

Rio Algom Mining LLC

February 28, 2011

ADDRESSEE ONLY

Mr. Tom McLaughlin, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop T-8F5
Washington, DC 20555

CERTIFIED MAIL

Return Receipt No. 7010 1870 0000 3699 1000

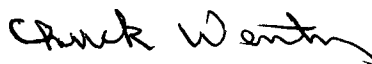
Re: **License SUA-1473, Docket No. 40-8905**
Semiannual Effluent Report – 2nd Half 2010

Dear Mr. McLaughlin,

In accordance with license condition #19 of the above referenced source material license and the NRC approved *Health Physics and Environmental Programs Manual*, please find attached the second half 2010 Semiannual Report for the Ambrosia Lake facility.

If you have any questions or need additional information, please do not hesitate to call me at (505) 287-8851, extension 15.

Regards,



Chuck Wentz
Environmental Department Supervisor
Radiation Safety Officer

Attachment

xc: B. Ray
NRC (document control)
file

115501

RIO ALGOM MINING LLC AMBROSIA LAKE FACILITY

License SUA – 1473 Docket 40 – 8905

Semi – Annual Effluent Report

2nd Half 2010

February 28, 2011

Rio Algom Mining LLC
Ambrosia Lake Facility

License SUA-1473
Docket Number 40-8905

Crushing Circuit Stack Emissions

Mill building demolition of the conventional mill circuit was successfully completed in February 2004.

Rio Algom Mining LLC
Ambrosia Lake Facility

License SUA-1473
Docket Number 40-8905

Yellowcake Dryer Stack Emissions

Mill building demolition of the conventional mill circuit was successfully completed in February 2004.

High Volume Environmental Air Samples
2nd Half 2010

3rd Quarter 2010					Substation	4th Quarter 2010				
Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit		Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit
U-nat	4.6E-18	3.0E-19	2.5E-18	< 1.0		U-nat	<2.2E-18	<2.9E-20	2.2E-18	<1.0
Th-230	7.4E-18	6.4E-18	8.3E-18	< 1.0		Th-230	6.4E-18	3.9E-18	7.6E-18	< 1.0
Ra-226	-2.6E-18	1.5E-18	3.3E-18	< 1.0		Ra-226	2.4E-18	1.3E-18	7.0E-18	< 1.0
Pb-210	7.3E-16	2.7E-17	4.1E-17	< 1.0		Pb-210	8.9E-16	3.0E-17	5.7E-17	< 1.0

3rd Quarter 2010					Section 17 VH 4	4th Quarter 2010				
Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit		Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit
U-nat	6.0E-18	4.0E-19	3.0E-18	< 1.0		U-nat	<2.2E-18	<2.9E-20	2.1E-18	<1.0
Th-230	4.3E-18	4.8E-18	8.9E-18	< 1.0		Th-230	4.5E-18	3.1E-18	6.1E-18	< 1.0
Ra-226	2.8E-18	1.5E-18	3.2E-18	< 1.0		Ra-226	1.5E-18	1.8E-18	3.5E-18	< 1.0
Pb-210	7.4E-16	2.7E-17	3.8E-17	< 1.0		Pb-210	9.1E-16	3.0E-17	5.9E-17	< 1.0

High Volume Environmental Air Samples
2nd Half 2010

3rd Quarter 2010					Section 30 West VH 6					4th Quarter 2010				
Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit	Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit	Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit
U-nat	8.1E-18	5.3E-19	3.1E-18	< 1.0	U-nat	2.8E-18	3.7E-20	2.3E-18	< 1.0	U-nat	2.8E-18	3.7E-20	2.3E-18	< 1.0
Th-230	4.8E-18	6.4E-18	9.0E-18	< 1.0	Th-230	2.1E-19	4.4E-18	7.5E-18	< 1.0	Th-230	2.1E-19	4.4E-18	7.5E-18	< 1.0
Ra-226	7.5E-18	2.4E-18	3.7E-18	< 1.0	Ra-226	2.3E-18	2.2E-18	5.4E-18	< 1.0	Ra-226	2.3E-18	2.2E-18	5.4E-18	< 1.0
Pb-210	1.2E-15	3.8E-17	5.9E-17	< 1.0	Pb-210	1.4E-15	4.1E-17	7.5E-17	< 1.0	Pb-210	1.4E-15	4.1E-17	7.5E-17	< 1.0

