbon-in-leach (cyanide)	Active
31	Cantung Mine	North American Tungsten Corporation Ltd.	Northwest Territories (east of Yukon border)	Tungsten	3 000 t/d	Flotation	Active
32	Con Mine	Miramar Northern Mining Ltd.	Northwest Territories (Yellowknife)	Gold			Closed
33	Giant Mine	Aboriginal Affairs and Northern Development Canada	Northwest Territories (Yellowknife)	Gold		Mining only – ore shipped to Con Mine	Closed
34	Lupin Operations	Lupin Mines Inc.	Nunavut (western NU, northeast of Yellowknife)	Gold			On care and maintenance
35	Meadowbank Mine	Agnico-Eagle Ltd.	Nunavut (western NU, 70 km north of Baker Lake northeast of Yellowknife)	Gold	8 500 t/d	Gravity, cyanidation,	Active
36	Red Lake Mine	Goldcorp Canada Ltd.	Ontario (northwestern ON, Red Lake area)	Gold	600 t/d	Gravity, cyanidation, flotation	Active
37	Campbell Mine	Goldcorp Inc.	Ontario (northwestern ON, Red Lake area)	Gold	≥1 000 t/d	Cyanidation	Active
38	Musselwhite Mine	Goldcorp Inc.	Ontario (northwestern ON)	Gold	3 300 t/d	Cyanidation	Active

## Appendix B: Mining Facilities Subject to the *Metal Mining Effluent Regulations* in 2012 (cont'd)

	Facility	Operator	Province/Territory (Location)	Products	Production Capacity	Process	Status
39	Lac des Iles Mine	North American Palladium Ltd.	Ontario (northwestern ON, northwest of Thunder Bay)	Palladium, platinum, gold, copper, nickel, cobalt	15 000 t/d	Flotation	Active
40	Golden Giant Mine	Newmont Canada Corporation	Ontario (northern ON, east of Marathon)	Gold		Cyanidation	Closed
41	Williams Mine	Barrick Gold Corporation	Ontario (northern ON, east of Marathon)	Gold	10 000 t/d	Cyanidation, gravity	Active
42	David Bell Mine	Barrick Gold Corporation	Ontario (northern ON, east of Marathon)	Gold	1 500 t/d	Mining only – ore shipped to Williams Mill	Active
43	Eagle River Mine	Wesdome Gold Mines Ltd.	Ontario (northern ON, west of Wawa)	Gold	850 t/d	Mining only – ore shipped to River Gold Mill	Active
44	Eagle River Mill (Mill, Mishipit, and Magnacon Mine)	Wesdome Gold Mines Ltd.	Ontario (northern ON, west of Wawa)	Gold	1 000 t/d	Cyanidation	Active
45	Island Gold Project	Richmont Mines Inc.	Ontario (northern ON, west of Wawa)	Gold	650 t/d	Cyanidation	Active
46	Edwards Mine	Strike Minerals Inc.	Ontario (northern ON, 50 km northeast of Wawa)	Gold	Not available	Not available	Mine under development
47	Porcupine Gold Mines (Dome Mine, Owl Creek Pit, Pamour Mine)	Goldcorp Canada Ltd. and Goldcorp Inc.	Ontario (northeastern ON, Timmins area)	Gold	Not available	Cyanidation	Active
48	Holloway Mine	Holloway Mining Company	Ontario (northeastern ON, Timmins area)	Gold	2 500 t/d	Cyanidation	Active
49	Clavos Mine	St Andrew Goldfields Ltd./Sage Gold Inc.	Ontario (northeastern ON, Timmins area)	Gold	700 t/d	Ore shipped to Stock Mill	Active
50	Hislop Mine	St Andrew Goldfields Ltd.	Ontario (northeastern ON, Timmins area)	Gold	1 500 t/d	Ore shipped to Stock Mill	Active
51	Timmins West Complex	Lake Shore Gold Corporation	Ontario (northeastern ON, Timmins area)	Gold	Not available	Mining only, ore processed at Bell Creek Mill	Active
52	Stock Mine and Mill Complex	Brigus Gold Corporation	Ontario (northeastern ON, Timmins area)	Gold	1 300 t/d (mill)	Carbon-in-leach (cyanide)	Active
53	Bell Creek Mine and Mill	Lake Shore Gold Corporation	Ontario (northeastern ON, Timmins area)	Gold	1 500 t/d	Carbon-in-leach (cyanide)	Active
54	Black Fox Mine	Brigus Gold Corporation	Ontario (northeastern ON, Timmins area)	Gold	1 500 t/d	Mining only – ore shipped to Black Fox Mill Complex	Active
55	Redstone Mine	Liberty Mines Inc.	Ontario (northeastern ON, Timmins area)	Nickel	2 000 t/d (mill)	Flotation	Active
56	McWatters Mine	Liberty Mines Inc.	Ontario (northeastern ON, Timmins area)	Nickel	1 500 t/d	Mining only – ore shipped to Redstone Mill	Active

## Appendix B: Mining Facilities Subject to the *Metal Mining Effluent Regulations* in 2012 (cont'd)

	<b>Facility</b>	<b>Operator</b>	<b>Province/Territory (Location)</b>	<b>Products</b>	<b>Production Capacity</b>	<b>Process</b>	<b>Status</b>
57	Kidd Mining Division	Xstrata Canada Corporation	Ontario (northeastern ON, Timmins area)	Zinc, copper, cadmium, indium, cobalt, selenium, silver, palladium, platinum	10 000 t/d	Mining only – ore shipped to Kidd Metallurgical Division	Active
58	Kidd Metallurgical Division	Xstrata Canada Corporation	Ontario (northeastern ON, Timmins area)	Zinc, copper, cadmium, indium, cobalt, selenium, silver, palladium, platinum	10 000 t/d	Flotation	Active
59	Montcalm Project	Xstrata Canada Corporation	Ontario (northeastern ON, Timmins area)	Nickel, copper, cobalt		Ore shipped to Kidd Metallurgical Division	On care and maintenance
60	Macassa Mine	Kirkland Lake Gold Inc.	Ontario (northeastern ON, Kirkland Lake area)	Gold	1 450 t/d	Cyanidation	Active
61	Detour Lake Mine	Detour Gold Corporation	Ontario (northeastern ON, near Québec Border)	Gold	55 000 t/d	Gravity, cyanidation	Active
62	Young-Davidson Mine	AuRico Gold Inc.	Ontario (northeastern ON, 60 km west of Kirkland Lake)	Gold	6 000 t/d	Gravity, flotation, cyanidation	Mine under development
63	McAlpine Mill	SMC (Canada) Ltd.	Ontario (northeastern ON, Cobalt area)	Gold, silver, platinum, palladium	200 t/d processes metallurgical wastes	Gravity and flotation	Active
64	Lockerby Mine	First Nickel Inc.	Ontario (Sudbury area)	Copper, nickel, cobalt	700 t/d	Mining only – ore shipped to Strathcona Mill	Active
65	Strathcona Tailings Treatment System (includes Fraser, Strathcona Mine and Mill, Craig and Onaping Mines; also includes Inco's Coleman and McCreedy East Mines)	Xstrata Canada Corporation	Ontario (Sudbury area)	Nickel, copper, cobalt, platinum, palladium	8 200 t/d	Flotation	Active
66	Copper Cliff Complex (includes Clarabelle Mill, smelter, Copper Cliff North, Copper Cliff South, Creighton, Gertrude, Frood, and Stobie Mines)	Vale Canada Ltd.	Ontario (Sudbury area)	Nickel, copper, cobalt, platinum	27 300 t/d for Clarabelle Mill	Flotation	Active
67	Xstrata Nickel Sudbury Smelter	Xstrata Canada Corporation	Ontario (Sudbury area)	Nickel, copper, cobalt, platinum, palladium			Active
68	Garson Mine	Vale Canada Ltd.	Ontario (Sudbury area)	Nickel, copper, cobalt, platinum	2 400 t/d	Mining only – ore shipped to Copper Cliff Complex – Clarabelle Mill	Active

## Appendix B: Mining Facilities Subject to the *Metal Mining Effluent Regulations* in 2012 (cont'd)

	Facility	Operator	Province/Territory (Location)	Products	Production Capacity	Process	Status
69	Crean Hill Mine	Vale Canada Ltd.	Ontario (Sudbury area)	Nickel, copper, cobalt, platinum	1 800 t/d	Mining only – ore shipped to Copper Cliff Complex – Clarabelle Mill	Active
70	Totten Mine	Vale Canada Ltd.	Ontario (Sudbury area)	Nickel, copper, precious metals	Designed to process 200 t/d		Mine under development
71	Podolsky Mine	FNX Mining Company Inc.	Ontario (Sudbury area)	Nickel, copper, precious metals	1 000 t/d	Mining only – ore shipped to Copper Cliff Complex – Clarabelle Mill	Active
72	Shakespeare Nickel Mine	URSA Major Minerals Inc.	Ontario (Sudbury area)	Nickel, copper, cobalt, gold, platinum, palladium	Not available	Mining only – ore shipped to Xstrata's Strathcona Mill	On care and maintenance
73	Haley Plant	Timminco Ltd.	Ontario (southeastern ON, west of Ottawa)	Magnesium, calcium, strontium	7 500 t/y magnesium, 900 t/y calcium	Calcining, reduction, refining, melting, casting, extruding	Active
74	Langlois (Mine)	Ressources Breakwater Ltée/Nyrstar	Quebec (northwestern QC, 213 km north of Val-d'Or)	Zinc, copper, gold, silver	Designed to process 2000 t/d	Flotation	On care and maintenance
75	Francoeur (Mine)	Mines Richmont Inc.	Quebec (northwestern QC, 25 km southwest of Rouyn-Noranda)	Gold	360 t/d	Mining only – ore shipped to Camflo Mill	Active, then closed since November 1, 2012
76	Matagami (Mine) (Xstrata Zinc Canada Division)	Xstrata Canada Corporation	Quebec (northeastern QC, near Matagami)	Zinc, copper	2 000 t/d	Flotation	Active
77	Vezza (Mine)	North American Palladium Ltd.	Quebec (northeastern QC, 25 km south of Matagami)	Gold	750 t/d	Mining only – ore shipped to Géant Dormant Mill	Active
78	Éléonore (Mine)	Les Mines Opinaca Ltée	Quebec (northern QC, northeast corner of Opinaca Reservoir, James Bay region)	Gold	7 000 t/d	Gravity, flotation, cyanidation	Mine under development
79	Casa Berardi (Mine)	Mines Aurizon Ltée	Quebec (northwestern QC, 95 km north of La Sarre)	Gold	1 600 to 2 200 t/d	Cyanidation	Active
80	Géant Dormant (Mine)	Ressources Cadiscor Inc./North American Palladium Ltd.	Quebec (northeastern QC, Abitibi region)	Gold	900 t/d	Cyanidation	Active – mill only
81	Barry	Ressources Métanor Inc.	Quebec (northeastern QC, Abitibi region)	Gold	500 t/d	Mining only – ore shipped to Bachelor Mill	Active
82	Lac Bachelor	Ressources Métanor Inc.	Quebec (northeastern QC, Abitibi region)	Gold	800 t/d	Cyanidation	Active
83	Laronde (Mine)	Mines Agnico-Eagle Ltée	Quebec (northeastern QC, Abitibi region)	Gold, silver, copper, zinc, lead	7 000 t/d	Flotation, leaching, gravity concentration	Active
84	Lapa (Project)	Mines Agnico-Eagle Ltée	Quebec (northwestern QC, 11 km east of LaRonde Mine)	Gold	1 500 t/d	Mining only – ore shipped to LaRonde Mill	Active

## Appendix B: Mining Facilities Subject to the *Metal Mining Effluent Regulations* in 2012 (cont'd)

	<b>Facility</b>	<b>Operator</b>	<b>Province/Territory (Location)</b>	<b>Products</b>	<b>Production Capacity</b>	<b>Process</b>	<b>Status</b>
85	Mouska (Mine)	Gestion Iamgold Québec Inc.	Quebec (northeastern QC, Abitibi region)	Gold	600 t/d	Mining only – ore shipped to Doyon Mill	Active
86	Doyon	Gestion Iamgold Québec Inc.	Quebec (northeastern QC, Abitibi region)	Gold		Cyanidation	Ceased production in Dec. 2009
87	Kiena (Mine)	Mines d'Or Wessône Ltée	Quebec (northeastern QC, Abitibi region)	Gold	2 000 t/d	Cyanidation	Active
88	Canadian Malartic Mine	Corporation Minière Osisko	Quebec (northeastern QC, Abitibi region)	Gold	55 000 t/d (mill)	Cyanidation	Active
89	Sigma	Century Mining Corporation	Quebec (northeastern QC, Abitibi region)	Gold	5 000 t/d	Cyanidation	On care and maintenance
90	Goldex (Mine)	Mines Agnico-Eagle Ltée	Quebec (northeastern QC, Abitibi region)	Gold	6 900 t/d	Gravity, cyanidation, flotation	Closed
91	Beaufor	Mines Richmont Inc.	Quebec (northeastern QC, Abitibi region)	Gold	820 t/d	Mining only – ore shipped to Camflo	Active
92	Camflo (Mill)	Mines Richmont Inc.	Quebec (northeastern QC, Abitibi region)	Gold	1 300 t/d (mill only)	Cyanidation	Active
93	Lac Herbin	Alexis Minerals Corporation – QMX Gold Corporation	Quebec (northeastern QC, Abitibi region)	Gold	450 t/d	Mining only – ore shipped to Aurbel Mill	Active
94	Aurbel (mine)	Alexis Minerals Corporation – QMX Gold Corporation	Quebec (northeastern QC, Abitibi region)	Gold	800 t/d (mill)	Gravity, flotation, cyanidation	Active
95	Horne (Smelter)	Xstrata Canada Corporation	Quebec (northeastern QC, Abitibi region)	Copper		Flotation	Mill closed
96	Copper Rand (Mine)	Ressources Campbell Inc./CBay Minerals Inc.	Quebec (northeastern QC, Chibougamau area)	Copper, gold, silver		Gravity, flotation	On care and maintenance
97	Raglan (Mine)	Xstrata Canada Corporation	Quebec (northern QC, west of Ungava Bay)	Nickel, copper, cobalt, platinum, palladium	3 000 t/d	Flotation	Active
98	Nunavik Nickel (Project)	Canadian Royalties Inc.	Quebec (northern QC, west of Ungava Bay)	Nickel, copper, cobalt, platinum, palladium	Designed to process 4 500 t/d (mill)	Flotation	Mine under development
99	Niobec (Mine)	Gestion Iamgold-Québec Inc.	Quebec (central QC, Lac St. Jean region)	Niobium	5000 t/d	Flotation, magnetic separation	Active
100	Complexe métallurgique Sorel-Tracy	QIT-Fer et Titane Inc.	Quebec (southwestern QC)	Titanium, iron ore	Ore processed from Tio Mine	Metallurgical process	Active
101	Tio (Mine)	QIT-Fer et Titane Inc.	Quebec (eastern QC, north of Havre-Saint-Pierre)	Titanium, iron ore	8 000 t/d	Mining only – ore processed at plant in Sorel, QC	Active
102	Mont-Wright (Mine)	ArcelorMittal Mines Canada	Quebec (northeastern QC, near Wabush, NL)	Iron ore	125 000 t/d	Grinding and spiral separation	Active
103	Fire Lake (Mine)	ArcelorMittal Mines Canada	Quebec (northeastern QC, 55 km south of Mont-Wright Mine)	Iron ore	2 000 t/d	Mining only – ore shipped by train to Mount-Wright Mine	Active

## Appendix B: Mining Facilities Subject to the *Metal Mining Effluent Regulations* in 2012 (cont'd)

Facility	Operator	Province/Territory (Location)	Products	Production Capacity	Process	Status
104 Lac Bloom (Mine)	Société en commandite de la mine de fer du Lac Bloom	Quebec (northeastern QC, near Wabush, NL)	Iron ore	8 Mt of concentrate per year	Grinding and spiral separation	Active
105 James (Mine)	Labrador Iron Mines Ltd.	Newfoundland and Labrador (western Labrador, near Schefferville)	Iron ore	15 000 t/d		Active
106 Wabush Mines Joint Venture (Scully Mine)	Wabush Mines	Newfoundland and Labrador (western Labrador, Wabush, Labrador City area)	Iron ore	54 400 t/d	Grinding, spiral and high-tension separation	Active
107 Iron Ore Company of Canada – Carol Project	Iron Ore Company of Canada	Newfoundland and Labrador (western Labrador, Wabush, Labrador City area)	Iron ore	140 000 t/d	Spirals and magnetic separators, flotation	Active
108 Nugget Pond Mine	Rambler Metals and Mining Canada Ltd.	Newfoundland and Labrador (north-central Newfoundland, northwest of Grand Falls)	Gold	500 t/d (mill only)	Hydromet (gold) – flotation (copper)	On care and maintenance
109 Ming Mine	Rambler Metals and Mining Canada Ltd.	Newfoundland and Labrador (north-central Newfoundland, northwest of Grand Falls)	Copper, gold	650 t/d	Hydromet (gold) – flotation (copper)	Active
110 Pine Cove Mine	Anaconda Mining Inc.	Newfoundland and Labrador (north-central Newfoundland, northwest of Grand Falls)	Gold	1 000 t/d	Gravity/flotation	Active
111 Duck Pond Mine	Teck Resources Ltd.	Newfoundland and Labrador (west-central Newfoundland)	Copper, zinc, silver, gold	1 500 t/d	Flotation	Active
112 Voisey's Bay Mine – Mill	Vale Inco Ltd.	Newfoundland and Labrador (northeastern Labrador)	Nickel, copper, cobalt	6 000 t/d	Flotation	Active
113 Beaver Brook Mine	Beaver Brook Antimony Mine Inc.	Newfoundland and Labrador (central Newfoundland, 60 km southwest of Gander)	Antimony	450 t/d	Flotation	On care and maintenance
114 Brunswick No. 12	Xstrata Canada Corporation – Xstrata Zinc Canada Division	New Brunswick (northern NB, south of Bathurst)	Lead, zinc, copper, silver	10 000 t/d	Flotation	Active
115 Caribou Mine and Mill	Maple Minerals Corporation/ Trevali Mining Corporation	New Brunswick (northern NB, west of Bathurst)	Zinc, lead, silver, copper	3 000 t/d (mill) 1 650 t/d (mine)	Flotation	On care and maintenance
116 Restigouche Mine	Blue Note Mining Inc. – Blue Note Caribou Mines Inc. / Province of New Brunswick	New Brunswick (northern NB, west of Bathurst)	Zinc, lead, silver, copper		Mining only – ore shipped to Caribou Mill	Closed
117 Scozinc Mine and Mill	Selwyn Resources Ltd.	Nova Scotia (65 km north of Halifax)	Zinc, lead	2 300 t/d (mill)	Flotation	On care and maintenance

## Appendix C: Mining Companies Included in the Assessment in 2012

Alexco Keno Hill Mining Corporation	Mines d'Or Wesdome Ltée
Alexis Minerals Corporation	Mines Richmont Inc.
Anaconda Mining Inc.	Minto Explorations Ltd.
ArcelorMittal Mines Canada	Miramar Northern Mining Ltd.
AREVA Resources Canada Inc.	Newmont Canada Corporation
AuRico Gold Inc.	North American Palladium Ltd.
Barrick Gold Corporation	North American Tungsten Corporation Ltd.
Beaver Brook Antimony Mine Inc.	NVI Mining Ltd.
Blue Note Mining Inc.	Nyrstar
Blue Note Caribou Mines Inc.	Province of New Brunswick
Brigus Gold Corporation	QIT-Fer et Titane Inc.
Cameco Corporation	QMX Gold Corporation
Canadian Royalties Inc.	Rambler Metals and Mining Canada Ltd.
CaNickel Mining Ltd.	Ressources Breakwater Ltée
CBay Minerals Inc.	Ressources Cadiscor Inc.
Century Mining Corporation	Ressources Campbell Inc.
Claude Resources Inc.	Ressources Métanor Inc.
Corporation minière Osisko	Richmont Mines Inc.
Detour Gold Corporation	San Gold Corporation
Eagle Plains Resources Ltd.	Sage Gold Inc
First Nickel Inc.	Selwyn Resources Ltd.
FNX Mining Company Inc.	Similco Mines Ltd.
FortyTwo Metals Inc.	SMC (Canada) Ltd.
Gestion Iamgold-Québec Inc.	Société en commandite de la mine de fer du Lac Bloom
Goldcorp Canada Ltd.	St Andrew Goldfields Ltd.
Goldcorp Inc.	Strike Minerals Inc
Golden Band Resources Inc.	Tantalum Mining Corporation of Canada Ltd.
Holloway Mining Company	Taseko Mines Ltd.
Huckleberry Mines Ltd.	Teck Resources Ltd.
Hudson Bay Mining and Smelting Co. Ltd.	Thompson Creek Mining Ltd.
Indian and Northern Affairs Canada	Timminco Ltd.
Iron Ore Company of Canada	Trevali Mining Corporation
Kirkland Lake Gold Inc.	USR Major Minerals Inc.
Labrador Iron Mines Ltd.	Vale Canada Ltd.
Lake Shore Gold Corporation	Vale Inco Ltd.
Les Mines Opinaca Ltée	Wabush Mines
Liberty Mines Inc.	Wesdome Gold Mines Ltd.
Lupin Mines Inc.	Xstrata Canada Corporation
Maple Minerals Corporation	Xstrata Zinc Canada Division
Mines Agnico-Eagle Ltée	Yellowjacket Resources Ltd.
Mines Aurizon Ltée	Yukon Zinc Corporation

## Appendix D: Performance Summary of Mine Effluents in 2012

### Note to the Reader

The tables presented in this appendix summarize the effluent quality data for mines subject to the *Metal Mining Effluent Regulations* in 2012. The summaries include site identification (i.e., mine/mill name and effluent discharge name) and number of months of discharge.

