

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Grant Harrigan
TEL (902) 539-3012
FAX (902) 539-3381
DATE 11th April, 2008

FILE NO. S-1114-10
SHIFT: 0630 to 1800
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. CP-0121

**SUBJECT: 10th April, 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Cooling Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 10th of April, 2008. Colin MacIsaac and Reggie Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly clear skies changing to overcast skies later in the day
- Temperature: approximately 10°C (data unavailable from Environment Canada)
- Wind Direction: South to Southwest

Comments: *ALL-TECH was on-Site at 0630 and sampling began as soon as there was Site activity. Air monitoring was performed during EarthTech's construction activities.*

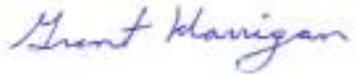
All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were below the established Site Action Level for this parameter of 0.66 ppm. Each measurement is the average of a 15 minute sample. A minimum of 2 samples were taken downwind and 1 sample upwind every hour. All measurements were found to be below the detection limit of the instrument. Levels above detection limit will be noted in the table below.

Due to operational criteria, during periods of precipitation (snow and rain) and high humidity, TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Colin MacIsaac and reviewed by Grant Harrigan and Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



Grant Harrigan, B.Tech
Environmental Technologist
ALL-TECH Environmental Services Cape Breton Ltd.

Copied via e-mail:

Shawn Bernon shawn@tarpondscleanup.ca, Wilfred Kaiser wilfred@tarpondscleanup.ca, Nancy LeDrew nancy@tarpondscleanup.ca, Trish Magliaro trish@tarpondscleanup.ca, Terry Smith tsmith@toalltech.com, Phyllis Low pjlow@toalltech.com, Dianne Theriault dtheriault@toalltech.com, Darren Gardiner dgardiner@croworld.com, Darren Lawless dlawless@toalltech.com, Kevin Mac Pherson kevinmacp@cbcl.ca, Kathy Harquail kharquail@toalltech.com

Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Cooling Pond
10th April, 2008

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 30m Southeast of Inglis Street and Spar Road intersection	0710	155	14	South	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
2 30m Northeast of Acadian Lines terminal	0715	155	13	Southwest	Upwind	Background	No observations seen to effect sampling integrity
3 60m Northwest of STPA building	0745	155	15	South	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
4 30m Northeast of Acadian Lines terminal	0800	155	13	Southwest	Upwind	Background	No observations seen to effect sampling integrity
5 90m Southeast of Inglis Street and Spar Road intersection	0800	155	16	South	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
6 90m Southeast of Inglis Street and Spar Road intersection	0840	155	38	South	Downwind	Payloaders, excavators moving materials	Visible dust coming from activity site
7 30m Northeast of Acadian Lines terminal	0900	155	15	Southwest	Upwind	Background	No observations seen to effect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
8 90m Southeast of Inglis Street and Spar Road intersection	0900	155	20	South	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
9 90m Southeast of Inglis Street and Spar Road intersection	0945	155	49	South	Downwind	Payloaders, excavators moving materials	Visible dust coming from activity site
10 30m Northeast of Acadian Lines terminal	1000	155	14	Southwest	Upwind	Background	No observations seen to effect sampling integrity
11 90m Northwest of STPA building	1000	155	26	Southwest	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
12 90m Northwest of STPA building	1020	155	25	Southwest	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
13 30m Northeast of Acadian Lines terminal	1100	155	14	Southwest	Upwind	Background	No observations seen to effect sampling integrity
14 60m Northwest of STPA building	1100	155	16	Southwest	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
15 60m Northwest of STPA building	1130	155	15	Southwest	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
16 30m Northeast of Acadian Lines terminal	1200	155	12	Southwest	Upwind	Background	No observations seen to effect sampling integrity
17 60m Northwest of STPA building	1200	155	14	Southwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
18 60m Northwest of STPA building	1245	155	14	Southwest	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
19 30m Northeast of Acadian Lines terminal	1300	155	12	Southwest	Upwind	Background	No observations seen to effect sampling integrity
20 60m Northwest of STPA building	1300	155	17	Southwest	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
21 60m Northwest of STPA building	1340	155	17	Southwest	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
22 30m Northeast of Acadian Lines terminal	1400	155	13	Southwest	Upwind	Background	No observations seen to effect sampling integrity
23 60m Northwest of STPA building	1400	155	30	Southwest	Downwind	Payloaders, excavators moving materials	Visible dust coming from activity site

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
24 60m Northwest of STPA building	1415	155	22	Southwest	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
25 30m Northeast of Acadian Lines terminal	1500	155	15	Southwest	Upwind	Background	No observations seen to effect sampling integrity
26 60m Northwest of STPA building	1500	155	29	Southwest	Downwind	Payloaders, excavators moving materials	Visible dust coming from activity site
27 60m Northwest of STPA building	1530	155	110	Southwest	Downwind	Payloaders, excavators moving materials	Visible dust coming from activity site
28 60m Northwest of STPA building	1545	155	38	Southwest	Downwind	Payloaders, excavators moving materials	Visible dust coming from activity site
29 30m Northeast of Acadian Lines terminal	1600	155	10	Southwest	Upwind	Background	No observations seen to effect sampling integrity
30 40m Northwest of STPA building	1600	155	46	Southwest	Downwind	Payloaders, excavators moving materials	Visible dust coming from activity site
31 40m Northwest of STPA building	1630	155	130	Southwest	Downwind	Payloaders, excavators moving materials	Visible dust coming from activity site

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
32 30m Northeast of Acadian Lines terminal	1700	155	9	Southwest	Upwind	Background	No observations seen to effect sampling integrity
33 40m Northwest of STPA building	1700	155	16	Southwest	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity
34 40m Northwest of STPA building	1715	155	9	Southwest	Downwind	Payloaders, excavators moving materials	No observations seen to effect sampling integrity

Notes: Air sample duration for each monitoring event was 15 minutes.

Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value (µg/m ³)	Dust Budget Exceedance Value (µg/m ³)
30m Southeast of Inglis Street and Spar Road intersection	0700 to 0759	15	990
90m Southeast of Inglis Street and Spar Road intersection	0800 to 0859	42	990
90m Southeast of Inglis Street and Spar Road intersection	0900 to 0959	77	990
90m Northwest of STPA building	1000 to 1059	103	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
60m Northwest of STPA building	1100 to 1159	119	990
60m Northwest of STPA building	1200 to 1259	133	990
60m Northwest of STPA building	1300 to 1359	150	990
60m Northwest of STPA building	1400 to 1459	176	990
60m Northwest of STPA building	1500 to 1559	235	990
40m Northwest of STPA building	1600 to 1659	323	990
40m Northwest of STPA building	1700 to 1759	336	990

VOC Monitoring

Monitoring Method	Yes	No
Sustained Odours Observed		•
P.I.D. Required	•	