



**Department of Environment and
Conservation**

**Industrial Effluent Compliance
2012 Annual Report**

Pollution Prevention Division

April 2013

Table of Contents

1) Executive Summary	4
2) Metal Mines.....	5
a) Anaconda Mining Inc.....	5
b) Beaver Brook Antimony Mine	5
c) Iron Ore Company of Canada (IOCC)	5
d) Labrador Iron Mines.....	6
e) Rambler Metals and Mining Canada Ltd (Ming Mine)	7
f) Rambler Metals and Mining Canada Ltd (Nugget Pond).....	7
g) Teck Resources Ltd.	8
h) Vale Newfoundland and Labrador Ltd. (Voisey's Bay)	8
i) Wabush Mines	9
3) Petroleum Refining	38
a) North Atlantic Refining Ltd.....	38
4) Pulp and Paper.....	41
a) Corner Brook Pulp and Paper Ltd.....	41
b) Grand Falls Mill (Previously Abitibi-Consolidated Company of Canada)	41
5) Thermal Generation	45
a) Holyrood Thermal Generating Station	45
6) Other	48
a) Atlantic Minerals Ltd. (Lower Cove)	48
b) Atlantic Minerals (North Star Cement)	48
c) DJ Composites.....	48
d) GC Rieber Carino Company.....	48
e) Hope Brook Mine Site	49
f) Labatt Breweries Newfoundland	49
g) Molson Coors Canada, St. John's	50
h) Newfoundland Transshipment Terminal.....	50
i) Pardy's Waste Management Facility – Incinerator Road.....	50
j) Vale Newfoundland and Labrador Ltd. (Argentia Hydrometallurgical Demonstration Plant)	51
k) Vale Newfoundland and Labrador Ltd. (Long Harbour)	51
7) Conclusion	87
8) Appendix A: Abbreviations and Acronyms.....	88

List of Tables

Table 1: Anaconda Mining Inc.	10
Table 2: Beaver Brook	12
Table 3: Iron Ore Company of Canada	14
Table 4: Labrador Iron Mines	19
Table 5: Rambler Metals and Mining Canada Ltd. (Ming Mine)	23
Table 6: Rambler Metals and Mining (Nugget Pond)	25
Table 7: Teck Resources Ltd.	27
Table 8: Vale Newfoundland and Labrador Ltd. (Voisey's Bay)	29
Table 9: Wabush Mines	31
Table 10: North Atlantic Refining Ltd	39
Table 11: Corner Brook Pulp and Paper	42
Table 12: Grand Falls Mill	44
Table 13: Holyrood Thermal Generating Station	46
Table 14: Atlantic Minerals Ltd. (Lower Cove)	53
Table 15: Atlantic Minerals Ltd. (North Star Cement)	54
Table 16: DJ Composites	55
Table 17: GC Rieber Carino Company	57
Table 18: Hope Brook Mine Site	59
Table 19: Labatt Breweries Newfoundland	66
Table 20: Molson Coors Canada	68
Table 21: Newfoundland Transshipment Terminal	70
Table 22: Pardy's Waste Management Facility-Incinerator Road	74
Table 23: Vale Newfoundland and Labrador Ltd. (Argentia)	76
Table 24: Vale Newfoundland and Labrador Ltd. (Long Harbour)	78

1) Executive Summary

The Newfoundland and Labrador Department of Environment and Conservation (NL ENVC) regulates industrial effluent under the *Environmental Control Water and Sewage Regulations NLR 65/03* (ECWSR). In April 2009, the ECWSR was amended. The amendment adopted specific limits from the corresponding federal regulations for each of the mining, pulp and paper and petroleum refining industrial sectors. Industries operating under a certificate of approval (COA) from the Pollution Prevention Division have effluent streams identified and subsequent monitoring schedules developed to characterize the effluent. These schedules are designed to ensure that the effluent discharged from the industry meets regulatory requirements and is protective of the receiving environment.

Copies of the ECWSR, Metal Mining Effluent Regulations, the Pulp and Paper Effluent Regulations and the Petroleum Refinery Liquid Effluent Regulations can be obtained at:

www.assembly.nl.ca/Legislation/sr/Regulations/rc030065.htm

<http://www.canlii.org/en/ca/laws/regu/sor-2002-222/latest/sor-2002-222.html>

<http://www.canlii.org/en/ca/laws/regu/sor-92-269/latest/sor-92-269.html>

<http://www.canlii.org/en/ca/laws/regu/crc-c-828/latest/crc-c-828.html>

In 2012 there were more than 20 industries reporting effluent quality to the NL ENVC on a consistent basis. This report provides a summary of the effluent quality discharged at the major industries within the province of Newfoundland and Labrador. It is important to note that the summaries provided are for the discharge locations only. Most industries conduct additional monitoring for general water quality characterization at discharge points as well as other locations in proximity to operations. Some industries operating in the province also participate in Environmental Effects Monitoring (EEM) programs. This report identifies EEM activities completed in 2012.

Disclaimer:

- The data presented is based upon reports submitted to the NL ENVC as of February 28th, 2013.
- The actual laboratory documentation is available upon request to verify analysis as required.
- Average pH values have been corrected to reflect the logarithmic nature of the parameter.
- The number of samples listed in the tables is based on the maximum collected in a month for any one parameter. Some of the parameters may have been analyzed less frequently.

2) Metal Mines

a) Anaconda Mining Inc.

Current COA Approval #: AA08-035500
 Issue date: March 31, 2008
 Expiration: March 31, 2013

Anaconda Mining Inc. has one discharge point located at the Polishing Pond outflow. The effluent monitoring program requires analysis of numerous parameters; nine of these parameters have environmental limits. A monthly Acute Lethality Test (ALT) is also required as part of the COA. Nine samples were collected at the outflow of the Polishing Pond in 2012. There were no discharges in February, March, July or September. There was one cyanide exceedence reported in October and the mean monthly average cyanide value exceeded criteria in January, October and December. All other monitoring was within acceptable criteria and there were no reported toxicity failures.

Environmental Effects Monitoring

There were no EEM reports submitted in 2012.

See Table 1: Anaconda Mining Inc. 2012: Effluent Discharge Criteria Summary.

b) Beaver Brook Antimony Mine

Current COA Approval #: AA08-035501
 Issue date: March 19, 2008
 Expiration: March 19, 2013

Beaver Brook Antimony has one discharge point located at Site 16, the final discharge from the Polishing Ponds. The effluent monitoring program for discharge criteria compliance consists of eight parameters and ALT. In 2012, 23 samples were collected. There were three total suspended solids (TSS) analyses that were reported as greater than 30mg/L and the average TSS was greater than 15mg/L for four months in 2012. There was no toxicity failures reported in 2012.

There are several points to note with respect to the Beaver Brook Antimony mine:

1. The Beaver Brook Antimony mine triggered the federal MMER on March 1, 2012.
2. The mill at Beaver Brook ceased production on November 20, 2012. The mine is currently in care and maintenance.

Environmental Effects Monitoring

There were no EEM submissions in 2012.

See Table 2: Beaver Brook 2012: Effluent Discharge Criteria Summary.

c) Iron Ore Company of Canada

Current COA Approval #: AA08-015498A
 Issue date: January 14, 2008
 Revised: December 15, 2011
 Expiration: January 14, 2013
 Extended: February 28, 2013 or until issued.

The Iron Ore Company of Canada has six discharge points: FDP-MD5, FDP-TIA (Julienne Narrows), FDP-Hakim Culvert, PD-19, PD-28 and PD-32. The effluent monitoring program for the federal discharge point (FDP) locations requires analysis of numerous parameters; eight of these have environmental limits. PD-19 requires monitoring for total petroleum hydrocarbons (TPH) only. PD-28 and PD-32 requires monitoring for five parameters, two of which have environmental limits.

FDP-MD5: Effluent discharge and corresponding environmental monitoring was conducted at FDP-MD5 between May and December. There were a total of 31 samples analysed at this location with one reported TSS exceedence in October. All other analyses met acceptable criteria and there were no reported ALT failures.

FDP-TIA: During 2012, 53 samples were collected at FDP-TIA. There were no reported exceedences of any acceptable criteria for any parameters and there were no reported ALT failures.

FDP-Hakim Culvert: A total of 53 samples were collected at FDP-Hakim Culvert in 2012. There was one TSS exceedence reported in April. All other monitoring at FDP-Hakim Culvert during 2012 was acceptable.

PD-19: TPH samples were collected nine times between May and December, 2012. There were no reported exceedences.

PD-28: Discharge was reported and analysed at PD-28 in April, May, June, July, September and October 2012. Six samples were collected and there were no exceedences reported.

PD-32: Discharge was reported and analysed at PD-32 in May, June, and July, 2012. There were no exceedences reported in the three collected samples.

Environmental Effects Monitoring

There were no EEM reports submitted in 2012.

See Table 3: Iron Ore Company of Canada 2012 Effluent Discharge Criteria Summary.

d) Labrador Iron Mines

<u>Current COA</u>	Approval #:	AA10-095537
	Issue date:	September 8, 2010
	Expiration:	September 8, 2015

Labrador Iron Mines has three discharge locations at its mining operation: Ruth Pit Outlet, JSP-Out-1 and JSP-Out-2. The effluent monitoring program for these locations requires analysis of numerous parameters, eight of which have associated compliance limits.

Ruth Pit Outlet: There were 54 samples collected at the Ruth Pit Outlet in 2012. There were no exceedences reported for any parameters that have compliance limits and there were no ALT failures.

JSP-Out-1: In 2012, there were 54 samples collected at JSP-Out-1. There was one reported TSS exceedence in February. All other monitoring met acceptable criteria and there were no ALT failures.

JSP-Out-2: There were 50 samples collected at JSP-Out-2 in 2012. There was a TSS exceedence reported in both February and May. All other monitoring met acceptable criteria and there were no reported ALT failures.

Environmental Effects Monitoring

There were no EEM submissions for 2012.

See Table 4: Labrador Iron Mines 2012: Effluent Discharge Criteria Summary.

e) Rambler Metals and Mining Canada Ltd (Ming Mine)

<u>Current COA</u>	Approval #:	AA11-055561
	Issue date:	May 25, 2011
	Expiration:	May 25, 2016

Rambler Metals and Mining has one location at the Ming Mine site that discharges effluent into South Brook Pond on the Baie Verte Peninsula. The effluent monitoring program consists of numerous parameters; nine of which have environmental compliance limits. There was discharge of treated effluent in April, June, and August to December. There were 16 samples collected and analysed with seven reported zinc exceedences. In four of the seven reporting months there were exceedences above the allowable maximum mean concentration limits. Additionally, there were two *Rainbow trout* failures reported in October and *Daphnia magna* failures in September and October. The *Rainbow trout* ALT is the compliance determinant test. Since commencing operations underground, the composition of the wastewater entering the wastewater treatment plant has changed. Rambler Metals and Mining Ltd is currently working with a consultant to optimize the wastewater treatment plant to effectively treat the metal concentrations exhibited in the wastewater as a result of this activity.

Environmental Effects Monitoring

There were no EEM submissions for 2012.

See Table 5: Rambler Metals and Mining Canada Ltd. 2012: Effluent Discharge Criteria Summary.

f) Rambler Metals and Mining Canada Ltd (Nugget Pond)

<u>Current COA</u>	Approval #:	AA10-075529
	Issue date:	July 2, 2010
	Expiration:	March 31, 2013

There is one discharge point located at the Polishing Pond at the Rambler Metals and Mining Canada Ltd. Nugget Pond mill facility. The effluent monitoring program contains numerous parameters; eight of which have environmental compliance limits. ALTs are also required as part of the COA. In 2012, a total of 18 samples were collected and analysed at the Polishing Pond. There were no reported exceedences or toxicity failures.

Environmental Effects Monitoring

The Cycle 3 EEM interpretive report was submitted in 2012.

See Table 6: Rambler Metals and Mining Canada Ltd (Nugget Pond Facility) 2012: Effluent Discharge Criteria Summary.

g) Teck Resources Ltd.

<u>Current COA</u>	Approval #:	AA10-115540
	Issue date:	November 23, 2010
	Expiration:	November 23, 2015

Teck Resources Ltd. has one discharge point (Dam C) at their mining operation located near Millertown, NL. The effluent monitoring program requires analysis of numerous parameters and nine of these parameters have associated compliance limits. In 2012, 31 samples were collected and analysed. There was no discharge in January, February or March, 2012. There were no exceedences in 2012, however there were 3 *Daphnia Magna* failures reported. It is important to note that the *Rainbow trout* ALT is the compliance toxicity test.

Environmental Effects Monitoring

There were no EEM reports submitted in 2012.

See Table 7: Teck Resources Ltd. 2012: Effluent Discharge Criteria Summary.

h) Vale Newfoundland and Labrador Ltd. (Voisey's Bay)

<u>Current COA</u>	Approval #:	AA09-015510
	Issue date:	January 1, 2009
	Expiration:	December 31, 2013

The Vale Newfoundland and Labrador Ltd. Mine Site located near Nain, Labrador discharges effluent from the Waste Water Treatment Plant. The effluent monitoring program consists of several parameters; eight of these have compliance limits. In 2012, 44 samples were collected with no reported exceedences of any parameters. Vale did experience some toxicity issues in 2012 with a *Rainbow trout* failure in August and 23 of 25 *Daphnia magna* tests failing throughout the year. It is important to note that the *Rainbow trout* test is the compliance toxicity test. As a result of the *Rainbow trout* toxicity experienced in August, Vale immediately ceased discharging treated effluent to Anaktalak Bay, Labrador. Discharge recommenced in November following an extensive evaluation of the effluent and confirmation that the effluent was no longer toxic. Vale is continuing with a toxicity evaluation program in efforts to prevent any further discharge of effluent that is toxic to *Rainbow trout*.

Environmental Effects Monitoring

There were no EEM submissions in 2012.

See Table 8: Vale Newfoundland and Labrador Ltd. (Voisey's Bay) 2012: Effluent Discharge Criteria Summary.

i) Wabush Mines

Current COA Approval #: AA12-055569
 Issue date: May 31, 2012
 Expiration: May 31, 2016

Wabush Mines has five discharge points: Flora Lake, Knoll Lake, West Pit Settling Pond, East Pit #2 and the Deep Wells. The effluent monitoring program consists of several parameters, eight of which have compliance limits. There are ALT requirements at all of these locations with the exception of Deep Wells. Wabush Mines is still attempting to control TSS levels throughout the site and is continuing to work with regulatory agencies and consultants in these efforts. Significant infrastructure upgrades were installed in 2012 and as a result, water quality is anticipated to improve in 2013, particularly at the Knoll Lake discharge location.

Flora Lake: 52 samples were collected and analysed at the Flora Lake discharge in 2012. There was one reported TSS exceedence in June.

Knoll Lake: As a result of a commitment by Wabush Mines to improve the discharge at Knoll Lake, significant work has been completed in this area. Large amounts of data have been collected from this location in 2012 as a result of the effluent studies and construction activities. All data submitted to the Department is included in this summary. Data from 346 samples were reported in 2012. There were 85 TSS exceedences reported and the mean monthly average was exceeded eight times this year. There was also one *Daphnia magna* failure reported in December.

West Pit Settling Pond: 51 samples were collected at the West Pit Settling Pond in 2012. There were no reported exceedences or toxicity failures.

East Pit #2: 52 samples were analysed at the East Pit #2 location in 2012. There were no reported exceedences but there was one *Daphnia magna* failure in April. The *Rainbow Trout* test is the compliance toxicity test.

Deep Wells: A total of 52 samples were taken at this location with no exceedences reported.

Environmental Effects Monitoring

There were no EEM reports submitted in 2012.

See Table 9: Wabush Mines 2012: Effluent Discharge Criteria Summary.

Table 1: Anaconda Mining Inc. 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Polishing Pond Discharge	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples	1			1	2	1		1		1	1	1	9
- pH, Maximum (Units)	7.85			7.43	8.09	7.92		8.17			8.12	7.95	8.17
- pH, Minimum (Units)					8.01								8.01
- pH, Exceedence (<5.5, >9.0)	0			0	0	0		0			0	0	0
- As, Maximum						<0.001		<0.001			<0.001	<0.001	<0.001
- As, Exceedence (>1)						0		0			0	0	0
Monthly Average (>0.50)						<0.001		<0.001			<0.001	<0.001	
- Cu, Maximum						0.0113		0.0063			0.0397	0.0642	0.0642
- Cu, Exceedence (>0.6)						0		0			0	0	0
Monthly Average (>0.30)						0.0113		0.0063			0.0397	0.0642	
- CN, Maximum	1.6			0.008	0.87	0.23		0.11		2.1	0.11	1.2	2.1
- CN, Exceedence (>2.0)	0			0	0	0		0		1	0	0	1
Monthly Average (>1.00)	1.6			0.008	0.565	0.23		0.11		2.1	0.11	1.2	
- Pb, Maximum						<0.0005		<0.0005			0.00105	<0.0005	0.00105
- Pb, Exceedence (>0.4)						0		0			0	0	0
Monthly Average (>0.20)						<0.0005		<0.0005			0.00105	<0.0005	
- Ni, Maximum						<0.002		<0.002			<0.002	<0.002	<0.002
- Ni, Exceedence (>1)						0		0			0	0	0
Monthly Average (>0.50)						<0.002		<0.002			<0.002	<0.002	
- Zn, Maximum						<0.005		<0.005			0.0085	<0.005	0.0085
- Zn, Exceedence (>1)						0		0			0	0	0
Monthly Average (>0.50)						<0.005		<0.005			0.0085	<0.005	
- TSS, Maximum	3.2			2.7	4.8	9.6		2.6		18	5.4	4	18
- TSS, Exceedence (>30)	0			0	0	0		0		0	0	0	0
Monthly Average (>15.00)	3.2			2.7	4.6	9.6		2.6		18	5.4	4	
- Ra-226, Maximum						<0.005							<0.005
- Ra-226, Exceedence (>1.11 Bq/l)						0							0
Monthly Average (>0.37)						<0.005							

Table 1 Continued: Anaconda Mining Inc. 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Polishing Pond Discharge	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Ammonia, Maximum						4.3		4.2			2.9	4.2	4.3
- Cd, Maximum (ug/L)						0.017		<0.017			0.02	0.018	0.02
- Fe, Maximum						1.08		<0.05			0.594	0.242	1.08
- Hg, Maximum (ug/L)						<0.013		<0.013			<0.013	<0.013	<0.013
- Nitrate, Maximum						2		4.4			4.1	4.8	4.8
- TDS, Maximum						398		613			419	518	613
- TPH, Maximum						<0.10							<0.1
- ALT, Pass (RT)	1							1			1	1	4
- ALT, Fail (RT)	0							0			0	0	0
- ALT, Pass (DM)	1							1			1	1	4
- ALT, Fail (DM)	0							0			0	0	0