Table D1 summarizes the distribution of the non-compliant parameters for metals and pH, whereas Table D2 summarizes the results of 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 times that the monthly 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 D1: Summary of Exceedances for Mines Subject to the MMER in 2012: Prescribed Parameters and pH**

Site Identification		Number of Months of Discharge	As 0.5 mg/L	Cu 0.3 mg/L	CN 1 mg/L	Pb 0.2 mg/L	Ni 0.5 mg/L	Zn 0.5 mg/L	TSS 15 mg/L	Ra-226 0.37 Bq/L	pH Low	pH High
Mine/Mill Name	Effluent Discharge Name										6	9.5
Aurbel (Mine)	Aurbel Final Effluent	3										
Barry (Mine)	V-Notch	0										
Beaufor	Final Effluent	12										
Beaver Brook Mine	Site 16 – Polishing Pond Discharge	5								4		
Bell Creek Mine and Mill	Effluent Treatment Plant Discharge	0										
Bell Creek Mine and Mill	Phase 1 and 2 Seepage Collection Ditch	0										
Bell Creek Mine and Mill	Phase 3 Seepage Collection Ditch	0										
Bell Creek Mine and Mill	Polishing Pond	10										
Bellekeno Mine	Be.KV43 – Bellekeno 625 Treatment Pond Decant	12										
Birchtree Mine	Birchtree Effluent Treatment Plant	12										
Black Fox Mine	Pike River Discharge Point	12										
Black Fox Mine	Salve Creek Transitional Period Discharge Point	0										
Brunswick No. 12	3333 Final Effluent	12										
Bucko Lake Mine	Settling Pond Discharge	9								3		
Camflo (Mill)	Final Effluent	12										
Campbell Mine	WETOUT	4										
Canadian Malartic Mine	Final Effluent	7								1		
Cantung Mine	4-27-2 Culvert	12										
Cantung Mine	Polishing Pond Four	12										
Cantung Mine	Settling Pond 5-2	2										
Caribou Mine – Mill	Polishing Pond Effluent	12										
Casa Berardi (Mine)	Final Effluent – Point A	4										
Chisel North Mine	Chisel North Mine Discharge	12										
Cigar Lake Project	Station 2.2	12										
Clavos Mine	Clavos Mine Drainage Area	1										
Clavos Mine	Sediment Pond	0										
Complexe métallurgique Sorel-Tracy	Final Effluent QIT (Point 1.4)	12								4		
Complexe métallurgique Sorel-Tracy	EFF2.2-P84	12										
Con Mine	Surveillance Network Program Station 40-1	0										
Copper Cliff Complex	Copper Cliff Wastewater Treatment Plant	10										
Copper Cliff Complex	Nolin Creek Spillway	0										
Copper Cliff Complex	Nolin Creek Wastewater Treatment Plant	8										
Copper Mountain Mine	Co.SW07 – W. Dam Seepage	12										

**Table D1: Summary of Exceedances for Mines Subject to the MMER in 2012: Prescribed Parameters and pH (cont'd)**

**Table D1: Summary of Exceedances for Mines Subject to the MMER in 2012: Prescribed Parameters and pH (cont'd)**

Site Identification		Number of Months of Discharge	As 0.5 mg/L	Cu 0.3 mg/L	CN 1 mg/L	Pb 0.2 mg/L	Ni 0.5 mg/L	Zn 0.5 mg/L	TSS 15 mg/L	Ra-226 0.37 Bq/L	pH Low	pH High
Mine/Mill Name	Effluent Discharge Name										6	9.5
Goldex (Mine)	Final Effluent – Goldex Tailings Pond	11										
Goldex (Mine)	Final Effluent – Shaft No. 2	0										
Haley Plant	FDP 1	9										
Hislop Mine	Sedimentation Pond	8										
Holloway Mine	Final Discharge Point	3										
Horne (Smelter)	Final Effluent – Pelletier Sector	12										
Huckleberry Mine	Hu.EZDD – East Zone Diversion Ditch	0										
Huckleberry Mine	Hu.SC3 – Sediment Control Structure 3	12										
Huckleberry Mine	Hu.SC4 – Sediment Control Structure 4	12										
Huckleberry Mine	HU.SC6 – Sediment Control Structure 6	0										
Huckleberry Mine	HU.SC7 – Sediment Control Structure 7	0										
Huckleberry Mine	HU.SC8 – Sediment Control Structure 8	3										
Huckleberry Mine	Hu.TMF2 – Tailings Management Facility 2 Supernatant/Hu.TRO – Tahtsa Reach Outfall	10										
Iron Ore Company of Canada – Carol Project	Hakim Culvert	12										
Iron Ore Company of Canada – Carol Project	Julienne Narrows	12										
Iron Ore Company of Canada – Carol Project	MD5	8										
Island Gold Project	IG-2	7								2		
James Mine	Ruth Pit Outlet	12										
Joe Mann	Polishing Pond Effluent – Point 10	0										
Jolu Mill	Mallard Tailings Management Facility – Cell C Outlet Berm	8								1		
Kemess South Mine	KS.WQ14 – Runoff	12										
Kemess South Mine	KS.WQBXL – Sedimentation Pond Decant	3										
Key Lake Operation	Station 1.2 – Dewatering Discharge to Horsefly Lake	12										
Key Lake Operation	Station 1.4 – Mill Effluent to Wolf Lake	12										
Kidd Metallurgical Division	Final Effluent Monitoring Point	12										
Kidd Mining Division	Treatment Pond Final Effluent	9										

**Table D1: Summary of Exceedances for Mines Subject to the MMER in 2012: Prescribed Parameters and pH (cont'd)**

**Table D1: Summary of Exceedances for Mines Subject to the MMER in 2012: Prescribed Parameters and pH (cont'd)**

Site Identification		Number of Months of Discharge	As 0.5 mg/L	Cu 0.3 mg/L	CN 1 mg/L	Pb 0.2 mg/L	Ni 0.5 mg/L	Zn 0.5 mg/L	TSS 15 mg/L	Ra-226 0.37 Bq/L	pH Low	pH High
Mine/Mill Name	Effluent Discharge Name										6	9.5
Ming Mine	Wastewater Treatment System Discharge	7						2				
Minto Project	Mi.W3 – Runoff Main Water Dam	12										
Mishi Pit (part of Eagle River Mill)	Mishi Pit	8										
Montcalm Project	Montcalm Final Effluent	3										
Mont-Wright (Mine)	HS-1	12										
Mont-Wright (Mine)	MS-2	6								1		
Mouska (Mine)	Final Effluent	12										
Musselwhite Mine	FDP 1	5										
Myra Falls Operations	MF11A – Runoff Myra Ponds Effluent	12										
Niobec (Mine)	Final Effluent	12										
Nugget Pond Mine	Polishing Pond Effluent	10					1					
Nunavik Nickel (Project)	Expo Final Effluent	2										
Pine Cove Property	Tailings Pond Discharge	9				3				1		
Podolsky Mine	Norman North Bog Outlet	12										
Porcupine Gold Mines	Mine Effluent Treatment Plant – Dome Mine	3										
Porcupine Gold Mines	Mine Water Storage Pond – Dome Mine	12										
Porcupine Gold Mines	Owl Creek Discharge 1	0										
Porcupine Gold Mines	Owl Creek Discharge 2	4										
Porcupine Gold Mines	Pamour Mine Water	5										
Rabbit Lake Operation	Station 2.3.3	12										
Raglan (Mine)	DIR-HSA	0										
Raglan (Mine)	DIR-SPOON	3										
Raglan (Mine)	DIR-UT	6										
Raglan (Mine)	DIR-Z3	6										
Red Lake Mine	G1	0										
Red Lake Mine	G2	4										
Red Lake Mine	Shaft 3 Mine Water Settling Pond	0										
Redstone Mine	RSD-2	4										
Restigouche Mine	Mixing Structure Discharge	0										
Rice Lake Gold Mine	FDP1 – End of Pipe	2										
Santoy 7 Mine	Santoy 7 Settling Pond	1								1		
Santoy 8 Mine	S8SP Final Discharge Point	2										
Scozinc Mine – Mill	Polishing Pond Outlet	12										
Seabee Gold Mine	Final Discharge Point 1.2	12										
Seabee Gold Mine	Final Discharge Point 1.3	0										

**Table D1: Summary of Exceedances for Mines Subject to the MMER in 2012: Prescribed Parameters and pH (cont'd)**

**Table D1: Summary of Exceedances for Mines Subject to the MMER in 2012: Prescribed Parameters and pH (cont'd)**

Site Identification		Number of Months of Discharge	As	Cu	CN	Pb	Ni	Zn	TSS	Ra-226	pH Low	pH High
Mine/Mill Name	Effluent Discharge Name		0.5 mg/L	0.3 mg/L	1 mg/L	0.2 mg/L	0.5 mg/L	0.5 mg/L	15 mg/L	0.37 Bq/L	6	9.5
Wabush Mines Joint Venture – Scully Mine	Knoll Lake Inflow	12							7			
Wabush Mines Joint Venture – Scully Mine	Loadout Ditch Discharge	0										
Wabush Mines Joint Venture – Scully Mine	Shops East Discharge	0										
Wabush Mines Joint Venture – Scully Mine	Shops South Discharge	0										
Wabush Mines Joint Venture – Scully Mine	Tailings Discharge	0										
Wabush Mines Joint Venture – Scully Mine	Tailings Line Emergency Dump Basin 1	11							8			
Wabush Mines Joint Venture – Scully Mine	West Pit Extension Settling Basin	12										
Williams Mine	Polishing Pond Discharge CP 400	0										
Williams Mine	Stormwater Pond CP 102	10										
Williams Mine	Stormwater Pond CP 0300	4										
Williams Mine	Stormwater Pond CP 400A	3								1		
Williams Mine	Treated Effluent CP 0201	5										
Wolverine Project	Wo.TSF – Tailings Storage Facility	0										
Xstrata Nickel Sudbury Smelter	Final Effluent at NIR Road	12										
Yellowjacket Gold Mine	Ye.TSF – Tailings Storage Facility	0										
Young-Davidson Mine	Mine Water Pond Final Discharge	11										
<b>Total Exceedances</b>			2	3	5	0	5	4	51	1	2	1

**Table D2: Performance Summary for Mines Subject to the MMER in 2012: Rainbow Trout (RT) Acute Lethality and *Daphnia magna* (DM) Monitoring Tests**

Site Identification		Number of Months of Discharge	RT Total	RT Fail	DM Total	DM Fail
Mine/Mill Name	Effluent Discharge Name					
Aubel (Mine)	Aubel Final Effluent	3	3		3	
Barry (Mine)	V-Notch	0				
Beaufor	Final Effluent	12	4		4	
Beaver Brook Mine	Site 16 – Polishing Pond Discharge	5	4		4	
Bell Creek Mine and Mill	Effluent Treatment Plant Discharge	0				
Bell Creek Mine and Mill	Phase 1 and 2 Seepage Collection Ditch	0				
Bell Creek Mine and Mill	Phase 3 Seepage Collection Ditch	0				
Bell Creek Mine and Mill	Polishing Pond	10	10		10	
Bellekeno Mine	Be.KV43 – Bellekeno 625 Treatment Pond Decant	12	13		13	
Birchtree Mine	Birchtree Effluent Treatment Plant	12	4		4	2
Black Fox Mine	Pike River Discharge Point	12	13		12	
Black Fox Mine	Salve Creek Transitional Period Discharge Point	0				
Brunswick No. 12	3333 Final Effluent	12	14		14	
Bucko Lake Mine	Settling Pond Discharge	9	7		7	6
Camflo (Mill)	Final Effluent	12	5		5	
Campbell Mine	WETOUT	4	5		5	
Canadian Malartic Mine	Final Effluent	7	6		6	
Cantung Mine	4-27-2 Culvert	12	4		4	
Cantung Mine	Polishing Pond Four	12	4		4	
Cantung Mine	Settling Pond 5-2	2	2		2	
Caribou Mine – Mill	Polishing Pond Effluent	12	12		12	
Casa Berardi (Mine)	Final Effluent – Point A	4	4		4	
Chisel North Mine	Chisel North Mine Discharge	12	5		5	
Cigar Lake Project	Station 2.2	12	6		6	
Clavos Mine	Clavos Mine Drainage Area	1	1		1	
Clavos Mine	Sediment Pond	0				
Complexe métallurgique Sorel-Tracy	Final Effluent QIT (Point 1.4)	12	12		12	
Complexe métallurgique Sorel-Tracy	EFF2.2-P84	12	12		12	
Con Mine	Surveillance Network Program Station 40-1	0				
Copper Cliff Complex	Copper Cliff Wastewater Treatment Plant	10	4		4	
Copper Cliff Complex	Nolin Creek Spillway	0				
Copper Cliff Complex	Nolin Creek Wastewater Treatment Plant	8	3		3	
Copper Mountain Mine	Co.SW07 – W. Dam Seepage	12	9		9	
Copper Mountain Mine	Co.SW09 – Level 6 Adit	12	9		9	
Copper Mountain Mine	Co.SW21 – D4 Dump Drainage	12	9		9	
Copper Mountain Mine	Co.SW27 – E Dam Seepage	2	2		2	
Copper Mountain Mine	Co.SW36 – Lost Horse Gulch Drainage	12	9		9	
Copper Mountain Mine	Co.SW37 – D2 Dump Drainage	12	9		9	
Copper Rand (Mine)	Final Discharge Point 2.1c	12	3		3	
Crean Hill Mine	Crean Hill Mine Waste Water Treatment System	12	4		4	
David Bell Mine	Sedimentation Pond Effluent	8	8		8	
Detour Lake Mine	T4	0				
Doyon	Pond A Final Effluent (D-203)	12	4		4	
Duck Pond Operations	Polishing Pond Effluent	9	9		9	3
Eagle River Mill	Eagle River Mill	2	2	1	2	1
Eagle River Mine	FDP 1	12	4		4	
Edwards Mine	Edwards Mine Effluent Discharge 1	6	5		5	

**Table D2: Performance Summary for Mines Subject to the MMER in 2012: Rainbow Trout (RT) Acute Lethality and *Daphnia magna* (DM) Monitoring Tests (cont'd)**

Site Identification		Number of Months of Discharge	RT Total	RT Fail	DM Total	DM Fail
Mine/Mill Name	Effluent Discharge Name					
Éléonore (Mine)	Final Effluent – Waste Rock Pile	3	2		2	
Endako Mines	En.A1 – Tailings Pond 1 South	12	4		4	
Endako Mines	En.H1 – Tailings Pond 2 Higginbotham	12	4		4	
Endako Mines	En.N1 – Tailings Pond 1 North	12	4		4	
Endako Mines	En.S2 – Tailings Pond 2 South	12	4		4	
Endako Mines	En.SBC – Endako Pit	12	4		4	
Endako Mines	En.W2 – Denak West Pit	8	3		3	
Fire Lake (Mine)	Beaver Pit – Spillway (FL-2)	12	12		12	
Fire Lake (Mine)	Main Pit (FL-1)	0				
Flin Flon Complex	North Weir Discharge	12	4		4	
Francoeur (Mine)	Francoeur Final Effluent	5	4		4	
Garson Mine	Garson Mine	12	4		4	
Géant Dormant (Mine)	GD-E01 Final Effluent – Mine Water Pond	12	5		5	
Géant Dormant (Mine)	GD-E03 Polishing Pond 2A	4	3		3	
Giant Mine	Surveillance Network Program Station 43-1	5	5		5	
Gibraltar Mine	Gi.ESAD – East Saddle Dam	12	13		13	1
Gibraltar Mine	Gi.FR.D – Fraser River Diffuser	8	8		8	1
Golden Giant Mine	ITF Emergency Spillway	0				
Golden Giant Mine	Waste Water Treatment Plant Effluent	5	5		5	
Goldex (Mine)	Final Effluent	0				
Goldex (Mine)	Final Effluent – Goldex Tailings Pond	11	11		11	
Goldex (Mine)	Final Effluent – Shaft No. 2	0				
Haley Plant	FDP 1	9	3		3	
Hislop Mine	Sedimentation Pond	8	8		8	
Holloway Mine	Final Discharge Point	3	3		3	
Horne (Smelter)	Final Effluent – Pelletier Sector	12	4		4	
Huckleberry Mine	Hu.EZDD – East Zone Diversion Ditch	0				
Huckleberry Mine	Hu.SC3 – Sediment Control Structure 3	12	4		4	
Huckleberry Mine	Hu.SC4 – Sediment Control Structure 4	12	4		4	
Huckleberry Mine	HU.SC6 – Sediment Control Structure 6	0				
Huckleberry Mine	HU.SC7 – Sediment Control Structure 7	0				
Huckleberry Mine	HU.SC8 – Sediment Control Structure 8	3	2		2	
Huckleberry Mine	Hu.TMF2 – Tailings Management Facility 2 Supernatant/Hu.TRO – Tahtsa Reach Outfall	10	3		3	
Iron Ore Company of Canada – Carol Project	Hakim Culvert	12	12		12	
Iron Ore Company of Canada – Carol Project	Julienne Narrows	12	12		12	
Iron Ore Company of Canada – Carol Project	MD5	8	8		8	
Island Gold Project	IG-2	7	6		6	
James Mine	Ruth Pit Outlet	12	12		12	
Joe Mann	Polishing Pond Effluent – Point 10	0				
Jolu Mill	Mallard Tailings Management Facility – Cell C Outlet Berm	8	8		8	
Kemess South Mine	KS.WQ14 – Runoff	12	4		4	
Kemess South Mine	KS.WQBXL – Sedimentation Pond Decant	3	3		3	
Key Lake Operation	Station 1.2 – Dewatering Discharge to Horsefly Lake	12	4		4	

**Table D2: Performance Summary for Mines Subject to the MMER in 2012: Rainbow Trout (RT) Acute Lethality and *Daphnia magna* (DM) Monitoring Tests (cont'd)**

Site Identification		Number of Months of Discharge	RT Total	RT Fail	DM Total	DM Fail
Mine/Mill Name	Effluent Discharge Name					
Key Lake Operation	Station 1.4 – Mill Effluent to Wolf Lake	12	4		4	
Kidd Metallurgical Division	Final Effluent Monitoring Point	12	4		4	
Kidd Mining Division	Treatment Pond Final Effluent	9	5		5	
Kiena (Mine)	Final Effluent	7	6		6	
Lac Bachelor	Parshall Flume	12	8		8	
Lac Bloom (Mine)	Mill Site – Surface Drainage Pond Effluent	0				
Lac Bloom (Mine)	Mine Site – Surface Drainage Sedimentation Pond B2 Effluent	0				
Lac Bloom (Mine)	Recycling Water Pond Treatment Effluent	6	6		6	
Lac Bloom (Mine)	EFF-MIN	9	9		9	
Lac des Iles Mine	FDP 1	9	9		9	
Lac des Iles Mine	Final Discharge Point 2	4	5		5	
Lac Herbin (Mine)	Final Effluent 1	0				
Lac Herbin (Mine)	Final Effluent 2	12	4		4	
Langlois (Mine)	Main Final Effluent	12	13		13	
Lapa (Project)	Final Effluent – Sedimentation Pond	12	12		12	
Laronde (Mine)	Final Effluent 3A	12	13		13	
Lockerby Mine	Number 4 Pond Effluent	12	4		4	
Lupin Operations	Tailings Polishing Pond No. 2	1	1		1	
Macassa Mine	C Dam	12	12		12	
Magnacon Mine (part of Eagle River Mill)	Magnacon Mine	0				
Matagami Mine (Xstrata Zinc Canada Division)	Final Effluent (WLD)	12	14	1	14	3
MAX Molybdenum Mine and Mill	MM.SiteD – Mine Portal Settling Pond	0				
MAX Molybdenum Mine and Mill	MM.Sitel – Settling Ponds Decant	12	2		1	
MAX Molybdenum Mine and Mill	MM.TP – Tailings Pond Discharge	2				
McAlpine Mill	Polishing Pond	12	4		10	3
McArthur River Operation	Station 2.1	12	4		4	
McArthur River Operation	Station 2.1B	0				
McArthur River Operation	Station 2.7	10	3		3	
McClean Lake Operation	CM01-B (JEB Water Treatment Plant)	12	4		4	
McClean Lake Operation	CM03	0				
McClean Lake Operation	SC01 (SUE Water Treatment Plant Effluent)	0	3		3	
McClean Lake Operation	SP01	0				
McWatters Mine	MWD-2	12	12		12	
Meadowbank Mine	Attenuation Pond Discharge	4	3		3	
Meadowbank Mine	Dewatering Final Discharge 1	2	1		1	
Ming Mine	Wastewater Treatment System Discharge	7	5		5	1
Minto Project	Mi.W3 – Runoff Main Water Dam	12	9		9	1
Mishi Pit (part of Eagle River Mill)	Mishi Pit	8	8	1	8	1
Montcalm Project	Montcalm Final Effluent	3	3		3	
Mont-Wright (Mine)	HS-1	12	5		5	
Mont-Wright (Mine)	MS-2	6	6		6	2
Mouska (Mine)	Final Effluent	12	4		4	
Musselwhite Mine	FDP 1	5	5		5	
Myra Falls Operations	MF.11A – Runoff Myra Ponds Effluent	12	4		4	
Niobec (Mine)	Final Effluent	12	4		3	2
Nugget Pond Mine	Polishing Pond Effluent	10	13		13	

**Table D2: Performance Summary for Mines Subject to the MMER in 2012: Rainbow Trout (RT) Acute Lethality and *Daphnia magna* (DM) Monitoring Tests (cont'd)**

Site Identification		Number of Months of Discharge	RT Total	RT Fail	DM Total	DM Fail
Mine/Mill Name	Effluent Discharge Name					
Nunavik Nickel (Project)	Expo Final Effluent	2	1		1	
Pine Cove Property	Tailings Pond Discharge	9	5		5	
Podolsky Mine	Norman North Bog Outlet	12	4		4	
Porcupine Gold Mines	Mine Effluent Treatment Plant – Dome Mine	3	3		3	
Porcupine Gold Mines	Mine Water Storage Pond – Dome Mine	12	4		4	
Porcupine Gold Mines	Owl Creek Discharge 1	0				
Porcupine Gold Mines	Owl Creek Discharge 2	4	5		5	
Porcupine Gold Mines	Pamour Mine Water	5	3		3	
Rabbit Lake Operation	Station 2.3.3	12	4		4	
Raglan (Mine)	DIR-HSA	0				
Raglan (Mine)	DIR-SPOON	3	3		3	
Raglan (Mine)	DIR-UT	6	6		6	
Raglan (Mine)	DIR-Z3	6	6		6	
Red Lake Mine	G1	0				
Red Lake Mine	G2	4	4		4	
Red Lake Mine	Shaft 3 Mine Water Settling Pond	0				
Redstone Mine	RSD-2	4	4		4	
Restigouche Mine	Mixing Structure Discharge	0				
Rice Lake Gold Mine	FDP1 – End of Pipe	2	5		5	
Santoy 7 Mine	Santoy 7 Settling Pond	1	1		1	
Santoy 8 Mine	S8SP Final Discharge Point	2	4		4	
Scozinc Mine – Mill	Polishing Pond Outlet	12	8		8	
Seabee Gold Mine	Final Discharge Point 1.2	12	4		4	
Seabee Gold Mine	Final Discharge Point 1.3	0				
Seabee Gold Mine	Final Discharge Point 1.5	3	4		4	
Shakespeare Nickel Mine	MISA Weir	3	3		3	
Sigma	Final Effluent EFF1	10	4		4	
Snow Lake Mill	Anderson Lake Discharge	8	6		6	
Snow Lake Mine	SWM-03 (Birch Lake Outlet Embankment Decant Discharge)	1	2		2	
Stock Mine and Mill Complex	Direct Tailings Pond Effluent	0				
Stock Mine and Mill Complex	Polishing Pond Effluent	7	8		8	
Strathcona Tailings Treatment System	Fecunis RR Bridge	12	5		5	
Tanco Mine	East Discharge (Phreatic Flow)	0				
Tanco Mine	West Discharge (Compliance Point)	12	4		4	
Thompson Complex	Misery Weir	12	4		4	
Thompson Complex	Station B	12	7		7	
Timmins West Complex	TR-1	12	12		12	
Tio (Mine)	Switch South	12	12		12	
Tio (Mine)	ELAC168/E-Lac 166	9	9		9	
Tio (Mine)	Lake 211.4	9	9		9	
Tio (Mine)	Grondin Effluent (formerly Grondin Lake)	0				
Tio (Mine)	Resurgence Leo	12	12		12	
Totten Mine	Totten Discharge	9	3		3	
Trout Lake Mine	Trout Lake Surface Sump Discharge	8	3		3	2
Vezza (Mine)	Polishing Pond	3	11	6	11	
Voisey's Bay Mine – Mill	Port Site Sedimentation Pond	1	1		1	
Voisey's Bay Mine – Mill	Sedimentation Pond A Discharge	0				

**Table D2: Performance Summary for Mines Subject to the MMER in 2012: Rainbow Trout (RT) Acute Lethality and *Daphnia magna* (DM) Monitoring Tests (cont'd)**

Site Identification		Number of Months of Discharge	RT Total	RT Fail	DM Total	DM Fail
Mine/Mill Name	Effluent Discharge Name					
Voisey's Bay Mine – Mill	Sedimentation Pond B	0				
Voisey's Bay Mine – Mill	South of Ovoid Final Discharge Point	0				
Voisey's Bay Mine – Mill	South Sedimentation Pond	0				
Voisey's Bay Mine – Mill	Treated Effluent Final Discharge Point	10	11		11	11
Wabush Mines Joint Venture – Scully Mine	East Pit Dewatering East	0				
Wabush Mines Joint Venture – Scully Mine	East Pit No. 1 Dewatering	0				
Wabush Mines Joint Venture – Scully Mine	East Pit No. 2 Dewatering	12	4		4	1
Wabush Mines Joint Venture – Scully Mine	Flora Lake Discharge	12	4		4	
Wabush Mines Joint Venture – Scully Mine	Knoll Lake Inflow	12	4		4	
Wabush Mines Joint Venture – Scully Mine	Loadout Ditch Discharge	0				
Wabush Mines Joint Venture – Scully Mine	Shops East Discharge	0				
Wabush Mines Joint Venture – Scully Mine	Shops South Discharge	0				
Wabush Mines Joint Venture – Scully Mine	Tailings Discharge	0				
Wabush Mines Joint Venture – Scully Mine	Tailings Line Emergency Dump Basin 1	11	10		10	
Wabush Mines Joint Venture – Scully Mine	West Pit Extension Settling Basin	12	4		4	
Williams Mine	Polishing Pond Discharge CP 400	0				
Williams Mine	Stormwater Pond CP 102	10	10		10	
Williams Mine	Stormwater Pond CP 0300	4	4		4	
Williams Mine	Stormwater Pond CP 400A	3	3		3	
Williams Mine	Treated Effluent CP 0201	5	5		5	
Wolverine Project	Wo.TSF – Tailings Storage Facility	0				
Xstrata Nickel Sudbury Smelter	Final Effluent at NIR Road	12	4		4	
Yellowjacket Gold Mine	Ye.TSF – Tailings Storage Facility	0				
Young-Davidson Mine	Mine Water Pond Final Discharge	11	13	2	13	2
<b>Summary</b>			<b>942</b>	<b>11</b>	<b>945</b>	<b>43</b>

## Appendix E: Effluent Quality Data for Mines in 2012

### Note to the Reader

The tables presented in this appendix show the summary of the monthly monitoring results (monthly means) of each final discharge point identified pursuant to sections 9 and 10 of the *Metal Mining Effluent Regulations* (MMER). Effluent results were provided to Environment Canada pursuant to section 22 of the Regulations, which requires mines to submit annual reports to Environment Canada. The format for these reports is specified in Schedule 6 of the Regulations. Data are presented as provided by the owners or operators of the mines except where comments indicate that some data were added for completeness based on quarterly reports.