3rd Quarter 2010					North Fence					4th Quarter 2010				
Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit	Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit	Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit
U-nat	5.0E-18	3.3E-19	2.8E-18	< 1.0	U-nat	<2.2E-18	<2.9E-20	2.5E-18	<1.0	U-nat	<2.2E-18	<2.9E-20	2.5E-18	<1.0
Th-230	7.5E-18	5.9E-18	8.2E-18	< 1.0	Th-230	2.7E-18	4.1E-18	7.3E-18	< 1.0	Th-230	2.7E-18	4.1E-18	7.3E-18	< 1.0
Ra-226	4.8E-18	1.8E-18	7.1E-18	< 1.0	Ra-226	2.3E-18	2.4E-18	5.7E-18	< 1.0	Ra-226	2.3E-18	2.4E-18	5.7E-18	< 1.0
Pb-210	6.6E-16	2.4E-17	3.7E-17	< 1.0	Pb-210	1.1E-15	3.6E-17	7.1E-17	< 1.0	Pb-210	1.1E-15	3.6E-17	7.1E-17	< 1.0

High Volume Environmental Air Samples
2nd Half 2010

3rd Quarter 2010					Mill Diversion	4th Quarter 2010				
Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit		Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit
U-nat	3.5E-18	2.3E-19	2.5E-18	< 1.0		U-nat	3.4E-18	4.5E-20	2.4E-18	< 1.0
Th-230	2.8E-18	5.2E-18	8.2E-18	< 1.0		Th-230	1.8E-17	6.2E-18	7.8E-18	< 1.0
Ra-226	1.7E-18	1.2E-18	3.3E-18	< 1.0		Ra-226	4.0E-18	1.3E-18	1.9E-18	< 1.0
Pb-210	9.0E-16	3.0E-17	4.0E-17	< 1.0		Pb-210	1.1E-15	3.8E-17	7.1E-17	< 1.0

High Volume Environmental Air Samples
2nd Half 2010

3rd Quarter 2010					KGL - North					4th Quarter 2010				
Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit	Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit	Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit
U-nat	4.1E-18	2.7E-19	3.5E-18	< 1.0	U-nat	3.5E-18	4.7E-20	2.5E-18	< 1.0	U-nat	3.5E-18	4.7E-20	2.5E-18	< 1.0
Th-230	3.0E-18	5.7E-18	1.1E-17	< 1.0	Th-230	4.2E-18	3.8E-18	8.1E-18	< 1.0	Th-230	4.2E-18	3.8E-18	8.1E-18	< 1.0
Ra-226	4.3E-18	2.1E-18	6.3E-18	< 1.0	Ra-226	1.6E-18	2.4E-18	2.3E-18	< 1.0	Ra-226	1.6E-18	2.4E-18	2.3E-18	< 1.0
Pb-210	1.0E-15	3.7E-17	5.6E-17	< 1.0	Pb-210	8.1E-16	3.2E-17	7.2E-17	< 1.0	Pb-210	8.1E-16	3.2E-17	7.2E-17	< 1.0

3rd Quarter 2010					KGL - South					4th Quarter 2010				
Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit	Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit	Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit
U-nat	4.9E-18	3.2E-19	4.2E-18	< 1.0	U-nat	2.6E-18	3.5E-20	2.6E-18	< 1.0	U-nat	2.6E-18	3.5E-20	2.6E-18	< 1.0
Th-230	-2.1E-19	6.9E-18	1.3E-17	< 1.0	Th-230	3.4E-18	5.0E-18	9.2E-18	< 1.0	Th-230	3.4E-18	5.0E-18	9.2E-18	< 1.0
Ra-226	4.8E-18	2.3E-18	6.9E-18	< 1.0	Ra-226	2.5E-18	2.2E-18	9.9E-18	< 1.0	Ra-226	2.5E-18	2.2E-18	9.9E-18	< 1.0
Pb-210	1.2E-15	4.1E-17	5.8E-17	< 1.0	Pb-210	1.5E-15	4.2E-17	7.6E-17	< 1.0	Pb-210	1.5E-15	4.2E-17	7.6E-17	< 1.0

Note: Two additional sampling locations were added in the 4th quarter of 2005 to monitor the Lined Pond relocation project.

