

# Rio Algom Mining LLC

September 13, 2010

ADDRESSEE ONLY

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

CERTIFIED MAIL

Return Receipt No. 7009 0960 0000 8421 2989

Re: **License SUA-1473, Docket No. 40-8905**  
**Semiannual Effluent Report – 1st 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 first 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

JE17

**RIO ALGOM MINING LLC  
AMBROSIA LAKE FACILITY**

License SUA – 1473 Docket 40 – 8905

**Semi – Annual  
Effluent Report**

**1<sup>st</sup> Half 2010**

**September 13, 2010**

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  
1st Half 2010

1st Quarter 2010					Substation	2nd 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	0.0E+00	0.0E+00	2.3E-18	< 1.0		U-nat	4.6E-18	2.2E-19	2.8E-18	< 1.0
Th-230	-6.8E-20	4.3E-18	6.8E-18	< 1.0		Th-230	3.4E-18	5.0E-18	8.2E-18	< 1.0
Ra-226	2.3E-18	1.8E-18	4.1E-18	< 1.0		Ra-226	3.2E-18	2.4E-18	6.4E-18	< 1.0
Pb-210	1.4E-15	4.3E-17	6.0E-17	< 1.0		Pb-210	6.5E-16	4.0E-17	5.6E-17	< 1.0

1st Quarter 2010					Section 17 VH 4	2nd 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	0.0E+00	0.0E+00	2.4E-18	< 1.0		U-nat	3.7E-18	1.8E-19	3.1E-18	< 1.0
Th-230	4.2E-19	3.4E-18	7.6E-18	< 1.0		Th-230	1.1E-17	5.9E-18	9.2E-18	< 1.0
Ra-226	1.2E-18	1.5E-18	3.7E-18	< 1.0		Ra-226	5.8E-18	2.8E-18	6.3E-18	< 1.0
Pb-210	1.4E-15	4.4E-17	6.4E-17	< 1.0		Pb-210	6.9E-16	4.1E-17	5.6E-17	< 1.0

High Volume Environmental Air Samples  
1st Half 2010

1st Quarter 2010					Section 30 West VH 6				
Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit	Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit
U-nat	0.0E+00	0.0E+00	2.5E-18	< 1.0	U-nat	1.5E-17	7.3E-19	3.6E-18	< 1.0
Th-230	-9.5E-19	4.7E-18	8.0E-18	< 1.0	Th-230	2.1E-17	8.4E-18	1.3E-17	< 1.0
Ra-226	2.6E-18	1.9E-18	5.1E-18	< 1.0	Ra-226	5.8E-18	2.8E-18	6.3E-18	< 1.0
Pb-210	1.8E-15	5.2E-17	8.0E-17	< 1.0	Pb-210	6.9E-16	4.1E-17	5.6E-17	< 1.0

1st Quarter 2010					North Fence				
Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit	Nuclide	Conc. (uCi/ml)	Error (uCi/ml)	LLD (uCi/ml)	% Limit
U-nat	0.0E+00	0.0E+00	2.5E-18	< 1.0	U-nat	3.3E-17	1.6E-18	3.3E-18	< 1.0
Th-230	5.2E-18	5.0E-18	7.5E-18	< 1.0	Th-230	2.9E-17	8.1E-18	1.1E-17	< 1.0
Ra-226	9.0E-19	1.9E-18	3.8E-18	< 1.0	Ra-226	7.6E-18	4.2E-18	7.3E-18	< 1.0
Pb-210	1.8E-15	5.4E-17	8.2E-17	< 1.0	Pb-210	7.0E-16	4.4E-17	6.9E-17	< 1.0

High Volume Environmental Air Samples  
1st Half 2010

1st Quarter 2010					Mill Diversion	2nd 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	3.6E-18	9.6E-20	2.3E-18	< 1.0	U-nat	2.3E-17	1.1E-18	2.9E-18	< 1.0	
Th-230	1.1E-16	1.4E-17	8.1E-18	< 1.0	Th-230	2.3E-16	2.2E-17	9.5E-18	1.2	
Ra-226	3.8E-18	1.9E-18	4.9E-18	< 1.0	Ra-226	1.1E-17	2.8E-18	4.8E-18	< 1.0	
Pb-210	1.5E-15	4.4E-17	6.0E-17	< 1.0	Pb-210	5.7E-16	3.7E-17	5.4E-17	< 1.0	