Supporting information includes:

- Mine/Mill Name
- Mine/Mill Operator Name
- Mine/Mill Product(s)
- Mine/Mill Address
- Identification of Final Effluent Discharge Point
- Parameter Limits
- Monthly Mean Concentrations of the Deleterious Substances
- Monthly pH Range (Low and High)
- Monthly Effluent Volume
- Results of Rainbow Trout Acute Lethality Tests
- Results of *Daphnia magna* Monitoring Tests
- Comments (if applicable)

Highlighted data indicate that a Monthly Effluent Quality Standard was exceeded for a given month. 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%. Tables are sorted in alphabetical order based on mine/mill name.

# **Metal Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Barry (Mine)																						
Operator Name	Ressources Métanor Inc.																						
Product(s)	Gold																						
Address	200 Mine Road, Desmaraismville, Quebec J0Y 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	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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Beaver Brook Mine																							
Operator Name	Beaver Brook Antimony Mine Inc.																							
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	-	-	0.0823	0.0828	0.0870	ND	ND	0.0987	0.1067	ND	ND	ND											
Cu (mg/L)	0.3	-	-	0.0010	0.0010	0.0010	ND	ND	0.0010	0.0010	ND	ND	ND											
CN (mg/L)	1.0	-	-	NMR	NMR	NMR	ND	ND	NMR	NMR	ND	ND	ND											
Pb (mg/L)	0.2	-	-	0.0072	0.0056	0.0024	ND	ND	0.0043	0.0062	ND	ND	ND											
Ni (mg/L)	0.5	-	-	0.0295	0.0240	0.0250	ND	ND	0.0140	0.0200	ND	ND	ND											
Zn (mg/L)	0.5	-	-	0.0034	0.0025	0.0125	ND	ND	0.0033	0.0043	ND	ND	ND											
TSS (mg/L)	15	-	-	19.00	18.00	11.00	ND	ND	15.33	24.00	ND	ND	ND											
Ra-226 (Bq/L)	0.37	-	-	0.0050	0.0071	0.0025	ND	ND	0.0117	0.0267	ND	ND	ND											
pH low	≥6.0	-	-	8.0	8.1	8.4	ND	ND	7.9	8.2	ND	ND	ND											
pH high	≤9.5	-	-	8.2	8.3	8.5	ND	ND	8.3	8.3	ND	ND	ND											
Flow (m <sup>3</sup> /month)	—	-	-	43,716	45,588	133	ND	ND	36,845	43,773	ND	ND	ND											
Rainbow Trout	Pass	-	-	1	1	-	ND	ND	1	1	ND	ND	ND											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	-	-	1	1	-	ND	ND	1	1	ND	ND	ND											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	The mine became subject to the MMER in March 2012. No toxicity test results were provided for May.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Bell Creek Mine and Mill																					
Operator Name	Lake Shore Gold Corporation																					
Product(s)	Gold																					
Address	P.O. Box 1067, 8215 Highway 101 West, Timmins, Ontario P4N 7H9																					
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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-									
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND									
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Comments:</b>																						
Notes: ND: No Deposit			NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Bell Creek Mine and Mill																						
Operator Name	Lake Shore Gold Corporation																						
Product(s)	Gold																						
Address	P.O. Box 1067, 8215 Highway 101 West, Timmins, Ontario P4N 7H9																						
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	0.0238	0.0225	0.0198	0.0193	0.0135	ND	0.0192	0.0151	0.0191	0.0238	0.0266										
Cu (mg/L)	0.3	ND	0.0083	0.0039	0.0034	0.0123	0.0162	ND	0.0049	0.0111	0.0065	0.0028	0.0035										
CN (mg/L)	1.0	ND	0.0240	0.0194	0.0025	0.0082	0.0275	ND	0.0105	0.0195	0.0165	0.0060	0.0062										
Pb (mg/L)	0.2	ND	0.0005	0.0007	0.0003	0.0003	0.0002	ND	0.0001	0.0002	0.0002	0.0003	0.0002										
Ni (mg/L)	0.5	ND	0.0135	0.0135	0.0091	0.0157	0.0225	ND	0.0102	0.0213	0.0161	0.0130	0.0144										
Zn (mg/L)	0.5	ND	0.0040	0.0098	0.0056	0.0050	0.0050	ND	0.0080	0.0043	0.0020	0.0015	0.0023										
TSS (mg/L)	15	ND	11.00	8.50	4.75	2.00	3.00	ND	2.00	1.75	5.00	3.00	2.67										
Ra-226 (Bq/L)	0.37	ND	NMR	0.0050	NMR	NMR	0.0025	ND	0.0050	NMR	0.0050	NMR	0.0050										
pH low	≥6.0	ND	8.2	8.0	8.3	6.5	6.5	ND	8.2	7.0	8.1	8.0	7.5										
pH high	≤9.5	ND	8.2	8.4	8.4	8.2	7.6	ND	8.4	8.2	8.2	8.1	8.9										
Flow (m <sup>3</sup> /month)	—	ND	5,198	149,001	55,302	51,158	69,659	ND	58,934	151,227	19,709	71,151	63,118										
Rainbow Trout	Pass	ND	1	1	1	1	1	ND	1	1	1	1	1										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	1	1	1	1	1	ND	1	1	1	1	1										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Birchtree Mine																							
<b>Operator Name</b>		Vale Inco Ltd.																							
<b>Product(s)</b>		Nickel-Copper																							
<b>Address</b>		P.O. Box 5000, Thompson, Manitoba R8N 1P3																							
<b>Effluent Discharge Point</b>		Birchtree Effluent Treatment Plant																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.												
As (mg/L)	0.5	0.0257	0.0434	0.0410	0.0107	0.0588	0.0312	0.0272	0.0367	0.0084	0.0097	0.0097	0.0040												
Cu (mg/L)	0.3	0.0320	0.0300	0.0425	0.0325	0.0360	0.0325	0.0317	0.0350	0.0250	0.0300	0.0275	0.0300												
CN (mg/L)	1.0	NMR	0.0054	NMR	NMR	0.0010	NMR	0.0046	NMR	NMR	0.0087	NMR	NMR												
Pb (mg/L)	0.2	0.0150	0.0150	0.0150	0.0150	0.0184	0.0198	0.0150	0.0150	0.0150	0.0004	0.0005	0.0005												
Ni (mg/L)	0.5	0.0380	0.0275	0.0275	0.0363	0.0140	0.0100	0.0350	0.0300	0.0475	0.0300	0.0300	0.0300												
Zn (mg/L)	0.5	0.0298	0.0135	0.0143	0.0233	0.0134	0.0050	0.0062	0.0050	0.0575	0.0088	0.0050	0.0082												
TSS (mg/L)	15	3.60	2.60	2.40	0.80	1.68	0.70	0.67	1.40	0.90	0.56	0.70	0.24												
Ra-226 (Bq/L)	0.37	0.0840	0.0675	0.0625	0.1200	0.1640	0.1400	0.1500	0.1875	0.1425	0.0830	0.0650	0.0420												
pH low	≥6.0	6.7	6.7	6.6	6.9	6.7	7.0	6.7	6.8	6.9	6.7	6.8	6.7												
pH high	≤9.5	7.0	7.1	7.0	7.2	7.1	7.1	7.0	7.0	7.0	7.1	7.1	7.2												
Flow (m <sup>3</sup> /month)	—	32,538	25,767	26,916	50,498	33,753	39,608	31,832	29,047	35,588	34,125	33,240	28,371												
Rainbow Trout	Pass	NMR	1	NMR	NMR	1	NMR	1	NMR	NMR	1	NMR	NMR												
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	NMR	-	NMR	NMR	-	NMR	1	NMR	NMR	1	NMR	NMR												
Monitoring Test	Fail	-	1	-	-	1	-	-	-	-	-	-	-												
<b>Comments:</b>																									
Notes: ND: No Deposit		NMR: No Measurement Required		Pass: ≤50% Mortality				Fail: >50% Mortality																	
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Black Fox Mine																						
<b>Operator Name</b>	Brigus Gold Corporation																						
<b>Product(s)</b>	Gold																						
<b>Address</b>	Highway 101, P.O. Box 605, Matheson, Ontario P0K 1N0																						
<b>Effluent Discharge Point</b>	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)	1.0	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										
<b>Rainbow Trout</b>	<b>Pass</b>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
<b>Acute Lethality Test</b>	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Daphnia magna</b>	<b>Pass</b>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
<b>Monitoring Test</b>	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Bucko Lake Mine																							
<b>Operator Name</b>		CaNickel Mining Ltd.																							
<b>Product(s)</b>		Nickel																							
<b>Address</b>		P.O. 239, 371 Flemming Drive, Wadowden, Manitoba R0B 1S0																							
<b>Effluent Discharge Point</b>		Settling Pond Discharge																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.												
As (mg/L)	0.5	0.0007	0.0004	ND	-	ND	ND	0.0010	0.0020	0.0018	0.0006	0.0006	0.0005												
Cu (mg/L)	0.3	0.0016	0.0005	ND	-	ND	ND	0.0027	0.0011	0.0025	0.0042	0.0026	0.0020												
CN (mg/L)	1.0	NMR	NMR	ND	NMR	ND	ND	NMR	NMR	NMR	NMR	NMR	NMR												
Pb (mg/L)	0.2	0.0008	0.0002	ND	-	ND	ND	0.0003	0.0001	0.0001	0.0003	0.0002	0.0002												
Ni (mg/L)	0.5	0.0854	0.0383	ND	-	ND	ND	0.1532	0.0391	0.0505	0.0513	0.0786	0.0631												
Zn (mg/L)	0.5	0.0135	0.0040	ND	-	ND	ND	0.0040	0.0043	0.0080	0.0045	0.0072	0.0043												
TSS (mg/L)	15	9.44	11.40	ND	-	ND	ND	32.30	19.17	17.10	8.74	12.40	9.68												
Ra-226 (Bq/L)	0.37	0.0119	0.0100	ND	-	ND	ND	0.3600	0.2657	0.1733	0.2060	0.1950	0.1160												
pH low	≥6.0	7.4	9.1	ND	-	ND	ND	7.5	7.3	6.9	7.4	7.4	7.4												
pH high	≤9.5	7.8	9.1	ND	-	ND	ND	7.7	7.8	7.8	7.8	7.6	7.5												
Flow (m <sup>3</sup> /month)	—	21,290	8,994	ND	1,205	ND	ND	17,129	28,006	17,207	23,252	17,272	18,643												
Rainbow Trout	Pass	1	-	ND	-	ND	ND	1	1	1	1	1	1												
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	-	-	ND	-	ND	ND	-	1	-	-	-	-												
Monitoring Test	Fail	1	-	-	-	-	-	1	-	1	1	1	1												
<b>Comments:</b>	No toxicity test results were provided for February and April. Only flow measurement was provided for April since the mine reported discharge of effluent during only one day for that month.																								
Notes: ND: No Deposit		NMR: No Measurement Required		Pass: ≤50% Mortality		Fail: >50% Mortality																			
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Campbell Mine																						
Operator Name	Goldcorp Inc.																						
Product(s)	Gold																						
Address	P.O. Box 2000, 10 Mine Road, Balmertown, Ontario P0V 1C0																						
Effluent Discharge Point	WETOOUT																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	ND	ND	ND	ND	0.0202	0.0301	0.0404	0.0272	ND	ND	ND	ND										
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0091	0.0074	0.0068	0.0068	ND	ND	ND	ND										
CN (mg/L)	1.0	ND	ND	ND	ND	0.0083	0.0061	0.0048	0.0088	ND	ND	ND	ND										
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0002	0.0001	0.0004	0.0008	ND	ND	ND	ND										
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0666	0.0755	0.0561	0.0585	ND	ND	ND	ND										
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0215	0.0098	0.0427	0.0848	ND	ND	ND	ND										
TSS (mg/L)	15	ND	ND	ND	ND	1.88	2.05	2.42	3.48	ND	ND	ND	ND										
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0025	0.0025	0.0100	0.0060	ND	ND	ND	ND										
pH low	≥6.0	ND	ND	ND	ND	7.5	6.4	6.5	6.2	ND	ND	ND	ND										
pH high	≤9.5	ND	ND	ND	ND	7.9	7.5	7.2	6.7	ND	ND	ND	ND										
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	61,859	280,936	372,728	337,479	ND	ND	ND	ND										
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	1	2	ND	ND	ND	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	1	1	1	2	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Cantung Mine																						
Operator Name	North American Tungsten Corporation Ltd.																						
Product(s)	Tungsten																						
Address	P.O. Box 848, Watson Lake, Yukon Y0A 1C0																						
Effluent Discharge Point	4-27-2 Culvert																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	0.0003	0.0003	0.0077	0.0004	0.0005	0.0005	0.0006	0.0004	0.0005	0.0016	0.0004	0.0004										
Cu (mg/L)	0.3	0.0007	0.0006	0.0005	0.0013	0.0004	0.0007	0.0014	0.0003	0.0007	0.0003	0.0007	0.0008										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000										
Ni (mg/L)	0.5	0.0008	0.0006	0.0010	0.0007	0.0009	0.0008	0.0010	0.0007	0.0008	0.0006	0.0008	0.0007										
Zn (mg/L)	0.5	0.0036	0.0045	0.0056	0.0037	0.0031	0.0043	0.0052	0.0030	0.0040	0.0048	0.0041	0.0023										
TSS (mg/L)	15	0.60	2.25	1.50	3.60	1.63	2.13	4.38	0.63	2.50	0.88	0.50	1.20										
Ra-226 (Bq/L)	0.37	0.0070	NMR	NMR	0.0100	NMR	NMR	0.0100	NMR	NMR	0.0050	NMR	NMR										
pH low	≥6.0	7.9	7.9	7.8	8.0	8.1	8.0	8.0	8.0	8.1	8.0	8.0	8.0										
pH high	≤9.5	8.2	8.0	8.2	8.2	8.2	8.2	8.1	8.1	8.2	8.1	8.1	8.0										
Flow (m <sup>3</sup> /month)	—	49,664	36,572	35,489	33,877	153,821	237,729	136,467	63,981	84,569	75,806	87,388	76,743										
Rainbow Trout	Pass	1	NMR	NMR	1	NMR	NMR	NMR	1	NMR	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	NMR	NMR	1	NMR	NMR	NMR	1	NMR	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Cantung Mine																							
<b>Operator Name</b>	North American Tungsten Corporation Ltd.																							
<b>Product(s)</b>	Tungsten																							
<b>Address</b>	P.O. Box 848, Watson Lake, Yukon Y0A 1C0																							
<b>Effluent Discharge Point</b>	Settling Pond 5-2																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.											
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.0005	0.0009	ND	ND	ND	ND	ND											
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0055	0.0026	ND	ND	ND	ND	ND											
CN (mg/L)	1.0	ND	ND	ND	ND	ND	NMR	NMR	ND	ND	ND	ND	ND											
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0003	0.0002	ND	ND	ND	ND	ND											
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0010	0.0017	ND	ND	ND	ND	ND											
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0140	0.0075	ND	ND	ND	ND	ND											
TSS (mg/L)	15	ND	ND	ND	ND	ND	8.25	5.00	ND	ND	ND	ND	ND											
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0050	-	ND	ND	ND	ND	ND											
pH low	≥6.0	ND	ND	ND	ND	ND	8.0	7.8	ND	ND	ND	ND	ND											
pH high	≤9.5	ND	ND	ND	ND	ND	8.2	8.1	ND	ND	ND	ND	ND											
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	ND	6,468	4,845	ND	ND	ND	ND	ND											
<b>Rainbow Trout</b>	<b>Pass</b>	ND	ND	ND	ND	ND	1	1	ND	ND	ND	ND	ND											
<b>Acute Lethality Test</b>	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-											
<b>Daphnia magna</b>	<b>Pass</b>	ND	ND	ND	ND	ND	1	1	ND	ND	ND	ND	ND											
<b>Monitoring Test</b>	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-											
<b>Comments:</b>	No radium 226 results were provided for the third quarter.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Casa Berardi (Mine)																							
<b>Operator Name</b>		Mines Aurizon Ltée																							
<b>Product(s)</b>		Gold																							
<b>Address</b>		659 2nd Street East, La Sarre, Quebec J9Z 2Y9																							
<b>Effluent Discharge Point</b>		Final Effluent – 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	0.0611	0.1035	ND	ND	ND	ND	0.1302	0.1399												
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0208	0.0130	ND	ND	ND	ND	0.0100	0.0512												
CN (mg/L)	1.0	ND	ND	ND	ND	0.0285	0.0136	ND	ND	ND	ND	0.0120	0.0563												
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0002	0.0002	ND	ND	ND	ND	0.0005	0.0003												
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0113	0.0116	ND	ND	ND	ND	0.0105	0.0271												
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0035	0.0021	ND	ND	ND	ND	0.0020	0.0092												
TSS (mg/L)	15	ND	ND	ND	ND	2.50	4.25	ND	ND	ND	ND	2.00	1.00												
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0025	0.0020	ND	ND	ND	ND	0.0015	0.0027												
pH low	≥6.0	ND	ND	ND	ND	7.8	6.9	ND	ND	ND	ND	7.6	7.3												
pH high	≤9.5	ND	ND	ND	ND	8.0	8.2	ND	ND	ND	ND	7.8	7.7												
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	590,627	235,608	ND	ND	ND	ND	262,019	364,105												
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	ND	ND	ND	ND	1	1												
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	ND	ND	ND	ND	1	1	ND	ND	ND	ND	1	1												
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
<b>Comments:</b>																									
Notes: ND: No Deposit		NMR: No Measurement Required				Pass: ≤50% Mortality				Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Cigar Lake Project																						
Operator Name	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	0.0005	0.0006	0.0006	0.0005	0.0006	0.0005	0.0008	0.0011	0.0010	0.0005	0.0005	0.0005										
Cu (mg/L)	0.3	0.0014	0.0017	0.0015	0.0013	0.0040	0.0017	0.0020	0.0018	0.0023	0.0009	0.0011	0.0013										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
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	0.0034	0.0037	0.0057	0.0042	0.0060	0.0033	0.0031	0.0043	0.0042	0.0018	0.0039	0.0036										
Zn (mg/L)	0.5	0.0200	0.0146	0.0145	0.0135	0.0109	0.0124	0.0157	0.0159	0.0101	0.0078	0.0146	0.0118										
TSS (mg/L)	15	1.25	1.20	0.63	1.38	0.60	0.80	1.44	1.79	0.60	0.62	0.60	0.63										
Ra-226 (Bq/L)	0.37	0.0025	0.0025	0.0025	0.0025	0.0025	0.0054	0.0033	0.0034	0.0038	0.0031	0.0039	0.0034										
pH low	≥6.0	7.1	7.0	7.3	7.2	7.1	6.9	6.9	7.2	6.9	7.1	7.0	7.2										
pH high	≤9.5	7.5	7.4	7.3	7.4	7.5	7.2	7.6	7.4	7.3	7.4	7.6	7.7										
Flow (m <sup>3</sup> /month)	—	19,025	20,511	17,245	29,390	47,169	16,476	23,831	24,082	62,550	67,470	26,786	23,132										
Rainbow Trout	Pass	1	NMR	NMR	NMR	1	NMR	1	1	1	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	NMR	NMR	NMR	1	NMR	1	1	1	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Clavos Mine																							
<b>Operator Name</b>		St Andrew Goldfields Ltd. / Sage Gold Inc.																							
<b>Product(s)</b>		Gold																							
<b>Address</b>		Rural Route 2, Matheson, Ontario P0K 1N0																							
<b>Effluent Discharge Point</b>		Sediment 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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND												
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
<b>Comments:</b>		In September 2012, the ownership of Calvos Mine was transferred from St Andrew Goldfield Ltd to Sage Gold Inc.																							
Notes: ND: No Deposit		NMR: No Measurement Required		Pass: ≤50% Mortality		Fail: >50% Mortality																			
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Complexe métallurgique Sorel-Tracy																							
Operator Name	QIT-Fer et Titane Inc.																							
Product(s)	Iron-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	0.0019	0.0012	0.0016	0.0023	0.0017	0.0017	0.0016	0.0012	0.0007	0.0005	0.0012	0.0010											
Cu (mg/L)	0.3	0.0102	0.0049	0.0149	0.0180	0.0126	0.0087	0.0079	0.0055	0.0033	0.0059	0.0092	0.0084											
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR											
Pb (mg/L)	0.2	0.0013	0.0007	0.0015	0.0027	0.0014	0.0009	0.0005	0.0005	0.0007	0.0020	0.0022	0.0017											
Ni (mg/L)	0.5	0.0108	0.0071	0.0131	0.0163	0.0122	0.0125	0.0086	0.0040	0.0055	0.0132	0.0143	0.0145											
Zn (mg/L)	0.5	0.0753	0.0203	0.0136	0.0439	0.0123	0.0147	0.0094	0.0045	0.0044	0.0134	0.0148	0.0290											
TSS (mg/L)	15	4.18	3.30	4.50	7.13	6.66	3.73	2.12	1.28	2.15	1.22	2.20	4.48											
Ra-226 (Bq/L)	0.37	0.0075	0.0045	0.0036	0.0031	0.0030	0.0018	0.0045	0.0070	0.0023	0.0014	0.0013	0.0010											
pH low	≥6.0	8.1	7.8	7.9	8.9	8.0	8.2	8.1	8.6	7.9	7.8	7.5	7.5											
pH high	≤9.5	8.6	8.1	9.3	9.2	9.1	8.6	8.7	8.8	8.6	8.4	8.3	7.6											
Flow (m <sup>3</sup> /month)	—	7,164	5,618	17,372	12,224	15,936	6,117	3,687	2,571	1,801	4,409	2,709	3,279											
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:																								
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Copper Cliff Complex																						
<b>Operator Name</b>	Vale Canada Ltd.																						
<b>Product(s)</b>	Nickel-Copper-Cobalt-Platinum																						
<b>Address</b>	155 Balsam Street, Copper Cliff, Ontario P0M 1N0																						
<b>Effluent Discharge Point</b>	Copper Cliff Wastewater Treatment Plant																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	0.0148	0.0046	0.0070	0.0018	0.0025	ND	ND	0.0073	0.0070	0.0017	0.0010	0.0013										
Cu (mg/L)	0.3	0.2628	0.2574	0.2078	0.1393	0.1380	ND	ND	0.0327	0.0720	0.0943	0.1613	0.1950										
CN (mg/L)	1.0	0.0090	0.0098	0.0080	0.0045	0.0090	ND	ND	0.0117	0.0020	0.0018	0.0023	0.0018										
Pb (mg/L)	0.2	0.0310	0.0310	0.0310	0.0310	0.0310	ND	ND	0.0310	0.0310	0.0310	0.0310	0.0310										
Ni (mg/L)	0.5	0.1568	0.3326	0.0993	0.0775	0.0965	ND	ND	0.0167	0.0290	0.0320	0.1578	0.1670										
Zn (mg/L)	0.5	0.0268	0.0296	0.0090	0.0135	0.0180	ND	ND	0.0050	0.0050	0.0050	0.0050	0.0050										
TSS (mg/L)	15	1.95	3.32	1.70	2.30	1.00	ND	ND	1.47	2.20	1.33	2.55	2.45										
Ra-226 (Bq/L)	0.37	0.0100	NMR	NMR	0.0160	NMR	ND	ND	0.0050	NMR	0.0080	NMR	NMR										
pH low	≥ 6.0	7.6	8.0	7.3	8.3	8.0	ND	ND	8.3	9.0	6.8	7.0	6.1										
pH high	≤ 9.5	8.5	8.4	8.9	9.0	9.2	ND	ND	8.6	9.0	8.7	8.6	8.3										
Flow (m <sup>3</sup> /month)	—	3,974,123	3,781,507	4,749,293	4,059,225	831,644	ND	ND	2,309,688	438,370	1,828,809	2,990,601	3,316,969										
<b>Rainbow Trout</b>	<b>Pass</b>	1	NMR	NMR	1	NMR	ND	ND	1	NMR	1	NMR	NMR										
<b>Acute Lethality Test</b>	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Daphnia magna</b>	<b>Pass</b>	1	NMR	NMR	1	NMR	ND	ND	1	NMR	1	NMR	NMR										
<b>Monitoring Test</b>	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Copper Cliff Complex																						
Operator Name	Vale Canada Ltd.																						
Product(s)	Nickel-Copper-Cobalt-Platinum																						
Address	155 Balsam Street, Copper Cliff, Ontario P0M 1N0																						
Effluent Discharge Point	Nolin Creek Wastewater Treatment Plant																						
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	ND	ND	ND	ND	0.0010	0.0010	0.0010										
Cu (mg/L)	0.3	0.0898	0.0922	0.1220	0.0545	0.0733	ND	ND	ND	ND	0.0640	0.1063	0.1045										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	ND	ND	ND	ND	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0080	0.0098	0.0080	0.0080	0.0080	ND	ND	ND	ND	0.0080	0.0080	0.0105										
Ni (mg/L)	0.5	0.2760	0.3048	0.3608	0.1685	0.1913	ND	ND	ND	ND	0.1790	0.3043	0.3325										
Zn (mg/L)	0.5	0.0133	0.0172	0.0083	0.0054	0.0075	ND	ND	ND	ND	0.0025	0.0034	0.0053										
TSS (mg/L)	15	2.90	2.44	2.75	1.60	2.27	ND	ND	ND	ND	2.36	2.95	2.85										
Ra-226 (Bq/L)	0.37	0.0100	NMR	NMR	0.0060	NMR	ND	ND	ND	ND	0.0140	NMR	NMR										
pH low	≥6.0	8.3	8.3	8.5	8.5	8.6	ND	ND	ND	ND	8.4	8.4	8.3										
pH high	≤9.5	8.7	8.7	8.8	9.2	9.3	ND	ND	ND	ND	8.7	8.5	8.4										
Flow (m <sup>3</sup> /month)	—	330,793	385,439	722,966	718,920	319,086	ND	ND	ND	ND	477,690	327,628	200,911										
Rainbow Trout	Pass	1	NMR	NMR	1	NMR	ND	ND	ND	ND	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	NMR	NMR	1	NMR	ND	ND	ND	ND	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Copper Mountain Mine																							
<b>Operator Name</b>		Similco Mines Ltd.																							
<b>Product(s)</b>		Copper-Gold-Silver																							
<b>Address</b>		P.O. Box 1400, Princeton, British Columbia V0X 1W0																							
<b>Effluent Discharge Point</b>		Co.SW09 - Level 6 Adit																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.												
As (mg/L)	0.5	0.0019	0.0019	0.0020	0.0017	0.0017	0.0016	0.0015	0.0016	0.0018	0.0017	0.0015	0.0018												
Cu (mg/L)	0.3	0.0190	0.0184	0.0204	0.0194	0.0204	0.0211	0.0213	0.0209	0.0206	0.0203	0.0216	0.0223												
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR												
Pb (mg/L)	0.2	0.0001	0.0000	0.0001	0.0001	0.0001	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001												
Ni (mg/L)	0.5	0.0008	0.0008	0.0008	0.0010	0.0012	0.0010	0.0013	0.0012	0.0012	0.0011	0.0011	0.0005												
Zn (mg/L)	0.5	0.0030	0.0032	0.0030	0.0030	0.0030	0.0033	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030												
TSS (mg/L)	15	3.00	3.00	1.75	0.70	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50												
Ra-226 (Bq/L)	0.37	NMR	0.0025	NMR	NMR	0.0025	NMR	NMR	0.0042	NMR	NMR	0.0088	NMR												
pH low	≥6.0	8.0	8.0	7.9	8.1	7.9	7.9	7.9	8.0	8.0	8.0	7.9	8.0												
pH high	≤9.5	8.2	8.2	8.1	8.2	8.2	8.3	8.1	8.1	8.1	8.2	8.1	8.1												
Flow (m <sup>3</sup> /month)	—	12,240	10,229	14,397	32,210	32,604	17,905	17,099	18,636	12,468	11,676	21,694	19,158												
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	NMR	NMR	1	NMR												
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	1	1	1	1	1	1	1	1	NMR	NMR	1	NMR												
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
<b>Comments:</b>																									
Notes: ND: No Deposit		NMR: No Measurement Required		Pass: ≤50% Mortality				Fail: >50% Mortality																	
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Copper Mountain Mine																						
<b>Operator Name</b>	Similco Mines Ltd.																						
<b>Product(s)</b>	Copper-Gold-Silver																						
<b>Address</b>	P.O. Box 1400, Princeton, British Columbia V0X 1W0																						
<b>Effluent Discharge Point</b>	Co.SW27 - E Dam Seepage																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	0.0008	0.0008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Cu (mg/L)	0.3	0.0022	0.0018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
CN (mg/L)	1.0	NMR	NMR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Pb (mg/L)	0.2	0.0000	0.0000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Ni (mg/L)	0.5	0.0006	0.0007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Zn (mg/L)	0.5	0.0015	0.0033	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
TSS (mg/L)	15	3.00	3.30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Ra-226 (Bq/L)	0.37	NMR	0.0050	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
pH low	≥6.0	7.8	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
pH high	≤9.5	8.1	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Flow (m <sup>3</sup> /month)	—	62,942	3,629	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Rainbow Trout	Pass	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Copper Mountain Mine																						
Operator Name	Similco Mines Ltd.																						
Product(s)	Copper-Gold-Silver																						
Address	P.O. Box 1400, Princeton, British Columbia V0X 1W0																						
Effluent Discharge Point	Co.SW37 - D2 Dump Drainage																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	0.0007	0.0007	0.0008	0.0007	0.0007	0.0007	0.0008	0.0008	0.0009	0.0008	0.0014	0.0014										
Cu (mg/L)	0.3	0.0059	0.0053	0.0063	0.0106	0.0082	0.0075	0.0072	0.0070	0.0076	0.0077	0.0270	0.0387										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002										
Ni (mg/L)	0.5	0.0007	0.0005	0.0007	0.0005	0.0005	0.0004	0.0005	0.0005	0.0005	0.0005	0.0016	0.0019										
Zn (mg/L)	0.5	0.0030	0.0030	0.0030	0.0026	0.0027	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030										
TSS (mg/L)	15	3.30	4.00	2.15	4.25	1.42	0.78	1.05	1.00	0.90	13.98	100.30	14.95										
Ra-226 (Bq/L)	0.37	NMR	0.0025	NMR	NMR	0.0025	NMR	NMR	0.0006	NMR	NMR	0.0035	NMR										
pH low	≥6.0	8.1	8.1	8.1	8.2	8.1	8.2	8.2	8.3	8.2	8.2	8.1	8.1										
pH high	≤9.5	8.3	8.2	8.2	8.3	8.3	8.4	8.3	8.3	8.3	8.3	8.2	8.3										
Flow (m <sup>3</sup> /month)	—	3,147	1,730	4,754	14,625	9,069	5,543	5,351	5,770	4,266	4,649	4,969	2,582										
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	NMR	NMR	1	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	1	1	1	1	1	1	1	NMR	NMR	1	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Crean Hill Mine																						
Operator Name	Vale Canada Ltd.																						
Product(s)	Nickel-Copper-Cobalt-Platinum																						
Address	337 Power Street, Copper Cliff, Ontario P0M 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	0.0010	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	0.0327	0.0320	0.0298	0.0068	0.0064	0.0060	0.0043	0.0070	0.0060	0.0302	0.0218	0.0215										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0310	0.0380	0.0310	0.0310	0.0310	0.0310	0.0310	0.0310	0.0310	0.0310	0.0310	0.0370										