Table 2: Beaver Brook 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Site 16	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples	3	4	4	4	2			3	3				23
- pH, Maximum (Units)	8.30	8.2	8.20	8.3	8.50			8.30	8.30				8.5
- pH, Minimum (Units)	8.1	7.9	8	8.1	8.40			7.90	8.20				7.9
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0			0	0				0
- As, Maximum	0.091	0.078	0.087	0.084	0.088			0.114	0.115				0.115
- As, Exceedence (>1)	0	0	0	0	0			0	0				0
Monthly Average (>0.50)	0.086	0.0635	0.079333	0.08275	0.087			0.098667	0.106666				
- Cu, Maximum	<0.002	<0.002	<0.002	<0.002	<0.002			<0.002	<0.002				<0.002
- Cu, Exceedence (>0.6)	0	0	0	0	0			0	0				0
Monthly Average (>0.30)	<0.002	<0.002	<0.002	<0.002	<0.002			<0.002	<0.002				
- Pb, Maximum	0.0015	0.0149	0.0158	0.0125	0.0028			0.0056	0.0111				0.0158
- Pb, Exceedence (>0.4)	0	0	0	0	0			0	0				0
Monthly Average (>0.20)	0.001017	0.004163	0.008133	0.0056	0.0024			0.004167	0.006167				
- Ni, Maximum	0.028	0.03	0.032	0.025	0.0026			0.0016	0.023				0.032
- Ni, Exceedence (>1)	0	0	0	0	0			0	0				0
Monthly Average (>0.50)	0.026667	0.026	0.029667	0.024	0.0025			0.014	0.02				
- Zn, Maximum	0.014	0.026	0.006	<0.005	0.0014			0.005	0.008				0.026
- Zn, Exceedence (>1)	0	0	0	0	0			0	0				0
Monthly Average (>0.50)	0.0075	0.011375	0.003667	<0.005	0.00125			0.003333	<0.005				
- TSS, Maximum	10	36	32	29	11			18	33				36
- TSS, Exceedence (>30)	0	1	1	0	0			0	1				3
Monthly Average (>15.00)	5.83	13.125	19	18	11			15.33333	23.25				
- Ra-226, Maximum			<0.01	0.01	<0.01			0.02	0.02				0.02
- Ra-226, Exceedence (>1.11 Bq/l)			0	0	0			0	0				0
Monthly Average (>0.37)			<0.01	0.007125	<0.01			0.011667	0.010833				
- Ammonia, Maximum													
- Cd, Maximum (ug/L)		0.054		<0.3	<0.3				0.085				<0.3
- Fe, Maximum		0.729		0.597	0.32				0.379				0.729
- Hg, Maximum (ug/L)													
- Nitrate, Maximum													

Table 2 Continued: Beaver Brook 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Site 16	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- TDS, Maximum													
- TPH, Maximum													
- ALT, Pass (RT)	1	1	1	1				1	1				6
- ALT, Fail (RT)	0	0	0	0				0	0				0
- ALT, Pass (DM)			1	1				1	1				4
- ALT, Fail (DM)			0	0				0	0				0

Table 3: Iron Ore Company of Canada 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

FDP - MD5	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples					3	4	5	4	4	5	4	2	31
- pH, Maximum (Units)					7.75	8.13	8.11	8.15	8.13	8.16	7.99	7.98	8.16
- pH, Minimum (Units)					7.63	7.89	8.06	7.88	7.94	8.02	7.92	7.94	7.63
- pH, Exceedence (<5.5, >9.0)					0	0	0	0	0	0	0	0	0
- As, Maximum					<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
- As, Exceedence (>1)					0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)					<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
- Cu, Maximum					<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0086	<0.0020	<0.0020	0.0086
- Cu, Exceedence (>0.6)					0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)					<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.00252	<0.0020	<0.0020	
- Pb, Maximum					<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0028	<0.00050	<0.00050	0.0028
- Pb, Exceedence (>0.4)					0	0	0	0	0	0	0	0	0
Monthly Average (>0.20)					<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00076	<0.00050	<0.00050	
- Ni, Maximum					<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0051	<0.0020	<0.0020	0.0051
- Ni, Exceedence (>1)					0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)					<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Zn, Maximum					0.011	0.0064	<0.0050	0.0068	0.0063	0.022	0.011	0.0084	0.022
- Zn, Exceedence (>1)					0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)					0.008333	<0.0050	<0.0050	<0.0050	<0.0050	0.0088	0.0076	0.0084	
- TSS, Maximum					7.6	6.4	4.8	5.8	4.7	45	18	2.6	45
- TSS, Exceedence (>30)					0	0	0	0	0	1	0	0	1
Monthly Average (>15.00)					6.2	3.525	2.86	3.65	2.675	10.64	8.1	<2.0	
- Ra-226, Maximum						<0.005	0.01	<0.01	<0.01			<0.01	0.01
- Ra-226, Exceedence (>1.11 Bq/l)						0	0	0	0			0	0
Monthly Average (>0.37)						<0.005	0.00625	<0.01	<0.01			<0.01	
- Ammonia, Maximum					0.082	0.073	<0.050	0.05	0.11	0.081	0.075	0.12	0.12
- Cd, Maximum (ug/L)					<0.017	<0.017	0.02	<0.017	<0.017	<0.017	<0.017	<0.017	0.02
- Fe, Maximum					1.4	0.54	0.44	0.4	0.78	0.83	1.1	0.32	1.4
- Hg, Maximum (ug/L)					<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
- Nitrate, Maximum					0.082	0.091	<0.050	<0.050	0.055	0.067	0.075	0.11	0.11

Table 3 Continued: Iron Ore Company of Canada 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

FDP-MD5	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- TDS, Maximum					74	100	123	150	140	160	150	150	160
- TPH, Maximum					<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
- ALT, Pass (RT)						1		1	1	1	1	1	6
- ALT, Fail (RT)						0		0	0	0	0	0	0
- ALT, Pass (DM)						1		1	1	1	1	1	6
- ALT, Fail (DM)						0		0	0	0	0	0	0

FDP-TIA (Julienne Narrows)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	5	4	4	5	4	4	5	4	4	5	4	5	53
- pH, Maximum (Units)	7.83	7.86	7.8	7.99	7.84	7.97	8.02	8.05	8.00	8.05	8.00	8.00	8.05
- pH, Minimum (Units)	7.76	7.82	7.67	7.85	7.66	7.71	7.87	7.88	7.96	7.85	7.93	7.84	7.66
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
- As, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<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, Maximum	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
- Cu, Exceedence (>0.6)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Pb, Maximum	<0.00050	<0.00050	<0.00050	0.00094	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00068	0.00094
- Pb, Exceedence (>0.4)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.20)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
- Ni, Maximum	<0.0020	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0029
- Ni, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Zn, Maximum	0.0056	<0.0050	<0.0050	<0.0050	<0.0050	0.0064	0.0062	<0.0050	0.0076	<0.0050	0.0076	0.2	0.2
- Zn, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.04496	

Table 3 Continued: Iron Ore Company of Canada 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

FDP-TIA (Julienne Narrows)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- TSS, Maximum	<2.0	<2.0	2	<2.0	3.2	5.8	1.8	2.6	3.4	1.4	1.2	1.8	5.8
- TSS, Exceedence (>30)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>15.00)	<2.0	<2.0	<2.0	<2.0	<2.0	2.525	<2.0	1.15	1.925	1.14	<1.0	<1.0	
- Ra-226, Maximum						<0.005	0.008	<0.01	0.01			<0.01	0.01
- Ra-226, Exceedence (>1.11 Bq/l)						0	0	0	0			0	0
Monthly Average (>0.37)						<0.005	<0.005	<0.01	0.01			<0.01	
- Ammonia, Maximum						<0.050	<0.050	0.067	<0.050				0.067
- Cd, Maximum (ug/L)					<0.017	<0.017	<0.017	<0.017	0.37	<0.017	0.63	0.017	0.63
- Fe, Maximum					0.077	0.21	0.11	<0.050	0.085	0.058	0.099	0.054	0.21
- Hg, Maximum (ug/L)					<0.013	<0.013	<0.013	<0.013	<0.013	0.07	<0.013	<0.013	0.07
- Nitrate, Maximum						0.82	0.78	0.73	0.7				0.82
- TDS, Maximum					66	72	65	75	76	72	73	66	76
- TPH, Maximum						<0.10	<0.10	<0.10	<0.10				0
- ALT, Pass (RT)	1	1	1	1	1	1		1	1	1	1	1	11
- ALT, Fail (RT)	0	0	0	0	0	0		0	0	0	0	0	0
- ALT, Pass (DM)	1	1	1	1	1	1		1	1	1	1	1	11
- ALT, Fail (DM)	0	0	0	0	0	0		0	0	0	0	0	0

FDP-Hakim Culvert	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	5	4	4	5	4	4	5	4	4	5	4	5	53
- pH, Maximum (Units)	8.06	8.09	8.05	8.09	8.11	8.23	8.15	8.18	8.24	8.20	8.19	8.19	8.24
- pH, Minimum (Units)	7.95	8.02	7.87	8.04	8.06	8.08	8.09	8.08	8.14	8.18	8.09	8.06	7.87
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
- As, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<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, Maximum	<0.0020	<0.0020	<0.0020	<0.0020	0.004	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.004
- Cu, Exceedence (>0.6)	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 3 Continued: Iron Ore Company of Canada 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

FDP-Hakim Culvert	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Monthly Average (>0.30)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Pb, Maximum	<0.00050	<0.00050	0.00072	0.0008	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0008
- Pb, Exceedence (>0.4)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.20)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
- Ni, Maximum	<0.0020	<0.0020	<0.0020	0.0042	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0042
- Ni, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Zn, Maximum	0.011	<0.0050	<0.0050	0.0055	0.0068	<0.0050	0.0075	<0.0050	<0.0050	0.0072	0.006	<0.0050	0.011
- Zn, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	0.00506	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
- TSS, Maximum	11	4.4	5	32	2	<1.0	4.2	3.2	4	6	2	<1.0	32
- TSS, Exceedence (>30)	0	0	0	1	0	0	0	0	0	0	0	0	1
Monthly Average (>15.00)	3.5	2.25	2.525	8.56	1.7	<1.0	1.92	1.775	2.666	2.4	1.275	<1.0	
- Ra-226, Maximum						<0.005	<0.005	<0.01	<0.01			<0.01	<0.01
- Ra-226, Exceedence (>1.11 Bq/l)						0	0	0	0			0	0
Monthly Average (>0.37)						<0.005	<0.005	<0.01	<0.01			<0.01	
- Ammonia, Maximum	23	8.6	16	9.7	4.5	10	7.2	7.8	5.5	5.5	6.5	3.3	23
- Cd, Maximum (ug/L)					<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
- Fe, Maximum					0.65	0.4	1.1	0.29	0.63	1.3	0.72	0.073	1.3
- Hg, Maximum (ug/L)					<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
- Nitrate, Maximum	39	18	31	28	15	23	24	24	22	20	18	18	39
- TDS, Maximum					275	292	360	301	310	300	301	255	360
- TPH, Maximum	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.1
- ALT, Pass (RT)	1	1	1	1	1	1		1	1	1	1	1	11
- ALT, Fail (RT)	0	0	0	0	0	0		0	0	0	0	0	0
- ALT, Pass (DM)	1	1	1	1	1	1		1	1	1	1	1	11
- ALT, Fail (DM)	0	0	0	0	0	0		0	0	0	0	0	0

Table 3 Continued: Iron Ore Company of Canada 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

PD 19 (Smallwood Pit)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples					1	1	2	1	1	1	1	1	9
- TPH, Maximum					<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

PD 28 (Humphrey West Pit)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples				1	1	1	1		1	1			6
- pH, Maximum (Units)				8.18	8.21	8.27	8.25		8.36	8.36			8.36
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)				0	0	0	0		0	0			0
- Fe, Maximum				0.21	0.62	0.24	0.07		0.41	1.4			1.4
- TDS, Maximum				430	370	340	340		350	360			430
- TPH, Maximum				<0.10	<0.10	<0.10	<0.10		<0.10	<0.10			<0.10
- TSS, Maximum				1.6	5.2	1.2	<1.0		1.4	3.2			5.2
- TSS, Exceedence (>30)				0	0	0	0		0	0			0
Monthly Average (>15.00)				1.6	5.2	1.2	<1.0		1.4	3.2			

PD 32	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples					1	1	1						3
- pH, Maximum (Units)					8.24	8.32	8.31						8.32
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)					0	0	0						0
- Fe, Maximum					0.085	0.12	0.056						0.12
- TDS, Maximum					190	180	170						190
- TPH, Maximum					<0.10	<0.10	<0.10						<0.10
- TSS, Maximum					2.6	<1.0	<1.0						2.6
- TSS, Exceedence (>30)					0	0	0						0
Monthly Average (>15.00)					2.6	<1.0	<1.0						

Table 4: Labrador Iron Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Ruth Pit Outlet	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	5	4	5	5	5	4	4	4	4	5	5	4	54
- pH, Maximum (Units)	7.79	7.80	7.63	7.71	7.46	7.75	8.03	8.00	7.83	8.08	7.98	7.8	8.08
- pH, Minimum (Units)	7.63	7.59	7.51	7.38	6.82	7.06	7.89	7.78	7.72	6.94	6.96	7	6.82
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
- As, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
- Cu, Maximum	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
- Cu, Exceedence (>0.6)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	
- Pb, Maximum	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
- Pb, Exceedence (>0.4)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average(>0.20)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
- Ni, Maximum	<0.002	<0.002	0.0026	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0026
- Ni, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
- Zn, Maximum	0.0086	0.0098	0.0073	0.1	0.016	<0.007	0.01	0.0076	<0.007	0.0099	<0.007	0.0088	0.1000
- Zn, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	0.0086	<0.006	<0.007	0.0305	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	
- TSS, Maximum	<2	6	9	9	8	3	2	3	3	9	6	2	9
- TSS, Exceedence (>30)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>15.00)	<2	3.75	3	3.6	4.75	<2	<2	2.5	<2	4.6	2.2	<2	
Radium, Maximum	<0.1	<0.01	<0.01	0.01	<0.01	<0.002	<0.01	<0.002	0.007	0.003	<0.002	<0.002	<0.1
Radium, Exceedence (>1.11 Bq/L)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ammonia, Maximum	0.04	0.04	0.07	0.02	<0.02	<0.02	<0.02	0.03	<0.02	0.04	0.03	<0.02	0.07
- Cd, Maximum (ug/L)	<0.3	<0.3	<0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.2	0.4
- Fe, Maximum	<0.06	0.2	<0.06	0.081	0.15	<0.06	<0.06	0.1	0.094	<0.06	<0.06	<0.06	0.2
- Hg, Maximum (ug/L)	<0.01	<0.1	0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.05
- Nitrate, Maximum	0.03	0.44	0.72	0.6	0.28	0.33	0.24	0.23	0.3	0.2	0.40	0.34	0.72

Table 4 Continued: Labrador Iron Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Ruth Pit Outlet	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- TDS, Maximum	60	110	88	72	71	90	82	67	89	35	69	95	110
- ALT, Pass (RT)	1	1	1	1	1	1	1	1	1	1	1	1	12
- ALT, Fail (RT)	0	0	0	0	0	0	0	0	0	0	0	0	0
- ALT, Pass (DM)	1	1	1	1	1	1	1	1	1	1	1	1	12
- ALT, Fail (DM)	0	0	0	0	0	0	0	0	0	0	0	0	0

JSP-Out-1	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	5	5	4	5	5	4	4	4	4	5	5	4	54
- pH, Maximum (Units)	7.14	7.08	7.07	7.15	7.20	7.22	7.26	7.18	7.09	7.41	7.48	6.82	7.48
- pH, Minimum (Units)	6.93	6.97	6.89	6.95	6.74	6.64	6.96	7.00	6.95	7.01	6.48	6.13	6.13
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
- As, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
- Cu, Maximum	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	0.0034	<0.001	<0.005
- Cu, Exceedence (>0.6)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	0.0034	<0.001	
- Pb, Maximum	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001
- Pb, Exceedence (>0.4)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average(>0.20)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	
- Ni, Maximum	<0.002	<0.002	0.0074	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0074
- Ni, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.002	<0.002	0.0074	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
- Zn, Maximum	<0.007	<0.007	0.019	<0.007	<0.007		0.0088	<0.007	<0.007	<0.007	<0.007	<0.007	0.019
- Zn, Exceedence (>1)	0	0	0	0	0		0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.007	<0.007	0.019	<0.007	<0.007		0.0088	<0.007	<0.007	<0.007	<0.007	<0.007	
- TSS, Maximum	3	74	3	6	2	4	6	10	<2	7	4	3	74
- TSS, Exceedence (>30)	0	1	0	0	0	0	0	0	0	0	0	0	1
Monthly Average (>15.00)	<2	18.6	2.75	4.6	<2	2.5	2.25	3.75	<2	3.4	<2	<2	

Table 4 Continued: Labrador Iron Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

JSP-Out-1	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Radium, Maximum	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01		0.005	<0.002	0.002	<0.002	<0.01
Radium, Exceedence (>1.11 Bq/L)	0	0	0	0	0	0	0		0	0	0	0	0
- Ammonia, Maximum	0.04	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	0.04	0.04	<0.02	0.04
- Cd, Maximum (ug/L)	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
- Fe, Maximum	<0.06	<0.06	0.068	0.13	<0.06	<0.06	<0.06	0.91	0.09	<0.06	0.52	<0.06	0.91
- Hg, Maximum (ug/L)	<0.01	<0.01	0.06	<0.01	<0.01	0.01	0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.06
- Nitrate, Maximum	0.02	0.21	0.2	0.5	0.46	0.17	0.210	0.2	0.2	0.3	0.20	0.19	0.5
- TDS, Maximum	17	38	34	16	49	42	44	36	41	65	25	26	65
- ALT, Pass (RT)	1	1	1	1	1	1	1	1	1	1	1	1	12
- ALT, Fail (RT)	0	0	0	0	0	0	0	0	0	0	0	0	0
- ALT, Pass (DM)							1	1	1	1	1	1	6
- ALT, Fail (DM)							0	0	0	0	0	0	0

JSP-Out-2	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	1	5	4	5	5	4	4	4	4	5	5	4	50
- pH, Maximum (Units)	7	7.03	6.97	7.17	7.06	7.11	7.23	7.16	7.09	7.24	7.29	6.87	7.29
- pH, Minimum (Units)		6.81	6.89	6.97	6.74	6.62	7.04	7.09	7.04	6.87	6.41	6.31	6.31
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
- As, Exceedence (>1)		0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
- Cu, Maximum		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005
- Cu, Exceedence (>0.6)		0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005
- Pb, Maximum		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001
- Pb, Exceedence (>0.4)		0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average(>0.20)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001