High Volume Environmental Air Samples  
1st Half 2010

1st Quarter 2010					KGL-North					2nd 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	0.0E+00	0.0E+00	2.4E-18	< 1.0	U-nat	1.5E-17	7.1E-19	3.2E-18	< 1.0	U-nat	1.5E-17	7.1E-19	3.2E-18	< 1.0
Th-230	8.5E-18	5.2E-18	7.8E-18	< 1.0	Th-230	1.0E-16	1.2E-17	9.3E-18	< 1.0	Th-230	1.0E-16	1.2E-17	9.3E-18	< 1.0
Ra-226	2.1E-18	1.7E-18	4.3E-18	< 1.0	Ra-226	8.7E-18	3.9E-18	7.1E-18	< 1.0	Ra-226	8.7E-18	3.9E-18	7.1E-18	< 1.0
Pb-210	1.6E-15	4.3E-17	5.4E-17	< 1.0	Pb-210	8.8E-16	4.9E-17	6.4E-17	< 1.0	Pb-210	8.8E-16	4.9E-17	6.4E-17	< 1.0

1st Quarter 2010					KGL-South					2nd 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	0.0E+00	0.0E+00	2.4E-18	< 1.0	U-nat	1.3E-17	6.2E-19	3.0E-18	< 1.0	U-nat	1.3E-17	6.2E-19	3.0E-18	< 1.0
Th-230	8.6E-18	5.2E-18	7.9E-18	< 1.0	Th-230	7.5E-18	5.4E-18	9.8E-18	< 1.0	Th-230	7.5E-18	5.4E-18	9.8E-18	< 1.0
Ra-226	9.4E-19	2.4E-18	6.1E-18	< 1.0	Ra-226	2.6E-18	2.8E-18	6.3E-18	< 1.0	Ra-226	2.6E-18	2.8E-18	6.3E-18	< 1.0
Pb-210	2.2E-15	5.6E-17	7.0E-17	< 1.0	Pb-210	1.1E-15	4.7E-17	5.6E-17	< 1.0	Pb-210	1.1E-15	4.7E-17	5.6E-17	< 1.0



Vegetation

Location: Substation Date: June 2010 Sample Media: Vegetation				Location: Mill Diversion Date: June 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	0.0E+00	0.0E+00	6.8E-05	U-nat	0.0E+00	0.0E+00	6.8E-05
Th-230	-2.8E-04	1.0E-03	1.5E-03	Th-230	9.6E-04	1.2E-03	1.5E-03
Ra-226	5.3E-04	8.0E-04	3.8E-03	Ra-226	2.0E-05	6.5E-04	3.7E-03
Pb-210	6.1E-03	4.7E-03	1.8E-02	Pb-210	0.0E+00	6.7E-03	2.6E-02

Location: Section 30 West VH6 Date: June 2010 Sample Media: Vegetation				Location: North Fence Date: June 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	5.9E-04	1.6E-05	6.8E-05	U-nat	1.1E-04	2.9E-06	6.8E-05
Th-230	2.0E-05	1.1E-03	1.5E-03	Th-230	-3.9E-04	9.2E-04	1.7E-03
Ra-226	1.3E-03	1.1E-03	4.2E-03	Ra-226	0.0E+00	7.1E-04	4.0E-03
Pb-210	1.3E-03	7.7E-03	3.0E-02	Pb-210	8.7E-03	6.9E-03	2.6E-02

Vegetation

Location: Section 17 VH.4  
Date: June 2010  
Sample Media: Vegetation

Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	1.3E-04	3.5E-06	6.8E-05
Th-230	1.9E-04	6.7E-04	1.4E-03
Ra-226	4.4E-04	8.8E-04	3.9E-03
Pb-210	6.3E-03	7.8E-03	3.0E-02

Location: KGL-North  
Date: June 2010  
Sample Media: Vegetation

Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	1.2E-04	3.3E-06	6.8E-05
Th-230	-1.2E-04	9.6E-04	1.8E-03
Ra-226	0.0E+00	6.1E-04	3.8E-03
Pb-210	4.4E-03	7.7E-03	3.0E-02

Location: KGL-South  
Date: June 2010  
Sample Media: Vegetation

Nuclide	Conc. (uCi/kg)	Error (uCi/kg)	LLD (uCi/kg)
U-nat	0.0E+00	0.0E+00	6.8E-05
Th-230	3.3E-04	1.0E-03	1.6E-03
Ra-226	7.1E-04	8.8E-04	3.7E-03
Pb-210	0.0E+00	7.6E-03	3.0E-02

Soil

Location: Substation Date: June 2010 Sample Media: Soil				Location: Mill Diversion Date: June 2010 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	1.1E-06	5.3E-08	3.4E-08	U-nat	6.5E-07	3.3E-08	3.4E-08
Th-230	1.1E-06	4.8E-07	7.2E-07	Th-230	4.2E-06	8.0E-07	7.0E-07
Ra-226	6.1E-07	2.0E-08	4.5E-07	Ra-226	3.9E-07	1.4E-07	3.5E-07
Pb-210	2.3E-06	1.8E-06	4.6E-06	Pb-210	6.2E-06	1.5E-06	3.4E-06