Vegetation

Location: Substation				Location: Mill Diversion			
Date: August 2010				Date: August 2010			
Sample Media: Vegetation				Sample Media: Vegetation			
Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)	Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	2.0E-04	4.8E-06	1.4E-04	U-nat	1.4E-04	3.2E-06	1.4E-04
Th-230	1.1E-03	9.9E-04	1.8E-03	Th-230	1.8E-03	9.7E-04	1.6E-03
Ra-226	9.2E-04	8.9E-04	3.8E-03	Ra-226	4.7E-04	7.2E-04	3.8E-03
Pb-210	2.0E-03	8.2E-03	2.6E-02	Pb-210	0.0E+00	6.1E-03	2.0E-02

Location: Section 30 West VH6				Location: North Fence			
Date: August 2010				Date: August 2010			
Sample Media: Vegetation				Sample Media: Vegetation			
Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)	Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	4.1E-03	9.7E-05	1.4E-04	U-nat	6.1E-04	1.5E-05	1.4E-04
Th-230	1.3E-04	6.2E-04	1.8E-03	Th-230	2.3E-03	1.0E-03	1.7E-03
Ra-226	1.2E-03	9.5E-04	3.8E-03	Ra-226	1.7E-03	1.0E-03	4.2E-03
Pb-210	0.0E+00	9.1E-03	2.9E-02	Pb-210	0.0E+00	7.8E-03	2.5E-02

Vegetation

Location: Section 17 VH 4				Location: KGL North			
Date: August 2010				Date: August 2010			
Sample Media: Vegetation				Sample Media: Vegetation			
Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)	Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	1.2E-03	2.7E-05	1.4E-04	U-nat	9.5E-04	2.3E-05	2.0E-04
Th-230	1.4E-03	9.3E-04	1.8E-03	Th-230	8.3E-04	8.7E-04	1.8E-03
Ra-226	1.5E-03	9.4E-04	3.7E-03	Ra-226	1.2E-03	9.2E-04	3.8E-03
Pb-210	8.9E-04	7.3E-03	2.4E-02	Pb-210	0.0E+00	8.8E-03	2.8E-02

Location: KGL South			
Date: August 2010			
Sample Media: Vegetation			
Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	3.4E-04	8.1E-06	1.4E-04
Th-230	1.3E-03	1.0E-03	1.8E-03
Ra-226	4.7E-04	7.3E-04	3.7E-03
Pb-210	0.0E+00	5.7E-03	1.8E-02

Vegetation ⁽¹⁾

Location: Substation Date: October 2010 Sample Media: Vegetation				Location: Mill Diversion Date: October 2010 Sample Media: Vegetation			
Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)	Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	<1.4E-04	<1.9E-06	<1.4E-04	U-nat	2.0E-04	2.9E-06	1.4E-04
Th-230	-2.1E-04	1.0E-03	1.5E-03	Th-230	2.0E-03	8.1E-04	9.1E-04
Ra-226	8.6E-04	7.2E-04	2.9E-03	Ra-226	2.9E-04	6.0E-04	3.0E-03
Pb-210	3.2E-03	2.3E-03	5.2E-03	Pb-210	0.0E+00	2.5E-03	5.9E-03

Location: Section 30 West VH6 Date: October 2010 Sample Media: Vegetation				Location: North Fence Date: October 2010 Sample Media: Vegetation			
Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)	Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	9.5E-04	1.4E-05	1.4E-04	U-nat	2.0E-04	2.9E-06	1.4E-04
Th-230	-1.6E-04	7.4E-04	1.3E-03	Th-230	1.2E-04	7.9E-04	1.4E-03
Ra-226	1.2E-03	8.5E-04	3.2E-03	Ra-226	3.1E-04	6.2E-04	3.6E-03
Pb-210	0.0E+00	2.8E-03	6.5E-03	Pb-210	4.2E-04	2.6E-03	6.2E-03

⁽¹⁾ An early frost occurred in the fall of 2010. Vegetation was already drying out and/or wilted

Vegetation ⁽¹⁾

Location: Section 17 VH 4 Date: October 2010 Sample Media: Vegetation				Location: KGL North Date: October 2010 Sample Media: Vegetation			
Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)	Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	2.0E-04	2.9E-06	1.4E-04	U-nat	2.0E-04	2.9E-06	1.4E-04
Th-230	4.0E-04	1.6E-03	2.6E-03	Th-230	8.7E-04	9.3E-04	1.6E-03
Ra-226	1.3E-04	5.8E-04	3.2E-03	Ra-226	3.1E-04	6.2E-04	3.1E-03
Pb-210	0.0E+00	2.3E-03	5.5E-03	Pb-210	0.0E+00	2.4E-03	5.6E-03