Table 4 Continued: Labrador Iron Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

JSP-Out-2	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Ni, Maximum		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
- Ni, Exceedence (>1)		0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
- Zn, Maximum		<0.007	<0.007	<0.007	0.012		<0.007	<0.007	<0.007	<0.007	<0.007	0.008	0.012
- Zn, Exceedence (>1)		0	0	0	0		0	0	0	0	0	0	0
Monthly Average (>0.50)		<0.007	<0.007	<0.007	0.012		<0.007	<0.007	<0.007	<0.007	<0.007	0.008	
- TSS, Maximum	<2	73	6	6	32	4	6	9	3	6	29	13	73
- TSS, Exceedence (>30)	0	1	0	0	1	0	0	0	0	0	0	0	2
Monthly Average (>15.00)	<2	16.5	5.25	3.4	11	<2	3.5	4.25	<2	2.4	12.8	6.5	
Radium, Maximum		<0.01	<0.01	0.01	<0.01	<0.002	<0.01		0.679	<0.002	<0.002	<0.002	0.679
Radium, Exceedence (>1.11 Bq/L)		0	0	0	0	0	0		0	0	0	0	0
- Ammonia, Maximum		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	0.03	<0.02	0.04
- Cd, Maximum (ug/L)		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.2	<0.3
- Fe, Maximum		<0.06	0.17	<0.06	0.54	<0.06	0.15	0.22	<0.06	0.18	0.095	<0.06	0.54
- Hg, Maximum (ug/L)		<0.01	0.06	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	<0.01	0.01	0.06
- Nitrate, Maximum		0.27	0.2	0.7	0.44	0.2	0.230	0.21	0.2	0.3	0.30	0.21	0.7
- TDS, Maximum		34	36	19	39	33	48	35	37	34	21	20	48
- ALT, Pass (RT)		1	1	1	1	1	1		1	1	1	1	10
- ALT, Fail (RT)		0	0	0	0	0	0		0	0	0	0	0
- ALT, Pass (DM)							1		1	1	1	1	5
- ALT, Fail (DM)							0		0	0	0	0	0

Table 5: Rambler Metals and Mining Canada Ltd. (Ming Mine) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Treated Mine Effluent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples				1		2		1	1	6	2	3	16
- pH, Maximum (Units)				8.14		7.92		8.45		8.84	8.02	8.72	8.84
- pH, Minimum (Units)						7.58				8.64		7.91	7.58
- pH, Exceedence (<5.5, >9.0)				0		0		0		0	0	0	0
- As, Maximum				<0.001		<0.001		<0.001	0.0016	0.0017	0.002	<0.001	0.002
- As, Exceedence (>1)				0		0		0	0	0	0	0	0
Monthly Average (<0.50)				<0.001		<0.001		<0.001	0.0016	<0.001	<0.001	<0.001	
- Cu, Maximum				0.0496		0.0795		0.045	0.0569	0.14	0.0725	0.117	0.14
- Cu, Exceedence (>0.6)				0		0		0	0	0	0	0	0
Monthly Average (<0.30)				0.0496		0.0542		0.045	0.0569	0.08424	0.07075	0.0802	
- CN, Maximum				0.00083		0.018		0.0039					0.018
- CN, Exceedence (>2)				0		0		0					0
Monthly Average (<1.00)				0.00083		0.01285		0.0039					
- Pb, Maximum				<0.0005		<0.0005		<0.0005	<0.0005	0.00058	0.0023	<0.05	0.0023
- Pb, Exceedence (>0.4)				0		0		0	0			0	0
Monthly Average (<0.20)				<0.0005		<0.0005		<0.0005	<0.0005	0.00156	0.00143	<0.05	
- Ni, Maximum				0.003		0.0769		0.0707	0.0471	0.0935	0.116	0.125	0.125
- Ni, Exceedence (>1)				0		0		0	0	0	0	0	0
Monthly Average (<0.50)				0.003		0.05285		0.0707	0.0471	0.06008	0.0821	0.0961	
- Zn, Maximum				0.08		2.02		0.433	0.452	2.2	2.03	4.02	4.02
- Zn, Exceedence (>1)				0		1		0	0	3	1	2	7
Monthly Average (<0.50)				0.08		1.03085		0.433	0.452	1.3616	1.412	1.997	
- TSS, Maximum				0.0072		7.6		7.2	6	27	9	15	27
- TSS, Exceedence (>30)				0		0		0	0	0	0	0	0
Monthly Average (<15.00)				0.0072		6.4		7.2	6	11.4	9	8.57	
- Ra-226, Maximum				0.07		0.03			0.05	0.06	0.06		0.07
- Ra-226, Exceedence (>1.11 Bq/l)				0		0			0	0	0		0
Monthly Average (>0.37)				0.07		0.03			0.05	0.046	0.06		

Table 5 Continued: Rambler Metals and Mining Canada Ltd. (Ming Mine) 2012 Effluent Discharge Criteria Summary
(mg/L, unless noted)

Treated Mine Effluent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Ammonia, Maximum				15		11				11	15		15
- Cd, Maximum (ug/L)						33.5				19.6	49	24.9	49
- Fe, Maximum				0.068		0.071				0.332	0.143		0.332
- Hg, Maximum (ug/L)						<0.013				<0.013	<0.013		<0.013
- Nitrate, Maximum						16				11	22		22
- TDS, Maximum						1800				2930	2530		2930
- TPH, Maximum						0.12							0.12
- ALT, Pass (RT)				1		1		1	1	0	1		5
- ALT, Fail (RT)				0		0		0	0	2	0		2
- ALT, Pass (RT)				1		1		1	0	0	1		4
- ALT, Fail (RT)				0		0		0	1	2	0		3

Table 6: Rambler Metals and Mining (Nugget Pond) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Polishing Pond	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples		2		3	2	1	1	2	3	1	2	1	18
- pH, Maximum (Units)		7.53		7.34	7.67	7.61	7.83	7.85	7.82	7.63	7.83	7.6	7.85
- pH, Minimum (Units)				7.13				7.81	7.77		7.68		7.13
- pH, Exceedence (<5.5, >9.0)		0		0	0	0	0	0	0	0	0	0	0
- As, Maximum		0.0014		0.0024	0.008	0.0058	0.004	0.004	0.004	0.006	0.003	0.002	0.008
- As, Exceedence (>1)		0		0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)		0.0014		0.0016	0.008	0.0058	0.004	0.004	0.0039	0.006	0.003	0.002	
- Cu, Maximum		0.014		0.016	0.0542	0.0395	0.031	0.014	0.013	0.033	0.016	0.035	0.0542
- Cu, Exceedence (>0.6)		0		0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)		0.014		0.013	0.0542	0.040	0.031	0.014	0.013	0.033	0.0145	0.035	
- CN, Maximum		0.06		0.65	0.7	0.41	0.71	0.6	0.13	0.11	0.23	0.22	0.71
- CN, Exceedence (>2)		0		0	0	0	0	0	0	0	0	0	0
Monthly Average (>1.00)		0.06		0.39	0.7	0.41	0.71	0.515	0.115	0.11	0.12	0.22	
- Pb, Maximum		0.002		0.0303	0.0719	0.05	0.02	0.0043	0.0027	0.02	0.00479	0.00224	0.0719
- Pb, Exceedence (>0.4)		0		0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.20)		0.002		0.013647	0.0719	0.050	0.02	0.0038	0.00245	0.02	0.004	0.00224	
- Ni, Maximum		<0.002		0.003	0.006	0.005	0.005	0.003	0.003	0.004	0.003	0.003	0.006
- Ni, Exceedence (>1)		0		0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)		<0.002		<0.002	0.006	0.005	0.005	0.003	0.003	0.004	0.0025	0.003	
- Zn, Maximum		<0.005		0.042	0.114	0.0769	0.054	0.025	0.031	0.064	0.083	0.031	0.114
- Zn, Exceedence (>1)		0		0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)		<0.005		0.0233333	0.114	0.065	0.054	0.025	0.0285	0.064	0.059	0.031	
- TSS, Maximum		<1.0		2.8	2.2	1.2	2.2	1.2	<1.0	3.2	2.2	<1.0	3.2
- TSS, Exceedence (>30)		0		0	0	0	0	0	0	0	0	0	0
Monthly Average (>15.00)		<1.0		1.6333333	2.2	1.2	2.2	<1.0	<1.0	3.2	1.35	<1.0	

Table 6 Continued: Rambler Metals and Mining (Nugget Pond) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Polishing Pond	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Ra-226, Maximum								<0.01	<0.01		0.01		0.01
- Ra-226, Exceedence (>1.11 Bq/l)								0	0		0		0
Monthly Average (>0.37)								<0.01	<0.01		0.01		
- Ammonia, Maximum		0.27		0.67	2.7	2.5	2.8	2.9	2.1		2.3		2.9
- Cd, Maximum (ug/L)				0.22	0.7	0.49	0.36	0.226	0.018		0.148		0.7
- Fe, Maximum				0.355	0.239	0.15	0.169	<0.050	0.062		0.108		0.355
- Hg, Maximum (ug/L)		0.052		0.098	0.31	0.2	0.12	0.04	0.025		0.019		0.31
- Nitrate, Maximum		2.9		0.66	2.6	2.9	2.8	2.2	2.5		2.4		2.9
- TDS, Maximum				94	233	245	246	291	230		238		291
- TPH, Maximum													
- ALT, Pass (RT)		2		3	1	1	1	1	1	1	1	1	13
- ALT, Fail (RT)		0		0	0	0	0	0	0	0	0	0	0
- ALT, Pass (DM)		2		3	1	1	1	1	1	1	1	1	13
- ALT, Fail (DM)		0		0	0	0	0	0	0	0	0	0	0

Table 7: Teck Resources Ltd. 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

DPM - Dam C	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples				2	3	4	3	2	4	5	5	3	31
- pH, Maximum (Units)				7.39	6.88	7.26	7.41	7.12	7.62	7.64	7.57	7.81	7.81
- pH, Minimum (Units)				7.27	6.27	7.10	7.21	7.03	7.38	7.50	7.20	7.65	6.27
- pH, Exceedence (<5.5, >9.0)				0	0	0	0	0	0	0	0	0	0
- As, Maximum				0.004	0.008	0.012	0.008	0.005	0.008	0.007	0.012	0.018	0.018
- As, Exceedence (>1)				0	0	0	0	0	0	0	0	0	0
Monthly Average (<0.50)				<0.004	0.006	0.0075	0.00567	0.005	0.00625	0.006	0.008	0.01067	
- Cu, Maximum				0.063	0.143	0.314	0.314	0.232	0.252	0.273	0.252	0.29	0.314
- Cu, Exceedence (>0.6)				0	0	0	0	0	0	0	0	0	0
Monthly Average (<0.30)				0.059	0.141	0.269	0.26833	0.215	0.21925	0.236	0.2284	0.27567	
- CN, Maximum				0.002	<0.002	0.002	0.005	<0.01	<0.01	<0.01	<0.01	<0.01	0.005
- CN, Exceedence (>2)				0	0	0	0	0	0	0	0	0	0
Monthly Average (<1.00)				<0.002	<0.002	<0.002	0.00367	<0.01	<0.01	<0.01	<0.01	<0.01	
- Pb, Maximum				0.018	0.151	0.058	0.057	0.0481	0.057	0.064	0.052	0.031	0.151
- Pb, Exceedence (>0.4)				0	0	0	0	0	0	0	0	0	0
Monthly Average (<0.20)				0.01025	0.06733	0.044	0.048	0.03955	0.05025	0.0516	0.0388	0.02833	
- Ni, Maximum				0.002	0.005	0.004	0.003	0.0036	0.002	0.004	0.005	0.006	0.006
- Ni, Exceedence (>1)				0	0	0	0	0	0	0	0	0	0
Monthly Average (<0.50)				<0.002	0.00333	0.00275	0.00233	0.0033	<0.002	<0.002	0.004	0.00433	
- Zn, Maximum				0.077	0.111	0.091	0.099	0.163	0.142	0.152	0.255	0.148	0.255
- Zn, Exceedence (>1)				0	0	0	0	0	0	0	0	0	0
Monthly Average (<0.50)				0.0745	0.10233	0.089	0.09433	0.1435	0.12925	0.1388	0.182	0.12467	
- TSS, Maximum				<2	5	4	6	4	7	2	4	<2	7
- TSS, Exceedence (>30)				0	0	0	0	0	0	0	0	0	0
Monthly Average (<15.00)				<2	4	3.5	4.3333	4	5	<2	2	<2	
- Ra-226, Maximum							0.03				0.04		0.04
- Ra-226, Exceedence (>1.11 Bq/l)							0				0		0
Monthly Average (<0.37)							0.03				0.04		
- Ammonia, Maximum				0.9	5.4	5.8	6.7	6.4	5.1	6	6.5	6.6	6.7
- Cd, Maximum (ug/L)				0.7	0.9	1	1.1	1.3	1.4	1.4	1.4	1.5	1.5

Table 7 Continued: Teck Resources Ltd. 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

DPM - Dam C	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Fe, Maximum				0.422	0.686	0.22	0.265	0.204	0.177	0.115	0.209	0.099	0.686
- Hg, Maximum (ug/L)				<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.01	0.01	0.2
- Nitrate, Maximum				0.31	0.64	0.67	1.1	1.06	1.48	0.89	0.81	0.77	1.48
- TDS, Maximum				191	809	1010	980	1050	1040	1120	1040	1060	1120
- ALT, Pass (RT)				1	1	1	1	1	1	1	1	1	9
- ALT, Fail (RT)				0	0	0	0	0	0	0	0	0	0
- ALT, Pass (DM)				0	0	0	1	1	1	1	1	1	6
- ALT, Fail (DM)				1	1	1	0	0	0	0	0	0	3

Table 8: Vale Newfoundland and Labrador Ltd. (Voisey's Bay) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Treated Effluent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	6	4	5	5	4	4	5	3	0	0	4	4	44
- pH, Maximum (Units)	7.81	8.13	7.97	8.57	8.81	8.06	8.49	6.80			7.31	7.92	8.81
- pH, Minimum (Units)	6.22	7.02	7.32	7.25	7.61	6.93	6.87	5.64			6.81	6.49	5.64
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0			0	0	0
- As, Maximum	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.01
- As, Exceedence (>1)	0	0	0	0	0	0	0	0			0	0	0
Monthly Average (>0.50)	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	
- Cu, Maximum	<0.02	0.0116	0.0033	0.005	0.0039	0.0077	0.0066	0.0073			0.0073	<0.002	0.0116
- Cu, Exceedence (>0.6)	0	0	0	0	0	0	0	0			0	0	0
Monthly Average (>0.30)	<0.02	0.0058	<0.002	<0.002	<0.002	0.00405	0.00374	0.0052			0.0026	<0.002	
- Pb, Maximum	<0.005	0.00105	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	0.00105
- Pb, Exceedence (>0.4)	0	0	0	0	0	0	0	0			0	0	0
Monthly Average (>0.20)	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	
- Ni, Maximum	0.0915	0.106	0.0799	0.0605	0.202	0.0809	0.115	0.117			0.0535	0.0269	0.202
- Ni, Exceedence (>1)	0	0	0	0	0	0	0	0			0	0	0
Monthly Average (>0.50)	0.079	0.086725	0.0586	0.0404	0.100	0.04815	0.090	0.109			0.04825	0.0207	
- Zn, Maximum	<0.05	0.006	0.0101	0.0051	0.0076	<0.005	<0.005	<0.005			0.0264	<0.005	0.0264
- Zn, Exceedence (>1)	0	0	0	0	0	0	0	0			0	0	0
Monthly Average (>0.50)	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			0.0109	<0.005	
- TSS, Maximum	20	13	22	9.3	7.5	5.6	5.3	6			7.2	5.4	22
- TSS, Exceedence (>30)	0	0	0	0	0	0	0	0			0	0	0
Monthly Average (>15.00)	8.88	8.975	14.25	7.54	6.63	4.025	3.58	4.133			5.825	4.4	
- Ra-226, Maximum (Bq/l)	0.01	<0.007	<0.01	0.01	<0.006	<0.005	<0.01	0.02			<0.01	0.02	0.02
- Ra-226, Exceedence (>1.11 Bq/l)	0	0	0	0	0	0	0	0			0	0	0
Monthly Average (>0.37)	<0.005	<0.007	<0.01	0.01	<0.006	<0.005	<0.01	<0.01			<0.01	0.0125	
- Ammonia, Maximum	0.5	0.48	0.48	0.56	0.62	0.53	0.54	0.56			0.49	0.51	0.62
- Cd, Maximum (ug/L)	0.024	0.022	0.013	<0.017	0.023	0.031	0.037	0.022			<0.017	<0.017	0.037

Table 8 Continued: Vale Newfoundland and Labrador Ltd. (Voisey's Bay) 2012 Effluent Discharge Criteria Summary
(mg/L, unless noted)

Treated Effluent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Fe, Maximum	3.38	3.11	3.81	2.98	2.39	1.83	2.22	2.17			3.76	1.79	3.81
- Hg, Maximum (ug/L)	<0.013	0.018	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013			<0.013	0.11	0.11
- Nitrate, Maximum	0.62	0.58	0.57	0.53	0.73	0.72	0.71	0.58			0.57	0.58	0.73
- TDS, Maximum	2080	1600	1620	1710	1580	1450	1440	1440			1550	2040	2080
- TPH, Maximum	0.24	0.24	0.24	0.53	0.27	0.28	0.28	0.23			0.22	0.25	0.53
- ALT, Pass (RT)	5	4	4	5	1	1	1	1			2	1	25
- ALT, Fail (RT)	0	0	0	0	0	0	0	1			0	0	1
- ALT, Pass (DM)	2	0	0	0	0	0	0	0			0	0	2
- ALT, Fail (DM)	3	4	4	5	1	1	1	1			2	1	23