Location: Section 30 West VH6 Date: June 2010 Sample Media: Soil				Location: North Fence Date: June 2010 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	7.1E-06	3.6E-07	3.4E-08	U-nat	5.0E-07	2.7E-08	3.4E-08
Th-230	5.0E-06	8.1E-07	6.40E-07	Th-230	3.9E-07	4.4E-07	7.3E-07
Ra-226	4.5E-06	3.7E-07	3.70E-07	Ra-226	3.4E-07	1.6E-07	4.3E-07
Pb-210	3.0E-06	1.5E-06	3.70E-06	Pb-210	2.0E-08	1.4E-06	3.9E-06

Soil

Location: Section 17 VH 4  
Date: June 2010  
Sample Media: Soil

Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)
U-nat	8.0E-07	4.0E-08	3.4E-08
Th-230	8.6E-07	4.0E-07	6.1E-07
Ra-226	7.3E-07	2.3E-07	4.3E-07
Pb-210	1.2E-06	1.4E-06	3.7E-06

Location: KGL-North  
Date: June 2010  
Sample Media: Soil

Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)
U-nat	1.2E-06	6.2E-08	3.4E-08
Th-230	1.0E-06	4.9E-07	7.6E-07
Ra-226	5.9E-07	2.2E-07	5.2E-07
Pb-210	1.5E-06	1.6E-06	4.3E-06

Location: KGL-South  
Date: June 2010  
Sample Media: Soil

Nuclide	Conc. (uCi/g)	Error (uCi/g)	LLD (uCi/g)
U-nat	1.9E-06	9.7E-08	3.4E-08
Th-230	1.8E-06	6.0E-07	7.3E-07
Ra-226	1.4E-06	2.4E-07	4.0E-07
Pb-210	5.0E-06	1.6E-06	3.9E-06

Sediment

Location: P-0 Date: June 2010 Sample Media: Sediment				Location: P-1 Date: June 2010 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	6.1E-06	3.1E-07	3.4E-08	U-nat	5.5E-06	2.8E-07	3.4E-08
Th-230	5.2E-06	8.3E-07	6.2E-07	Th-230	2.4E-05	1.8E-06	6.3E-07
Ra-226	1.2E-05	1.1E-06	9.2E-07	Ra-226	8.1E-06	9.0E-07	8.6E-07
Pb-210	4.5E-06	1.7E-06	6.4E-06	Pb-210	6.6E-06	1.5E-06	5.4E-06

  

Location: P-2 Date: June 2010 Sample Media: Sediment				Location: P-3 Date: June 2010 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	7.4E-06	3.8E-07	3.4E-08	U-nat	3.3E-07	1.7E-08	3.4E-08
Th-230	7.4E-06	1.1E-06	8.2E-07	Th-230	1.5E-06	4.4E-07	5.9E-07
Ra-226	2.3E-05	2.1E-06	1.7E-06	Ra-226	5.2E-07	2.6E-07	9.0E-07
Pb-210	5.8E-06	1.6E-06	5.5E-06	Pb-210	0.0E+00	1.5E-06	6.0E-06

Environmental Radon

Date: 1st Quarter 2010  
Sample Media: Track Etch

Date: 2nd Quarter 2010  
Sample Media: Track Etch

Location	Rate pCi/L	Error pCi/L	Location	Rate pCi/L	Error pCi/L
Substation	<0.3	No Value	Substation	0.6	0.1
Mill Diversion	1.4	0.1	Mill Diversion	2.1	0.1
Section 30W VH6	1.9	0.1	Section 30W VH6	1.9	0.1
North Fence	1.8	0.1	North Fence	1.9	0.1
Section 17 VH4	<0.3	No Value	Section 17 VH4	0.9	0.1
KGL-North	1.3	0.1	KGL-North	1.7	0.1
KGL-South	1.0	0.1	KGL-South	1.4	0.1

Notes:

- 1 - KGL sample locations added as part of lined pond relocation project.
- 2 - Substation Track Etch was destroyed by weather, no reading available in 1st Qtr

Environmental Gamma Radiation

Date: 1st Quarter 2010  
Sample Media: Gamma

Date: 2nd Quarter 2010  
Sample Media: Gamma

<u>Location</u>	<u>Rate (mRem/qtr)</u>
Substation	0
Mill Diversion	0
Section 30W VH6	9.5
North Fence	0
Section 17 VH4	0
Section 4 - #1	3.1
Section 4 - #2	2.3
Section 4 - #3	0

<u>Location</u>	<u>Rate (mRem/qtr)</u>
Substation	0
Mill Diversion	0
Section 30W VH6	0.4
North Fence	0
Section 17 VH4	0
Section 4 - #1	0
Section 4 - #2	0
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.
-