Ni (mg/L)	0.5	0.2907	0.1876	0.2528	0.1138	0.0794	0.0638	0.0563	0.0636	0.0818	0.2060	0.2665	0.3413										
Zn (mg/L)	0.5	0.0077	0.0064	0.0050	0.0063	0.0060	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050										
TSS (mg/L)	15	1.73	1.00	1.35	1.30	1.20	1.00	1.00	1.00	1.00	1.20	1.25	2.10										
Ra-226 (Bq/L)	0.37	0.0250	0.0201	0.0200	0.0143	NMR	NMR	0.0050	NMR	NMR	0.0310	NMR	NMR										
pH low	≥6.0	8.2	8.4	7.6	8.3	8.0	8.3	8.2	7.8	7.8	7.6	7.9	7.7										
pH high	≤9.5	8.4	8.6	8.5	8.8	8.6	8.5	8.4	8.3	8.3	8.6	8.3	8.0										
Flow (m <sup>3</sup> /month)	—	43,533	38,239	220,573	64,215	53,215	73,328	18,505	14,490	21,030	94,380	95,670	99,913										
Rainbow Trout	Pass	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Detour Lake Mine																						
Operator Name	Detour Gold Corporation																						
Product(s)	Gold																						
Address	86 2nd Street, P.O. Box 1325, 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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Duck Pond Operations																						
Operator Name	Teck Resources Ltd.																						
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	ND	ND	ND	0.0030	0.0067	0.0075	0.0057	0.0040	0.0063	0.0060	0.0080	0.0107										
Cu (mg/L)	0.3	ND	ND	ND	0.0495	0.1410	0.2693	0.2683	0.2117	0.2193	0.2360	0.2284	0.2757										
CN (mg/L)	1.0	ND	ND	ND	0.0015	0.0010	0.0013	0.0037	0.0050	0.0050	0.0042	0.0050	0.0050										
Pb (mg/L)	0.2	ND	ND	ND	0.0103	0.0673	0.0443	0.0480	0.0400	0.0503	0.0516	0.0388	0.0283										
Ni (mg/L)	0.5	ND	ND	ND	0.0015	0.0033	0.0028	0.0023	0.0025	0.0015	0.0016	0.0040	0.0043										
Zn (mg/L)	0.5	ND	ND	ND	0.0745	0.1023	0.0888	0.0943	0.1417	0.0940	0.1388	0.1820	0.1247										
TSS (mg/L)	15	ND	ND	ND	2.00	4.00	3.50	4.33	4.67	5.00	1.60	2.00	1.00										
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0100	NMR	NMR	0.0300	NMR	0.0400	NMR	0.0400	0.0200										
pH low	≥6.0	ND	ND	ND	7.3	6.3	7.1	7.2	7.0	7.4	7.5	7.2	7.7										
pH high	≤9.5	ND	ND	ND	7.4	6.9	7.3	7.4	7.5	7.6	7.6	7.6	7.8										
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	124,832	180,687	373,570	244,689	172,935	437,770	312,269	408,239	176,477										
Rainbow Trout	Pass	ND	ND	ND	1	1	1	1	1	1	1	1	1										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	-	-	-	1	1	1	1	1	1										
Monitoring Test	Fail	-	-	-	1	1	1	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Eagle River Mine																						
Operator Name	Wesdome Gold Mines Ltd.																						
Product(s)	Gold																						
Address	93 Mission Road, P.O. Box 1520, Wawa, Ontario P0S 1K0																						
Effluent Discharge Point	FDP 1																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	0.0003	0.0002	0.0002	0.0002	0.0003	0.0004	0.0002	0.0002	0.0001	0.0002	0.0003	0.0007										
Cu (mg/L)	0.3	0.0016	0.0014	0.0017	0.0014	0.0013	0.0012	0.0009	0.0009	0.0007	0.0014	0.0021	0.0017										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0001	0.0001	0.0003	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000	0.0001	0.0004	0.0005										
Ni (mg/L)	0.5	0.0021	0.0020	0.0016	0.0017	0.0019	0.0023	0.0013	0.0011	0.0011	0.0014	0.0019	0.0021										
Zn (mg/L)	0.5	0.0035	0.0044	0.0034	0.0019	0.0017	0.0010	0.0004	0.0005	0.0010	0.0028	0.0056	0.0050										
TSS (mg/L)	15	0.75	1.25	3.38	3.05	1.85	1.83	2.10	2.54	0.59	4.42	6.68	3.24										
Ra-226 (Bq/L)	0.37	NMR	NMR	0.0050	NMR	0.0050	NMR	0.0050	0.0050	NMR	0.0050	0.0050	NMR										
pH low	≥6.0	7.5	7.4	7.5	6.9	6.9	6.9	6.9	6.9	6.9	6.9	7.3	7.0										
pH high	≤9.5	7.6	7.6	7.7	7.3	7.4	7.1	7.2	7.3	7.2	7.4	7.6	7.5										
Flow (m³/month)	—	12,739	12,749	14,130	25,147	18,850	12,704	11,334	14,187	15,827	29,862	27,449	25,034										
Rainbow Trout	Pass	NMR	NMR	1	NMR	1	NMR	1	NMR	NMR	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	NMR	NMR	1	NMR	1	NMR	1	NMR	NMR	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Éléonore (Mine)																							
<b>Operator Name</b>	Les Mines Opinaca Ltée																							
<b>Product(s)</b>	Gold																							
<b>Address</b>	853 Rideau Boulevard, Rouyn-Noranda, Quebec J9Y 0G3																							
<b>Effluent Discharge Point</b>	Final Effluent - Waste Rock Pile																							
<b>Parameters</b>	<b>Limits</b>	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.											
As (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0180	0.0110	0.0095											
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	-	0.0045	0.0055	0.0256											
CN (mg/L)	1.0	-	-	-	-	-	-	-	-	-	NMR	NMR	NMR											
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	-	0.0002	0.0009	0.0004											
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0255	0.0188	0.0175											
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	-	0.0070	0.0105	0.0088											
TSS (mg/L)	15	-	-	-	-	-	-	-	-	-	4.50	6.25	3.00											
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	-	0.1765	0.2210	0.2015											
pH low	≥6.0	-	-	-	-	-	-	-	-	-	6.8	6.5	6.7											
pH high	≤9.5	-	-	-	-	-	-	-	-	-	6.9	8.0	7.1											
Flow (m <sup>3</sup> /month)	—	-	-	-	-	-	-	-	-	-	41,141	45,889	42,494											
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	-	-	1	1											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	-	-	-	-	-	-	-	-	-	-	1	1											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
<b>Comments:</b>	The mine became subject to the MMER in October 2012. No toxicity test results were provided for October																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality																				
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Endako Mines																						
Operator Name	Thompson Creek Mining Ltd.																						
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	NMR	0.0003	NMR	NMR	0.0003	NMR	NMR	0.0003	NMR	NMR	0.0001	NMR										
Cu (mg/L)	0.3	NMR	0.0013	NMR	NMR	0.0005	NMR	NMR	0.0005	NMR	NMR	0.0005	NMR										
CN (mg/L)	1.0	NMR	0.0692	NMR	NMR	0.0272	NMR	NMR	0.0359	NMR	NMR	0.0468	NMR										
Pb (mg/L)	0.2	NMR	0.0001	NMR	NMR	0.0003	NMR	NMR	0.0001	NMR	NMR	0.0001	NMR										
Ni (mg/L)	0.5	NMR	0.0013	NMR	NMR	0.0012	NMR	NMR	0.0005	NMR	NMR	0.0005	NMR										
Zn (mg/L)	0.5	NMR	0.0025	NMR	NMR	0.0030	NMR	NMR	0.0030	NMR	NMR	0.0025	NMR										
TSS (mg/L)	15	3.45	5.55	6.65	9.73	13.02	7.95	9.58	12.38	9.93	6.10	4.10	4.00										
Ra-226 (Bq/L)	0.37	NMR	0.0200	NMR	NMR	0.0070	NMR	NMR	0.0044	NMR	NMR	0.0094	NMR										
pH low	≥6.0	7.8	7.9	8.0	8.0	7.8	6.6	7.6	7.9	8.0	8.0	7.9	7.8										
pH high	≤9.5	8.1	8.0	8.0	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.0	8.0										
Flow (m <sup>3</sup> /month)	—	59,078	58,629	59,195	70,290	76,570	83,333	64,722	52,700	49,598	53,546	50,100	50,670										
Rainbow Trout	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Endako Mines																						
Operator Name	Thompson Creek Mining Ltd.																						
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	NMR	0.0003	NMR	NMR	0.0001	NMR	NMR	0.0001	NMR	NMR	0.0001	NMR										
Cu (mg/L)	0.3	NMR	0.0013	NMR	NMR	0.0012	NMR	NMR	0.0005	NMR	NMR	0.0005	NMR										
CN (mg/L)	1.0	NMR	0.0679	NMR	NMR	0.0025	NMR	NMR	0.0025	NMR	NMR	0.0471	NMR										
Pb (mg/L)	0.2	NMR	0.0001	NMR	NMR	0.0001	NMR	NMR	0.0001	NMR	NMR	0.0001	NMR										
Ni (mg/L)	0.5	NMR	0.0013	NMR	NMR	0.0005	NMR	NMR	0.0005	NMR	NMR	0.0005	NMR										
Zn (mg/L)	0.5	NMR	0.0025	NMR	NMR	0.0030	NMR	NMR	0.0030	NMR	NMR	0.0025	NMR										
TSS (mg/L)	15	0.50	0.50	0.50	0.50	1.08	0.75	0.90	0.68	0.63	0.70	0.68	0.50										
Ra-226 (Bq/L)	0.37	NMR	0.0025	NMR	NMR	0.0025	NMR	NMR	0.0042	NMR	NMR	0.0038	NMR										
pH low	≥6.0	7.8	7.8	7.9	8.0	7.8	7.9	7.6	7.9	7.9	8.0	7.8	7.9										
pH high	≤9.5	8.0	8.0	8.0	8.0	8.1	8.0	8.0	8.0	8.1	8.1	8.0	8.0										
Flow (m <sup>3</sup> /month)	—	44,028	41,610	42,245	66,190	59,886	46,920	40,474	38,704	37,350	40,660	39,270	36,177										
Rainbow Trout	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Endako Mines																						
Operator Name	Thompson Creek Mining Ltd.																						
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	NMR	0.0003	NMR	NMR	0.0010	NMR	NMR	0.0003	ND										
Cu (mg/L)	0.3	ND	ND	ND	NMR	0.0064	NMR	NMR	0.0013	NMR	NMR	0.0013	ND										
CN (mg/L)	1.0	ND	ND	ND	NMR	0.0092	NMR	NMR	0.0025	NMR	NMR	0.0025	ND										
Pb (mg/L)	0.2	ND	ND	ND	NMR	0.0001	NMR	NMR	0.0001	NMR	NMR	0.0001	ND										
Ni (mg/L)	0.5	ND	ND	ND	NMR	0.0013	NMR	NMR	0.0013	NMR	NMR	0.0013	ND										
Zn (mg/L)	0.5	ND	ND	ND	NMR	0.0150	NMR	NMR	0.0150	NMR	NMR	0.0025	ND										
TSS (mg/L)	15	ND	ND	ND	1.05	1.60	2.70	1.27	0.68	0.68	1.26	0.50	ND										
Ra-226 (Bq/L)	0.37	ND	ND	ND	NMR	0.0025	NMR	NMR	0.0045	NMR	NMR	0.0076	ND										
pH low	≥6.0	ND	ND	ND	7.7	8.0	7.6	7.7	7.9	8.0	7.9	8.0	ND										
pH high	≤9.5	ND	ND	ND	8.0	8.2	8.1	8.1	8.2	8.1	8.2	8.0	ND										
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	9,968	12,251	3,810	1,331	1,790	1,260	1,996	108	ND										
Rainbow Trout	Pass	ND	ND	ND	NMR	1	NMR	NMR	1	NMR	NMR	1	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	NMR	1	NMR	NMR	1	NMR	NMR	1	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Fire Lake (Mine)																						
Operator Name	ArcelorMittal Mines Canada																						
Product(s)	Iron																						
Address	P.O. Box 1817, Mont-Wright, Quebec G0G 1J0																						
Effluent Discharge Point	Main Pit (FL-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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Francoeur (Mine)																				
<b>Operator Name</b>	Richmont Mines Inc.																				
<b>Product(s)</b>	Gold																				
<b>Address</b>	199 Provencher Avenue, P.O. 39, Rouyn-Noranda, Quebec J0Z 1B0																				
<b>Effluent Discharge Point</b>	Francoeur Final Effluent																				
<b>Parameters</b>	<b>Limits</b>	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.								
As (mg/L)	0.5	-	-	-	-	-	-	-	0.0016	0.0005	0.0005	0.0007	0.0016								
Cu (mg/L)	0.3	-	-	-	-	-	-	-	0.0022	0.0022	0.0032	0.0028	0.0012								
CN (mg/L)	1.0	-	-	-	-	-	-	-	0.0000	0.0000	0.0000	0.0000	0.0000								
Pb (mg/L)	0.2	-	-	-	-	-	-	-	0.0002	0.0012	0.0022	0.0057	0.0039								
Ni (mg/L)	0.5	-	-	-	-	-	-	-	0.0075	0.0100	0.0064	0.0044	0.0059								
Zn (mg/L)	0.5	-	-	-	-	-	-	-	0.0740	0.0673	0.0734	0.0595	0.0408								
TSS (mg/L)	15	-	-	-	-	-	-	-	3.00	3.25	3.80	5.25	1.25								
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	0.0040	0.0060	0.0014	0.0023	0.0020								
pH low	≥6.0	-	-	-	-	-	-	-	7.6	7.5	7.3	7.4	7.5								
pH high	≤9.5	-	-	-	-	-	-	-	7.6	7.8	7.6	7.6	8.0								
Flow (m <sup>3</sup> /month)	—	-	-	-	-	-	-	-	5,250	27,567	31,173	31,976	31,560								
Rainbow Trout	Pass	-	-	-	-	-	-	-	-	1	1	1	1								
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-								
Daphnia magna	Pass	-	-	-	-	-	-	-	-	1	1	1	1								
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-								
<b>Comments:</b>	This mine became subject to the MMER in August 2012. No toxicity test results were provided for August.																				
Notes: ND: No Deposit	NMR: No Measurement Required	Pass: ≤50% Mortality	Fail: >50% Mortality																		
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Géant Dormant (Mine)																							
Operator Name	Ressources Cadiscor Inc. / North American Palladium Ltd.																							
Product(s)	Gold																							
Address	Km 118, Road 109 North, Amos, Quebec J9T 3A3																							
Effluent Discharge Point	GD-E01 Final Effluent – Mine Water Pond																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.											
As (mg/L)	0.5	0.0003	NMR	NMR	0.0033	NMR	0.0009	0.0003	0.0003	NMR	0.0351	NMR	NMR											
Cu (mg/L)	0.3	0.0084	0.0050	0.0046	0.0003	NMR	0.0028	0.0057	0.0054	0.0008	0.0024	0.0063	0.0066											
CN (mg/L)	1.0	NMR	NMR	NMR	0.0100	NMR	NMR	0.0060	0.0025	NMR	0.0050	NMR	NMR											
Pb (mg/L)	0.2	0.0002	NMR	NMR	0.0416	NMR	0.0002	0.0002	0.0002	NMR	0.0014	NMR	NMR											
Ni (mg/L)	0.5	0.0016	NMR	NMR	0.0022	NMR	0.0020	0.0042	0.0037	NMR	0.0020	NMR	NMR											
Zn (mg/L)	0.5	0.1146	0.0988	0.0930	0.1290	0.1098	0.1305	0.1628	0.1620	0.2018	0.1768	0.1913	0.1345											
TSS (mg/L)	15	3.20	1.50	2.25	2.50	2.10	2.13	1.70	1.00	0.63	5.10	2.00	1.63											
Ra-226 (Bq/L)	0.37	0.0090	NMR	NMR	0.0050	NMR	NMR	0.0120	NMR	NMR	0.0140	NMR	NMR											
pH low	≥6.0	7.8	7.9	8.5	8.3	8.5	8.2	8.0	7.7	7.9	8.1	8.0	8.1											
pH high	≤9.5	8.1	8.5	8.8	8.8	8.8	8.5	8.6	8.0	8.1	8.4	8.4	8.2											
Flow (m <sup>3</sup> /month)	—	101,586	66,591	74,721	63,962	118,035	106,125	53,064	87,610	78,086	85,629	95,047	69,867											
Rainbow Trout	Pass	1	NMR	NMR	1	NMR	NMR	1	1	NMR	1	NMR	NMR											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	1	NMR	NMR	1	NMR	NMR	1	1	NMR	1	NMR	NMR											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	In May 2009, the ownership of Géant Dormant Mine was transferred from Cadiscor Resources Inc. to North American Palladium Ltd.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Giant Mine																						
Operator Name	Aboriginal Affairs and Northern Development Canada																						
Product(s)	Gold																						
Address	Giant Minesite, Box 2951, Yellowknife, Northwest Territories X1A 2R2																						
Effluent Discharge Point	Surveillance Network Program Station 43-1																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	ND	ND	ND	ND	ND	0.3480	0.2870	0.2373	0.2683	0.2868	ND	ND										
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0188	0.0121	0.0124	0.0129	0.0119	ND	ND										
CN (mg/L)	1.0	ND	ND	ND	ND	ND	0.0025	0.0025	0.0025	0.0025	0.0025	ND	ND										
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0001	0.0001	0.0001	0.0001	0.0001	ND	ND										
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0425	0.0319	0.0307	0.0377	0.0359	ND	ND										
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0094	0.0061	0.0075	0.0069	0.0058	ND	ND										
TSS (mg/L)	15	ND	ND	ND	ND	ND	1.00	1.04	1.13	0.73	0.50	ND	ND										
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0025	0.0025	0.0100	0.0100	0.0100	ND	ND										
pH low	≥6.0	ND	ND	ND	ND	ND	8.2	7.7	8.2	8.3	8.2	ND	ND										
pH high	≤9.5	ND	ND	ND	ND	ND	8.2	8.3	8.3	8.4	8.4	ND	ND										
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	ND	58,393	259,371	177,582	89,170	73,196	ND	ND										
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	ND	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Gibraltar Mine																					
<b>Operator Name</b>	Taseko Mines Ltd.																					
<b>Product(s)</b>	Copper-Molybdenum																					
<b>Address</b>	10251 Gibraltar Mine Road, P.O. Box 130, McLeese Lake, British Columbia V0L 1P0																					
<b>Effluent Discharge Point</b>	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	0.0003	0.0004	0.0003	0.0003	0.0003	0.0006	0.0004	0.0003	ND									
Cu (mg/L)	0.3	ND	ND	ND	0.0029	0.0017	0.0016	0.0019	0.0024	0.0024	0.0023	0.0012	ND									
CN (mg/L)	1.0	ND	ND	ND	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	ND									
Pb (mg/L)	0.2	ND	ND	ND	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	ND									
Ni (mg/L)	0.5	ND	ND	ND	0.0074	0.0008	0.0005	0.0011	0.0010	0.0006	0.0015	0.0005	ND									
Zn (mg/L)	0.5	ND	ND	ND	0.0025	0.0031	0.0025	0.0025	0.0025	0.0031	0.0032	0.0025	ND									
TSS (mg/L)	15	ND	ND	ND	2.47	1.70	1.78	1.84	1.23	2.13	5.40	0.50	ND									
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0100	NMR	NMR	0.0025	0.0033	NMR	0.0025	NMR	ND									
pH low	≥6.0	ND	ND	ND	7.5	7.3	7.0	6.9	7.4	6.7	7.5	7.0	ND									
pH high	≤9.5	ND	ND	ND	8.2	7.8	7.2	7.6	7.9	7.6	7.6	7.0	ND									
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	240,748	327,084	395,273	383,700	432,998	370,650	393,721	107,987	ND									
<b>Rainbow Trout</b>	<b>Pass</b>	ND	ND	ND	1	1	1	1	1	1	1	1	ND									
<b>Acute Lethality Test</b>	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Daphnia magna</b>	<b>Pass</b>	ND	ND	ND	1	1	1	-	1	1	1	1	ND									
<b>Monitoring Test</b>	<b>Fail</b>	-	-	-	-	-	-	-	1	-	-	-	-									
<b>Comments:</b>																						
Notes: ND: No Deposit			NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Golden Giant Mine																						
<b>Operator Name</b>	Newmont Canada Corporation																						
<b>Product(s)</b>	Gold																						
<b>Address</b>	Yellow Brick Road, Hwy. 17, P.O. Box 40, Marathon, Ontario P0T 2E0																						
<b>Effluent Discharge Point</b>	Waste Water Treatment Plant 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	0.0009	ND	ND	0.0012	0.0017	0.0015	0.0009										
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0008	ND	ND	0.0001	0.0003	0.0005	0.0001										
CN (mg/L)	1.0	ND	ND	ND	ND	ND	0.0397	ND	ND	0.0469	0.0496	0.0369	0.0268										
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0001	ND	ND	0.0001	0.0001	0.0001	0.0001										
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.0039	ND	ND	0.0053	0.0050	0.0069	0.0066										
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0003	ND	ND	0.0003	0.0006	0.0003	0.0006										
TSS (mg/L)	15	ND	ND	ND	ND	ND	6.73	ND	ND	5.50	6.54	2.98	2.53										
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0067	ND	ND	0.0050	0.0096	0.0090	0.0110										
pH low	≥6.0	ND	ND	ND	ND	ND	7.3	ND	ND	7.3	7.2	7.2	7.4										
pH high	≤9.5	ND	ND	ND	ND	ND	7.4	ND	ND	7.6	7.4	7.4	7.4										
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	ND	27,817	ND	ND	31,391	36,723	39,190	32,211										
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	ND	ND	1	1	1	1										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	ND	ND	1	1	1	1										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Goldex (Mine)																						
Operator Name	Mines Agnico-Eagle Ltée																						
Product(s)	Gold																						
Address	1953 3rd Avenue West, P.O. Box 87, Val-d'Or, Quebec J9P 4N9																						
Effluent Discharge Point	Final Effluent – Goldex Tailings Pond																						
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	0.0003	0.0003	0.0003	0.0003	0.0003	0.0005	0.0008	0.0006	ND										
Cu (mg/L)	0.3	0.0010	0.0027	0.0015	0.0010	0.0026	0.0015	0.0012	0.0006	0.0009	0.0005	0.0006	ND										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	ND										
Pb (mg/L)	0.2	0.0129	0.0084	0.0011	0.0034	0.0025	0.0171	0.0016	0.0064	0.0002	0.0002	0.0003	ND										
Ni (mg/L)	0.5	0.0058	0.0066	0.0071	0.0047	0.0052	0.0103	0.0043	0.0037	0.0081	0.0041	0.0041	ND										
Zn (mg/L)	0.5	0.0226	0.0336	0.0150	0.0071	0.0116	0.0135	0.0154	0.0054	0.0048	0.0045	0.0034	ND										
TSS (mg/L)	15	3.80	1.20	2.25	2.10	3.50	2.13	1.80	3.50	1.63	1.20	8.75	ND										
Ra-226 (Bq/L)	0.37	0.0016	0.0018	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	ND										
pH low	≥6.0	7.2	7.1	6.9	7.1	7.6	7.2	7.4	7.8	7.6	7.5	7.5	ND										
pH high	≤9.5	7.5	7.7	7.2	7.7	8.0	7.9	7.9	7.9	7.9	7.6	7.6	ND										
Flow (m <sup>3</sup> /month)	—	245,428	116,805	522,843	391,964	429,178	167,428	42,325	94,373	190,634	332,294	315,472	ND										
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Haley Plant																						
Operator Name	Timmico Ltd.																						
Product(s)	Magnesium-Calcium-Strontium																						
Address	962 Magnesium Road, Haley 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	NMR	NMR	0.0005	NMR	0.0005	NMR	ND	ND	ND	0.0005	NMR	NMR										
Cu (mg/L)	0.3	NMR	NMR	0.0020	NMR	0.0020	NMR	ND	ND	ND	0.0020	NMR	NMR										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	ND	ND	ND	NMR	NMR	NMR										
Pb (mg/L)	0.2	NMR	NMR	0.0005	NMR	0.0005	NMR	ND	ND	ND	0.0005	NMR	NMR										
Ni (mg/L)	0.5	NMR	NMR	0.0025	NMR	0.0025	NMR	ND	ND	ND	0.0025	NMR	NMR										
Zn (mg/L)	0.5	NMR	NMR	0.0050	NMR	0.0050	NMR	ND	ND	ND	0.0100	NMR	NMR										
TSS (mg/L)	15	3.20	1.00	1.00	3.75	3.60	4.00	ND	ND	ND	2.50	2.75	2.00										
Ra-226 (Bq/L)	0.37	NMR	NMR	0.0050	NMR	0.0200	NMR	ND	ND	ND	0.0200	NMR	NMR										
pH low	≥6.0	7.4	7.5	7.5	7.2	6.6	6.2	ND	ND	ND	6.9	7.1	7.0										
pH high	≤9.5	7.7	7.7	7.8	7.8	7.0	8.0	ND	ND	ND	6.9	7.3	7.5										
Flow (m <sup>3</sup> /month)	—	3,360	1,385	16,841	30,390	53,289	26,415	ND	ND	ND	23,499	1,613	855										
Rainbow Trout	Pass	NMR	NMR	1	NMR	1	NMR	ND	ND	ND	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	NMR	NMR	1	NMR	1	NMR	ND	ND	ND	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Holloway Mine																							
<b>Operator Name</b>		Holloway Mining Company																							
<b>Product(s)</b>		Gold																							
<b>Address</b>		Highway 101E, P.O. Box 609, Matheson, Ontario P0K 1N0																							
<b>Effluent Discharge Point</b>		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	0.0020	0.0032	0.0028	ND												
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	0.0375	0.0560	0.0775	ND												
CN (mg/L)	1.0	ND	ND	ND	ND	ND	ND	ND	ND	0.0125	0.0074	0.0063	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	0.0300	0.0420	0.0750	ND												
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	0.0009	0.0023	0.0023	ND												
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	2.98	0.77	0.57	ND												
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	0.0025	0.0025	0.0025	ND												
pH low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	7.1	7.1	7.2	ND												
pH high	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	7.4	7.5	7.3	ND												
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	ND	ND	ND	ND	1,098,924	1,056,249	436,119	ND												
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	1	1	1	ND												
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	1	1	1	ND												
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
<b>Comments:</b>																									
Notes: ND: No Deposit		NMR: No Measurement Required				Pass: ≤50% Mortality				Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Huckleberry Mine																					
Operator Name	Huckleberry Mines Ltd.																					
Product(s)	Copper-Molybdenum-Gold-Silver																					
Address	P.O. Box 3000, Houston, British Columbia V0J 1Z0																					
Effluent Discharge Point	Hu.EZDD – East Zone Diversion 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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-									
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND									
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Comments:</b>																						
Notes: ND: No Deposit			NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Huckleberry Mine																							
Operator Name	Huckleberry Mines Ltd.																							
Product(s)	Copper-Molybdenum-Gold-Silver																							
Address	P.O. Box 3000, Houston, British Columbia V0J 1Z0																							
Effluent Discharge Point	Hu.SC4 – Sediment Control Structure 4																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.											
As (mg/L)	0.5	0.0008	0.0010	0.0007	0.0010	0.0011	0.0016	0.0013	0.0010	0.0010	0.0008	0.0008	0.0010											
Cu (mg/L)	0.3	0.0083	0.0080	0.0085	0.0471	0.0117	0.0095	0.0162	0.0092	0.0075	0.0139	0.0214	0.0119											
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR											
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001	0.0001											
Ni (mg/L)	0.5	0.0022	0.0022	0.0028	0.0140	0.0032	0.0025	0.0025	0.0024	0.0037	0.0030	0.0040	0.0029											
Zn (mg/L)	0.5	0.0042	0.0035	0.0038	0.0171	0.0050	0.0044	0.0108	0.0054	0.0065	0.0063	0.0069	0.0054											
TSS (mg/L)	15	0.84	0.50	0.65	3.36	1.85	2.05	0.86	0.90	0.65	0.86	0.75	0.65											
Ra-226 (Bq/L)	0.37	-	-	-	NMR	NMR	0.0060	NMR	0.0025	NMR	NMR	0.0025	NMR											
pH low	≥6.0	7.5	7.6	7.5	7.5	7.6	7.7	7.5	7.7	7.6	7.4	7.6	7.7											
pH high	≤9.5	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.7	7.8											
Flow (m <sup>3</sup> /month)	—	31,791	30,866	33,492	120,141	114,651	51,521	50,357	44,135	42,942	50,251	42,285	42,250											
Rainbow Trout	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	No test results for radium 226 were provided for the first quarter.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Huckleberry Mine																							
<b>Operator Name</b>		Huckleberry Mines Ltd.																							
<b>Product(s)</b>		Copper-Molybdenum-Gold-Silver																							
<b>Address</b>		P.O. Box 3000, Houston, British Columbia V0J 1Z0																							
<b>Effluent Discharge Point</b>		HUSC7 - 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	ND	ND												
Cu (mg/L)	0.3	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND												
CN (mg/L)	1.0	-	-	-	-	-	-	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	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND												
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
<b>Comments:</b>	This new final discharge point became subject to the MMER in July 2012.																								
Notes: ND: No Deposit		NMR: No Measurement Required		Pass: ≤50% Mortality		Fail: >50% Mortality																			
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Huckleberry Mine																							
Operator Name	Huckleberry Mines Ltd.																							
Product(s)	Copper-Molybdenum-Gold-Silver																							
Address	P.O. Box 3000, Houston, British Columbia V0J 1Z0																							
Effluent Discharge Point	Hu.TMF2 – Tailings Management Facility 2 Supernatant / Hu.TRO - Tahtsa Reach Outfall																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.											
As (mg/L)	0.5	0.0022	0.0011	0.0013	0.0009	0.0012	0.0012	0.0013	0.0015	-	ND	ND	-											
Cu (mg/L)	0.3	0.0086	0.0116	0.0117	0.0117	0.0360	0.0047	0.0043	0.0025	-	ND	ND	-											
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	ND	ND	NMR											
Pb (mg/L)	0.2	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0008	0.0001	-	ND	ND	-											
Ni (mg/L)	0.5	0.0018	0.0022	0.0018	0.0024	0.0047	0.0007	0.0006	0.0003	-	ND	ND	-											
Zn (mg/L)	0.5	0.0037	0.0029	0.0020	0.0025	0.0067	0.0014	0.0016	0.0015	-	ND	ND	-											
TSS (mg/L)	15	4.49	3.38	4.40	2.98	3.53	5.53	8.74	8.80	-	ND	ND	-											
Ra-226 (Bq/L)	0.37	-	-	-	NMR	NMR	0.0100	NMR	0.0080	NMR	ND	ND	-											
pH low	≥6.0	7.6	7.6	7.5	7.2	7.5	7.3	6.7	7.2	-	ND	ND	-											
pH high	≤9.5	7.9	7.9	7.6	7.6	8.1	7.6	7.5	9.4	-	ND	ND	-											
Flow (m <sup>3</sup> /month)	—	454,089	273,924	465,429	441,101	380,725	287,259	279,695	294,683	48,326	ND	ND	40,039											
Rainbow Trout	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	ND	ND	-											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	ND	ND	-											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	No test results for radium 226 were provided for the first quarter. Only flow measurement was provided for September and December. This final discharge point has been renamed as "Hu.TRO - Tahtsa Reach Outfall"																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Iron Ore Company of Canada - Carol Project																						
Operator Name	Iron Ore Company of Canada																						