Table 9: Wabush Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Flora Lake Discharge	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	5	4	4	4	5	4	5	4	4	5	4	4	52
- pH, Maximum (Units)	7.64	7.70	7.59	7.63	7.66	7.81	7.87	7.94	7.91	7.89	7.84	7.87	7.94
- pH, Minimum (Units)	7.54	7.41	7.56	7.61	7.55	7.61	7.70	7.84	7.82	7.74	7.70	7.72	7.41
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
- As, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<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, Maximum	<0.0020	<0.0020	0.0025	<0.0020	<0.0020	0.0036	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0036
- Cu, Exceedence (>0.6)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Pb, Maximum	<0.00050	<0.00050	<0.00050	<0.00050	0.00053	<0.00050	<0.0050	<0.0050	<0.0050	<0.0050	<0.00050	<0.00050	0.00053
- Pb, Exceedence (>0.4)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.20)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0050	<0.0050	<0.0050	<0.0050	<0.00050	<0.00050	
- Ni, Maximum	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
- Ni, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Zn, Maximum	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	0.0061	0.0089	<0.0050	0.0081	<0.0050	<0.0050	0.0084	0.0089
- Zn, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.005425	
- TSS, Maximum	6.8	3.4	3.8	2.8	21	34	9.2	2.2	2.2	3.8	7	5.8	34
- TSS, Exceedence (>30)	0	0	0	0	0	1	0	0	0	0	0	0	1
Monthly Average(>15.00)	3.6	1.35	2.45	2.15	9.66	13.45	3.12	1.15	1.75	1.86	5.9	4	
- Ra-226, Maximum	<0.01			<0.01			0.01			<0.01			0.01
- Ra-226, Exceedence (>1.1 Bq/l)	0			0			0			0			0
Monthly Average (>0.37)	<0.01			<0.01			0.01			<0.01			
- Ammonia, Maximum						0.07	0.12	<0.050	0.05				0.12
- Cd, Maximum (ug/L)						<0.017	<0.017	<0.017	<0.017				<0.017
- Fe, Maximum						1.6	0.147	0.058	0.302				1.6
- Hg, Maximum (ug/L)						<0.013	<0.013	<0.013	<0.013				<0.013

Table 9 Continued: Wabush Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Flora Lake Discharge	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Nitrate, Maximum						0.68	0.7	0.64	0.63				0.7
- TDS, Maximum						47	48	50	53				53
- TPH, Maximum						<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
- ALT, Pass (RT)	1			1			1			1			4
- ALT, Fail (RT)	0			0			0			0			0
- ALT, Pass (DM)	1			1			1			1			4
- ALT, Fail (DM)	0			0			0			0			0

Knoll Lake	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	11	24	31	34	21	33	36	34	34	35	22	31	346
- pH, Maximum (Units)	7.41	7.48	7.47	7.53	7.49	7.66	7.68	7.96	7.86	7.95	7.89	8.40	8.40
- pH, Minimum (Units)	7.08	6.87	6.93	7.02	7.13	7.18	6.83	7.31	7.52	7.41	7.18	7.36	6.83
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	0.0013	0.0011	0.0023	0.0025	0.0027	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	0.0027
- As, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0010	<0.0010	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
- Cu, Maximum	0.0109	0.0024	0.002	0.0035	0.0055	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0109
- Cu, Exceedence (>0.6)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Pb, Maximum	<0.00050	0.00073	0.00192	0.00109	0.00198	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00198
- Pb, Exceedence (>0.4)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.20)	<0.00050	<0.00050	0.000992	0.00284	0.0006	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
- Ni, Maximum	<0.0020	0.0021	0.0029	0.004	0.0046	<0.0020	<0.0020	<0.0020	0.0027	<0.0020	0.002	<0.0020	0.0046
- Ni, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Zn, Maximum	0.0081	0.0099	0.017	0.0201	0.0245	0.0083	0.0161	0.0089	0.0081	0.0109	0.023	0.0088	0.0245
- Zn, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	0.0051	0.06	0.01	0.007938	0.007625	0.0053	0.00812	0.005029	0.006513	0.006122	0.011486	0.007043	

Table 9 Continued: Wabush Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Knoll Lake	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- TSS, Maximum	320	1500	620	280	270	37	38	120	430	30	79	6	1500
- TSS, Exceedence (>30)	3	10	19	10	7	2	1	7	20	0	6	0	85
Monthly Average(>15.00)	80.62	129.20	157.48	40.41	51.59	5.25	5.38	23.31176	66.53824	8.762857	24.25	1.577419	
- Ra-226, Maximum	<0.01			0.04			0.03			<0.01			0.04
- Ra-226, Exceedence (>1.11 Bq/l)	0			0			0			0			0
Monthly Average (>0.37)	<0.01			0.04			0.03			<0.01			
- Ammonia, Maximum	0.51	0.56	0.79	1.2	3.4	1.3	1.9	0.79	0.58	0.25	0.67	0.91	3.4
- Cd, Maximum (ug/L)	0.039	0.056	0.116	0.041	0.044	<0.017	0.074	0.443	0.054	0.058	0.017	0.128	0.443
- Fe, Maximum	12	41.5	13	22.4	17.4	0.677	3.32	2.18	15.4	0.688	4.43	1.1	41.5
- Hg, Maximum (ug/L)	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.013	0.018	0.023	0.028	0.028
- Nitrate, Maximum	1.2	2.5	2	3.7	5.7	3.3	4.2	3	2.4	1.9	2.2	3.9	5.7
- TDS, Maximum	64	104	132	100	118	147	135	94	88	134	167	97	167
- TPH, Maximum	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
- ALT, Pass (RT)	1	3		1	3	1	4			1	4	4	22
- ALT, Fail (RT)	0	0		0	0	0	0			0	0	0	0
- ALT, Pass (DM)	1	3		1	3	4	4			1	4	3	24
- ALT, Fail (DM)	0	0		0	0	0	0			0	0	1	1

Table 9 Continued: Wabush Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

West Pit Settling Pond	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	5	4	4	4	5	4	5	4	4	5	4	3	51
- pH, Maximum (Units)	7.45	7.30	7.42	7.40	7.47	7.60	7.62	7.60	7.68	7.68	7.51	7.54	7.68
- pH, Minimum (Units)	7.21	7.03	7.07	7.29	7.31	7.41	7.42	7.51	7.59	7.14	7.31	7.26	7.03
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
- As, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<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, Maximum	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022
- Cu, Exceedence (>0.6)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Pb, Maximum	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
- Pb, Exceedence (>0.4)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.20)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
- Ni, Maximum	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
- Ni, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Zn, Maximum	<0.0050	<0.0050	0.0069	<0.0050	<0.0050	<0.0050	<0.0050	0.0064	0.0065	<0.0050	<0.0050	0.0066	0.0066
- Zn, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
- TSS, Maximum	<1.0	1.2	4.8	12	2	1.6	<2.0	<1.0	8.8	2.6	9.6	<1.0	12
- TSS, Exceedence (>30)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average(>15.00)	<0.64	<1.0	3	4.025	<2.0	<1.0	<2.0	<1.0	2.575	1.16	3.2	<1.0	
- Ra-226, Maximum	<0.01			<0.01			<0.01			0.02			0.02
- Ra-226, Exceedence (>1.11 Bq/l)	0			0			0			0			0
Monthly Average (>0.37)	<0.01			<0.01			<0.01			0.02			
- Ammonia, Maximum						0.16	0.14	0.1	0.061				0.16
- Cd, Maximum (ug/L)						<0.017	<0.017	<0.017	<0.017				<0.017

Table 9 Continued: Wabush Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

West Pit Settling Pond	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Fe, Maximum						<0.050	<0.050	0.052	<0.050				0.052
- Hg, Maximum (ug/L)						<0.013	<0.013	<0.013	<0.013				<0.013
- Nitrate, Maximum						1.3	0.78	0.93	0.52				1.3
- TDS, Maximum						35	33	40	43				43
- TPH, Maximum						<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
- ALT, Pass (RT)	1			1			1			1			4
- ALT, Fail (RT)	0			0			0			0			0
- ALT, Pass (DM)	1			1			1			1			4
- ALT, Fail (DM)	0			0			0			0			0

East Pit # 2	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	5	4	4	4	5	4	5	4	4	5	4	4	52
- pH, Maximum (Units)	7.70	7.73	7.67	7.78	7.84	7.89	7.92	7.94	7.97	7.96	7.83	7.93	7.97
- pH, Minimum (Units)	7.61	7.46	7.55	7.68	7.70	7.77	7.68	7.74	7.87	7.57	7.75	7.72	7.46
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
- As, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0010	<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, Maximum	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
- Cu, Exceedence (>0.6)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
- Pb, Maximum	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
- Pb, Exceedence (>0.4)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.20)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
- Ni, Maximum	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
- Ni, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
- Zn, Maximum	<0.0050	<0.0050	<0.0050	0.0053	<0.0050	<0.0050	<0.0050	<0.0050	0.0052	<0.0050	<0.0050	<0.0050	0.0053
- Zn, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 9 Continued: Wabush Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

East Pit # 2	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Monthly Average (>0.50)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
- TSS, Maximum	2.6	6.2	11	10	6.8	2.1	11	8.2	7	2.4	3.6	1.4	11
- TSS, Exceedence (>30)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average(>15.00)	1.14	2.15	4.05	3.65	3.54	1.625	4.2	4.075	3.175	1.78	2.05	<1.0	
- Ra-226, Maximum	<0.01			<0.01			<0.01			<0.01			<0.01
- Ra-226, Exceedence (>1.11 Bq/l)	0			0			0			0			0
Monthly Average (>0.37)	<0.01			<0.01			<0.01			<0.01			
- Ammonia, Maximum						0.57	0.98	0.91	0.37				0.98
- Cd, Maximum (ug/L)						<0.017	<0.017	0.023	<0.017				0.023
- Fe, Maximum						0.141	0.15	0.178	0.146				0.178
- Hg, Maximum (ug/L)						<0.013	<0.013	<0.013	<0.013				<0.013
- Nitrate, Maximum						4.9	4.9	4.4	3.7				4.9
- TDS, Maximum						100	95	104	106				106
- TPH, Maximum						<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
- ALT, Pass (RT)	1			1			1			1			4
- ALT, Fail (RT)	0			0			0			0			0
- ALT, Pass (DM)	1			0			1			1			3
- ALT, Fail (DM)	0			1			0			0			1

Deep Well Discharge	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	5	4	4	4	5	4	5	4	4	5	4	4	52
- pH, Maximum (Units)	7.48	7.45	7.30	7.39	7.42	7.35	7.60	7.60	7.59	7.60	7.54	7.61	7.61
- pH, Minimum (Units)	7.26	6.86	7.18	7.34	7.28	7.27	7.08	7.39	7.49	6.85	7.38	7.34	6.85
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
- As, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	

Table 9 Continued: Wabush Mines 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Deep Well Discharge	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Cu, Maximum	0.0023	0.0023	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0066	<0.0020	<0.0020	<0.0020	0.0023
- Cu, Exceedence (>0.6)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.30)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Pb, Maximum	<0.00050	0.00078	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00078
- Pb, Exceedence (>0.4)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.20)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
- Ni, Maximum	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
- Ni, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
- Zn, Maximum	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
- Zn, Exceedence (>1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average (>0.50)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
- TSS, Maximum	1.8	1.6	2.8	10	2	0.6	2.8	<1.0	<1.0	<1.0	4	<1.0	10
- TSS, Exceedence (>30)	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Average(>15.00)	1.04	1	1.6	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.375	<1.0	
- Ra-226, Maximum	<0.01			<0.01			<0.01			<0.01			<0.01
- Ra-226, Exceedence (>1.11 Bq/l)	0			0			0			0			0
Monthly Average (>0.37)	<0.01			<0.01			<0.01			<0.01			
- Ammonia, Maximum						<0.050	0.13	<0.050	<0.050				0.13
- Cd, Maximum (ug/L)						0.048	<0.017	0.137	<0.017				0.137
- Fe, Maximum						<0.050	<0.050	<0.050	<0.050				<0.050
- Hg, Maximum (ug/L)						0.083	<0.013	<0.013	<0.013				0.083
- Nitrate, Maximum						0.23	0.17	0.19	0.16				0.23
- TDS, Maximum						46	39	49	49				49
- TPH, Maximum						<0.10	<0.10	<0.10	<0.10			<0.10	<0.10

3) Petroleum Refining

a) North Atlantic Refining Ltd.

Current COA Approval #: AA06-055480
 Issue date: May 11, 2006
 Expiration: December 31, 2010
 Extension: December 31, 2013

North Atlantic Refining Limited has one discharge point which releases effluent into Placentia Bay. The effluent monitoring program consists of 6 compliance parameters, flow monitoring and a *Rainbow trout* ALT requirement. The average flow for the month is determined by averaging the measurements taken three times per week. Daily loadings are calculated from the daily flow and measured concentrations (flow measurements are taken at the same time as sample collection). In 2012, 157 samples were collected. There were no reported exceedences.

Environmental Effects Monitoring

There were no EEM submissions reviewed in 2012.

See Table 10: North Atlantic Refining Ltd. 2012: Effluent Discharge Criteria Summary.

Table 10: North Atlantic Refining Ltd. 2012 Effluent Discharge Criteria Summary

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Samples Taken	14	12	13	13	14	12	14	13	13	13	13	13	157
Reference Crude Rate (bbls / stream day)	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	
Avg Flow (Cdn. gal day)	1,480,000	1,610,000	1,340,000	1,230,000	900,000	980,000	1,460,000	1,930,000	1,310,000	1,060,000	1,610,000	2,080,000	
pH													
Average (units)	7.66	7.57	7.40	7.50	7.46	7.28	7.69	7.88	7.94	7.49	7.52	7.45	
Maximum (units)	8.00	7.90	7.70	7.80	7.70	7.70	8.00	8.30	8.20	7.90	7.90	7.80	8.3
Minimum (units)	7.30	7.30	7.10	7.30	7.10	6.60	7.30	7.50	7.50	7.20	7.30	6.90	6.6
Exceedences (< 5.5, > 9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil & Grease													
Average (300 lbs)	26.93	39.93	22.68	18.93	48.84	30.03	24.53	27.09	37.02	27.50	55.42	70.21	
Maximum (lbs)	58.50	108.87	50.64	54.06	147.79	104.11	58.73	59.48	212.21	91.17	138.65	154.39	212.2
Daily Limit (550 lbs)*	0	0	0	0	0	0	0	0	0	0	0	0	0
Never to Exceed (750 lbs)	0	0	0	0	0	0	0	0	0	0	0	0	0
Phenol													
Average (30 lbs)	0.33	0.29	0.20	0.29	1.00	0.27	0.19	0.25	0.24	2.79	0.28	0.38	
Maximum (lbs)	0.89	0.99	0.44	0.71	3.40	0.65	0.44	0.43	0.65	27.02	0.71	1.48	27.0
Daily Limit(55 lbs)*	0	0	0	0	0	0	0	0	0	0	0	0	0
Never to Exceed (75 lbs)	0	0	0	0	0	0	0	0	0	0	0	0	0
Sulphide													
Average (10 lbs)	0.38	0.34	0.33	0.19	0.30	0.24	0.29	0.55	1.40	2.75	0.39	0.63	
Maximum (lbs)	0.82	0.99	1.33	0.44	1.01	0.51	1.26	2.21	13.43	18.14	0.85	1.62	18.1
Daily Limit (30 lbs)*	0	0	0	0	0	0	0	0	0	0	0	0	0
Never to Exceed (50 lbs)	0	0	0	0	0	0	0	0	0	0	0	0	0
Ammonia Nitrogen													
Average (360 lbs)	24.47	34.28	13.71	14.60	33.56	33.80	7.54	13.24	12.35	32.38	48.51	51.68	
Maximum (lbs)	53.18	123.71	51.92	26.49	92.37	54.58	16.24	40.58	38.27	98.67	84.87	113.64	123.7
Daily Limit (570 lbs)*	0	0	0	0	0	0	0	0	0	0	0	0	0
Never to Exceed (720 lbs)	0	0	0	0	0	0	0	0	0	0	0	0	0

*Not to exceed more than one day per month

Table 10 Continued: North Atlantic Refining Ltd. 2012 Effluent Discharge Criteria Summary

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
TSS													
Average (720 lbs)	215.32	202.73	94.62	152.56	128.39	194.31	146.28	222.12	182.45	172.51	210.74	230.46	
Maximum (lbs)	547.82	751.00	219.13	355.09	235.12	609.40	464.00	664.79	556.62	349.69	345.49	568.22	751.0
Daily Limit (1200 lbs)*	0	0	0	0	0	0	0	0	0	0	0	0	0
Never to Exceed (1500 lbs)	0	0	0	0	0	0	0	0	0	0	0	0	0
pH at Outfall													
Samples	31	29	31	30	31	30	31	31	30	31	30	31	366
Average (units)	7.63	7.48	7.35	7.48	7.46	7.32	7.67	7.80	7.94	7.53	7.46	7.43	
Maximum (units)	8.00	7.90	7.90	7.80	7.90	9.00	8.00	8.30	8.30	8.20	7.90	7.90	9.0
Minimum (units)	7.30	7.00	7.10	7.30	7.10	6.60	7.30	7.30	7.50	7.20	7.20	6.90	6.6
Exceedences (< 5.5, > 9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
ALT, pass	1	1	1	1	1	1	1	1	1	1	1	1	12
ALT, fail	0	0	0	0	0	0	0	0	0	0	0	0	0

*Not to exceed more than one day per month

4) Pulp and Paper

a) Corner Brook Pulp and Paper Ltd.

Current COA Approval #: AA09-115522
 Issue date: November 10, 2009
 Expiration: July 7, 2013

Corner Brook Pulp and Paper has two discharge locations, the outflow of the Effluent Treatment and the East Sewer. The effluent monitoring program consists of two parameters for compliance, TSS and biochemical oxygen demand (BOD) as well as ALT requirements. TSS and flow are measured daily while BOD is measured three times per week. The total loadings are reported in tonnes/day and there were no exceedences of the limits. All *Rainbow trout* ALTs were conducted successfully. *Daphnia magna* ALTs are required weekly. There was one failure reported in February at the East Sewer. It is important to note that the *Rainbow trout* ALT is the compliance determining toxicity test.

Environmental Effects Monitoring

There were no EEM submissions for 2012.

See Table 11: Corner Brook Pulp and Paper 2012: Effluent Discharge Criteria Summary.

b) Grand Falls Mill (Previously Abitibi-Consolidated Company of Canada)

Current COA Approval #: Memo written by Dan Michielsen
 Issue date: May 3, 2011
 Expiration: No expiration date established

This site is currently owned and monitored by the Province of Newfoundland and Labrador. The Grand Falls Mill has one compliance point that is monitored weekly for pH and TPH. There were no reported exceedences in 2012.

Environmental Effects Monitoring

There were no EEM activities at this site in 2012.

See Table 12: Grand Falls Mill 2012: Effluent Discharge Criteria Summary.