Location: KGL South Date: October 2010 Sample Media: Vegetation			
Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	1.4E-04	1.9E-06	1.4E-04
Th-230	1.9E-03	9.8E-04	1.6E-03
Ra-226	1.0E-05	5.4E-04	3.1E-03
Pb-210	6.1E-04	2.6E-03	6.2E-03

⁽¹⁾ An early frost occurred in the fall of 2010. Vegetation was already drying out and/or wilted

Soil

Location: Substation				Location: Mill Diversion			
Date:				Date:			
Sample Media: Soil				Sample Media: Soil			
Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)	Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)
U-nat	Note:			U-nat	Note:		
Th-230	Soil is sampled annually.			Th-230	Soil is sampled annually.		
Ra-226	Please see 1st Half 2010 report			Ra-226	Please see 1st Half 2010 report		
Pb-210	for soil sampling data.			Pb-210	for soil sampling data.		

Location: Section 30 West VH6				Location: North Fence			
Date:				Date:			
Sample Media: Soil				Sample Media: Soil			
Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)	Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)
U-nat	Note:			U-nat	Note:		
Th-230	Soil is sampled annually.			Th-230	Soil is sampled annually.		
Ra-226	Please see 1st Half 2010 report			Ra-226	Please see 1st Half 2010 report		
Pb-210	for soil sampling data.			Pb-210	for soil sampling data.		

Rio Algom Mining LLC
Ambrosia Lake Facility

License SUA-1473
Docket Number 40-8905

Soil

Location: Section 17 VH 4
Date:
Sample Media: Soil

Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)
U-nat	Note:		
Th-230	Soil is sampled annually.		
Ra-226	Please see 1st Half 2010 report		
Pb-210	for soil sampling data.		

Location: KGL-North
Date:
Sample Media: Soil

Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)
U-nat	Note:		
Th-230	Soil is sampled annually.		
Ra-226	Please see 1st Half 2010 report		
Pb-210	for soil sampling data.		

Location: KGL-South
Date:
Sample Media: Soil

Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)
U-nat	Note:		
Th-230	Soil is sampled annually.		
Ra-226	Please see 1st Half 2010 report		
Pb-210	for soil sampling data.		

Sediment

Location: P-0 Date: Sample Media: Sediment				Location: P-1 Date: Sample Media: Sediment			
Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)	Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)
U-nat	Note:			U-nat	Note:		
Th-230	Sediment is sampled annually.			Th-230	Sediment is sampled annually.		
Ra-226	Please see 1st half 2010 report			Ra-226	Please see 1st half 2010 report		
Pb-210	for 2010 sediment data.			Pb-210	for 2010 sediment data.		

Location: P-2 Date: Sample Media: Sediment				Location: P-3 Date: Sample Media: Sediment			
Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)	Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)
U-nat	Note:			U-nat	Note:		
Th-230	Sediment is sampled annually.			Th-230	Sediment is sampled annually.		
Ra-226	Please see 1st half 2010 report			Ra-226	Please see 1st half 2010 report		
Pb-210	for 2010 sediment data.			Pb-210	for 2010 sediment data.		

Environmental Radon Monitoring

Date: 3rd Quarter 2010
Sample Media: Radon - Track Etch

Location	Concentration (pCi/L)	Error (pCi/L)
Substation	1.3	0.1
Mill Diversion	2.2	0.1
Section 30W VH6	2.6	0.2
North Fence	2.5	0.2
Section 17 VH4	1.0	0.1
KGL South	1.9	0.1
KGL North	2.2	0.1

Date: 4th Quarter 2010
Sample Media: Radon - Track Etch

Location	Concentration (pCi/L)	Error (pCi/L)
Substation	0.4	0.0
Mill Diversion	2.2	0.1
Section 30W VH6	3.1	0.2
North Fence	2.6	0.1
Section 17 VH4	0.4	0.0
KGL South	1.8	0.1
KGL North	1.8	0.1

Note: Two additional sampling locations were added in the 4th quarter of 2005 to monitor the Lined Pond relocation project.