Product(s)	Iron																						
Address	2 Avalon Drive, P.O. Box 1000, Labrador City, Newfoundland and Labrador A2V 2Y6																						
Effluent Discharge Point	Julienne Narrows																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	0.0005	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)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0003	0.0003	0.0003	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003										
Ni (mg/L)	0.5	0.0010	0.0010	0.0010	0.0014	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010										
Zn (mg/L)	0.5	0.0026	0.0025	0.0025	0.0025	0.0025	0.0035	0.0032	0.0025	0.0053	0.0025	0.0047	0.0055										
TSS (mg/L)	15	0.70	0.50	0.88	0.50	1.18	2.53	0.94	1.15	1.93	1.14	0.80	0.76										
Ra-226 (Bq/L)	0.37	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0080	0.0050	0.0100	0.0100	0.0050	0.0050										
pH low	≥6.0	7.8	7.8	7.7	7.9	7.7	7.7	7.9	7.9	8.0	7.9	7.9	7.8										
pH high	≤9.5	7.8	7.9	7.8	8.0	7.8	8.0	8.0	8.1	8.0	8.1	8.0	8.0										
Flow (m <sup>3</sup> /month)	—	146,856,672	91,790,496	76,704,019	34,047,216	128,357,499	166,512,024	113,513,267	118,214,524	100,733,550	96,583,104	88,361,280	78,852,096										
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Island Gold Project																							
<b>Operator Name</b>	Richmont Mines Inc.																							
<b>Product(s)</b>	Gold																							
<b>Address</b>	15 Goudreau Road, P.O. Box 456, Dubreuilville, Ontario P0S 1B0																							
<b>Effluent Discharge Point</b>	IG-2																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.											
As (mg/L)	0.5	ND	ND	ND	0.0008	0.0010	ND	0.0040	0.0034	ND	0.0156	0.0113	0.0049											
Cu (mg/L)	0.3	ND	ND	ND	0.0019	0.0022	ND	0.0022	0.0027	ND	0.0084	0.0063	0.0047											
CN (mg/L)	1.0	ND	ND	ND	0.0009	0.0005	ND	0.0023	0.0023	ND	0.0200	0.0153	0.0095											
Pb (mg/L)	0.2	ND	ND	ND	0.0001	0.0001	ND	0.0001	0.0003	ND	0.0003	0.0003	0.0012											
Ni (mg/L)	0.5	ND	ND	ND	0.0012	0.0034	ND	0.0010	0.0019	ND	0.0084	0.0062	0.0055											
Zn (mg/L)	0.5	ND	ND	ND	0.0027	0.0027	ND	0.0014	0.0035	ND	0.0030	0.0032	0.0075											
TSS (mg/L)	15	ND	ND	ND	5.58	6.13	ND	6.16	22.13	ND	12.50	9.72	39.70											
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0050	NMR	ND	NMR	0.0100	ND	NMR	0.0050	NMR											
pH low	≥6.0	ND	ND	ND	7.7	8.2	ND	8.0	8.2	ND	8.5	7.9	7.9											
pH high	≤9.5	ND	ND	ND	8.0	8.4	ND	8.3	8.3	ND	8.5	8.1	7.9											
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	320,371	166,376	ND	267,115	183,995	ND	33,778	516,383	40,410											
Rainbow Trout	Pass	ND	ND	ND	1	1	ND	1	1	ND	-	1	1											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	ND	ND	ND	1	1	ND	1	1	ND	-	1	1											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
<b>Comments:</b>	No toxicity test results were provided for October.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Joe Mann																					
<b>Operator Name</b>	Legault Métal Inc.																					
<b>Product(s)</b>	Gold-Copper																					
<b>Address</b>	P.O. Box 400, Chibougamau, Quebec G8P 2X8																					
<b>Effluent Discharge Point</b>	Polishing Pond Effluent – Point 10																					
<b>Parameters</b>	<b>Limits</b>	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)	1.0	-	-	-	-	-	-	-	-	-	-	-	-									
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	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Comments:</b>	As of October 25, 2011, the mine has received “Recognized Closed Mine Status” and therefore is no longer subject to the MMER.																					
Notes: ND: No Deposit	NMR: No Measurement Required	Pass: ≤50% Mortality	Fail: >50% Mortality																			
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Kemess South Mine																							
Operator Name	AuRico Gold Inc.																							
Product(s)	Gold-Copper																							
Address	P.O. Box 3519, Smithers, British Columbia V0J 2N0																							
Effluent Discharge Point	KS.WQ14 – Runoff																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.											
As (mg/L)	0.5	0.0005	0.0004	0.0003	0.0006	0.0010	0.0008	0.0006	0.0004	0.0003	0.0003	0.0004	0.0003											
Cu (mg/L)	0.3	0.0014	0.0014	0.0012	0.0022	0.0036	0.0023	0.0022	0.0016	0.0012	0.0015	0.0016	0.0012											
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR											
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001											
Ni (mg/L)	0.5	0.0002	0.0002	0.0002	0.0003	0.0004	0.0002	0.0002	0.0002	0.0002	0.0002	0.0012	0.0002											
Zn (mg/L)	0.5	0.0005	0.0008	0.0003	0.0008	0.0016	0.0007	0.0008	0.0003	0.0005	0.0008	0.0046	0.0008											
TSS (mg/L)	15	4.92	2.85	2.40	4.55	12.23	3.24	2.97	2.65	1.92	2.43	2.25	2.28											
Ra-226 (Bq/L)	0.37	NMR	NMR	0.0025	NMR	0.0050	NMR	NMR	0.0050	NMR	0.0100	NMR	NMR											
pH low	≥6.0	8.1	8.1	8.1	8.1	8.0	8.1	8.0	8.2	8.2	8.0	8.2	8.1											
pH high	≤9.5	8.2	8.3	8.3	8.2	8.2	8.3	8.3	8.4	8.4	8.4	8.3	8.3											
Flow (m <sup>3</sup> /month)	—	18,479	22,131	40,800	69,788	504,684	323,586	32,486	19,151	19,233	27,632	19,051	15,334											
Rainbow Trout	Pass	NMR	NMR	1	NMR	1	NMR	NMR	1	NMR	1	NMR	NMR											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	NMR	NMR	1	NMR	1	NMR	NMR	1	NMR	1	NMR	NMR											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:																								
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Key Lake Operation																							
<b>Operator Name</b>		Cameco Corporation																							
<b>Product(s)</b>		Uranium																							
<b>Address</b>		2121-11th Street West, Saskatoon, Saskatchewan S7M 1J3																							
<b>Effluent Discharge Point</b>		Station 1.2 – Dewatering Discharge to Horsefly Lake																							
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	0.0001												
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR												
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	0.0234	0.0202	0.0303	0.0290	0.0183	0.0168	0.0200	0.0253	0.0230	0.0286	0.0320	0.0236												
Zn (mg/L)	0.5	0.0024	0.0015	0.0024	0.0019	0.0014	0.0012	0.0012	0.0020	0.0018	0.0018	0.0021	0.0016												
TSS (mg/L)	15	0.18	0.20	0.18	0.10	0.18	0.10	0.12	0.25	0.10	0.10	0.10	0.10												
Ra-226 (Bq/L)	0.37	0.0025	0.0025	0.0025	0.0034	0.0043	0.0025	0.0038	0.0039	0.0025	0.0025	0.0044	0.0051												
pH low	≥6.0	6.3	6.4	6.4	6.3	6.7	6.4	6.2	6.1	6.2	6.4	6.4	6.2												
pH high	≤9.5	6.9	6.7	6.7	6.8	6.9	6.7	6.6	6.7	6.8	6.7	6.7	6.7												
Flow (m <sup>3</sup> /month)	—	461,638	359,022	476,231	470,552	246,383	328,297	492,155	466,918	287,292	444,777	479,465	540,235												
Rainbow Trout	Pass	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1												
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1												
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
<b>Comments:</b>																									
Notes: ND: No Deposit		NMR: No Measurement Required		Pass: ≤50% Mortality				Fail: >50% Mortality																	
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Kidd Metallurgical Division																						
Operator Name	Xstrata Canada Corporation																						
Product(s)	Zinc-Copper-Silver-Lead-Cadmium-Indium-Cobalt-Selenium-Palladium-Platinum																						
Address	10050 Highway 101 East, P.O. Bag 2002, 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	0.0003	0.0003	0.0005	0.0003	0.0008	0.0007	0.0011	0.0012	0.0018	0.0012	0.0008	0.0004										
Cu (mg/L)	0.3	0.0023	0.0077	0.0048	0.0052	0.0045	0.0073	0.0052	0.0080	0.0050	0.0054	0.0058	0.0016										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0010	0.0010	0.0013	0.0016	0.0010	0.0018	0.0012	0.0010	0.0013	0.0014	0.0010	0.0010										
Ni (mg/L)	0.5	0.0010	0.0013	0.0010	0.0012	0.0010	0.0013	0.0010	0.0013	0.0020	0.0042	0.0023	0.0016										
Zn (mg/L)	0.5	0.0900	0.0977	0.0433	0.0264	0.0355	0.0253	0.0278	0.0133	0.0120	0.0146	0.0240	0.0260										
TSS (mg/L)	15	1.33	1.00	1.25	1.20	1.25	2.25	2.20	2.25	2.25	1.40	1.50	2.00										
Ra-226 (Bq/L)	0.37	NMR	0.0100	NMR	NMR	0.0050	NMR	NMR	0.0200	NMR	NMR	0.0050	NMR										
pH low	≥6.0	7.9	7.8	7.3	7.7	7.7	7.9	7.5	8.1	7.7	7.7	7.5	7.4										
pH high	≤9.5	8.1	7.8	8.5	8.3	8.0	8.1	7.9	8.4	8.1	8.2	8.3	7.8										
Flow (m <sup>3</sup> /month)	—	203,100	660,650	3,992,820	1,224,450	503,350	537,810	520,600	885,400	1,047,510	1,335,670	1,881,730	861,830										
Rainbow Trout	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Kiena (Mine)																							
Operator Name	Mines d'Or Wesdome Ltée																							
Product(s)	Gold																							
Address	950 Kienawisik Road, P.O. Box 268, Val-d'Or, Quebec J9P 4P3																							
Effluent Discharge Point	Final Effluent																							
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	ND	0.0005	ND	0.0005	0.0005	0.0005	0.0005	ND											
Cu (mg/L)	0.3	ND	ND	0.0105	0.0108	ND	0.0085	ND	0.0038	0.0030	0.0093	0.0090	ND											
CN (mg/L)	1.0	ND	ND	0.0110	0.0050	ND	0.0015	ND	0.0041	0.0023	0.0030	0.0060	ND											
Pb (mg/L)	0.2	ND	ND	0.0005	0.0009	ND	0.0005	ND	0.0005	0.0005	0.0005	0.0005	ND											
Ni (mg/L)	0.5	ND	ND	0.0305	0.0475	ND	0.0270	ND	0.0608	0.0450	0.0273	0.0270	ND											
Zn (mg/L)	0.5	ND	ND	0.0130	0.0103	ND	0.0068	ND	0.0090	0.0035	0.0035	0.0035	ND											
TSS (mg/L)	15	ND	ND	8.50	4.25	ND	3.00	ND	2.80	3.50	4.00	11.00	ND											
Ra-226 (Bq/L)	0.37	ND	ND	0.0043	0.0045	ND	0.0010	ND	0.0020	NMR	0.0010	NMR	ND											
pH low	≥6.0	ND	ND	7.1	7.4	ND	7.5	ND	7.6	7.8	7.6	7.4	ND											
pH high	≤9.5	ND	ND	7.4	7.7	ND	7.6	ND	8.0	8.0	7.8	7.4	ND											
Flow (m <sup>3</sup> /month)	—	ND	ND	85,503	35,319	ND	17,361	ND	311,376	41,773	62,647	20,533	ND											
Rainbow Trout	Pass	ND	ND	-	1	ND	1	ND	1	1	1	1	ND											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	ND	ND	-	1	ND	1	ND	1	1	1	1	ND											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	No toxicity test results were provided for March.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Lac Bloom (Mine)																					
Operator Name	Société en commandite de la mine de fer du Lac Bloom																					
Product(s)	Iron																					
Address	P.O. Box 880, Route 389, Fermont, Quebec G1G 1J0																					
Effluent Discharge Point	Mill Site - Surface Drainage 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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-									
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND									
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Comments:</b>																						
Notes: ND: No Deposit			NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Lac Bloom (Mine)																						
Operator Name	Société en commandite de la mine de fer du Lac Bloom																						
Product(s)	Iron																						
Address	P.O. Box 880, Route 389, Fermont, Quebec G1G 1J0																						
Effluent Discharge Point	Recycling Water Pond Treatment Effluent																						
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	ND	ND										
Cu (mg/L)	0.3	ND	ND	ND	ND	0.0025	0.0025	0.0021	0.0010	0.0013	0.0016	ND	ND										
CN (mg/L)	1.0	ND	ND	ND	ND	NMR	NMR	NMR	NMR	NMR	NMR	ND	ND										
Pb (mg/L)	0.2	ND	ND	ND	ND	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	ND	ND										
Ni (mg/L)	0.5	ND	ND	ND	ND	0.0045	0.0039	0.0019	0.0021	0.0024	0.0028	ND	ND										
Zn (mg/L)	0.5	ND	ND	ND	ND	0.0150	0.0088	0.0047	0.0035	0.0035	0.0098	ND	ND										
TSS (mg/L)	15	ND	ND	ND	ND	12.00	9.00	2.25	3.50	5.60	5.50	ND	ND										
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	0.0010	0.0010	0.0028	0.0045	0.0196	0.0010	ND	ND										
pH low	≥ 6.0	ND	ND	ND	ND	6.9	6.7	7.5	7.6	7.6	7.4	ND	ND										
pH high	≤ 9.5	ND	ND	ND	ND	7.1	7.8	7.7	7.8	7.7	7.7	ND	ND										
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	244,700	432,505	558,611	812,746	366,069	148,613	ND	ND										
Rainbow Trout	Pass	ND	ND	ND	ND	1	1	1	1	1	1	ND	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	1	1	1	1	1	1	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Lac des Iles Mine																							
<b>Operator Name</b>		North American Palladium Ltd.																							
<b>Product(s)</b>		Palladium-Platinum-Gold-Copper-Nickel-Cobalt																							
<b>Address</b>		P.O. Box 10547, Thunder Bay, Ontario P7B 6T9																							
<b>Effluent Discharge Point</b>		FDP 1																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.												
As (mg/L)	0.5	ND	ND	ND	0.0002	0.0002	0.0002	0.0002	0.0002	0.0009	0.0003	0.0003	0.0003												
Cu (mg/L)	0.3	ND	ND	ND	0.0015	0.0016	0.0013	0.0010	0.0010	0.0020	0.0008	0.0010	0.0012												
CN (mg/L)	1.0	ND	ND	ND	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR												
Pb (mg/L)	0.2	ND	ND	ND	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0001												
Ni (mg/L)	0.5	ND	ND	ND	0.0128	0.0136	0.0113	0.0091	0.0084	0.0159	0.0118	0.0129	0.0138												
Zn (mg/L)	0.5	ND	ND	ND	0.0006	0.0017	0.0002	0.0010	0.0007	0.0006	0.0003	0.0005	0.0003												
TSS (mg/L)	15	ND	ND	ND	8.20	8.76	10.13	11.03	6.92	9.38	10.58	5.68	6.60												
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0050	NMR	NMR	0.0050	0.0100	0.0050	0.0050	0.0050	0.0050												
pH low	≥6.0	ND	ND	ND	7.6	7.1	7.2	7.9	7.8	7.5	7.6	7.7	7.7												
pH high	≤9.5	ND	ND	ND	7.9	8.0	8.0	8.1	8.1	8.1	7.9	7.8	7.7												
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	99,245	174,837	208,748	210,827	203,970	193,793	175,814	106,868	5,861												
Rainbow Trout	Pass	ND	ND	ND	1	1	1	1	1	1	1	1	1												
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	ND	ND	ND	1	1	1	1	1	1	1	1	1												
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
<b>Comments:</b>																									
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Lac Herbin (Mine)																							
Operator Name	Alexis Minerals Corporation - QMX Gold Corporation																							
Product(s)	Gold																							
Address	1900 Brador Road, Val-d'Or, Quebec J9P 7A9																							
Effluent Discharge Point	Final Effluent 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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	As of August 2012 the company name changed from Alexis Minerals Corporation to QMX Gold Corporation.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality																	
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Langlois (Mine)																							
Operator Name	Ressources Breakwater Ltée / Nyrstar																							
Product(s)	Zinc-Copper-Gold-Silver																							
Address	P.O. Box 6000, Route 1000, Km. 42, Lebel-sur-Quévillon, Quebec J0Y 1X0																							
Effluent Discharge Point	Main Final Effluent																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.											
As (mg/L)	0.5	0.0005	0.0007	0.0005	0.0006	0.0009	0.0010	0.0010	0.0007	0.0011	0.0011	0.0015	0.0006											
Cu (mg/L)	0.3	0.0102	0.0140	0.0158	0.0093	0.0106	0.0103	0.0128	0.0080	0.0123	0.0130	0.0180	0.0152											
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR											
Pb (mg/L)	0.2	0.0015	0.0033	0.0148	0.0545	0.0804	0.0053	0.0028	0.0028	0.0015	0.0074	0.0098	0.0060											
Ni (mg/L)	0.5	0.0082	0.0005	0.0129	0.0114	0.0179	0.0050	0.0225	0.0005	0.0068	0.0010	0.0006	0.0016											
Zn (mg/L)	0.5	0.2740	0.2033	0.1663	0.1193	0.1476	0.1807	0.1815	0.1880	0.1378	0.2346	0.2065	0.2254											
TSS (mg/L)	15	1.14	1.77	0.95	2.00	1.80	2.20	2.20	2.22	2.20	2.20	2.33	2.20											
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	NMR	0.0025	NMR	NMR	0.0025	NMR											
pH low	≥6.0	7.4	7.8	7.6	7.1	7.5	7.5	7.3	7.3	7.2	7.3	7.3	7.4											
pH high	≤9.5	8.0	8.2	8.1	7.8	7.7	7.7	7.5	7.7	7.7	7.4	7.7	7.5											
Flow (m <sup>3</sup> /month)	—	72,157	41,027	76,847	196,365	363,907	253,493	218,316	157,477	222,789	311,034	201,612	210,769											
Rainbow Trout	Pass	1	2	1	1	1	1	1	1	1	1	1	1											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	1	2	1	1	1	1	1	1	1	1	1	1											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	In August 2011, the ownership of Langlois Mine has been transferred from Ressources Breakwater Ltée to Nyrstar. No radium 226 test results were provided for the first and second quarters.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Laronde (Mine)																						
Operator Name	Mines Agnico-Eagle Ltée																						
Product(s)	Gold-Silver-Copper-Zinc																						
Address	10200 Preissac Road, Rouyn-Noranda, Quebec J0Y 2H0																						
Effluent Discharge Point	Final Effluent 3A																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	0.0038	0.0042	0.0030	0.0021	0.0026	0.0028	0.0030	0.0030	0.0034	0.0048	0.0020	0.0009										
Cu (mg/L)	0.3	0.0173	0.0196	0.0353	0.0425	0.0588	0.0513	0.0302	0.0380	0.0415	0.0228	0.0320	0.0333										
CN (mg/L)	1.0	0.0960	0.0694	0.0610	0.0443	0.0328	0.0178	0.0156	0.0210	0.0453	0.0588	0.0860	0.1033										
Pb (mg/L)	0.2	0.0005	0.0005	0.0005	0.0054	0.0045	0.0006	0.0005	0.0005	0.0009	0.0005	0.0005	0.0005										
Ni (mg/L)	0.5	0.1750	0.2540	0.2250	0.1603	0.0990	0.0578	0.0384	0.0685	0.0863	0.0924	0.1055	0.1138										
Zn (mg/L)	0.5	0.0353	0.0230	0.0423	0.0405	0.0268	0.0218	0.0094	0.0160	0.0300	0.0058	0.0113	0.0040										
TSS (mg/L)	15	5.95	3.91	7.10	12.15	14.76	10.45	6.46	8.68	9.60	7.38	4.98	4.20										
Ra-226 (Bq/L)	0.37	0.0060	NMR	NMR	0.0160	NMR	NMR	0.0025	NMR	NMR	0.0025	NMR	NMR										
pH low	≥6.0	7.0	6.9	6.7	6.9	6.6	6.8	7.0	6.9	7.0	6.9	6.8	6.7										
pH high	≤9.5	7.6	7.5	7.9	7.5	7.2	7.2	7.7	7.1	7.2	7.1	7.4	7.0										
Flow (m <sup>3</sup> /month)	—	120,914	127,509	265,142	251,555	234,449	206,367	190,690	230,049	281,895	310,098	281,284	191,038										
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	2	1										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	2	1										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Lupin Operations																						
Operator Name	Lupin Mines Inc.																						
Product(s)	Gold																						
Address	1104-750 West Pender Street, Vancouver, British Columbia V6C 2T8																						
Effluent Discharge Point	Tailings Polishing Pond 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	0.0087	ND	ND	ND										
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	0.0037	ND	ND	ND										
CN (mg/L)	1.0	ND	ND	ND	ND	ND	ND	ND	ND	0.0025	ND	ND	ND										
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	0.0001	ND	ND	ND										
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	0.0699	ND	ND	ND										
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	0.2318	ND	ND	ND										
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	3.00	ND	ND	ND										
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	0.0082	ND	ND	ND										
pH low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	6.1	ND	ND	ND										
pH high	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	7.1	ND	ND	ND										
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	ND	ND	ND	ND	1,066,836	ND	ND	ND										
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Magnacon Mine (part of Eagle River Mill)																							
<b>Operator Name</b>		Wesdome Gold Mines Ltd.																							
<b>Product(s)</b>		Gold																							
<b>Address</b>		93 Mission Road, P.O. Box 1520, Wawa, Ontario P0S 1K0																							
<b>Effluent Discharge Point</b>		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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND												
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
<b>Comments:</b>																									
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	MAX Molybdenum Mine and Mill																						
Operator Name	FortyTwo Metals Inc.																						
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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	MAX Molybdenum Mine and Mill																						
Operator Name	FortyTwo Metals Inc.																						
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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0012	-										
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0006	-										
CN (mg/L)	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NMR	-										
Pb (mg/L)	0.2	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	0.0010	-										
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0020	-										
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.00	-										
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-										
pH low	≥ 6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.4	-										
pH high	≤ 9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.4	-										
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	10,998										
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Comments:	Only flow data was provided for December. No Radium 226 test results were provided for November. No toxicity test results were provided for November and December.																						
Notes: ND: No Deposit	NMR: No Measurement Required	Pass: ≤50% Mortality								Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	McArthur River Operation																						
Operator Name	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	0.0012	0.0020	0.0027	0.0019	0.0025	0.0024	0.0016	0.0018	0.0019	0.0011	0.0020	0.0013										
Cu (mg/L)	0.3	0.0008	0.0014	0.0013	0.0013	0.0016	0.0014	0.0017	0.0013	0.0011	0.0011	0.0012	0.0011										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
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	0.0010	0.0012	0.0016	0.0012	0.0012	0.0009	0.0007	0.0007	0.0010	0.0011	0.0014	0.0012										
Zn (mg/L)	0.5	0.0010	0.0012	0.0022	0.0013	0.0025	0.0011	0.0013	0.0013	0.0008	0.0009	0.0012	0.0011										
TSS (mg/L)	15	0.80	1.38	0.88	0.88	0.70	0.50	1.00	0.63	0.63	0.80	0.50	0.50										
Ra-226 (Bq/L)	0.37	0.0460	0.0440	0.0475	0.0525	0.0440	0.0600	0.1220	0.0575	0.0775	0.0340	0.0350	0.0475										
pH low	≥6.0	7.1	7.1	7.1	6.9	6.8	7.2	6.7	7.0	6.9	7.1	7.1	7.1										
pH high	≤9.5	7.8	7.5	7.4	7.5	7.3	7.3	7.2	7.2	7.4	7.5	7.3	7.3										
Flow (m <sup>3</sup> /month)	—	177,776	161,959	175,320	177,078	191,635	172,500	212,758	202,173	176,460	204,058	251,733	221,866										
Rainbow Trout	Pass	NMR	1	NMR	NMR	NMR	1	NMR	NMR	1	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	NMR	1	NMR	NMR	NMR	1	NMR	NMR	1	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	McArthur River Operation																				
Operator Name	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	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0046	ND	ND								
Cu (mg/L)	0.3	0.0002	0.0001	0.0002	0.0002	0.0004	0.0001	0.0004	0.0003	0.0001	0.0270	ND	ND								
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	ND	ND								
Pb (mg/L)	0.2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	0.0048	ND	ND								
Ni (mg/L)	0.5	0.0016	0.0016	0.0016	0.0014	0.0014	0.0012	0.0015	0.0014	0.0012	0.0035	ND	ND								
Zn (mg/L)	0.5	0.0276	0.0265	0.0250	0.0230	0.0120	0.0098	0.0086	0.0136	0.0088	0.1300	ND	ND								
TSS (mg/L)	15	0.80	0.50	0.50	0.63	0.50	0.50	1.00	1.00	0.50	46.00	ND	ND								
Ra-226 (Bq/L)	0.37	0.0880	0.0850	0.0875	0.0800	0.0800	0.0925	0.0940	0.1100	0.0900	0.1300	ND	ND								
pH low	≥6.0	6.9	7.0	7.1	7.2	7.0	7.1	6.8	7.1	7.0	10.7	ND	ND								
pH high	≤9.5	7.2	7.5	7.2	7.3	7.3	7.2	7.7	7.3	7.2	10.7	ND	ND								
Flow (m <sup>3</sup> /month)	—	34,139	35,402	40,595	27,614	37,799	38,270	31,026	33,240	33,242	1,570	ND	ND								
Rainbow Trout	Pass	NMR	1	NMR	1	NMR	NMR	1	NMR	NMR	-	ND	ND								
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-								
Daphnia magna	Pass	NMR	1	NMR	1	NMR	NMR	1	NMR	NMR	-	ND	ND								
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-								
Comments:	No toxicity test results were submitted for the fourth quarter. The mine reported discharge of effluent during only 2 days in October.																				
Notes: ND: No Deposit	NMR: No Measurement Required	Pass: ≤50% Mortality	Fail: >50% Mortality																		
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	McClean Lake Operation																						
Operator Name	AREVA Resources Canada Inc.																						
Product(s)	Uranium																						
Address	P.O. Box 9204, 817-45th Street West, Saskatoon, Saskatchewan S7K 3X5																						
Effluent Discharge Point	CM03																						
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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		McClean Lake Operation																							
<b>Operator Name</b>		AREVA Resources Canada Inc.																							
<b>Product(s)</b>		Uranium																							
<b>Address</b>		P.O. Box 9204, 817-45th Street West, Saskatoon, Saskatchewan S7K 3X5																							
<b>Effluent Discharge Point</b>		SP01																							
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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND												
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
<b>Comments:</b>																									
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Meadowbank Mine																						
Operator Name	Agnico-Eagle Mines Ltd.																						
Product(s)	Gold																						
Address	P.O. Box 540, Baker Lake, Nunavut X0C 0A0																						
Effluent Discharge Point	Attenuation Pond Discharge																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	-	-	-	-	-	-	-	-	0.0023	ND	0.0078	ND										
Cu (mg/L)	0.3	-	-	-	-	-	-	-	-	0.0071	ND	0.0067	ND										
CN (mg/L)	1.0	-	-	-	-	-	-	-	-	0.1380	ND	0.2450	ND										
Pb (mg/L)	0.2	-	-	-	-	-	-	-	-	0.0099	ND	0.0002	ND										
Ni (mg/L)	0.5	-	-	-	-	-	-	-	-	0.0308	ND	0.0470	ND										
Zn (mg/L)	0.5	-	-	-	-	-	-	-	-	0.0090	ND	0.0005	ND										
TSS (mg/L)	15	-	-	-	-	-	-	3.75	4.40	3.25	ND	6.00	ND										
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	-	-	0.0500	ND	0.0480	ND										
pH low	≥6.0	-	-	-	-	-	-	7.0	6.9	7.3	ND	6.8	ND										
pH high	≤9.5	-	-	-	-	-	-	7.9	7.9	7.7	ND	6.8	ND										
Flow (m <sup>3</sup> /month)	—	-	-	-	-	-	-	340,841	136,572	132,300	ND	127,390	ND										
Rainbow Trout	Pass	-	-	-	-	-	-	1	1	-	ND	1	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	-	-	-	-	-	-	1	1	-	ND	1	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Comments:	This new final discharge point became subject to the MMER in July 2012. No test results for As, Cu, CN, Pb, Ni, Zn and radium 226 were provided for July and August. Toxicity test results were not provided for September.																						
Notes: ND: No Deposit	NMR: No Measurement Required	Pass: ≤50% Mortality				Fail: >50% Mortality																	
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Ming Mine																							
Operator Name	Rambler Metals and Mining Canada Ltd.																							
Product(s)	Copper-Gold																							
Address	P.O. Box 610, Baie Verte, Newfoundland and Labrador A0K 1B0																							
Effluent Discharge Point	Wastewater Treatment System Discharge																							