Table 11: Corner Brook Pulp and Paper 2012 Effluent Discharge Criteria Summary

		TSS Concentration				BOD Concentration				Monthly Average Limits	
		Average Production	Average TSS Discharge		East Sewer	Effluent Treatment	Average BOD Discharge		East Sewer	Effluent Treatment	TSS
Month	Tonne/Day	Tonne/Day	kg / FMT	mg/L	mg/L	Tonne/Day	kg / FMT	mg/L	mg/L	Tonne/Day	Tonne/Day
Jan-11	712	0.9	1.3	1.84	19.61	0.3	0.5	1.46	6.77	10.4	7.0
Feb-11	714	1.0	1.4	2.07	22.69	0.4	0.6	1.00	9.85	10.4	7.0
Mar-11	646	1.8	2.8	2.35	37.42	0.5	0.8	1.08	11.23	10.4	7.0
Apr-11	653	1.6	2.4	4.60	31.07	0.5	0.8	1.42	10.08	10.4	7.0
May-11	664	1.9	2.8	2.29	41.81	0.4	0.6	1.00	8.80	10.4	7.0
Jun-11	702	1.6	2.3	1.90	34.80	0.5	0.7	1.00	10.67	10.4	7.0
Jul-11	706	1.0	1.4	2.23	16.42	0.3	0.4	0.62	5.69	10.4	7.0
Aug-11	696	1.9	2.7	2.32	33.74	0.3	0.4	0.43	5.57	10.4	7.0
Sep-11	669	2.3	3.5	3.73	42.87	0.6	0.9	0.67	11.08	10.4	7.0
Oct-11	695	3.3	4.7	2.61	63.26	0.8	1.2	0.50	16.29	10.4	7.0
Nov-11	670	0.7	1.1	3.03	12.47	0.2	0.3	1.08	4.08	10.4	7.0
Dec-11	720	1.7	2.4	2.55	30.32	0.4	0.6	0.67	7.58	10.4	7.0

Table 11 Continued: Corner Brook Pulp and Paper 2012 Effluent Discharge Criteria

Month	Toxicity (% by volume)							
	96 Hr LC50 (Rainbow Trout)				48 Hr LC50 (Daphnia magna)			
	East Sewer		Effluent Treatment		East Sewer		Effluent Treatment	
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Jan-12	1	0	1	0	5	0	5	0
Feb-12	1	0	1	0	3	1	3	0
Mar-12	2	0	1	0	4	0	4	0
Apr-12	1	0	1	0	4	0	4	0
May-12	1	0	1	0	4	0	4	0
Jun-12	1	0	1	0	4	0	4	0
Jul-12	1	0	1	0	5	0	5	0
Aug-12	1	0	1	0	4	0	4	0
Sep-12	1	0	1	0	4	0	4	0
Oct-12	1	0	1	0	5	0	5	0
Nov-12	1	0	1	0	4	0	4	0
Dec-12	1	0	1	0	4	0	4	0

Table 12: Grand Falls Mill 2012 Effluent Discharge Criteria Summary

	Samples	TPH, Maximum	TPH, Exceedence (>15 mg/L)	pH, Maximum (units)	pH, Minimum (units)	pH, Exceedence (<5.5, >9.0 pH units)
January	3	1.5	0	7.99	7.57	0
February	4	<0.10	0	8.07	7.56	0
March	2	<0.10	0	7.96	7.95	0
April	4	0.99	0	8.03	7.26	0
May	5	0.53	0	8.09	7.75	0
June	4	0.53	0	8.12	8.01	0
July	5	0.17	0	8.20	8.07	0
August	3	<0.10	0	8.19	8.11	0
September	3	0.13	0	8.09	7.51	0
October	3	0.2	0	7.93	7.76	0
November	3	0.28	0	7.75	7.40	0
December	3	0.34	0	7.85	7.61	0
Total	42	1.5	0	8.20	7.26	0

5) Thermal Generation

a) Holyrood Thermal Generating Station

Current COA Approval #: AA11-085563
 Issue date: August 31, 2011
 Expiration: August 31, 2016

The Holyrood Thermal Generating Station has two discharge points, the continuous basin outfall and the periodic basin (batch reactor). The effluent monitoring program consists of five parameters and ALT. It is important to note that the ALT is a monitoring analysis only for the Holyrood Thermal Generating Station. Compliance is not determined based on the *Rainbow trout* ALT.

Continuous Basin: There was no discharge from July to October at the Continuous Basin. 33 samples were collected during the year and there were no reported exceedences. There were eight *Rainbow trout* ALT tests conducted throughout the year with 5 reported failures.

Periodic Basin: 30 samples were collected in 2012. There were no discharges in July. There were no reported exceedences or toxicity failures.

Environmental Effects Monitoring

There were no EEM submissions in 2012.

See Table 13: Holyrood Thermal Generating Station 2012: Effluent Discharge Criteria Summary.

Table 13: Holyrood Thermal Generating Station 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

CONTINUOUS BASIN	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
- Samples	4	6	5	3	5	3					3	4	33
- pH Maximum (Units)	6.90	6.70	6.70	6.7	6.70	6.85					7.20	7.20	7.2
- pH Minimum (Units)	6.60	6.50	6.20	6.3	6.30	6.40					5.70	6.60	5.70
- pH Exceedence (<5.5, >9.0)	0	0	0	0	0	0					0	0	0
- Fe Maximum	0.034	0.177	0.085	0.105	0.241	0.139					0.210	0.152	0.241
- Fe Exceedence (>10 mg/L)	0	0	0	0	0	0					0	0	0
- Ni Maximum	0.006	0.005	0.007	0.012	0.057	0.013					0.092	0.008	0.092
- Ni Exceedence (>0.5 mg/L)	0	0	0	0	0	0					0	0	0
- V Maximum	0.072	0.055	0.080	0.120	0.100	0.120					0.149	0.0197	0.149
- V Exceedence (>2.0 mg/L)	0	0	0	0	0	0					0	0	0
- TSS Maximum	<2	<2	<2	26.3	13.8	3.0					2.5	12.8	26.300
- TSS Exceedence (>30 mg/L)	0	0	0	0	0	0					0	0	0
- ALT, Pass (RT)	1	1	0	0	0							1	3
- ALT, Fail (RT)	1	0	2	1	1							0	5

Table 13 Continued: Holyrood Thermal Generating Station 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

PERIODIC BASIN (WWTP)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
- Samples	2	6	1	6	1	2		1	2	5	3	1	30
- pH Maximum (Units)	8.20	8.60	7.30	8.4	8.40	8.40		8.50	8.40	8.50	8.70	8.70	8.7
- pH Minimum (Units)	8.20	8.20		8.4					8.30	8.30	8.30		8.20
- pH Exceedence (<5.5, >9.0)	0	0	0	0	0	0		0	0	0	0	0	0
- Fe Maximum	0.024	0.101	0.032	0.290	0.280	0.660		0.250	0.240	0.161	1.040	0.091	1.040
- Fe Exceedence (>10 mg/L)	0	0	0	0	0	0		0	0	0	0	0	0
- Ni Maximum	0.100	0.122	0.111	0.150	0.090	0.430		0.140	0.150	0.142	0.202	0.110	0.430
- Ni Exceedence (>0.5 mg/L)	0	0	0	0	0	0		0	0	0	0	0	0
- V Maximum	0.230	0.189	0.060	0.090	0.003	1.500		0.020	0.080	0.086	0.332	0.284	1.500
- V Exceedence (>2.0 mg/L)	0	0	0	0	0	0		0	0	0	0	0	0
- TSS Maximum	3.3	2.5	<2	6.5	8.5	7.3		5.5	3.0	8.3	4.5	<2	8.500
- TSS Exceedence (>30 mg/L)	0	0	0	0	0	0		0	0	0	0	0	0
- ALT, Pass (RT)	2	2	1	3	1	1		1	2	1	1	1	16
- ALT, Fail (RT)	0	0	0	0	0	0		0	0	0	0	0	0

6) Other

a) Atlantic Minerals Ltd. (Lower Cove)

Current COA Approval #: AA09-035515
 Issue date: March 31, 2009
 Expiration: March 30, 2014

Atlantic Minerals Ltd. collected four samples at two locations in 2012 for effluent monitoring. There were no reported exceedences during the year.

Environmental Effects Monitoring

There is no EEM program at this site.

See Table 14: Atlantic Minerals Ltd (Lower Cove). 2012: Effluent Discharge Criteria Summary.

b) Atlantic Minerals (North Star Cement)

Atlantic Minerals (North Star Cement) does not operate under a COA. The quarry has been closed and current monitoring is to ensure surface runoff through the site is acceptable. There were 4 TDS exceedences reported at the outflow of the quarry.

Environmental Effects Monitoring

There is no EEM program at this site.

See Table 15: Atlantic Minerals Ltd (North Star Cement) 2012: Effluent Discharge Criteria Summary.

c) DJ Composites

DJ Composites does not operate under a COA from NL ENVC. DJ Composites occasionally discharges to the municipal sewer system in Gander, NL. In 2012, discharge occurred on three occasions. All discharges were compliant with Schedule A of the ECWSR with the exception of one pH exceedence.

Environmental Effects Monitoring

There is no EEM program at this site.

See Table 16: DJ Composites 2012: Effluent Discharge Criteria Summary.

d) GC Rieber Carino Company

Current COA Approval #: AA10-095535
 Issue date: September 1, 2010
 Expiration: September 1, 2013
 Compliance Agreement: January 31, 2013

Carino has one effluent discharge location. The effluent monitoring program contains numerous water quality parameters, 14 of which have associated compliance limits. 54 samples were collected in 2012. Exceedences included: 16 pH, 11 total dissolved solids (TDS), three TSS, 43 BOD, 10 ammonia, 11 phenol and nine oil and grease.

Carino has entered into a compliance agreement with NL ENVC to assess any effects on the environment as a result of effluent discharged from the facility.

Environmental Effects Monitoring

The interpretive report was reviewed in 2012 with additional EEM activities scheduled for 2013.

See Table 17: GC Rieber Carino Company 2012: Effluent Discharge Criteria Summary.

e) Hope Brook Mine Site

The Hope Brook Mine Site has been remediated by the Government of Newfoundland and Labrador. The Department of Natural Resources analyses effluent from the site as per a letter of direction from NL ENVC dated January 30, 2008. The monitoring program consists of several key indicator parameters and metals. Compliance limits are applied to six parameters. *Rainbow trout* ALT tests are conducted annually at some locations.

Banana Pond: Three samples were collected in 2012 with no reported exceedences.

Boat Hole Brook 6 (BH6): Three samples were collected in 2012 with pH reported as less than 5.5 pH units in all three samples.

Pine Pond Outflow: Three samples were collected in 2012 with pH reported as less than 5.5 pH units in one sample. The *Rainbow trout* ALT passed.

Inlet to Boat Hole Brook: Three samples were collected in 2012 with pH reported as less than 5.5 pH units in all two samples. A *Rainbow trout* ALT was conducted on a sample from this location and it failed. Additional testing is expected to be conducted in 2013.

Catch Basin Drainage: Three samples were collected in 2012 with no reported exceedences or failures.

Open Pit Spillway: Three samples were collected in 2012 with no reported exceedences or failures.

Polish Pond: Three samples were collected in 2012 with no reported exceedences or failures.

Environmental Effects Monitoring

There is no EEM program at this site.

See Table 18: Hope Brook Mine Site 2012: Effluent Discharge Criteria Summary.

f) Labatt Breweries Newfoundland

Current COA

Approval #: AA09-125523
Issue date: December 10, 2009
Expiration: December 10, 2014

Labatt Breweries Newfoundland has one discharge point that deposits effluent into the City of St. John's municipal sewer. In 2012, 50 samples were collected and analysed. There were 17 pH samples reported as out of acceptable range, 47 BOD exceedences and 30 TSS exceedences.

Environmental Effects Monitoring

There is no EEM program at this site.

See Table 19: Labatt Breweries Newfoundland 2012: Effluent Discharge Criteria Summary.

g) Molson Coors Canada, St. John's

<u>Current COA</u>	Approval #:	AA11-125568
	Issue date:	December 14, 2011
	Expiration:	December 28, 2016

Molson Coors Canada has one discharge point that deposits effluent into the City of St. John's municipal sewer. A total of 51 samples were collected and analysed in 2012. Reported exceedences included; 32 pH, 50 BOD, one TSS, and two zinc.

Environmental Effects Monitoring

There is no EEM program at this site.

See Table 20: Molson Coors Canada 2012: Effluent Discharge Criteria Summary.

h) Newfoundland Transshipment Terminal

<u>Current COA</u>	Approval #:	AA08-035499
	Issue date:	March 13, 2008
	Expiration:	March 12, 2013

Newfoundland Transshipment Terminal monitors water quality at nine locations. Discharge to the environment only occurs from the containment pond. The effluent monitoring program for discharge criteria compliance consists of three parameters, with ALT analysis at Containment Pond. There were no exceedences of the allowable discharge criteria, and there were no ALT failures at the Containment Pond.

Environmental Effects Monitoring

There were no EEM activities in 2012.

See Table 21: NTT 2012: Effluent Discharge Criteria Summary.

i) Pardy's Waste Management Facility – Incinerator Road

<u>Current COA</u>	Approval #:	Letter written by Derrick Maddocks
	Issue date:	March 11, 2009 with extension
	Expiration:	Extension expires May 31, 2013

Pardy's Waste Management operates a wastewater treatment facility on Incinerator Road in Foxtrap, NL. They have one discharge location from the plant. In 2012, 18 effluent samples were collected and analysed. The following exceedences were

reported; two barium, eight TSS, nine total coliforms, nine fecal coliforms, 11 BOD, 16 total phosphorous, 16 TDS, two nitrate, three TPH and 15 ammonia. ALT testing is required but reports were not received for the facility.

Environmental Effects Monitoring

There is no EEM program at this site.

See Table 22: Parly's Waste Management Facility 2012: Effluent Discharge Criteria Summary.

j) Vale Newfoundland and Labrador Ltd. (Argentia Hydrometallurgical Demonstration Plant)

Current COA Approval #: AA10-055525
 Issue date: May 1, 2010
 Expiration: April 30, 2014

Vale Newfoundland and Labrador Ltd. Argentia Hydrometallurgical Demonstration Plant has one discharge point at the Polishing Pond. The effluent monitoring program for discharge criteria compliance consists of 14 parameters and ALT. In 2012, there were effluent discharges in January, July and December with no exceedences or ALT failures reported.

Environmental Effects Monitoring

There is no EEM program at this site.

See Table 23: Vale Newfoundland and Labrador Ltd. (Argentia) 2012: Effluent Discharge Criteria Summary

k) Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant)

Current COA Approval #: AA11-055560A
 Issue date: May 16, 2011
 Revision: September 9, 2011
 Expiration: December 31, 2013
 Approval #: AA12-035570
 Issue date: March 14, 2012
 Revision: December 31, 2013

Vale Newfoundland and Labrador Ltd., Long Harbour Hydrometallurgical Plant had eight active discharge points in 2012 (D2, D3, D5, D11, D13, D18, D19 and D25).

D2: A total of 27 samples were taken at this location with six TSS exceedences reported.

D3: In 2012, 35 samples were taken at this location. There was one iron and nine TSS exceedences reported.

D5: A total of 22 samples were taken at this location. There was one iron and three TSS exceedences reported.

D11: There were 29 samples collected at this location. There was one lead, two iron and eight TSS exceedences reported.

D13: A total of 28 samples were taken at this location with three TSS and six iron exceedences reported.

D18: Four samples were taken at this location in 2012 with one TSS exceedence reported.

D19: There were two samples collected at this location in 2012 with no reported exceedences.

D25: In 2012, there were 29 samples collected at this site with no reported exceedences.

Environmental Effects Monitoring

There is no EEM program at this site.

See Table 24: Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant) 2012: Effluent Discharge Criteria Summary.

Table 14: Atlantic Minerals Ltd. (Lower Cove) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Duck Pond (DL-HC Quarry)	May	Aug	Oct	Nov	Total
Samples	1	1	1	1	4
pH, Maximum (units)	8.07	8.32	8.22	8.16	8.32
pH, Minimum (units)					0.00
pH, Exceedence (<5.5, >9.0)	0	0	0	0	0
As, Maximum	<0.001	<0.001	<0.001	<0.001	<0.001
As, Exceedence (>1)	0	0	0	0	0
Cu, Maximum	<0.002	<0.002	<0.002	<0.002	<0.002
Cu, Exceedence (> 0.6)	0	0	0	0	0
Pb, Maximum	0.00138	0.00088	0.00112	0.00141	0.00141
Pb, Exceedence (>0.4)	0	0	0	0	0
Ni, Maximum	<0.002	<0.002	<0.002	<0.002	<0.002
Nii, Exceedence (>1)	0	0	0	0	0
Zn, Maximum	0.0225	0.0119	0.006	0.0078	0.0225
Zn, Exceedence (>1)	0	0	0	0	0
TSS, Maximum	8.2		8.7	5.4	8.7
TSS, Exceedence (>30)	0		0	0	0
Ammonia, Maximum	0.15	0.054	0.067	0.13	0.15
Fe, Maximum	<0.05	<0.05	0.065	0.066	0.066
Nitrate, Maximum	1.4	0.73	0.72	1.3	1.4
TDS, Maximum	116	123	120	140	140

DL Quarry 2	May	Aug	Oct	Nov	Total
Samples	1	1	1	1	4
pH, Maximum (units)	8.23	8.07	8.26	8.26	8.26
pH, Minimum (units)					0.00
pH, Exceedence (<5.5, >9.0)	0	0	0	0	0
As, Maximum	<0.001	<0.001	<0.001	<0.001	<0.001
As, Exceedence (>1)	0	0	0	0	0
Cu, Maximum	<0.002	<0.002	<0.002	<0.002	<0.002
Cu, Exceedence (> 0.6)	0	0	0	0	0
Pb, Maximum	0.00203	0.00183	0.00341	0.00272	0.00341
Pb, Exceedence (>0.4)	0	0	0	0	0
Ni, Maximum	<0.002	<0.002	<0.002	<0.002	<0.002
Ni, Exceedence (>1)	0	0	0	0	0
Zn, Maximum	0.0089	0.062	0.0841	0.0062	0.0841
Zn, Exceedence (>1)	0	0	0	0	0
TSS, Maximum	3.2		2.4	2.8	3.2
TSS, Exceedence (>30)	0		0	0	0
Ammonia, Maximum	0.17	0.84	<0.050	<0.050	0.84
Fe, Maximum	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate, Maximum	8.5	5.5	2.7	2.1	8.5
TDS, Maximum	247	254	184	193	254

Table 15: Atlantic Minerals Ltd. (North Star Cement) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Series 1	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples				1		1	1				1		4
- pH, Maximum				8.85		8.24	8.51				8.61		8.85
- pH, Minimum													
- pH, Exceedance (<5.5, >9.0)				0		0	0				0		0

Shale Quarry	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples				1		1	1				1		4
- pH, Maximum				8.07		7.98	8.08				8.05		8.08
- pH, Minimum													
- pH, Exceedance (<5.5, >9.0)				0		0	0				0		0
- TSS, Maximum				1.2		3.6	21				3.2		21
- TSS, Exceedance (>30)				0		0	0				0		0
- TDS, Maximum				1800		1300	1100				2000		2000
- TDS, Exceedance (>1000)				1		1	1				1		4
- Ca, Maximum (mg/L)				144		167	180				181		181
- Mg, Maximum (mg/L)				20.4		26.7	30.3				23.3		30.3
- Hardness, Maximum				440		530	570				550		570