Treated Mine Discharge Water

Sample: Treated Mine Water

Date: 1st 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: 2nd 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 - 1st QUARTER 2010

Date	Location	Depth to Water (ft)	Total Depth (ft)	WELL STATUS	pH (s.u.)	Temp. ( C)	Spec. Cond. (uS)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Nitrate (mg/L)	Arsenic (mg/L)	Selenium (mg/L)	Uranium (mg/L)
1/12/2010	MW-12		13.00	NS										
1/11/2010	MW-13		29.27	NS										
1/12/2010	MW-22	35.39	36.85		7.23	12.4	5130	140	2700	5120	14.4	0.004	0.105	0.0387
1/12/2010	MW-23		41.73	NS										
1/12/2010	MW-24		50.11	NS										
1/12/2010	MW-25		29.62	NS										
1/12/2010	MW-26		35.25	NS										
1/11/2010	MW-27		27.85	NS										
1/11/2010	MW-28		32.48	NS										
1/11/2010	MW-29		29.29	NS										
1/11/2010	MW-30		40.99	NS										
1/12/2010	MW-31		50.51	NS										
1/12/2010	MW-32	68.05	71.61		7.21	13	5080	120	2600	5220	46.6	0.008	0.243	0.0738
1/12/2010	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 - 2nd QUARTER 2010

Date	Location	Depth to Water (ft)	Total Depth (ft)	WELL STATUS	pH (s.u.)	Temp. ( C)	Spec. Cond. (uS)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Nitrate (mg/L)	Arsenic (mg/L)	Selenium (mg/L)	Uranium (mg/L)
4/12/2010	MW-12		13.00	NS										
4/12/2010	MW-13		29.27	NS										
4/12/2010	MW-22	35.42	36.87		7.27	15.5	5190	140	2700	4380	19	0.008	0.1300	0.0358
4/12/2010	MW-23		41.73	NS										
4/12/2010	MW-24		50.13	NS										
4/12/2010	MW-25		29.62	NS										
4/12/2010	MW-26		35.25	NS										
4/12/2010	MW-27		27.87	NS										
4/12/2010	MW-28		32.48	NS										
4/12/2010	MW-29		29.29	NS										
4/12/2010	MW-30		40.99	NS										
4/12/2010	MW-31		50.51	NS										
4/12/2010	MW-32	68.25	71.62		7.29	14.7	5250	120	2800	4470	60	0.012	0.2250	0.0170
4/12/2010	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 - 2nd 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)
4/12/2009	MW-12	NS											
4/12/2009	MW-13	NS											
4/12/2009	MW-22		231	<2	437	257	677	5	0.7	< 0.2	< 0.03	< 0.05	< 0.05
4/12/2009	MW-23	NS											
4/12/2009	MW-24	NS											
4/12/2009	MW-25	NS											
4/12/2009	MW-26	NS											
4/12/2009	MW-27	NS											
4/12/2009	MW-28	NS											
4/12/2009	MW-29	NS											
4/12/2009	MW-30	NS											
4/12/2009	MW-31	NS											
4/12/2009	MW-32		306	<2	542	365	455	6	1.0	< 0.2	< 0.03	< 0.05	< 0.05
4/12/2009	MW-33	NS											

Notes

- 1 - Well status listed as "NS" indicates the well was either dry or contained insufficient water for sample collection.
- 2 - Groundwater standards not established. Standard will be existing concentration or numeric standard, whichever is greater.
- 3 - 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 - 2nd QUARTER 2010  
SEMI-ANNUAL REPORT

Date	Location	Cu (mg/L)	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)
4/12/2009	MW-12										
4/12/2009	MW-13										
4/12/2009	MW-22	< 0.05	0.3	<0.0005	0.84	<0.05	<0.05	1.2	< 0.05	< 0.05	0.42 & 0.3
4/12/2009	MW-23										
4/12/2009	MW-24										
4/12/2009	MW-25										
4/12/2009	MW-26										
4/12/2009	MW-27										
4/12/2009	MW-28										
4/12/2009	MW-29										
4/12/2009	MW-30										
4/12/2009	MW-31										
4/12/2009	MW-32	< 0.05	< 0.1	0.0005	0.51	< 0.05	< 0.05	0.4	< 0.05	< 0.05	0.26 & 0.62
4/12/2009	MW-33										

Notes

- 1 - Well status listed as "NS" indicates the well was either dry or contained insufficient water for sample collection.
- 2 - Groundwater standards not established. Standard will be existing concentration or numeric standard, whichever is greater.
- 3 - Monitor wells MW-1 through MW-11, MW-14 through MW-21 plugged and abandoned for the lined pond relocation project.