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	0.0005	ND	0.0005	0.0016	0.0005	0.0005	0.0005											
Cu (mg/L)	0.3	ND	ND	ND	0.0496	ND	0.0289	ND	0.0450	0.0569	0.0621	0.0690	0.0618											
CN (mg/L)	1.0	ND	ND	ND	0.0083	ND	0.0077	ND	NMR	NMR	NMR	NMR	NMR											
Pb (mg/L)	0.2	ND	ND	ND	0.0003	ND	0.0003	ND	0.0003	0.0003	0.0003	0.0006	0.0003											
Ni (mg/L)	0.5	ND	ND	ND	0.0030	ND	0.0288	ND	0.0707	0.0471	0.0227	0.1160	0.1085											
Zn (mg/L)	0.5	ND	ND	ND	0.0800	ND	0.0417	ND	0.4330	0.4520	0.3375	2.0300	0.9860											
TSS (mg/L)	15	ND	ND	ND	7.20	ND	7.60	ND	7.20	6.00	10.00	9.00	8.20											
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0100	ND	0.0300	ND	-	0.0500	0.0600	0.0600	0.0250											
pH low	≥ 6.0	ND	ND	ND	8.1	ND	7.9	ND	8.5	9.0	8.6	8.0	7.9											
pH high	≤ 9.5	ND	ND	ND	8.1	ND	7.9	ND	8.5	9.0	9.0	8.0	8.4											
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	2,567	ND	2,567	ND	2,996	2,996	4,354	2,177	30,437											
Rainbow Trout	Pass	ND	ND	ND	1	ND	1	ND	1	1	-	1	-											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	ND	ND	ND	1	ND	1	ND	1	-	-	1	-											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	1	-	-											
Comments:	No radium 226 test results were provided for August. No toxicity test results were provided for October and December.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Mishi Pit (part of Eagle River Mill)																							
Operator Name	Wesdome Gold Mines Ltd.																							
Product(s)	Gold																							
Address	93 Mission Road, P.O. Box 1520, Wawa, Ontario P0S 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	0.0011	0.0008	0.0009	0.0012	ND	ND	0.0004	0.0003	-	0.0010											
Cu (mg/L)	0.3	ND	ND	0.0010	0.0008	0.0013	0.0022	ND	ND	0.0003	0.0003	-	0.0008											
CN (mg/L)	1.0	ND	ND	NMR	NMR	NMR	NMR	ND	ND	NMR	NMR	NMR	NMR											
Pb (mg/L)	0.2	ND	ND	0.0003	0.0001	0.0003	0.0002	ND	ND	0.0000	0.0000	-	0.0001											
Ni (mg/L)	0.5	ND	ND	0.0008	0.0010	0.0013	0.0014	ND	ND	0.0003	0.0003	-	0.0009											
Zn (mg/L)	0.5	ND	ND	0.0013	0.0009	0.0011	0.0040	ND	ND	0.0010	0.0005	-	0.0010											
TSS (mg/L)	15	ND	ND	3.05	1.00	1.00	5.80	ND	ND	2.10	3.80	4.60	4.50											
Ra-226 (Bq/L)	0.37	ND	ND	0.0050	0.0075	0.0075	0.0050	ND	ND	0.0050	0.0050	-	0.0050											
pH low	≥6.0	ND	ND	6.2	6.7	6.8	6.7	ND	ND	7.1	7.0	7.1	6.8											
pH high	≤9.5	ND	ND	6.2	7.0	6.9	6.7	ND	ND	7.1	7.0	7.1	6.8											
Flow (m <sup>3</sup> /month)	—	ND	ND	16,184	12,478	1,520	960	ND	ND	90	991	6,489	19,385											
Rainbow Trout	Pass	ND	ND	1	-	1	1	ND	ND	1	1	1	1											
Acute Lethality Test	Fail	-	-	-	1	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	ND	ND	1	-	1	1	ND	ND	1	1	1	1											
Monitoring Test	Fail	-	-	-	1	-	-	-	-	-	-	-	-											
Comments:	No results for As, Cu, Pb, Ni, Zn and radium 226 were submitted for November.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Mont-Wright (Mine)																						
Operator Name	ArcelorMittal Mines Canada																						
Product(s)	Iron																						
Address	P.O. Box 1817, Mont-Wright, Quebec G0G 1J0																						
Effluent Discharge 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	0.0005	0.0005	0.0006	0.0005	0.0005	0.0005										
Cu (mg/L)	0.3	0.0030	0.0038	0.0030	0.0020	0.0030	0.0020	0.0012	0.0023	0.0134	0.0024	0.0015	0.0023										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	0.0005	0.0005										
Ni (mg/L)	0.5	0.0202	0.0270	0.0188	0.0093	0.0130	0.0110	0.0092	0.0140	0.0353	0.0088	0.0088	0.0095										
Zn (mg/L)	0.5	0.0120	0.0140	0.0113	0.0295	0.0164	0.0115	0.0074	0.0059	0.0106	0.0089	0.0205	0.0123										
TSS (mg/L)	15	2.30	1.13	3.38	6.25	9.00	6.50	8.20	11.75	7.00	7.40	5.25	3.00										
Ra-226 (Bq/L)	0.37	NMR	0.0090	NMR	NMR	0.0100	0.0060	0.0020	NMR	NMR	NMR	0.0050	NMR										
pH low	≥6.0	6.7	6.6	6.7	7.2	6.8	7.4	6.8	7.2	7.5	7.3	7.2	7.1										
pH high	≤9.5	7.1	7.2	7.6	7.5	7.6	7.4	7.8	7.4	7.8	7.7	7.7	7.4										
Flow (m <sup>3</sup> /month)	—	498,635	547,977	5,320,034	5,306,105	8,640,218	11,602,904	11,508,043	8,050,229	12,782,429	5,664,512	6,737,812	2,248,836										
Rainbow Trout	Pass	NMR	1	NMR	NMR	1	1	1	NMR	NMR	NMR	1	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	NMR	1	NMR	NMR	1	1	1	NMR	NMR	NMR	1	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Mouska (Mine)																						
Operator Name	Gestion IAMGOLD Québec Inc.																						
Product(s)	Gold																						
Address	P.O. Box 9999, 1075 3rd Ave. East, Val-d'Or, Quebec J9P 6M1																						
Effluent Discharge Point	Final Effluent																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	0.0003	NMR	NMR	0.0003	NMR	NMR	0.0005	NMR	NMR	0.0005	NMR	NMR										
Cu (mg/L)	0.3	0.0192	NMR	NMR	0.0113	NMR	NMR	0.0280	NMR	NMR	0.0230	0.0310	0.0330										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0008	NMR	NMR	0.0002	NMR	NMR	0.0010	NMR	NMR	0.0020	NMR	NMR										
Ni (mg/L)	0.5	0.0034	NMR	NMR	0.0040	NMR	NMR	0.0030	NMR	NMR	0.0030	NMR	NMR										
Zn (mg/L)	0.5	0.0100	NMR	NMR	0.0090	NMR	NMR	0.0010	NMR	NMR	0.0340	NMR	NMR										
TSS (mg/L)	15	5.60	4.50	4.50	8.50	5.80	9.35	6.66	6.88	5.83	5.66	4.68	3.10										
Ra-226 (Bq/L)	0.37	0.0060	NMR	NMR	0.0030	NMR	NMR	0.0025	NMR	NMR	0.0025	NMR	NMR										
pH low	≥6.0	7.9	7.9	7.9	7.9	7.8	7.7	6.9	7.9	7.9	7.9	7.9	7.8										
pH high	≤9.5	8.0	8.2	8.0	8.1	8.0	8.0	8.0	8.0	8.1	8.0	8.0	8.0										
Flow (m <sup>3</sup> /month)	—	101,833	100,266	108,576	100,656	110,225	122,828	155,472	190,390	197,294	237,288	206,928	174,163										
Rainbow Trout	Pass	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Myra Falls Operations																								
<b>Operator Name</b>		NVI Mining Ltd. / Nyrstar																								
<b>Product(s)</b>		Copper-Zinc-Lead-Gold-Silver																								
<b>Address</b>		P.O. Box 8000, Campbell River, British Columbia V9W 5E2																								
<b>Effluent Discharge Point</b>		MF.11A – Runoff Myra Ponds Effluent																								
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.													
As (mg/L)	0.5	0.0004	0.0005	0.0005	0.0008	0.0006	0.0004	0.0005	0.0006	0.0006	0.0005	0.0004	0.0005													
Cu (mg/L)	0.3	0.0263	0.0199	0.0291	0.0193	0.0158	0.0172	0.0325	0.0187	0.0242	0.0178	0.0294	0.0277													
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR													
Pb (mg/L)	0.2	0.0135	0.0023	0.0152	0.0023	0.0015	0.0014	0.0021	0.0018	0.0013	0.0030	0.0019	0.0028													
Ni (mg/L)	0.5	0.0015	0.0011	0.0015	0.0008	0.0009	0.0009	0.0013	0.0007	0.0007	0.0005	0.0007	0.0014													
Zn (mg/L)	0.5	0.3900	0.1986	0.3138	0.1830	0.1434	0.1393	0.1813	0.1059	0.1123	0.1035	0.1780	0.2370													
TSS (mg/L)	15	7.85	6.08	6.62	5.10	3.90	3.28	3.15	2.60	2.33	4.58	10.15	6.20													
Ra-226 (Bq/L)	0.37	NMR	0.0050	NMR	NMR	0.0050	NMR	NMR	0.0025	NMR	NMR	0.0050	NMR													
pH low	≥6.0	9.0	8.9	8.9	9.1	9.0	9.0	9.0	8.9	9.0	8.9	8.8	8.9													
pH high	≤9.5	9.0	9.0	9.0	9.2	9.1	9.0	9.2	9.2	9.1	8.9	8.9	9.4													
Flow (m <sup>3</sup> /month)	—	1,384,392	1,073,831	1,090,581	1,038,107	1,082,259	1,021,698	986,633	990,235	847,529	935,311	1,270,458	1,255,537													
Rainbow Trout	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR													
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-													
Daphnia magna	Pass	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR													
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-													
<b>Comments:</b>	In August 2011, the ownership of Myra Fall Operations was transferred from NVI Mining Ltd. to Nyrstar																									
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																		
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Nugget Pond Mine																							
Operator Name	Rambler Metals and Mining Canada Ltd.																							
Product(s)	Gold																							
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	ND	0.0016	ND	0.0016	0.0082	0.0058	0.0043	0.0043	0.0039	0.0055	0.0026	0.0023											
Cu (mg/L)	0.3	ND	0.0148	ND	0.0131	0.0542	0.0395	0.0312	0.0136	0.0129	0.0330	0.0146	0.0349											
CN (mg/L)	1.0	ND	0.0790	ND	0.3967	1.7000	0.4100	0.7100	0.5150	0.1135	0.1100	0.1195	0.2200											
Pb (mg/L)	0.2	ND	0.0021	ND	0.0136	0.0719	0.0458	0.0213	0.0038	0.0024	0.0199	0.0040	0.0022											
Ni (mg/L)	0.5	ND	0.0010	ND	0.0020	0.0062	0.0051	0.0048	0.0030	0.0028	0.0040	0.0027	0.0026											
Zn (mg/L)	0.5	ND	0.0050	ND	0.0184	0.1140	0.0769	0.0542	0.0253	0.0286	0.0640	0.0589	0.0313											
TSS (mg/L)	15	ND	0.85	ND	1.63	2.20	1.20	2.20	0.85	0.50	3.20	1.35	0.50											
Ra-226 (Bq/L)	0.37	ND	0.0050	ND	-	-	-	NMR	0.0050	0.0050	NMR	0.0100	NMR											
pH low	≥6.0	ND	7.5	ND	7.1	7.7	7.6	7.8	7.8	7.8	7.6	7.7	7.6											
pH high	≤9.5	ND	7.6	ND	7.3	7.7	7.6	7.8	7.9	7.8	7.6	7.8	7.6											
Flow (m <sup>3</sup> /month)	—	ND	177,500	ND	266,250	88,750	88,750	177,500	2,592	2,592	2,996	1,577	1,051											
Rainbow Trout	Pass	ND	2	ND	3	1	1	1	1	1	1	1	1											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	ND	2	ND	3	1	1	1	1	1	1	1	1											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	No radium 226 test results were provided for the second quarter.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Pine Cove Property																							
Operator Name	Anaconda Mining Inc.																							
Product(s)	Gold																							
Address	P.O. Box 238, Baie Verte, Newfoundland and Labrador A0K 1B0																							
Effluent Discharge Point	Tailings Pond Discharge																							
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.											
As (mg/L)	0.5	-	ND	ND	0.0005	NMR	0.0005	ND	0.0005	-	NMR	0.0005	0.0005											
Cu (mg/L)	0.3	-	ND	ND	0.0117	NMR	0.0113	ND	0.0063	-	NMR	0.0397	0.0642											
CN (mg/L)	1.0	1.6000	ND	ND	0.2440	0.5650	0.1800	ND	0.1100	-	2.1000	0.1100	1.2000											
Pb (mg/L)	0.2	-	ND	ND	0.0010	NMR	0.0003	ND	0.0003	-	NMR	0.0011	0.0003											
Ni (mg/L)	0.5	-	ND	ND	0.0010	NMR	0.0010	ND	0.0010	-	NMR	0.0010	0.0010											
Zn (mg/L)	0.5	-	ND	ND	0.0116	NMR	0.0025	ND	0.0025	-	NMR	0.0085	0.0025											
TSS (mg/L)	15	3.20	ND	ND	2.70	4.60	8.40	ND	2.60	-	18.00	5.40	4.00											
Ra-226 (Bq/L)	0.37	-	ND	ND	NMR	NMR	0.0025	ND	-	-	-	-	-											
pH low	≥6.0	7.9	ND	ND	7.4	8.0	7.9	ND	8.2	-	-	8.1	8.0											
pH high	≤9.5	7.9	ND	ND	7.4	8.1	8.0	ND	8.2	-	-	8.1	8.0											
Flow (m <sup>3</sup> /month)	—	64	ND	ND	8,080	11,213	7,532	ND	15,688	39,220	17,702	4,602	23,602											
Rainbow Trout	Pass	1	ND	ND	NMR	NMR	1	ND	1	NMR	NMR	1	1											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	1	ND	ND	NMR	NMR	1	ND	1	NMR	NMR	1	1											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	Only flow measurement was provided for September. Test results for As, Cu, Pb, Ni, and Zn were not provided for the first quarter. Test results for radium 226 were not provided for the first, third or fourth quarter. Test results for pH were not provided for October.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Porcupine Gold Mines																						
Operator Name	Goldcorp Canada Ltd. and Goldcorp Inc.																						
Product(s)	Gold																						
Address	1 Gold Mine Road, P.O. Box 70, South Porcupine, Ontario P0N 1H0																						
Effluent Discharge Point	Mine Effluent Treatment Plant – Dome 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	0.0030	0.0013	0.0030	ND	ND	ND										
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	0.0116	0.0144	0.0321	ND	ND	ND										
CN (mg/L)	1.0	ND	ND	ND	ND	ND	ND	0.0380	0.0383	0.0548	ND	ND	ND										
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	0.0040	0.0030	0.0031	ND	ND	ND										
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0268	0.0427	0.0603	ND	ND	ND										
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.0035	0.0013	0.0019	ND	ND	ND										
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	2.60	2.00	2.28	ND	ND	ND										
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	NMR	0.0050	0.0050	ND	ND	ND										
pH low	≥6.0	ND	ND	ND	ND	ND	ND	7.5	7.3	7.1	ND	ND	ND										
pH high	≤9.5	ND	ND	ND	ND	ND	ND	7.5	7.6	7.3	ND	ND	ND										
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	ND	ND	46,032	874,355	845,364	ND	ND	ND										
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	1	1	1	ND	ND	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	1	1	1	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Porcupine Gold Mines																					
<b>Operator Name</b>	Goldcorp Canada Ltd. and Goldcorp Inc.																					
<b>Product(s)</b>	Gold																					
<b>Address</b>	1 Gold Mine Road, P.O. Box 70, South Porcupine, Ontario P0N 1H0																					
<b>Effluent Discharge Point</b>	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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-									
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND									
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Comments:</b>																						
Notes: ND: No Deposit			NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Porcupine Gold Mines																						
<b>Operator Name</b>	Goldcorp Canada Ltd. and Goldcorp Inc.																						
<b>Product(s)</b>	Gold																						
<b>Address</b>	4315 Gold Mine Road, South Porcupine, Ontario P0N 1H0																						
<b>Effluent Discharge Point</b>	Pamour Mine Water																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	0.0706	ND	0.1199	0.1235	ND	ND	ND	ND	ND	ND	0.1107	0.1148										
Cu (mg/L)	0.3	0.0106	ND	0.0044	0.0035	ND	ND	ND	ND	ND	ND	0.0021	0.0029										
CN (mg/L)	1.0	0.0025	ND	0.0025	0.0025	ND	ND	ND	ND	ND	ND	0.0025	0.0025										
Pb (mg/L)	0.2	0.0066	ND	0.0055	0.0040	ND	ND	ND	ND	ND	ND	0.0040	0.0040										
Ni (mg/L)	0.5	0.0763	ND	0.0496	0.0317	ND	ND	ND	ND	ND	ND	0.0200	0.0282										
Zn (mg/L)	0.5	0.0033	ND	0.0032	0.0020	ND	ND	ND	ND	ND	ND	0.0022	0.0025										
TSS (mg/L)	15	2.40	ND	4.50	6.25	ND	ND	ND	ND	ND	ND	4.83	2.36										
Ra-226 (Bq/L)	0.37	0.0050	ND	NMR	0.0005	ND	ND	ND	ND	ND	ND	0.0100	NMR										
pH low	≥ 6.0	7.8	ND	7.7	8.1	ND	ND	ND	ND	ND	ND	8.5	7.8										
pH high	≤ 9.5	7.8	ND	7.8	8.8	ND	ND	ND	ND	ND	ND	9.1	8.6										
Flow (m <sup>3</sup> /month)	—	150	ND	33,255	11,052	ND	ND	ND	ND	ND	ND	54,774	39,122										
Rainbow Trout	Pass	1	ND	NMR	1	ND	ND	ND	ND	ND	ND	1	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<i>Daphnia magna</i>	Pass	1	ND	NMR	1	ND	ND	ND	ND	ND	ND	1	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Raglan (Mine)																					
Operator Name	Xstrata Canada Corporation																					
Product(s)	Nickel-Copper-Cobalt-Platinum-Palladium																					
Address	120 Avenue de l'Aéroport, 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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-									
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND									
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Comments:</b>																						
Notes: ND: No Deposit			NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Raglan (Mine)																						
Operator Name	Xstrata Canada Corporation																						
Product(s)	Nickel-Copper-Cobalt-Platinum-Palladium																						
Address	120 Avenue de l'Aéroport, 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	ND	0.0013	0.0006	0.0014	0.0013	0.0027	0.0026	ND										
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0037	0.0036	0.0021	0.0025	0.0025	0.0007	ND										
CN (mg/L)	1.0	ND	ND	ND	ND	ND	NMR	NMR	NMR	NMR	NMR	NMR	ND										
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	0.0006	0.0002	0.0031	0.0101	0.0012	0.0028	ND										
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	0.3304	0.2294	0.2517	0.4255	0.3640	0.2642	ND										
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	0.0006	0.0006	0.0034	0.0048	0.0029	0.0005	ND										
TSS (mg/L)	15	ND	ND	ND	ND	ND	2.75	2.30	1.88	1.50	1.63	2.50	ND										
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0010	0.0020	NMR	NMR	0.0010	NMR	ND										
pH low	≥6.0	ND	ND	ND	ND	ND	6.8	7.6	7.8	7.7	7.4	7.5	ND										
pH high	≤9.5	ND	ND	ND	ND	ND	8.1	8.7	8.8	8.6	8.1	8.2	ND										
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	ND	73,561	68,760	74,655	49,125	115,250	40,274	ND										
Rainbow Trout	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	1	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	1	1	1	1	1	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Red Lake Mine																						
Operator Name	Goldcorp Canada Ltd.																						
Product(s)	Gold																						
Address	General Delivery, Balmertown, Ontario P0V 1C0																						
Effluent Discharge Point	G1																						
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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Red Lake Mine																						
Operator Name	Goldcorp Canada Ltd.																						
Product(s)	Gold																						
Address	General Delivery, Balmertown, Ontario P0V 1C0																						
Effluent Discharge Point	Shaft 3 Mine Water 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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Restigouche Mine																						
<b>Operator Name</b>	Blue Note Mining Inc. – Blue Note Caribou Mines Inc. / Province of New Brunswick																						
<b>Product(s)</b>	Zinc-Lead-Copper-Silver																						
<b>Address</b>	9361 Route 180, P.O. Box 26, Bathurst, New Brunswick E2A 3Z1																						
<b>Effluent Discharge Point</b>	Mixing Structure Discharge																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	<b>0.5</b>	-	-	-	-	-	-	-	-	-	-	-	-										
Cu (mg/L)	<b>0.3</b>	-	-	-	-	-	-	-	-	-	-	-	-										
CN (mg/L)	<b>1.0</b>	-	-	-	-	-	-	-	-	-	-	-	-										
Pb (mg/L)	<b>0.2</b>	-	-	-	-	-	-	-	-	-	-	-	-										
Ni (mg/L)	<b>0.5</b>	-	-	-	-	-	-	-	-	-	-	-	-										
Zn (mg/L)	<b>0.5</b>	-	-	-	-	-	-	-	-	-	-	-	-										
TSS (mg/L)	<b>15</b>	-	-	-	-	-	-	-	-	-	-	-	-										
Ra-226 (Bq/L)	<b>0.37</b>	-	-	-	-	-	-	-	-	-	-	-	-										
pH low	<b>≥6.0</b>	-	-	-	-	-	-	-	-	-	-	-	-										
pH high	<b>≤9.5</b>	-	-	-	-	-	-	-	-	-	-	-	-										
Flow (m <sup>3</sup> /month)	—	-	-	-	-	-	-	-	-	-	-	-	-										
Rainbow Trout	<b>Pass</b>	-	-	-	-	-	-	-	-	-	-	-	-										
Acute Lethality Test	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-										
<i>Daphnia magna</i>	<b>Pass</b>	-	-	-	-	-	-	-	-	-	-	-	-										
Monitoring Test	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>	No effluent data were reported in 2012.																						
Notes: ND: No Deposit	NMR: No Measurement Required	Pass: ≤50% Mortality				Fail: >50% Mortality																	
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>		Santoy 7 Mine																							
<b>Operator Name</b>		Claude Resources Inc.																							
<b>Product(s)</b>		Gold																							
<b>Address</b>		P.O. Box 1230, LaRonge, Saskatchewan S0J 1L0																							
<b>Effluent Discharge Point</b>		Santoy 7 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	0.0005	ND												
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0110	ND												
CN (mg/L)	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0180	ND												
Pb (mg/L)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0017	ND												
Ni (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0092	ND												
Zn (mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4300	ND												
TSS (mg/L)	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16.00	ND												
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0100	ND												
pH low	≥6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.7	ND												
pH high	≤9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.7	ND												
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	ND												
Rainbow Trout	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND												
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND												
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-												
<b>Comments:</b>																									
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Scozinc Mine – Mill																							
Operator Name	Selwyn Resources Ltd.																							
Product(s)	Zinc-Lead																							
Address	15601 Highway 224, RR 1, Milford Station, Gays River, Nova Scotia B0N 1Y0																							
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	0.0006	0.0008	0.0013	0.0018	0.0019	0.0015	0.0026	0.0028	NMR	-	-	-											
Cu (mg/L)	0.3	0.0178	0.0026	0.0031	0.0034	0.0047	0.0072	0.0067	0.0066	NMR	-	-	-											
CN (mg/L)	1.0	0.0010	0.0010	0.0010	0.0013	0.0010	0.0010	0.0010	0.0010	NMR	-	-	-											
Pb (mg/L)	0.2	0.0018	0.0023	0.0020	0.0030	0.0017	0.0012	0.0018	0.0004	NMR	-	-	-											
Ni (mg/L)	0.5	0.0005	0.0007	0.0008	0.0007	0.0008	0.0007	0.0007	0.0010	NMR	-	-	-											
Zn (mg/L)	0.5	0.0173	0.0313	0.0340	0.0310	0.0216	0.0220	0.0095	0.0102	0.0184	0.0276	0.0312	0.0386											
TSS (mg/L)	15	3.20	2.20	3.10	3.16	3.85	2.68	2.90	2.10	1.30	1.68	1.45	1.38											
Ra-226 (Bq/L)	0.37	-	-	-	-	-	-	0.0025	NMR	NMR	-	-	-											
pH low	≥6.0	6.4	6.6	6.5	7.6	7.6	7.7	7.9	8.0	-	-	-	-											
pH high	≤9.5	7.0	7.0	7.5	7.7	7.7	7.9	8.0	8.0	-	-	-	-											
Flow (m <sup>3</sup> /month)	—	1,166,083	1,057,610	1,254,010	-	-	-	136,774	150,447	1,981,012	1,180,998	622,761	794,323											
Rainbow Trout	Pass	1	1	NMR	2	1	1	1	NMR	NMR	1	NMR	NMR											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	1	1	NMR	2	1	1	1	NMR	NMR	1	NMR	NMR											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	No flow data was recorded for the months of April, May and June. No radium 226 test results were provided, for the first, second and fourth quarters. No pH test results were provided for September, October, November and December. Test results for As, Cu, CN, Pb and Ni were not provided for the fourth quarter.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Seabee Gold Mine																					
Operator Name	Claude Resources Inc.																					
Product(s)	Gold																					
Address	P.O. Box 1230, LaRonge, 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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-									
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND									
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Comments:</b>																						
Notes: ND: No Deposit			NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Shakespeare Nickel Mine																						
Operator Name	URSA Major Minerals Inc.																						
Product(s)	Nickel-Copper-Cobalt-Gold-Platinum-Palladium																						
Address	8 King Street East, Suite 1300, Toronto, Ontario M5C 1B3																						
Effluent Discharge Point	MISA Weir																						
Parameters	Limits	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	ND	ND	0.0005	ND	ND	0.0005	ND	ND	ND	0.0001	ND	ND										
Cu (mg/L)	0.3	ND	ND	0.0012	ND	ND	0.0019	ND	ND	ND	0.0017	ND	ND										
CN (mg/L)	1.0	ND	ND	NMR	ND	ND	NMR	ND	ND	ND	NMR	ND	ND										
Pb (mg/L)	0.2	ND	ND	0.0005	ND	ND	0.0005	ND	ND	ND	0.0001	ND	ND										
Ni (mg/L)	0.5	ND	ND	0.3400	ND	ND	0.0842	ND	ND	ND	0.0397	ND	ND										
Zn (mg/L)	0.5	ND	ND	0.0073	ND	ND	0.0042	ND	ND	ND	0.0020	ND	ND										
TSS (mg/L)	15	ND	ND	4.83	ND	ND	0.73	ND	ND	ND	1.30	ND	ND										
Ra-226 (Bq/L)	0.37	ND	ND	0.0050	ND	ND	0.0050	ND	ND	ND	0.0025	ND	ND										
pH low	≥6.0	ND	ND	7.6	ND	ND	7.7	ND	ND	ND	7.5	ND	ND										
pH high	≤9.5	ND	ND	8.0	ND	ND	7.8	ND	ND	ND	7.5	ND	ND										
Flow (m <sup>3</sup> /month)	—	ND	ND	18,485	ND	ND	10,165	ND	ND	ND	11,466	ND	ND										
Rainbow Trout	Pass	ND	ND	1	ND	ND	1	ND	ND	ND	1	ND	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	1	ND	ND	1	ND	ND	ND	1	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Snow Lake Mill																							
Operator Name	Hudson Bay Mining and Smelting Co. Ltd.																							
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	0.0020	0.0011	0.0020	0.0023	0.0024	0.0030	0.0028	0.0025	ND	ND											
Cu (mg/L)	0.3	ND	ND	0.0035	0.0039	0.0051	0.0043	0.0031	0.0029	0.0032	0.0034	ND	ND											
CN (mg/L)	1.0	ND	ND	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	ND	ND											
Pb (mg/L)	0.2	ND	ND	0.0035	0.0035	0.0035	0.0035	0.0035	0.0035	0.0035	0.0035	ND	ND											
Ni (mg/L)	0.5	ND	ND	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	ND	ND											
Zn (mg/L)	0.5	ND	ND	0.0530	0.0708	0.0446	0.0230	0.0096	0.0110	0.0155	0.0230	ND	ND											
TSS (mg/L)	15	ND	ND	1.40	1.70	2.15	2.08	1.29	2.18	2.23	2.55	ND	ND											
Ra-226 (Bq/L)	0.37	ND	ND	-	NMR	0.0025	NMR	NMR	0.0025	0.0200	0.0060	ND	ND											
pH low	≥6.0	ND	ND	7.3	7.1	7.5	7.5	7.5	7.7	7.7	7.7	ND	ND											
pH high	≤9.5	ND	ND	7.3	7.9	8.8	8.0	7.9	8.0	8.2	7.8	ND	ND											
Flow (m <sup>3</sup> /month)	—	ND	ND	100,000	809,862	836,857	809,862	299,961	310,212	356,478	102,534	ND	ND											
Rainbow Trout	Pass	ND	ND	-	1	1	1	-	1	1	1	ND	ND											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	ND	ND	-	1	1	1	-	1	1	1	ND	ND											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	No toxicity test results were provided for March and July. No radium 266 test results were provided for the first quarter																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Stock Mine and Mill Complex																						
<b>Operator Name</b>	Brigus Gold Corporation																						
<b>Product(s)</b>	Gold																						
<b>Address</b>	Rural Route 2, Matheson, Ontario P0K 1N0																						
<b>Effluent Discharge Point</b>	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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Strathcona Tailings Treatment System																						
Operator Name	Xstrata 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	0.0016	0.0024	0.0025	0.0019	0.0018	0.0041	0.0090	0.0117	0.0033	0.0044	0.0070	0.0038										
Cu (mg/L)	0.3	0.0065	0.0065	0.0134	0.0080	0.0087	0.0108	0.0224	0.0518	0.0290	0.0155	0.0102	0.0211										
CN (mg/L)	1.0	0.0006	0.0009	0.0006	0.0005	0.0006	0.0008	0.0005	0.0005	0.0031	0.0005	0.0005	0.0005										
Pb (mg/L)	0.2	0.0040	0.0005	0.0008	0.0011	0.0008	0.0013	0.0206	0.0037	0.0232	0.0005	0.0003	0.0012										
Ni (mg/L)	0.5	0.0585	0.0592	0.0668	0.0375	0.0385	0.0470	0.0452	0.0839	0.0377	0.0463	0.0478	0.0514										
Zn (mg/L)	0.5	0.0039	0.0017	0.0043	0.0036	0.0032	0.0035	0.0034	0.0064	0.0035	0.0064	0.0017	0.0047										
TSS (mg/L)	15	0.15	0.21	0.68	0.34	0.45	0.39	0.94	1.05	1.55	0.33	0.84	3.48										
Ra-226 (Bq/L)	0.37	0.0050	NMR	NMR	NMR	0.0050	NMR	0.0050	NMR	NMR	0.0050	NMR	NMR										
pH low	≥6.0	7.3	7.3	7.3	7.2	7.1	7.3	7.4	7.2	7.3	7.4	7.3	7.1										
pH high	≤9.5	7.5	7.5	7.5	7.4	7.4	7.5	7.6	7.5	7.5	7.5	7.6	7.5										
Flow (m <sup>3</sup> /month)	—	1,788,930	1,553,094	3,074,823	1,762,718	1,254,266	857,503	933,894	844,564	1,008,880	1,675,642	1,653,197	1,499,183										
Rainbow Trout	Pass	1	NMR	NMR	NMR	1	NMR	1	NMR	1	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	NMR	NMR	NMR	1	NMR	1	NMR	1	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)***