Table 16: DJ Composites 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Weekly Samples		1	1	1									3
pH Maximum (Units)		7.83	9.36	7.94									9.36
pH Minimum (Units)													
pH Violations (<5.5, >9.0)		0	1	0									1
BOD Maximum		<5.0											<5.0
BOD Violations (>300 mg/l)		0											0
TSS, Maximum		40											40
TSS Violations (>350 mg/l)		0											0
B, Maximum		0.32	0.119	<0.5									<0.5
Exceedence (5.0 mg/L)		0	0	0									0
Cd, Maximum (ug/L)		0.041	0.038	<0.17									<0.17
Exceedence(0.05 mg/L)		0	0	0									0
Cr, Maximum		0.246	0.207	0.89									0.890
Exceedence (1.0 mg/L Cr(III) Limit)		0	0	0									0
Cr (+3), Maximum		0.25	0.21	0.89									0.89
Exceedence (1 mg/L)		0	0	0									0
Chromium (VI), Maximum													
Exceedence (0.05 mg/L)													
Cu, Maximum		0.146	0.0148	0.207									0.207
Exceedence (0.3 mg/L)		0	0	0									0
Fe, Maximum		0.151	0.138	<0.5									<0.5
Exceedence (15 mg/L)		0	0	0									0
Pb, Maximum		0.00855	0.0022	<0.005									0.00855
Exceedence(0.2 mg/L)		0	0	0									0

Table 16 Continued: DJ Composites 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Hg, Maximum (ug/L)		<0.013											<0.013
Exceedence (0.005 mg/L)		0											0
Ni, Maximum		0.0066	<0.002	<0.02									<0.02
Exceedence (0.5 mg/L)		0	0	0									0
Zn, Maximum		0.159	0.117	0.054									0.159
Exceedence (0.5 mg/L)		0	0	0									0
Orthophosphate, Maximum		0.17											0.17
Exceedence (10.0 mg/L)		0											0
Total Oil & Grease, Maximum		17											17
Exceedence (100 mg/L)		0											0
Phenol		<0.1											<0.1
Exceedence (0.5 mg/L)		0											0
Cyanide		0.38											0.38
Exceedence (2.0 mg/L)		0											0
As, Maximum		0.0041	0.0028	<0.01									<0.01
Ba, Maximum		0.0075	<0.001	<0.01									<0.01
Se, Maximum		<0.001	<0.001	<0.01									<0.01
Ag, Maximum		<0.0001	<0.0001	<0.001									<0.001
Hg, Maximum (ug/L)		<0.013											<0.013
Exceedence (0.005 mg/L)		0											0
Ni, Maximum		0.0066	<0.002	<0.02									<0.02
Exceedence (0.5 mg/L)		0	0	0									0

Table 17: GC Rieber Carino Company 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Samples	4	5	5	3	6	5	2	5	4	6	5	4	54
pH, Maximum (units)	12.3	9.97	9.1	9.63	8.24	9.77	9.27	11.6	11.3	8.91	9.26	9.27	12.3
pH, Minimum (units)	9.43	6.42	7.74	7.06	6.86	6.92	6.89	6.91	6.81	5.47	7.21	7.15	5.47
pH, Exceedance (<5.5, >9.0)	4	1	1	1	0	1	1	3	1	1	1	1	16
As, Maximum Exceedance (0.5 mg/L)	<0.001 0	<0.001 0	<0.001 0	0.0029 0	<0.01 0	0.0012 0		<0.01 0	<0.001 0	<0.001 0	<0.001 0	<0.001 0	<0.01 0
Ba, Maximum Exceedance (0.5 mg/L)	0.0027 0	0.0065 0	0.0032 0	0.0031 0	<0.01 0	0.0028 0		0.019 0	0.0074 0	0.0153 0	0.0139 0	0.0096 0	0.019 0
B, Maximum Exceedance (5.0 mg/L)	<0.05 0	<0.5 0	<0.5 0	0.07 0	<0.5 0	<0.5 0	<0.05 0	<0.5 0	<0.05 0	0.077 0	<0.5 0	<0.5 0	<0.5 0
Cd, Maximum (ug/L) Exceedance(0.05 mg/L)	0.029 0	0.2 0	0.21 0	0.042 0	0.048 0	0.303 0	<0.017 0	<0.17 0	<0.17 0	0.258 0	<0.17 0	<0.17 0	0.303 0
Cr, Maximum Exceedance (1.0 mg/L Cr(III) Limit)	0.343 0	0.0703 0	0.553 0	0.0167 0	0.341 0	0.059 0	0.0426 0	0.281 0	0.044 0	1.01 0	0.538 0	0.486 0	1.01 0
Cr (+3), Maximum Exceedance (1 mg/L)	0.34 0	0.069 0	0.55 0	0.015 0	0.33 0	0.06 0	0.039 0	0.21 0	0.04 0	0.99 0	0.53 0	0.48 0	0.99 0
Chromium (VI), Maximum Exceedance (0.05 mg/L)	0.0059 0	0.0017 0	0.0022 0	0.0018 0	0.0093 0	0.0119 0	0.0034 0	0.0082 0					0.0119 0
Cu, Maximum Exceedance (0.3 mg/L)	0.0192 0	0.078 0	0.087 0	0.014 0	0.0498 0	0.0349 0	0.0491 0	0.0374 0	0.0336 0	0.0559 0	0.124 0	0.0879 0	0.124 0
Fe, Maximum Exceedance (10 mg/L)	1.06 0	3.28 0	<0.5 0	6.73 0	7.25 0	0.978 0	6.75 0	1.75 0	1.99 0	8.35 0	1.23 0	1.59 0	8.35 0
Pb, Maximum Exceedance(0.2 mg/L)	<0.0005 0	<0.0005 0	<0.005 0	<0.0005 0	0.0008 0	<0.005 0	0.00089 0	<0.005 0	<0.005 0	0.00055 0	<0.005 0	<0.005 0	<0.005 0
Hg, Maximum (ug/L) Exceedance (0.005 mg/L)	<0.013 0	<0.013 0	0.018 0	0.06 0	0.025 0	<0.013 0		<0.013 0	0.055 0	<0.013 0	0.018 0	<0.013 0	0.06 0
Ni, Maximum Exceedance (0.5 mg/L)	0.0053 0	0.022 0	0.0037 0	0.0119 0	0.0119 0	<0.02 0	0.0045 0	0.053 0	0.0547 0	0.0582 0	0.041 0	0.0351 0	0.0582 0
Zn, Maximum Exceedance (0.5 mg/L)	0.0096 0	0.147 0	<0.05 0	0.0158 0	<0.05 0	<0.05 0	0.0117 0	<0.05 0	0.0242 0	0.207 0	<0.05 0	<0.05 0	0.207 0

Table 17 Continued: GC Rieber Carino Company 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Se, Maximum Exceedence (0.5 mg/L)	<0.001 0	<0.001 0	<0.001 0	0.0053 0	<0.01 0	0.0014 0		<0.01 0	0.0029 0	0.002 0	0.0014 0	<0.001 0	<0.01 0
Ag, Maximum Exceedence (0.05 mg/L)	<0.0001 0	<0.0001 0	<0.0001 0	<0.0001 0	<0.0001 0	<0.0001 0		<0.0001 0	<0.0001 0	<0.0001 0	<0.0001 0	<0.0001 0	<0.0001 0
TDS, Maximum Exceedence (1000 mg/L)	1870 1	8200 1	3790 1	4970 1	20400 1	3120 1		13400 1	5750 1	9600 1	6680 1	4840 1	20400 11
TSS, Maximum Exceedence (30 mg/L)	91 2	12 0	7 0	23 0	49 1	8.8 0	12 0	26 0	6 0	17 0	20 0	11 0	91 3
BOD, Maximum Exceedence (20 mg/L)	120 3	340 4	240 4	700 2	2700 5	1500 4	340 2	580 4	620 3	510 5	630 4	490 3	2700 43
Ammonia, Maximum Exceedence (2.0mg/L)	1.5 0	54 1	45 1	71 1	32 1	7 1		20 1	12 1	44 1	22 1	21 1	71 10
Sulfide, Maximum Exceedence (0.5 mg/L)	<0.02 0	<0.02 0	0.14 0	0.05 0	0.04 0	<0.02 0		0.071 0	0.03 0	0.024 0	<0.020 0	<0.020 0	0.14 0
Total Oil & Grease, Maximum Exceedence (15 mg/L)	9.4 0	26 1	9.7 0	7.5 0	19 1	12 0	8.6 0	14 0	20 2	18 3	21 2	11 0	26 9
Phenol Exceedence (0.1 mg/L)	0.77 1	2.8 1	2 1	0.18 1	0.72 1	4.5 1		15 1	12 1	1.5 1	3 1	1.3 1	15 11
Cyanide Exceedence (0.025mg/L)	<0.002 0	<0.002 0	0.0057 0	0.008 0	0.01 0	0.0086 0		0.0055 0	0.005 0	0.014 0	0.011 0	0.0074 0	0.014 0

Table 18: Hope Brook Mine Site 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Banana Pond	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples						1		1	1				3
- pH, Maximum (Units)						6.80		6.80	6.60				6.80
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)						0		0	0				0
- As, Maximum						<0.002		<0.002	<0.002				<0.002
- As, Exceedence (>1.0)						0		0	0				0
Monthly Average (0.5)						<0.002		<0.002	<0.002				
- Cu, Maximum						0.01		0.031	0.018				0.031
- Cu, Exceedence (>0.6)						0		0	0				0
Monthly Average (>0.30)						0.01		0.031	0.018				
- Pb, Maximum						<0.0005		<0.0005	<0.0005				<0.0005
- Pb, Exceedence (>0.4)						0		0	0				0
Monthly Average (>0.20)						<0.0005		<0.0005	<0.0005				
- Ni, Maximum						<0.002		<0.002	<0.002				<0.002
- Ni, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						<0.002		<0.002	<0.002				
- Zn, Maximum						0.005		0.013	0.015				0.015
- Zn, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						0.005		0.013	0.015				
- Sulphate, Maximum						85		84	86				86
- Cd, Maximum (ug/L)						<0.3		<0.3	0.128				<0.3
- Fe, Maximum						0.134		0.245	0.16				0.245
- TDS, Maximum						162		172	174				174

BH6	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples						1		1	1				3
- pH, Maximum (Units)						2.7		5	4.8				5
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)						1		1	1				3

Table 18 Continued: Hope Brook Mine Site 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

BH6	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples						1		1	1				3
- As, Maximum						<0.002		<0.002	<0.002				<0.002
- As, Exceedence (>1.0)						0		0	0				0
Monthly Average (0.5)						<0.002		<0.002	<0.002				
- Cu, Maximum						0.106		0.600	0.593				0.600
- Cu, Exceedence (>0.6)						0		0	0				0
Monthly Average (>0.30)						0.106		0.600	0.593				
- Pb, Maximum						<0.0005		0.0028	0.0021				0.0028
- Pb, Exceedence (>0.4)						0		0	0				0
Monthly Average (>0.20)						<0.0005		0.0028	0.0021				
- Ni, Maximum						0.004		0.009	0.01				0.01
- Ni, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						0.004		0.009	0.01				
- Zn, Maximum						0.082		0.149	0.163				0.163
- Zn, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						0.082		0.149	0.163				
- Sulphate, Maximum						425		136	152				425
- Cd, Maximum (ug/L)						0.4		1.1	1.32				1.32
- Fe, Maximum						<0.05		0.16	0.168				0.168
- TDS, Maximum						622		226	254				622

Pine Pond Outflow	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples						1		1	1				3
- pH, Maximum (Units)						3.90		6.60	7.00				7.00
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)						1		0	0				1
- As, Maximum						<0.002		<0.002	<0.002				<0.002
- As, Exceedence (>1.0)						0		0	0				0
Monthly Average (0.5)						<0.002		<0.002	<0.002				

Table 18 Continued: Hope Brook Mine Site 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Pine Pond Outflow	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples						1		1	1				3
- Cu, Maximum						0.009		0.008	0.007				0.009
- Cu, Exceedence (>0.6)						0		0	0				0
Monthly Average (>0.30)						0.009		0.008	0.007				
- Pb, Maximum						<0.0005		<0.0005	<0.0005				<0.0005
- Pb, Exceedence (>0.4)						0		0	0				0
Monthly Average (>0.20)						<0.0005		<0.0005	<0.0005				
- Ni, Maximum						<0.002		<0.002	<0.002				<0.002
- Ni, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						<0.002		<0.002	<0.002				
- Zn, Maximum						0.009		<0.005	<0.005				0.009
- Zn, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						0.009		<0.005	<0.005				
- Sulphate, Maximum						26		21	24				26
- Cd, Maximum (ug/L)						<0.3		<0.3	0.036				<0.3
- Fe, Maximum						0.101		0.132	0.294				0.294
- TDS, Maximum						68		68	64				68
- ALT, Pass (RT)								1					1
- ALT, Fail (RT)								0					0

Inlet to Boat Hole Brook	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples						1		1	1				3
- pH, Maximum (Units)						6.00		5.40	5.00				6.00
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)						0		1	1				2
- As, Maximum						<0.002		<0.002	<0.002				<0.002
- As, Exceedence (>1.0)						0		0	0				0
Monthly Average (0.5)						<0.002		<0.002	<0.002				

Table 18 Continued: Hope Brook Mine Site 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Inlet to Boat Hole Brook	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Cu, Maximum						0.012		0.037	0.06				0.06
- Cu, Exceedence (>0.6)						0		0	0				0
Monthly Average (>0.30)						0.012		0.037	0.06				
- Pb, Maximum						<0.0005		0.0014	0.0017				0.0017
- Pb, Exceedence (>0.4)						0		0	0				0
Monthly Average (>0.20)						<0.0005		0.0014	0.0017				
- Ni, Maximum						<0.002		0.011	0.005				0.011
- Ni, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						<0.002		0.011	0.005				
- Zn, Maximum						0.014		0.019	0.024				0.024
- Zn, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						0.014		0.019	0.024				
- Sulphate, Maximum						38		48	61				61
- Cd, Maximum (ug/L)						<0.3		<0.3	0.26				<0.3
- Fe, Maximum						0.192		0.324	0.276				0.324
- TDS, Maximum						102		122	124				124
- ALT, Pass (RT)								0					0
- ALT, Fail (RT)								1					1

Catch Basin Drainage	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples						1		1	1				3
- pH, Maximum (Units)						7.50		7.50	7.40				7.5
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)						0		0	0				0
- As, Maximum						<0.002		<0.002	<0.002				<0.002
- As, Exceedence (>1.0)						0		0	0				0
Monthly Average (0.5)						<0.002		<0.002	<0.002				
- Cu, Maximum						0.007		0.013	0.014				0.014
- Cu, Exceedence (>0.6)						0		0	0				0
Monthly Average (>0.30)						0.007		0.013	0.014				

Table 18 Continued: Hope Brook Mine Site 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Catch Basin Drainage	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Pb, Maximum						<0.0005		0.0009	0.001				0.001
- Pb, Exceedence (>0.4)						0		0	0				0
Monthly Average (>0.20)						<0.0005		0.0009	0.001				
- Ni, Maximum						0.002		0.002	0.003				0.003
- Ni, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						0.002		0.002	0.003				
- Zn, Maximum						<0.005		0.006	0.011				0.011
- Zn, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						<0.005		0.006	0.011				
- Sulphate, Maximum						489		322	289				489
- Cd, Maximum (ug/L)						<0.3		<0.3	0.077				<0.3
- Fe, Maximum						0.39		0.494	0.647				0.647
- TDS, Maximum						750		558	476				750
- ALT, Pass (RT)								1					1
- ALT, Fail (RT)								0					0

Open Pit Spillway	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples						1		1	1				3
- pH, Maximum (Units)						8.00		7.90	7.30				8
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)						0		0	0				0
- As, Maximum						<0.002		<0.002	<0.002				<0.002
- As, Exceedence (>1.0)						0		0	0				0
Monthly Average (0.5)						<0.002		<0.002	<0.002				
- Cu, Maximum						0.003		0.004	0.003				0.004
- Cu, Exceedence (>0.6)						0		0	0				0
Monthly Average (>0.30)						0.003		0.004	0.003				
- Pb, Maximum						<0.0005		<0.0005	<0.0005				<0.0005
- Pb, Exceedence (>0.4)						0		0	0				0
Monthly Average (>0.20)						<0.0005		<0.0005	<0.0005				

Table 18 Continued: Hope Brook Mine Site 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Open Pit Spillway	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Ni, Maximum						0.007		0.005	0.006				0.007
- Ni, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						0.007		0.005	0.006				
- Zn, Maximum						0.005		<0.005	0.006				0.006
- Zn, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						0.005		<0.005	0.006				
- Sulphate, Maximum						725		660	1320				1320
- Cd, Maximum (ug/L)						<0.3		<0.3	0.089				<0.3
- Fe, Maximum						0.345		0.695	0.457				0.695
- TDS, Maximum						1150		1080	1070				1150
- ALT, Pass (RT)								1					1
- ALT, Fail (RT)								0					0

Polish Pond	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples						1		1	1				3
- pH, Maximum (Units)						7.30		6.60	6.70				7.30
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)						0		0	0				0
- As, Maximum						<0.002		<0.002	<0.002				<0.002
- As, Exceedence (>1.0)						0		0	0				0
Monthly Average (0.5)						<0.002		<0.002	<0.002				
- Cu, Maximum						0.019		0.03	0.028				0.03
- Cu, Exceedence (>0.6)						0		0	0				0
Monthly Average (>0.30)						0.019		0.03	0.028				
- Pb, Maximum						<0.0005		<0.0005	<0.0005				<0.0005
- Pb, Exceedence (>0.4)						0		0	0				0
Monthly Average (>0.20)						<0.0005		<0.0005	<0.0005				
- Ni, Maximum						<0.002		<0.002	<0.002				<0.002
- Ni, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						<0.002		<0.002	<0.002				

Table 18 Continued: Hope Brook Mine Site 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Polish Pond	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Zn, Maximum						<0.005		0.01	0.054				0.054
- Zn, Exceedence (>1)						0		0	0				0
Monthly Average (>0.50)						<0.005		0.01	0.054				
- Sulphate, Maximum						55		29	33				55
- Cd, Maximum (ug/L)						<0.3		<0.3	0.08				<0.3
- Fe, Maximum						0.523		0.247	0.295				0.523
- TDS, Maximum						110		88	78				110
- ALT, Pass (RT)								1					1
- ALT, Fail (RT)								0					0