Environmental Gamma Radiation

Date: 3rd Quarter 2010
Sample Media: Gamma

Location	Rate (mRem/qtr)
Substation	0
Mill Diversion	0
Section 30W VH6	10.3
North Fence	0
Section 17 VH4	0
Section 4 - #1	0
Section 4 - #2	0.3
Section 4 - #3	0

Date: 4th Quarter 2010
Sample Media: Gamma

Location	Rate (mRem/qtr)
Substation	0
Mill Diversion	0
Section 30W VH6	8.6
North Fence	0.1
Section 17 VH4	0
Section 4 - #1	0
Section 4 - #2	0.9
Section 4 - #3	0

Notes:

- 1 - Section 4 sample locations added as part of lined pond relocation project.
 - 2 - Values represent net values after subtraction of site control dosimeter.
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Treated Mine Discharge Water

Sample: Treated Mine Water

Date: 3rd Quarter 2010

Location	Uranium			Radium-226 (soluble)			Radium-226 (insoluble)		
	Conc. (mg/L)	Error (mg/L)	LLD (mg/L)	Conc. (pCi/L)	Error (pCi/L)	LLD (pCi/L)	Conc. (pCi/L)	Error (pCi/L)	LLD (pCi/L)
P-8	dry	dry	dry	dry	dry	dry	dry	dry	dry
P-10	dry	dry	dry	dry	dry	dry	dry	dry	dry
P-12	dry	dry	dry	dry	dry	dry	dry	dry	dry
P-14	dry	dry	dry	dry	dry	dry	dry	dry	dry
P-16	dry	dry	dry	dry	dry	dry	dry	dry	dry
P-18	dry	dry	dry	dry	dry	dry	dry	dry	dry

Sample: Treated Mine Water

Date: 4th Quarter 2010

Location	Uranium			Radium-226 (soluble)			Radium-226 (insoluble)		
	Conc. (mg/L)	Error (mg/L)	LLD (mg/L)	Conc. (pCi/L)	Error (pCi/L)	LLD (pCi/L)	Conc. (pCi/L)	Error (pCi/L)	LLD (pCi/L)
P-8	dry	dry	dry	dry	dry	dry	dry	dry	dry
P-10	dry	dry	dry	dry	dry	dry	dry	dry	dry
P-12	dry	dry	dry	dry	dry	dry	dry	dry	dry
P-14	dry	dry	dry	dry	dry	dry	dry	dry	dry
P-16	dry	dry	dry	dry	dry	dry	dry	dry	dry
P-18	dry	dry	dry	dry	dry	dry	dry	dry	dry

Mine water treatment discharge subject to NPDES permit limitations at outfall location.

Limits: Total Uranium = 4 mg/L (max); soluble Ra-226 = 10 pCi/L (max); total Ra-226 = 30 pCi/L (max)

RIO ALGOM MINING LLC
DISCHARGE PERMIT - DP-71
MONITORING RESULTS - 3rd QUARTER 2010

Date	Location	Depth to	Total	WELL STATUS	pH (s.u.)	Temp. (C)	Spec.	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Nitrate (mg/L)	Arsenic (mg/L)	Selenium (mg/L)	Uranium (mg/L)
		Water (ft)	Depth (ft)				Cond. (uS)							
7/5/2010	MW-12		13.00	NS										
7/5/2010	MW-13		29.27	NS										
7/5/2010	MW-22	35.68	36.89		7.05	14.4	5550	130	2900	5290	21.9	0.006	0.135	0.0309
7/5/2010	MW-23		41.73	NS										
7/5/2010	MW-24		50.13	NS										
7/5/2010	MW-25		29.62	NS										
7/5/2010	MW-26		35.25	NS										
7/5/2010	MW-27		27.87	NS										
7/5/2010	MW-28		32.48	NS										
7/5/2010	MW-29		29.29	NS										
7/5/2010	MW-30		40.99	NS										
7/5/2010	MW-31		50.51	NS										
7/5/2010	MW-32	68.28	71.62		7.03	15.8	5380	120	2900	5330	69.4	0.007	0.336	0.0556
7/5/2010	MW-33		59.31	NS										

Notes

- 1 - Well status listed as "NS" indicates the well was either dry or contained insufficient water for sample collection.
- 2 - Monitor wells MW-1 through MW-11, MW-14 through MW-21 plugged and abandoned for the lined pond relocation project.