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Tanco Mine																						
Operator Name	Tantalum Mining Corporation of Canada Ltd.																						
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	NMR	0.0068	NMR	NMR	0.0100	NMR	0.0291	NMR	NMR	0.0054	NMR	NMR										
Cu (mg/L)	0.3	NMR	0.0015	NMR	NMR	0.0012	NMR	0.0012	NMR	NMR	0.0010	NMR	NMR										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	NMR	0.0002	NMR	NMR	0.0002	NMR	0.0006	NMR	NMR	0.0005	NMR	NMR										
Ni (mg/L)	0.5	NMR	0.0013	NMR	NMR	0.0021	NMR	0.0030	NMR	NMR	0.0050	NMR	NMR										
Zn (mg/L)	0.5	NMR	0.0031	NMR	NMR	0.0063	NMR	0.0066	NMR	NMR	0.0048	NMR	NMR										
TSS (mg/L)	15	3.93	3.25	3.74	8.00	13.78	8.45	8.68	16.24	15.20	13.92	7.48	4.55										
Ra-226 (Bq/L)	0.37	NMR	0.0060	NMR	NMR	0.0025	NMR	0.0025	NMR	NMR	0.0025	NMR	NMR										
pH low	≥6.0	7.3	7.0	7.2	7.2	2.8	6.9	7.8	7.1	7.3	7.0	6.7	6.8										
pH high	≤9.5	7.6	7.1	7.9	8.8	8.8	8.0	8.3	8.7	7.9	8.4	7.7	7.2										
Flow (m <sup>3</sup> /month)	—	180,746	75,194	121,793	112,241	177,227	171,510	177,227	177,227	171,510	177,227	43,590	79,523										
Rainbow Trout	Pass	NMR	1	NMR	NMR	1	NMR	1	NMR	NMR	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	NMR	1	NMR	NMR	1	NMR	1	NMR	NMR	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Thompson Complex																							
Operator Name	Vale Inco Ltd.																							
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	0.0044	0.0039	0.0041	0.0037	0.0159	0.0074	0.0105	0.0093	0.0080	0.0078	0.0044	0.0050											
Cu (mg/L)	0.3	0.0260	0.0100	0.0175	0.0263	0.0250	0.0250	0.0175	0.0150	0.0163	0.0140	0.0213	0.0210											
CN (mg/L)	1.0	NMR	0.0010	NMR	NMR	0.0010	NMR	0.0010	0.0010	NMR	0.0010	NMR	NMR											
Pb (mg/L)	0.2	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150	0.0009	0.0005	0.0007											
Ni (mg/L)	0.5	0.1460	0.1100	0.0925	0.1175	0.1380	0.1050	0.0833	0.0425	0.0825	0.0980	0.1025	0.0760											
Zn (mg/L)	0.5	0.0228	0.0090	0.0081	0.0100	0.0132	0.0050	0.0050	0.0050	0.0050	0.0050	0.0078	0.0062											
TSS (mg/L)	15	11.48	3.50	2.70	10.93	9.28	8.20	3.80	3.60	6.30	4.80	6.80	5.12											
Ra-226 (Bq/L)	0.37	NMR	0.0025	NMR	NMR	0.0025	NMR	0.0025	0.0300	NMR	0.0025	NMR	NMR											
pH low	≥6.0	7.3	7.4	7.3	7.4	7.5	7.6	7.5	7.2	7.3	7.3	7.2	7.2											
pH high	≤9.5	8.3	8.1	7.6	7.6	8.0	8.0	7.9	7.6	7.5	7.6	7.6	7.5											
Flow (m <sup>3</sup> /month)	—	1,098,144	1,027,296	1,098,144	1,794,960	1,949,875	2,229,120	1,165,104	749,952	1,321,920	1,333,843	1,412,640	1,365,984											
Rainbow Trout	Pass	1	1	1	1	1	-	1	-	-	1	-	-											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	1	1	1	1	1	-	1	-	-	1	-	-											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	No toxicity test results were provided for June, August, September, November and December.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Tio (Mine)																						
Operator Name	QIT-Fer et Titane Inc.																						
Product(s)	Iron-Titanium																						
Address	P.O. Box 160, 951 De l'Escale Boulevard, Havre-Saint-Pierre, Quebec G0G 1P0																						
Effluent Discharge Point	Switch South																						
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	0.0090	0.0037	0.0180	0.0435	0.0223	0.0157	0.0106	0.0158	0.0243	0.0500	0.0435	0.0353										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0005	0.0005	0.0005	0.0005	0.0020	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005										
Ni (mg/L)	0.5	0.2540	0.1767	0.2800	0.2650	0.1184	0.1053	0.0776	0.0955	0.0950	0.1214	0.1120	0.0998										
Zn (mg/L)	0.5	0.0268	0.0250	0.0445	0.0398	0.0288	0.0213	0.0122	0.0198	0.0173	0.0210	0.0218	0.0173										
TSS (mg/L)	15	1.46	1.10	3.35	9.83	4.92	1.60	1.24	1.88	5.38	18.00	16.25	7.50										
Ra-226 (Bq/L)	0.37	0.0025	NMR	NMR	0.0050	NMR	NMR	NMR	NMR	0.0060	NMR	NMR	0.0010										
pH low	≥6.0	6.7	6.9	6.9	6.3	6.3	6.5	6.4	6.5	6.6	6.8	6.1	7.0										
pH high	≤9.5	7.0	7.0	7.1	6.9	6.8	6.8	7.0	6.9	7.0	7.1	7.4	7.2										
Flow (m <sup>3</sup> /month)	—	484	176	43	70,985	73,631	3,826	2,170	522	864	23,487	1,651	1,943										
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Tio (Mine)																					
Operator Name	QIT-Fer et Titane Inc.																					
Product(s)	Iron-Titanium																					
Address	P.O. Box 160, 951 De l'Escale Boulevard, Havre-Saint-Pierre, Quebec G0G 1P0																					
Effluent Discharge Point	Lake 211.4																					
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	0.0183	0.0180	0.0143	0.0164	0.0208	0.0218	0.0208	0.0188	0.0155									
CN (mg/L)	1.0	ND	ND	ND	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR									
Pb (mg/L)	0.2	ND	ND	ND	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	ND	0.1700	0.1740	0.2425	0.2740	0.2600	0.2143	0.1738	0.2093	0.1870									
Zn (mg/L)	0.5	ND	ND	ND	0.0267	0.0376	0.0413	0.0604	0.0773	0.0543	0.0478	0.0520	0.0440									
TSS (mg/L)	15	ND	ND	ND	2.33	2.18	2.35	3.36	6.38	4.50	2.60	7.00	5.50									
Ra-226 (Bq/L)	0.37	ND	ND	ND	0.0025	NMR	NMR	NMR	NMR	0.0010	NMR	NMR	0.0030									
pH low	≥6.0	ND	ND	ND	6.2	6.1	6.0	6.0	6.0	6.4	6.5	6.1	6.3									
pH high	≤9.5	ND	ND	ND	6.5	6.7	7.0	6.8	6.2	7.1	6.8	6.7	6.4									
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	35,632	28,539	8,989	5,011	5,744	19,836	24,155	8,951	850									
Rainbow Trout	Pass	ND	ND	ND	1	1	1	1	1	1	1	1	1									
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-									
Daphnia magna	Pass	ND	ND	ND	1	1	1	1	1	1	1	1	1									
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Comments:</b>																						
Notes: ND: No Deposit			NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Tio (Mine)																						
Operator Name	QIT-Fer et Titane Inc.																						
Product(s)	Iron-Titanium																						
Address	P.O. Box 160, 951 De l'Escale Boulevard, Havre-Saint-Pierre, Quebec G0G 1P0																						
Effluent Discharge Point	Resurgence Leo																						
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	0.0184	0.0175	0.0155	0.0104	0.0070	0.0048	0.0084	0.0123	0.0105	0.0086	0.0070	0.0138										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0005	0.0005	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	0.3480	0.3025	0.3825	0.4075	0.4480	0.4150	0.3580	0.3775	0.4108	0.4404	0.4570	0.4325										
Zn (mg/L)	0.5	0.0338	0.0365	0.0363	0.0310	0.0296	0.0223	0.0256	0.0380	0.0580	0.0288	0.0380	0.0495										
TSS (mg/L)	15	0.70	1.13	0.80	1.05	1.02	1.08	0.54	1.38	2.38	0.50	2.13	0.75										
Ra-226 (Bq/L)	0.37	0.0025	NMR	NMR	0.0025	NMR	NMR	NMR	NMR	0.0010	NMR	NMR	0.0030										
pH low	≥6.0	6.7	6.8	6.8	6.4	6.3	6.6	7.0	6.7	6.6	6.6	6.6	6.8										
pH high	≤9.5	6.9	7.0	7.0	7.1	6.6	7.2	7.2	7.0	7.1	7.1	7.1	7.0										
Flow (m <sup>3</sup> /month)	—	16,478	13,034	10,176	224,226	268,647	211,860	69,162	136,727	82,802	286,567	267,867	51,459										
Rainbow Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	1	1	1	1	1	1	1	1	1	1	1										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Trout Lake Mine																						
Operator Name	Hudson Bay Mining and Smelting Co. Ltd.																						
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	0.0007	0.0006	0.0005	0.0006	0.0009	0.0010	ND	0.0008	0.0008	ND	ND	ND										
Cu (mg/L)	0.3	0.0119	0.0121	0.0103	0.0140	0.0198	0.0178	ND	0.0079	0.0178	ND	ND	ND										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	ND	NMR	NMR	ND	ND	ND										
Pb (mg/L)	0.2	0.0069	0.0079	0.0069	0.0076	0.0050	0.0085	ND	0.0095	0.0068	ND	ND	ND										
Ni (mg/L)	0.5	0.0082	0.0083	0.0060	0.0053	0.0088	0.0108	ND	0.0093	0.0110	ND	ND	ND										
Zn (mg/L)	0.5	0.0306	0.0545	0.0715	0.1215	0.2098	0.0865	ND	0.0173	0.0270	ND	ND	ND										
TSS (mg/L)	15	0.72	0.56	1.11	0.84	9.12	11.18	ND	3.67	2.53	ND	ND	ND										
Ra-226 (Bq/L)	0.37	0.0680	0.0675	0.0825	0.2000	0.0880	0.2250	ND	0.1067	0.2000	ND	ND	ND										
pH low	≥6.0	8.1	8.0	7.8	7.4	7.3	7.7	ND	6.9	7.7	ND	ND	ND										
pH high	≤9.5	8.3	8.4	8.2	8.2	8.6	8.0	ND	8.1	7.9	ND	ND	ND										
Flow (m <sup>3</sup> /month)	—	31,300	30,700	32,500	37,300	26,200	21,800	ND	14,100	2,400	ND	ND	ND										
Rainbow Trout	Pass	NMR	NMR	1	NMR	NMR	1	ND	NMR	1	ND	ND	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	NMR	NMR	-	NMR	NMR	1	ND	NMR	-	ND	ND	ND										
Monitoring Test	Fail	-	-	1	-	-	-	-	-	1	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Voisey's Bay Mine – Mill																					
Operator Name	Vale Inco Ltd.																					
Product(s)	Nickel-Copper-Cobalt																					
Address	Suite 700, Baine Johnston Centre, 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	0.0005	ND	ND	ND	ND	ND	ND									
Cu (mg/L)	0.3	ND	ND	ND	ND	ND	0.0030	ND	ND	ND	ND	ND	ND									
CN (mg/L)	1.0	ND	ND	ND	ND	ND	NMR	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	0.0989	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	0.72	ND	ND	ND	ND	ND	ND									
Ra-226 (Bq/L)	0.37	ND	ND	ND	ND	ND	0.0046	ND	ND	ND	ND	ND	ND									
pH low	≥6.0	ND	ND	ND	ND	ND	7.4	ND	ND	ND	ND	ND	ND									
pH high	≤9.5	ND	ND	ND	ND	ND	7.5	ND	ND	ND	ND	ND	ND									
Flow (m <sup>3</sup> /month)	—	ND	ND	ND	ND	ND	3,000	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	-	-	-	-	-	-	-	-	-	-	-	-									
Daphnia magna	Pass	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND									
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Comments:</b>																						
Notes: ND: No Deposit			NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Voisey's Bay Mine – Mill																						
Operator Name	Vale Inco Ltd.																						
Product(s)	Nickel-Copper-Cobalt																						
Address	Suite 700, Baine Johnston Centre, 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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Voisey's Bay Mine – Mill																						
Operator Name	Vale Inco Ltd.																						
Product(s)	Nickel-Copper-Cobalt																						
Address	Suite 700, Baine Johnston Centre, 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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Wabush Mines Joint Venture – Scully Mine																						
Operator Name	Wabush Mines																						
Product(s)	Iron																						
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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Wabush Mines Joint Venture – Scully Mine																							
Operator Name	Wabush Mines																							
Product(s)	Iron																							
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0																							
Effluent Discharge Point	East Pit No. 2 Dewatering																							
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)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR											
Pb (mg/L)	0.2	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	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	0.0032	0.0025	0.0025	0.0025	0.0025	0.0032	0.0025	0.0025	0.0032											
TSS (mg/L)	15	1.14	2.15	4.05	3.65	3.54	1.63	4.20	4.08	3.18	1.78	2.05	0.85											
Ra-226 (Bq/L)	0.37	0.0050	NMR	NMR	0.0050	NMR	NMR	0.0050	NMR	NMR	0.0050	NMR	NMR											
pH low	≥6.0	7.6	7.5	7.6	7.7	7.4	7.8	7.7	7.7	7.9	7.6	7.8	7.7											
pH high	≤9.5	7.7	7.7	7.7	7.8	7.8	7.9	7.9	7.9	8.0	8.0	7.8	7.9											
Flow (m <sup>3</sup> /month)	—	587,480	632,344	1,573,131	2,099,915	2,312,306	1,152,970	1,231,363	1,565,976	1,241,307	1,560,228	1,504,731	755,575											
Rainbow Trout	Pass	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	1	NMR	NMR	-	NMR	NMR	1	NMR	NMR	1	NMR	NMR											
Monitoring Test	Fail	-	-	-	1	-	-	-	-	-	-	-	-											
Comments:																								
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Wabush Mines Joint Venture - Scully Mine																						
Operator Name	Wabush Mines																						
Product(s)	Iron																						
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	0.0007	0.0005	0.0015	0.0005	0.0009	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005										
Cu (mg/L)	0.3	0.0030	0.0010	0.0010	0.0010	0.0019	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010										
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR										
Pb (mg/L)	0.2	0.0003	0.0003	0.0011	0.0003	0.0006	0.0003	0.0007	0.0003	0.0003	0.0003	0.0003	0.0003										
Ni (mg/L)	0.5	0.0010	0.0010	0.0020	0.0010	0.0017	0.0010	0.0010	0.0013	0.0014	0.0010	0.0013	0.0010										
Zn (mg/L)	0.5	0.0051	0.0047	0.0115	0.0051	0.0076	0.0046	0.0076	0.0053	0.0059	0.0058	0.0102	0.0071										
TSS (mg/L)	15	106.52	10.95	330.90	38.25	62.38	7.68	7.90	19.95	59.75	10.50	36.30	2.25										
Ra-226 (Bq/L)	0.37	0.0050	NMR	NMR	0.0400	NMR	NMR	0.0300	NMR	NMR	0.0050	NMR	NMR										
pH low	≥6.0	7.1	6.9	7.2	7.3	7.4	7.5	7.3	7.5	7.5	7.4	7.4	7.7										
pH high	≤9.5	7.3	7.4	7.5	7.4	7.5	7.6	7.5	7.6	7.7	7.7	7.9	7.8										
Flow (m <sup>3</sup> /month)	—	1,032,785	698,025	772,814	1,402,278	1,402,278	1,197,226	819,573	835,516	463,099	604,469	117,063	207,410										
Rainbow Trout	Pass	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Wabush Mines Joint Venture - Scully Mine																						
Operator Name	Wabush Mines																						
Product(s)	Iron																						
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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Wabush Mines Joint Venture - Scully Mine																					
Operator Name	Wabush Mines																					
Product(s)	Iron																					
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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-									
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND									
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-									
<b>Comments:</b>																						
Notes: ND: No Deposit			NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality													
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Wabush Mines Joint Venture – Scully Mine																							
Operator Name	Wabush Mines																							
Product(s)	Iron																							
Address	Scully Mine, P.O. Box 3000, Wabush, Newfoundland and Labrador A0R 1B0																							
Effluent Discharge Point	West Pit Extension Settling Basin																							
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	0.0013	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010											
CN (mg/L)	1.0	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR	NMR											
Pb (mg/L)	0.2	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	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	0.0036	0.0025	0.0025	0.0025	0.0025	0.0035	0.0035	0.0025	0.0025	0.0043											
TSS (mg/L)	15	0.74	0.80	3.00	4.15	1.18	0.95	0.81	0.50	2.58	1.16	3.20	0.50											
Ra-226 (Bq/L)	0.37	0.0050	NMR	NMR	0.0050	NMR	NMR	0.0050	NMR	NMR	0.0200	NMR	NMR											
pH low	≥6.0	7.2	7.0	7.1	7.3	7.3	7.4	7.4	7.5	7.6	7.1	7.3	7.3											
pH high	≤9.5	7.5	7.3	7.4	7.4	7.5	7.6	7.6	7.6	7.7	7.7	7.5	7.6											
Flow (m <sup>3</sup> /month)	—	1,104,016	1,530,192	1,965,382	1,659,370	1,698,492	1,694,195	1,954,059	2,896,525	2,373,019	2,583,094	2,528,467	2,758,991											
Rainbow Trout	Pass	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR											
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR	1	NMR	NMR											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:																								
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Williams Mine																						
<b>Operator Name</b>	Barrick Gold Corporation																						
<b>Product(s)</b>	Gold																						
<b>Address</b>	P.O. Bag 500, Marathon, Ontario P0T 2E0																						
<b>Effluent Discharge Point</b>	Stormwater Pond CP 102																						
<b>Parameters</b>	<b>Limits</b>	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.										
As (mg/L)	0.5	ND	ND	0.0059	0.0064	0.0060	0.0049	0.0044	0.0054	0.0040	0.0056	0.0093	0.0067										
Cu (mg/L)	0.3	ND	ND	0.0020	0.0017	0.0010	0.0006	0.0005	0.0007	0.0014	0.0005	0.0014	0.0007										
CN (mg/L)	1.0	ND	ND	0.0017	0.0010	0.0012	0.0010	0.0014	0.0017	0.0010	0.0083	0.0150	0.0082										
Pb (mg/L)	0.2	ND	ND	0.0020	0.0005	0.0005	0.0004	0.0005	0.0005	0.0005	0.0005	0.0016	0.0005										
Ni (mg/L)	0.5	ND	ND	0.0052	0.0028	0.0031	0.0023	0.0031	0.0022	0.0010	0.0023	0.0067	0.0051										
Zn (mg/L)	0.5	ND	ND	0.0200	0.0015	0.0022	0.0012	0.0015	0.0015	0.0015	0.0025	0.0078	0.0047										
TSS (mg/L)	15	ND	ND	5.67	5.30	4.26	8.13	1.85	3.44	3.80	5.10	5.88	3.77										
Ra-226 (Bq/L)	0.37	ND	ND	0.0133	0.0150	0.0090	0.0100	0.0063	0.0072	0.0050	0.0073	0.0050	0.0090										
pH low	≥6.0	ND	ND	7.5	7.9	7.8	7.8	7.9	7.8	7.8	7.6	7.6	7.7										
pH high	≤9.5	ND	ND	7.8	8.0	8.1	8.0	8.0	7.9	8.0	7.8	7.7	7.8										
Flow (m <sup>3</sup> /month)	—	ND	ND	83,465	31,461	76,563	60,300	101,553	82,283	32,501	80,340	153,382	56,617										
Rainbow Trout	Pass	ND	ND	1	1	1	1	1	1	1	1	1	1										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	1	1	1	1	1	1	1	1	1	1										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality														
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Williams Mine																						
Operator Name	Barrick Gold Corporation																						
Product(s)	Gold																						
Address	P.O. Bag 500, Marathon, Ontario P0T 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	0.0021	ND	ND	ND	ND	ND	0.0104	0.0055	ND	ND										
Cu (mg/L)	0.3	ND	ND	0.0024	ND	ND	ND	ND	ND	0.0011	0.0047	ND	ND										
CN (mg/L)	1.0	ND	ND	0.0020	ND	ND	ND	ND	ND	0.0053	0.0050	ND	ND										
Pb (mg/L)	0.2	ND	ND	0.0005	ND	ND	ND	ND	ND	0.0005	0.0030	ND	ND										
Ni (mg/L)	0.5	ND	ND	0.0058	ND	ND	ND	ND	ND	0.0047	0.0056	ND	ND										
Zn (mg/L)	0.5	ND	ND	0.0183	ND	ND	ND	ND	ND	0.0058	0.0210	ND	ND										
TSS (mg/L)	15	ND	ND	7.95	ND	ND	ND	ND	ND	5.60	105.00	ND	ND										
Ra-226 (Bq/L)	0.37	ND	ND	0.0050	ND	ND	ND	ND	ND	0.0050	0.0050	ND	ND										
pH low	≥6.0	ND	ND	7.3	ND	ND	ND	ND	ND	7.8	7.4	ND	ND										
pH high	≤9.5	ND	ND	7.9	ND	ND	ND	ND	ND	8.0	7.4	ND	ND										
Flow (m <sup>3</sup> /month)	—	ND	ND	43,049	ND	ND	ND	ND	ND	8,039	37,557	ND	ND										
Rainbow Trout	Pass	ND	ND	1	ND	ND	ND	ND	ND	1	1	ND	ND										
Acute Lethality Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
Daphnia magna	Pass	ND	ND	1	ND	ND	ND	ND	ND	1	1	ND	ND										
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)***