Table 19: Labatt Breweries Newfoundland 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Samples	4	4	5	4	3	4	4	5	4	4	5	4	50
pH Maximum (Units)	12.4	8.49	9.94	7.07	12	12.2	7.03	11.1	6.66	6.1	10.2	7.63	12.4
pH Minimum (Units)	5.96	5.42	4.87	6.57	7.29	5.34	5.29	7.02	3.48	5.44	5.99	5.47	3.48
pH Violations (<5.5, >9.0)	1	1	2	0	2	4	1	2	1	1	1	1	17
BOD Maximum	840	600	1300	670	1200	2500	1500	1900	3000	1700	1100	1100	3000
BOD Violations (>300 mg/l)	4	3	5	4	3	4	4	5	4	4	5	2	47
TSS, Maximum	430	450	660	600	620	660	1500	1400	2500	1900	2600	1300	2600
TSS Violations (>350 mg/l)	2	1	2	3	2	1	3	5	2	2	4	3	30
B, Maximum Exceedence (5.0 mg/L)			<0.05 0				<0.05 0					<0.05 0	<0.05 0
Cd, Maximum (ug/L) Exceedence(0.05 mg/L)			0.118 0				0.325 0					0.183 0	0.325 0
Cr, Maximum Exceedence (1.0 mg/L Cr(III) Limit)			0.0041 0				0.0127 0					0.0226 0	0.0226 0
Cr (+3), Maximum Exceedence (1 mg/L)													
Chromium (VI), Maximum Exceedence (0.05 mg/L)													
Cu, Maximum Exceedence (0.3 mg/L)			0.071 0				0.3140 0					0.0956 0	0.314 0
Fe, Maximum Exceedence (15 mg/L)			0.872 0				1.64 0					1.28 0	1.64 0
Pb, Maximum Exceedence(0.2 mg/L)			0.00358 0				0.0128 0					0.01 0	0.0128 0
Hg, Maximum (ug/L) Exceedence (0.005 mg/L)			0.017 0				<0.013 0					<0.013 0	0.017 0
Ni, Maximum Exceedence (0.5 mg/L)			0.0043 0				0.0124 0					0.0107 0	0.0124 0
Zn, Maximum Exceedence (0.5 mg/L)			0.178 0				0.476 0					0.176 0	0.476 0

Table 19 Continued: Labatt Breweries Newfoundland 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Total Oil & Grease, Maximum Exceedence (100 mg/L)													
Phenol Exceedence (0.5 mg/L)												0.23 0	0.23 0
Cyanide Exceedence (2 mg/L)													
Se, Maximum			0.0011				0.0024					<0.001	0.0024
As, Maximum			<0.001				0.0024					<0.001	0.0024
Ba, Maximum			0.0458				0.0403					0.0137	0.0458
Ag, Maximum			<0.0001				<0.0001					<0.0001	<0.0001
TDS, Maximum			382				234					871	871
Ammonia, Maximum			1.8				1.1					1.9	1.9
Sulfide, Maximum			0.09				0.1					0.19	0.19

Table 20: Molson Coors Canada 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Weekly Samples	4	5	4	4	5	4	5	4	4	4	4	4	51
pH Maximum (Units)	9.30	11.80	9.99	9.43	9.46	10.80	11.2	8.04	7.17	12	12.5	10.30	12.50
pH Minimum (Units)	5.15	6.28	4.96	4.88	5.33	5.45	4.54	4.76	4.40	6.21	6.34	5.38	4.40
pH Violations (<5.5, >9.0)	3	3	3	3	2	3	4	2	2	2	3	2	32
BOD Maximum	2100	1700	2200	1400	1600	1600	2900	3200	6700	1600	1600	1800	6700
BOD Violations (>300 mg/l)	4	5	4	4	5	4	5	4	4	4	4	3	50
TSS, Maximum	120	71	120	220	320	180	550	250	150	200	170	250	550
TSS Violations (>350 mg/l)	0	0	0	0	0	0	1	0	0	0	0	0	1
B, Maximum Exceedence (5.0 mg/L)			<0.05 0			<0.05 0			<0.05 0			<0.05 0	<0.05 0
Cd, Maximum (ug/L) Exceedence(0.05 mg/L)			0.14 0			0.087 0			0.061 0			0.092 0	0.14 0
Cr, Maximum Exceedence (1.0 mg/L Cr(III) Limit)			0.0081 0			0.0288 0			0.0181 0			0.0094 0	0.0288 0
Cr (+3), Maximum Exceedence (1 mg/L)													
Chromium (VI), Maximum Exceedence (0.05 mg/L)													
Cu, Maximum Exceedence (0.3 mg/L)			0.0502 0			0.0492 0			0.0812 0			0.0399 0	0.0812 0
Fe, Maximum Exceedence (15 mg/L)			5.61 0			0.942 0			1.1 0			0.934 0	5.61 0
Pb, Maximum Exceedence(0.2 mg/L)			0.00506 0			0.00567 0			0.00766 0			0.00613 0	0.00766 0
Hg, Maximum (ug/L) Exceedence (0.005 mg/L)			<0.013 0			<0.013 0			<0.013 0			<0.013 0	<0.013 0
Ni, Maximum Exceedence (0.5 mg/L)			0.0108 0			0.004 0			0.0063 0			0.0044 0	0.0108 0

Table 20 Continued: Molson Coors Canada 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Zn, Maximum			1.09			0.505			0.436			0.426	1.09
Exceedence (0.5 mg/L)			1			1			0			0	2
Total Oil & Grease, Maximum													
Exceedence (100 mg/L)													
Phenol			0.39			0.1			0.2			0.14	0.39
Exceedence (0.5 mg/L)			0			0			0			0	0
Cyanide													
Exceedence (2 mg/L)													
As, Maximum			0.0011			<0.001			<0.001			<0.001	0.0011
Ba, Maximum			0.0385			0.0112			0.0095			0.0082	0.0385
Se, Maximum			0.001			<0.001			<0.001			<0.001	0.001
Ag, Maximum			<0.0001			<0.0001			<0.0001			<0.0001	<0.0001
TDS, Maximum			961			879			637			684	961
Ammonia, Maximum			36			3.6			3.3			0.99	36
Sulfide, Maximum			0.12			0.03			0.048			0.052	0.12

Table 21: Newfoundland Transshipment Terminal 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Tank No. 1- Sump No. 1	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year To Date
Number of Samples	1			1			1			1			4
- TSS, Maximum	<1.6			<1.6			<1.6			<1.6			<1.6
- TSS, Exceedence (>30)	0			0			0			0			0
- pH, Maximum (Units)	7.7			7.9			7.9			7.8			7.90
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)	0			0			0			0			0
- TPH, Maximum	7.6			8			5.4			3.1			8.00
- TPH, Exceedence (>15)	0			0			0			0			0

Tank No. 2- Sump No. 2	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year To Date
Number of Samples	1			1			1			1			4
- TSS, Maximum	2.1			<1.6			<1.6			<1.6			2.1
- TSS, Exceedence (>30)	0			0			0			0			0
- pH, Maximum (Units)	7.9			8			7.9			7.8			8.00
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)	0			0			0			0			0
- TPH, Maximum	2.1			10.3			2.3			9.7			10.30
- TPH, Exceedence (>15)	0			0			0			0			0

Tank No. 3- Sump No. 3	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year To Date
Number of Samples	1			1			1			1			4
- TSS, Maximum	<1.6			<1.6			<1.6			<1.6			<1.6
- TSS, Exceedence (>30)	0			0			0			0			0
- pH, Maximum (Units)	7.6			8			7.9			7.8			8.00
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)	0			0			0			0			0
- TPH, Maximum	13.7			9.1			4.1			7.2			13.70
- TPH, Exceedence (>15)	0			0			0			0			0

Table 21 Continued: Newfoundland Transshipment Terminal 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Tank No. 4- Sump No. 4	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year To Date
Number of Samples	1			1			1			1			4
- TSS, Maximum	<1.6			<1.6			<1.6			<1.6			<1.6
- TSS, Exceedence (>30)	0			0			0			0			0
- pH, Maximum (Units)	7.4			7.5			7.9			7.4			7.90
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)	0			0			0			0			0
- TPH, Maximum	7.4			11.4			6.1			6.4			11.40
- TPH, Exceedence (>15)	0			0			0			0			0

Tank No. 5- Sump No. 5	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year To Date
Number of Samples	1			1			1			1			4
- TSS, Maximum	<1.6			<1.6			<1.6			<1.6			<1.6
- TSS, Exceedence (>30)	0			0			0			0			0
- pH, Maximum (Units)	7.2			7.4			7.7			7.3			7.7
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)	0			0			0			0			0
- TPH, Maximum	12.1			13.4			5.5			4.5			13.4
- TPH, Exceedence (>15)	0			0			0			0			0

Tank No. 6- Sump No. 6	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year To Date
Number of Samples	1			1			1			1			4
- TSS, Maximum	<1.6			<1.6			<1.6			<1.6			<1.6
- TSS, Exceedence (>30)	0			0			0			0			0
- pH, Maximum (Units)	7.4			7.5			7.5			7.4			7.50
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)	0			0			0			0			0
- TPH, Maximum	5.6			13.3			8.8			3.3			13.3
- TPH, Exceedence (>15)	0			0			0			0			0

Table 21 Continued: Newfoundland Transshipment Terminal 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Tank No. 7- Sump No. 7	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year To Date
Number of Samples	1			1			1			1			4
- TSS, Maximum	<1.6			<1.6			<1.6			<1.6			<1.6
- TSS, Exceedence (>30)	0			0			0			0			0
- pH, Maximum (Units)	8			8			8			7.9			8.00
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)	0			0			0			0			0
- TPH, Maximum	5.9			12.5			8.5			7.7			12.5
- TPH, Exceedence (>15)	0			0			0			0			0
Containment Pond	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year To Date
Number of Samples				1	1					1	1		4
- TSS, Maximum				<1.6						<1.6			<1.6
- TSS, Exceedence (>30)				0						0			0
- pH, Maximum (Units)				6.7						7.5			7.50
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)				0						0			0
- TPH, Maximum				5.7						9.3			9.3
- TPH, Exceedence (>15)				0						0			0
- ALT, Pass (RT)					1						1		2
- ALT, Fail (RT)					0						0		0

Table 21 Continued: Newfoundland Transshipment Terminal 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Oily Water Separator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year To Date
Number of Samples	1						1			1			3
- TSS, Maximum	<1.6						<1.6			<1.6			<1.6
- TSS, Exceedence (>30)	0						0			0			0
- pH, Maximum (Units)	7.2						7.3			7.2			7.30
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)	0						0			0			0
- TPH, Maximum	10.9						2.7			7.8			10.9
- TPH, Exceedence (>15)	0						0			0			0
- TDS, Maximum	578						2036			2982			2982
- TDS, Exceedence (>36000 mg/L)	0						0			0			0

Table 22: Pardy's Waste Management Facility-Incinerator Road 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Weekly Samples - Effluent	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Samples				1	1	2	2	4		3	3	2	18
pH, Maximum (Units)				7.31	7.54	7.2	7.41	7.58		8.01	7.5	7.07	8.01
pH, Minimum (Units)						6.95	7.25	7.19		7.17	7.4		6.95
pH, Exceedence (<5.5, >9.0)				0	0	0	0	0		0	0	0	0
As, Maximum					0.003		<0.01	0.0028		0.0021	0.0026	0.002	<0.01
As, Exceedence (>0.5)					0		0	0		0	0	0	0
Ba, Maximum					0.0407		0.183	0.127		0.0398	0.0134	0.0538	0.183
Ba, Exceedence (>5.0)					0		0	0		0	0	0	0
B, Maximum					5.2		8.91	3.95		0.286	0.364	1.79	8.91
B, Exceedence (>5.0)					1		1	0		0	0	0	2
Cd, Maximum (ug/L)					<0.017		<0.17	0.156		4.42	0.423	<0.017	4.42
Cd, Exceedence (>50ug/L)					0		0	0		0	0	0	0
Cr, Maximum					0.0022		<0.01	0.003		<0.001	<0.001	<0.001	<0.01
Cr, Exceedence (1.0)					0		0	0		0	0	0	0
Cu, Maximum					0.007		0.0445	0.0395		0.0125	0.0034	0.0046	0.0445
Cu, Exceedence (>0.3)					0		0	0		0	0	0	0
Fe, Maximum					3.1		1.96	2.72		0.137	0.121	0.182	3.1
Fe, Exceedence (>10)					0		0	0		0	0	0	0
Pb, Maximum					0.00077		<0.005	0.00346		<0.0005	0.00083	<0.0005	<0.005
Pb, Exceedence (>0.2)					0		0	0		0	0	0	0
Ni, Maximum					0.027		0.0333	0.0208		0.0099	0.0081	0.0086	0.0333
Ni, Exceedence (>0.5)					0		0	0		0	0	0	0
Se, Maximum					<0.001		<0.01	0.0017		<0.001	<0.001	<0.001	<0.01
Se, Exceedence (0.01)					0		0	0		0	0	0	0
Ag, Maximum					<0.0001		0.0034	0.00226		<0.0001	<0.0001	<0.0001	0.0034
Ag, Exceedence (0.05)					0		0	0		0	0	0	0
Zn, Maximum					0.0527		0.203	0.244		0.0249	0.0126	0.03	0.244
Zn, Exceedence (>0.5)					0		0	0		0	0	0	0

Table 22 Continued: Pardy's Waste Management Facility-Incinerator Road 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
TSS, Maximum				9.4	19	180	63	200		72	12	5	200
TSS, Exceedence (>30)				0	0	2	1	4		1	0	0	8
BOD, Maximum				8.7	13	840	550	1300		40	24	5.1	1300
BOD, Exceedence (>20)				0	0	2	2	4		2	1	0	11
Total Coliform, Maximum				0.33	49	2300	13000	35000		3300	17	170	35000
Total Coliform, Exceedence (>50)				0	0	1	1	4		2	0	1	9
Fecal Coliform, Maximum				0.23	7.9	170	2300	13000		35	0.49	33	13000
Fecal Coliform, Maximum (>10)				0	0	1	1	4		2	0	1	9
Total Phosphorus, Maximum				10	14	40	21	28		24	18	18	40
Total Phosphorus, Maximum (>1.0)				1	1	1	2	4		3	3	1	16
TDS, Maximum				2900	6300	23000	8800	16000		1200	2000	3900	23000
TDS, Exceedence (>1000)				1	1	2	2	4		3	2	1	16
Nitrate, Maximum				24	0.059	<0.05	<0.05	<0.05		<1.5	5.4	28	28
Nitrate, Exceedence (>10)				1	0	0	0	0		0	0	1	2
TPH, Maximum				<5.0	<5.0	6.8	6.8	47		<5.0	<5.0	<5.0	47
TPH, Exceedence (>15)				0	0	0	0	3		0	0	0	3
Ammonia, Maximum				110	93	180	99	190		120	150	0.21	190
Ammonia, Exceedence (>2.0)				1	1	2	2	3		3	3	0	15
ALT, Pass (RT)													0
ALT, Fail (RT)													0
ALT, Pass (DM)													0
ALT, Fail (DM)													0

Table 23: Vale Newfoundland and Labrador Ltd. (Argentia) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

Polish Pond Discharge	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	1						1					1	3
- pH, Maximum (Units)	7.21						7.16					7.2	7.21
- pH, Minimum (Units)													
- pH, Exceedence (<5.5, >9.0)	0						0					0	0
- As, Maximum	<0.001						<0.001					<0.001	<0.001
- As, Exceedence (>0.5)	0						0					0	0
- Cd, Maximum (ug/L)	0.047						0.034					0.03	0.047
- Cd, Exceedence (>0.05)	0						0					0	0
- Cu, Maximum	<0.002						<0.002					0.0046	0.0046
- Cu, Exceedence (>0.3)	0						0					0	0
- Fe, Maximum	0.19						<0.05					0.098	0.19
- Fe, Exceedence (> 10)	0						0					0	0
- Pb, Maximum	<0.0005						<0.0005					<0.0005	<0.0005
- Pb, Exceedence (>0.2)	0						0					0	0
- Hg, Maximum (ug/L)	<0.013						<0.013					<0.013	<0.013
- Hg, Exceedence (>0.005)	0						0					0	0
- Ni, Maximum	0.272						0.223					0.292	0.292
- Ni, Exceedence (>0.5)	0						0					0	0
- Zn, Maximum	<0.005						<0.005					0.0084	0.0084
- Zn, Exceedence (>0.5)	0						0					0	0
- Ammonia, Maximum	0.05						0.07					0.078	0.078
- Ammonia, Exceedence (>2)	0						0					0	0
- Nitrate, Maximum	<0.050						<0.050					<0.050	<0.050
- Nitrate, Exceedence (>10)	0						0					0	0
- TDS, Maximum	513						396					351	513
- TDS, Exceedence (>1000)	0						0					0	0
- TPH, Maximum	<0.1						<0.10					<0.1	<0.1
- TPH, Exceedence (>15)	0						0					0	0

Table 23 Continued: Vale Newfoundland and Labrador Ltd. (Argentia) 2012 Effluent Discharge Criteria Summary
(mg/L, unless noted)

Polish Pond Discharge	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- TSS, Maximum	<2.0						3.9					3.8	3.9
- TSS, Exceedence (>30)	0						0					0	0
- ALT, Pass (RT)	1						1					1	3
- ALT, Fail (RT)	0						0					0	0

Table 24: Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

D1	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012- site inactive													
D2 - Plant Site Diversion Ditch North Discharge	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
- Samples	3	4	1	1	4	3	5	1	1	1	1	2	27
- pH, Maximum (Units)	7.76	7.77	7.51	7.85	7.93	8.06	7.97	8.02	7.90	7.61	7.86	7.50	8.06
- pH, Minimum (Units)	7.21	7.28			7.53	7.76	7.77					7.24	7.21
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	0.0041	0.0025	0.0031	0.0018	0.005	0.0034	0.0046	0.0034	0.006	0.0026	0.0022	0.0039	0.006
- As, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Cu, Maximum	0.0116	0.0051	0.0034	0.0025	0.0075	0.0037	0.006	0.0026	0.0042	0.0036	0.0032	0.0122	0.0122
- Cu, Exceedence (>0.3)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Pb, Maximum	0.0244	0.00556	0.00225	0.0017	0.00854	0.00353	0.00789	0.00063	0.00241	0.00121	0.00094	0.0241	0.0244
- Pb, Exceedence (>0.2)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ni, Maximum	0.0039	<0.002	<0.002	<0.002	0.0023	0.076	<0.002	<0.002	0.0029	<0.002	<0.002	0.0064	0.076
- Ni, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Zn, Maximum	0.0491	0.0286	0.0331	0.023	0.0737	0.0389	0.0647	0.0124	<0.05	0.0367	0.0545	0.0854	0.0854
- Zn, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- TSS, Maximum	140	19	5.6	9.8	110	13	85	2.4	6.6	2	690	150	690
- TSS, Exceedence (>30)	1	0	0	0	2	0	1	0	0	0	1	1	6
- Ammonia, Maximum	0.48	1.7	<0.050	<0.050	0.097	<0.050	0.13	<0.050	0.052	0.11	0.18	0.17	1.7
- Ammonia, Exceedence (>2)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Cd, Maximum (ug/L)	0.171	0.11	0.071	0.051	0.231	0.176	0.419	0.069	0.366	0.215	0.288	0.307	0.419
- Fe, Maximum	5.06	0.803	0.386	0.366	1.12	0.827	1.57	0.102	0.418	0.213	0.219	8.48	8.48
- Fe, Exceedence (>10)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Hg, Maximum (ug/L)	<0.013	<0.013	<0.013	<0.013	0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.014	0.014
- Nitrate, Maximum	1.8	1.9	0.53	0.56	0.76	0.64	0.74	0.62	0.33	0.43	0.73	0.92	1.9
- Nitrate, Exceedence (>10)	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 24 Continued: Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