RIO ALGOM MINING LLC
DISCHARGE PERMIT - DP-71
MONITORING RESULTS - Fourth QUARTER 2010

Date	Location	Depth to	Total	WELL STATUS	pH (s.u.)	Temp. (C)	Spec.	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Nitrate (mg/L)	Arsenic (mg/L)	Selenium (mg/L)	Uranium (mg/L)
		Water (ft)	Depth (ft)				Cond. (uS)							
10/26/2010	MW-12		13.00	NS										
10/26/2010	MW-13		29.27	NS										
10/26/2010	MW-22	35.85	36.89	NS										
10/26/2010	MW-23	41.48	41.73	NS										
10/26/2010	MW-24		50.13	NS										
10/26/2010	MW-25		29.60	NS										
10/26/2010	MW-26		35.26	NS										
10/26/2010	MW-27		27.87	NS										
10/26/2010	MW-28		32.48	NS										
10/26/2010	MW-29		29.29	NS										
10/26/2010	MW-30		40.98	NS										
10/26/2010	MW-31		50.51	NS										
10/26/2010	MW-32	68.23	71.62		7.13	13.3	4810	120	2600	4100	55	0.011	0.2356	0.0620
12/27/2010	MW-32	68.31	71.61		7.18	11.9	4540			5200				
10/26/2010	MW-33		59.32	NS										

Notes

- 1 - Well status listed as "NS" indicates the well was either dry or contained insufficient water for sample collection.
- 2 - Monitor wells MW-1 through MW-11, MW-14 through MW-21 plugged and abandoned for the lined pond relocation project.
- 3 - The 12/27/2010 sample was collected to get HCO₃ and CO₃ analysis, complete set of analysis not performed.

RIO ALGOM MINING LLC
DISCHARGE PERMIT - DP-71
MONITORING RESULTS - 4TH QUARTER 2010
SEMI-ANNUAL REPORT

Date	Location	WELL STATUS	HCO3 (mg/L)	CO3 (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	F (mg/L)	Al (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	Cu (mg/L)
10/26/2010	MW-12	NS												
10/26/2010	MW-13	NS												
10/26/2010	MW-22	NS												
10/26/2010	MW-23	NS												
10/26/2010	MW-24	NS												
10/26/2010	MW-25	NS												
10/26/2010	MW-26	NS												
10/26/2010	MW-27	NS												
10/26/2010	MW-28	NS												
10/26/2010	MW-29	NS												
10/26/2010	MW-30	NS												
10/26/2010	MW-31	NS												
10/26/2010	MW-32		NA	NA	543	364	464	6	1.0	<0.2	<0.03	<0.05	<0.05	<0.05
12/27/2010	MW-32		268.00	<2										
10/26/2010	MW-33	NS												

Notes

- 1 - Well status listed as "NS" indicates the well was either dry or contained insufficient water for sample collection.
- 2 - NA = No Analysis Performed
- 3 - The 12/27/2010 sample for MW-32 was a special sample for HCO3 and CO3, not a complete set of analysis.

DISCHARGE PERMIT - DP-71
MONITORING RESULTS - 4TH QUARTER 2010
SEMI-ANNUAL REPORT

Date	Location	Fe (mg/L)	Pb (mg/L)	Mn (mg/L)	Mo (mg/L)	Ni (mg/L)	TKN (mg/L)	Ag (mg/L)	Zn (mg/L)	Ra-226 & Ra-228 (pCi/L)
10/26/2010	MW-12									
10/26/2010	MW-13									
10/26/2010	MW-22									
10/26/2010	MW-23									
10/26/2010	MW-24									
10/26/2010	MW-25									
10/26/2010	MW-26									
10/26/2010	MW-27									
10/26/2010	MW-28									
10/26/2010	MW-29									
10/26/2010	MW-30									
10/26/2010	MW-31									
10/26/2010	MW-32	<0.1	0.0018	0.5	<0.05	<0.05	0.5	<0.05	<0.05	0.34 & 1.2
12/27/2010	MW-32									
10/26/2010	MW-33									

Notes

- 1 - Well status listed as "NS" indicates the well was either dry or contained insufficient water for sample collection.
- 2 - NA = No Analysis Performed
- 3 - The 12/27/2010 sample for MW-32 was a special sample for HCO₃ and CO₃, not a complete set of analysis.