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

<b>Mine/Mill Name</b>	Wolverine Project																						
<b>Operator Name</b>	Yukon Zinc Corporation																						
<b>Product(s)</b>	Zinc-Copper-Lead-Silver-Gold																						
<b>Address</b>	701-475 Howe Street, Vancouver, British Columbia V6C 2B3																						
<b>Effluent Discharge Point</b>	Wo.TSF – Tailings Storage Facility																						
Parameters	Limits	Jan	Feb	Mar	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)	1.0	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										
<b>Rainbow Trout</b>	<b>Pass</b>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
<b>Acute Lethality Test</b>	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Daphnia magna</b>	<b>Pass</b>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
<b>Monitoring Test</b>	<b>Fail</b>	-	-	-	-	-	-	-	-	-	-	-	-										
<b>Comments:</b>																							
Notes: ND: No Deposit		NMR: No Measurement Required			Pass: ≤50% Mortality			Fail: >50% Mortality															
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**

# Metal Mining Effluent Regulations (MMER)

## 2012 Effluent Compliance

Mine/Mill Name	Yellowjacket Gold Mine																							
Operator Name	Eagle Plains Resources Ltd. / Yellowjacket Resources Ltd																							
Product(s)	Gold																							
Address	44-12th Avenue S, Suite 200, Cranbrook, British Columbia V1C 2R7																							
Effluent Discharge Point	Ye.TSF – Tailings Storage Facility																							
Parameters	Limits	Jan	Feb	Mar	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)	1.0	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	-	-	-	-	-	-	-	-	-	-	-	-											
Daphnia magna	Pass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
Monitoring Test	Fail	-	-	-	-	-	-	-	-	-	-	-	-											
Comments:	In February 2012, the ownership of Yellowjacket Gold Mine was transferred from Eagle Plains Resources Ltd to Yellowjacket Resources Ltd.																							
Notes: ND: No Deposit	NMR: No Measurement Required			Pass: ≤50% Mortality				Fail: >50% Mortality																
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 Mining Effluent Regulations (MMER)**

## **2012 Effluent Compliance**



**WWW.ec.gc.ca**

Additional information can be obtained at:

Environment Canada

Inquiry Centre

10 Wellington Street, 23rd Floor

Gatineau QC K1A 0H3

Telephone: 1-800-668-6767 (in Canada only) or 819-997-2800

Fax: 819-994-1412

TTY: 819-994-0736

Email: [enviroinfo@ec.gc.ca](mailto:enviroinfo@ec.gc.ca)