D3 - Plant Site Diversion Ditch South Discharge	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples	2	6	4	2	3	4	5	1	1	4	1	2	35
- pH, Maximum (Units)	7.57	7.70	7.79	7.89	7.73	8.00	8.02	7.78	7.60	7.88	7.64	7.34	8.02
- pH, Minimum (Units)	6.92	6.98	7.13	7.42	7.20	7.72	7.57			7.66		7.20	6.92
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	0.005	0.0065	0.0028	0.0013	0.0027	0.0015	0.0029	0.0014	0.0022	0.0019	0.0013	0.014	0.014
- As, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Cu, Maximum	0.0112	0.0189	0.0071	0.0034	0.0088	0.005	0.0077	0.0026	0.0067	0.0041	0.0034	0.0396	0.0396
- Cu, Exceedence (>0.3)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Pb, Maximum	0.0347	0.0508	0.014	0.00386	0.0164	0.00749	0.0138	0.00184	0.0115	0.00686	0.00233	0.0765	0.0765
- Pb, Exceedence (>0.2)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ni, Maximum	0.003	<0.002	0.0026	<0.002	0.0024	<0.002	0.0034	<0.002	0.0083	0.0021	<0.002	0.0147	0.0147
- Ni, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Zn, Maximum	0.0349	0.527	0.0223	0.0086	0.0277	0.0107	0.0286	0.0062	0.0299	0.017	0.0064	0.113	0.527
- Zn, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- TSS, Maximum	180	67	30	9.2	86	60	110	1.4	38	21	31	170	180
- TSS, Exceedence (>30)	1	1	0	0	2	1	1	0	1	0	1	1	9
- Ammonia, Maximum	0.28	0.33	0.057	0.081	0.23	<0.050	0.14	<0.050	0.15	0.17	0.13	0.2	0.33
- Ammonia, Exceedence (>2)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Cd, Maximum (ug/L)	0.196	0.256	0.175	0.067	0.138	0.102	0.167	0.039	0.18	0.098	0.082	0.463	0.463
- Fe, Maximum	3.67	1.58	2.73	1.88	2.57	1.58	5.08	1.17	3.64	3.93	1.45	21.5	21.5
- Fe, Exceedence (>10)	0	0	0	0	0	0	0	0	0	0	0	1	1
- Hg, Maximum (ug/L)	<0.013	0.015	0.013	0.015	0.017	0.022	0.017	<0.013	0.013	<0.013	<0.013	0.014	0.022
- Nitrate, Maximum	1.9	0.75	0.1	0.1	0.19	0.061	0.17	0.09	0.2	0.1	0.065	0.072	1.9
- Nitrate, Exceedence (>10)	0	0	0	0	0	0	0	0	0	0	0	0	0

D4	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													

Table 24 Continued: Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

D5 - Laydown Pad Storm Pond Discharge	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples	2	4	1	1	4	2	2	1	1	1	1	2	22
- pH, Maximum (Units)	7.31	7.36	7.27	7.62	7.42	7.47	7.43	7.07	7.49	7.35	7.49	7.17	7.62
- pH, Minimum (Units)	7.08	7.07			7.22	7.09	7.27					7.08	7.07
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0056	0.0056
- As, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Cu, Maximum	0.0079	0.0076	<0.002	<0.002	0.0043	0.0029	<0.002	<0.002	<0.002	<0.002	<0.002	0.0253	0.0253
- Cu, Exceedence (>0.3)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Pb, Maximum	0.00801	0.00391	0.00064	0.00092	0.00363	0.00166	0.00116	<0.0005	0.00075	<0.0005	<0.0005	0.0266	0.0266
- Pb, Exceedence (>0.2)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ni, Maximum	0.0034	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0162	0.0162
- Ni, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Zn, Maximum	0.022	0.0103	<0.005	0.0059	0.013	0.0067	0.0092	<0.005	0.0093	0.0069	<0.005	0.0963	0.0963
- Zn, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- TSS, Maximum	97	8.2	5.8	4.4	33	20	8.6	2.8	3.6	1.8	3.8	440	440
- TSS, Exceedence (>30)	1	0	0	0	1	0	0	0	0	0	0	1	3
- Ammonia, Maximum	0.48	1.3	<0.050	<0.050	0.32	<0.050	0.1	0.062	0.069	0.2	<0.050	0.73	1.3
- Ammonia, Exceedence (>2)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Cd, Maximum (ug/L)	0.06	0.026	<0.017	0.019	0.03	0.023	<0.017	<0.017	0.02	<0.017	<0.017	0.185	0.185
- Fe, Maximum	5.36	1.85	0.404	0.543	2	1.14	0.882	0.386	0.713	0.278	0.582	24.1	24.1
- Fe, Exceedence (>10)	0	0	0	0	0	0	0	0	0	0	0	1	1
- Hg, Maximum (ug/L)	<0.013	<0.013	<0.013	<0.013	<0.013	0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.02	0.02
- Nitrate, Maximum	0.55	2	0.68	0.58	0.59	0.34	0.38	0.096	0.23	0.13	0.5	0.49	2
- Nitrate, Exceedence (>10)	0	0	0	0	0	0	0	0	0	0	0	0	0

D6	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													

Table 24 Continued: Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

D7	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													
D8	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													
D9	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													
D10	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													
D11 - Quarry 2 Discharge	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples	4	6	2	1	4	4	2	1	1	1	1	2	29
- pH, Maximum (Units)	6.73	6.91	6.79	6.79	6.75	6.74	6.77	6.07	7.00	6.12	6.77	7.37	7.37
- pH, Minimum (Units)	6.44	6.25	6.74		6.37	6.18	6.74					6.31	6.18
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	0.0049	0.0014	0.0015	<0.001	0.0012	0.0011	0.0026	<0.001	<0.001	<0.001	<0.001	0.0302	0.0302
- As, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Cu, Maximum	0.0259	0.007	0.0067	0.0034	0.0048	0.0052	0.0099	<0.002	0.0041	0.0023	0.0034	0.0984	0.0984
- Cu, Exceedence (>0.3)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Pb, Maximum	0.0282	0.0915	0.00832	0.00327	0.00695	0.00905	0.0212	<0.0005	0.00522	0.00163	0.00277	0.249	0.249
- Pb, Exceedence (>0.2)	0	0	0	0	0	0	0	0	0	0	0	1	1
- Ni, Maximum	0.007	0.0023	0.0023	<0.002	<0.002	0.0024	0.0065	<0.002	0.0024	<0.002	<0.002	0.0703	0.0703
- Ni, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Zn, Maximum	0.0493	0.0147	0.0161	0.008	0.0207	0.0193	0.046	0.0086	0.0257	0.0143	0.0095	0.436	0.436
- Zn, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 24 Continued: Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

D11 - Quarry 2 Discharge	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- TSS, Maximum	330	110	14	9.4	110	160	130	2.4	9.2	9	16	2300	2300
- TSS, Exceedence (>30)	2	2	0	0	1	1	1	0	0	0	0	1	8
- Ammonia, Maximum	0.16	0.19	<0.050	<0.050	0.14	0.064	0.085	<0.050	0.097	0.16	0.15	0.074	0.19
- Ammonia, Exceedence (>2)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Cd, Maximum (ug/L)	0.222	0.087	0.094	0.059	0.135	0.175	0.264	0.101	0.201	0.137	0.097	1.97	1.97
- Fe, Maximum	10.8	2.48	3.1	0.849	1.78	2.29	8.83	0.384	1.98	0.89	1.75	106	106
- Fe, Exceedence (>10)	1	0	0	0	0	0	0	0	0	0	0	1	2
- Hg, Maximum (ug/L)	<0.013	<0.013	<0.013	<0.013	<0.013	0.015	0.013	<0.013	<0.013	<0.013	<0.013	0.021	0.021
- Nitrate, Maximum	4.4	3.6	2.9	3.1	4.2	2.6	1.4	1.7	2	1.7	1.3	1.8	4.4
- Nitrate, Exceedence (>10)	0	0	0	0	0	0	0	0	0	0	0	0	0

D12	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													

D13 - USM Site 2 Discharge	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples	2	4	1	1	3	1	5	4	3	1	1	2	28
- pH, Maximum (Units)	6.98	7.62	6.39	6.39	6.80	6.23	6.77	6.79	6.80	6.16	6.48	6.61	7.62
- pH, Minimum (Units)	6.41	6.10			6.26		6.49	6.11	6.56			6.06	6.06
- pH, Exceedence (<5.5, >9.0)	0	0	0	0	0	0	0	0	0	0	0	0	0
- As, Maximum	0.0091	<0.001	<0.001	<0.001	<0.001	<0.001	0.0023	0.003	0.0016	<0.001	<0.001	0.0031	0.0091
- As, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Cu, Maximum	0.0364	<0.002	<0.002	<0.002	0.0029	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0113	0.0364
- Cu, Exceedence (>0.3)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Pb, Maximum	0.0668	0.00156	<0.0005	<0.0005	0.00284	<0.0005	0.00099	<0.0005	0.00097	<0.0005	<0.0005	0.0226	0.0668
- Pb, Exceedence (>0.2)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ni, Maximum	0.0188	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.007	0.0188
- Ni, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 24 Continued: Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

D13 - USM Site 2 Discharge	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Zn, Maximum	0.115	0.0072	0.0063	0.006	0.0129	0.0062	0.0191	0.0191	0.016	0.0102	0.0066	0.0552	0.115
- Zn, Exceedence (>0.5)	0	0	0	0	0	0	0	0	0	0	0	0	0
- TSS, Maximum	920	15	2.6	3.8	25	6.2	21	37	17	3.6	4.8	220	920
- TSS, Exceedence (>30)	1	0	0	0	0	0	0	1	0	0	0	1	3
- Ammonia, Maximum	0.15	0.71	0.076	<0.050	<0.050	0.089	0.59	0.78	0.4	0.098	0.42	0.21	0.78
- Ammonia, Exceedence (>2)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Cd, Maximum (ug/L)	0.508	0.03	0.137	0.017	0.118	<0.017	0.065	0.037	0.055	0.028	0.018	0.188	0.508
- Fe, Maximum	26.8	3.09	1.2	1.3	1.15	3.9	13.9	19.4	9.22	1.77	3.49	11.5	26.8
- Fe, Exceedence (>10)	1	0	0	0	0	0	2	2	0	0	0	1	6
- Hg, Maximum (ug/L)	<0.013	<0.013	<0.013	<0.013	0.013	<0.013	<0.013	0.013	<0.013	<0.013	<0.013	<0.013	0.013
- Nitrate, Maximum	1.7	0.3	0.14	0.16	3.3	<0.050	0.13	0.09	0.14	0.082	0.1	0.16	3.3
- Nitrate, Exceedence (>10)	0	0	0	0	0	0	0	0	0	0	0	0	0

D14	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													

D15	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													

D16	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													

D17	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													

Table 24 Continued: Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

D18 - EPCM Discharge	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples			1			1			1			1	4
- pH, Maximum (Units)			6.83			7.07			7.35			7.06	7.35
- pH, Minimum (Units)													0.00
- pH, Exceedence (<5.5, >9.0)			0			0			0			0	0
- As, Maximum			<0.001			<0.001			<0.001			<0.001	<0.001
- As, Exceedence (>0.5)			0			0			0			0	0
- Cu, Maximum			<0.002			<0.002			0.002			<0.002	0.002
- Cu, Exceedence (>0.3)			0			0			0			0	0
- Pb, Maximum			<0.0005			<0.0005			0.00122			0.00074	0.00122
- Pb, Exceedence (>0.2)			0			0			0			0	0
- Ni, Maximum			<0.002			<0.002			<0.002			<0.002	<0.002
- Ni, Exceedence (>0.5)			0			0			0			0	0
- Zn, Maximum			0.0124			0.0195			0.0247			0.0189	0.0247
- Zn, Exceedence (>0.5)			0			0			0			0	0
- TSS, Maximum			1.8			5.2			4.6			31	31
- TSS, Exceedence (>30)			0			0			0			1	1
- Ammonia, Maximum			0.13			0.25			0.24			0.52	0.52
- Ammonia, Exceedence (>2)			0			0			0			0	0
- Cd, Maximum (ug/L)			0.023			<0.017			0.035			0.026	0.035
- Fe, Maximum			0.276			0.356			0.92			0.614	0.92
- Fe, Exceedence (>10)			0			0			0			0	0
- Hg, Maximum (ug/L)			<0.013			<0.013			<0.013			<0.013	<0.013
- Nitrate, Maximum			<0.050			<0.050			<0.050			0.069	0.069
- Nitrate, Exceedence (>10)			0			0			0			0	0

Table 24 Continued: Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

D19 - Quarry 3 Discharge	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples			1			1							2
- pH, Maximum (Units)			7.82			7.76							7.82
- pH, Minimum (Units)													0
- pH, Exceedence (<5.5, >9.0)			0			0							0
- As, Maximum			<0.001			<0.001							<0.001
- As, Exceedence (>0.5)			0			0							0
- Cu, Maximum			0.0022			<0.002							0.0022
- Cu, Exceedence (>0.3)			0			0							0
- Pb, Maximum			0.00069			<0.0005							0.00069
- Pb, Exceedence (>0.2)			0			0							0
- Ni, Maximum			<0.002			<0.002							<0.002
- Ni, Exceedence (>0.5)			0			0							0
- Zn, Maximum			<0.005			0.0066							0.0066
- Zn, Exceedence (>0.5)			0			0							0
- TSS, Maximum			2.4			3.4							3.4
- TSS, Exceedence (>30)			0			0							0
- Ammonia, Maximum			0.21			<0.050							0.21
- Ammonia, Exceedence (>2)			0			0							0
- Cd, Maximum (ug/L)			<0.017			<0.017							<0.017
- Fe, Maximum			0.08			0.123							0.123
- Fe, Exceedence (>10)			0			0							0
- Hg, Maximum (ug/L)			<0.013			<0.013							<0.013

D20	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													

D21	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
No samples collected in 2012 - site inactive													

Table 24 Continued: Vale Newfoundland and Labrador Ltd. (Long Harbour Hydrometallurgical Plant) 2012 Effluent Discharge Criteria Summary (mg/L, unless noted)

D25	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
- Samples						3	6	4	4	5	4	3	29
- pH, Maximum (Units)						6.77	7.00	7.15	7.14	7.36	6.71	6.70	7.36
- pH, Minimum (Units)						6.12	6.81	6.88	6.83	6.92	6.60	6.40	6.12
- pH, Exceedence (<5.5, >9.0)						0	0	0	0	0	0	0	0
- As, Maximum						<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
- As, Exceedence (>0.5)						0	0	0	0	0	0	0	0
- Cu, Maximum						<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
- Cu, Exceedence (>0.3)						0	0	0	0	0	0	0	0
- Pb, Maximum						<0.0005	0.00057	<0.0005	<0.0005	<0.0005	<0.0005	0.00067	0.00067
- Pb, Exceedence (>0.2)						0	0	0	0	0	0	0	0
- Ni, Maximum						<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
- Ni, Exceedence (>0.5)						0	0	0	0	0	0	0	0
- Zn, Maximum						0.0063	0.163	0.161	0.127	<0.005	0.0775	0.0072	0.163
- Zn, Exceedence (>0.5)						0	0	0	0	0	0	0	0
- TSS, Maximum						5.4	8.4	4.8	1.8	12	2.2	12	12
- TSS, Exceedence (>30)						0	0	0	0	0	0	0	0
- Ammonia, Maximum						0.064	0.61	0.27	0.61	0.42	<0.050	<0.050	0.61
- Ammonia, Exceedence (>2)						0	0	0	0	0	0	0	0
- Cd, Maximum (ug/L)						<0.017	0.031	<0.017	0.105	<0.017	<0.017	0.023	0.105
- Fe, Maximum						0.343	0.667	0.376	0.395	0.244	0.382	0.634	0.667
- Fe, Exceedence (>10)						0	0	0	0	0	0	0	0
- Hg, Maximum (ug/L)						<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
- Nitrate, Maximum						0.096	0.095	<0.050	<0.050	0.075	0.1	0.13	0.13
- Nitrate, Exceedence (>10)						0	0	0	0	0	0	0	0

7) Conclusion

The NL ENVC regulates effluent discharged from the industrial sectors of the province. As can be concluded from this short summary report, the nature of these industries and the types of effluent generated are very different and specific; no two industries can be viewed exactly the same. Differences within the industrial facilities and the receiving environment make this a dynamic field that has to be constantly monitored.

The industries operating within Newfoundland and Labrador are diligent in working with the NL ENVC to achieve the mutual goals of environmental sustainability and protection.

Additional effluent monitoring and water quality monitoring data from the industrial sector is available upon request from NL ENVC.

For further information related to industrial effluent quality and monitoring, please contact:

Angela Burridge
Senior Environmental Scientist

Government of Newfoundland and Labrador
Department of Environment and Conservation
Pollution Prevention Division

PO Box 8700
St. John's, NL
A1B 4J6

t (709) 729-4273 or 1-800-563-6181
f (709)729-6969
e angelaburridge@gov.nl.ca

8) Appendix A: Abbreviations and Acronyms

ALT – Acute Lethality Test

BOD – Biological Oxygen Demand

COA – Certificate of Approval

ECWSR – Environmental Control Water and Sewer Regulations

EEM - Environmental Effects Monitoring

FDP – Federal Discharge Point

MMER – Metal Mining Effluent Regulations

NL ENVC – Newfoundland and Labrador Department of Environment and Conservation

TDS – Total Dissolved Solids

TPH – Total Petroleum Hydrocarbons

TSS – Total Suspended Solids