

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1100-18
FROM	Grant Harrigan	SHIFT:	0630 to 2030
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	20 th March, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0103

**SUBJECT: 19th March, 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 19th of March, 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:

- Overcast changing to clear skies
- Temperature: approximately -3°C (data unavailable from Environment Canada)
- Wind Direction: Northeast to North

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.*

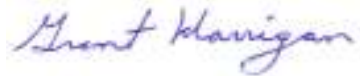
All downwind and upwind measurements of PM₁₀ were well below the established Site Action Level for this parameter of 155 µg/m³.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were well 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), 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
19th March, 2008

Sample No. & Air Monitoring Location	Time of Day	PM₁₀ Action Level (µg/m³)	Average Result (µg/m³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 20m Southeast of Inglis Street, Spar Road intersection	0715	155	8	Northeast	Upwind	Background	No observations seen to effect sampling integrity
2 90m Northeast of Acadian Lines bus terminal	0715	155	11	Northeast	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
3 90m Northeast of Acadian Lines bus terminal	0745	155	11	Northeast	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
4 20m Southeast of Inglis Street, Spar Road intersection	0800	155	11	Northeast	Upwind	Background	No observations seen to effect sampling integrity
5 90m Northeast of Acadian Lines bus terminal	0800	155	10	Northeast	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
6 90m Northeast of Acadian Lines bus terminal	0845	155	12	Northeast	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
7 20m Southeast of Inglis Street, Spar Road intersection	0900	155	13	Northeast	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 Northeast of Acadian Lines bus terminal	0900	155	12	Northeast	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
9 90m Northeast of Acadian Lines bus terminal	0945	155	15	Northeast	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
10 20m Southeast of Inglis Street, Spar Road intersection	1000	155	12	Northeast	Upwind	Background	No observations seen to effect sampling integrity
11 90m Northeast of Acadian Lines bus terminal	1005	155	13	Northeast	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
12 90m Northeast of Acadian Lines bus terminal	1045	155	15	Northeast	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
13 20m Southeast of Inglis Street, Spar Road intersection	1100	155	14	Northeast	Upwind	Background	No observations seen to effect sampling integrity
14 90m Northeast of Acadian Lines bus terminal	1100	155	14	Northeast	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
15 30m Northwest of Inglis Street, Terminal Road intersection	1130	155	59	North	Downwind	Excavators moving materials	Visible dust clouds moving off-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
16 20m Southeast of Inglis Street, Spar Road intersection	1200	155	12	Northeast	Upwind	Background	No observations seen to effect sampling integrity
17 30m Northwest of Inglis Street, Terminal Road intersection	1200	155	21	North	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
18 30m Northwest of Inglis Street, Terminal Road intersection	1235	155	48	North	Downwind	Excavators moving materials	Visible dust clouds moving off-Site
19 30m Northwest of Inglis Street, Terminal Road intersection	1300	155	50	North	Downwind	Excavators moving materials	Visible dust clouds moving off-Site
20 40m Northeast of Cooling Pond main gate	1310	155	10	North	Upwind	Background	No observations seen to effect sampling integrity
21 30m Northwest of Inglis Street, Terminal Road intersection	1320	155	25	North	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
22 40m Northeast of Cooling Pond main gate	1400	155	9	North	Upwind	Background	No observations seen to effect sampling integrity
23 30m Northwest of Inglis Street, Terminal Road intersection	1400	155	29	North	Downwind	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
24 30m Northwest of Inglis Street, Terminal Road intersection	1430	155	14	North	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
25 40m Northeast of Cooling Pond main gate	1500	155	12	North	Upwind	Background	No observations seen to effect sampling integrity
26 30m Northwest of Inglis Street, Terminal Road intersection	1500	155	19	North	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
27 30m Northwest of Inglis Street, Terminal Road intersection	1530	155	16	North	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
28 40m Northeast of Cooling Pond main gate	1600	155	11	North	Upwind	Background	No observations seen to effect sampling integrity
29 30m Northwest of Inglis Street, Terminal Road intersection	1600	155	11	North	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
30 30m Northwest of Inglis Street, Terminal Road intersection	1615	155	34	North	Downwind	Excavators moving materials	Visible dust clouds moving off-Site
31 40m Northeast of Cooling Pond main gate	1700	155	8	North	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
32 30m Northwest of Inglis Street, Terminal Road intersection	1700	155	37	North	Downwind	Excavators moving materials	Visible dust clouds moving off-Site
33 30m Northwest of Inglis Street, Terminal Road intersection	1715	155	40	North	Downwind	Excavators moving materials	Visible dust clouds moving off-Site
34 50m North of STPA building	1800	155	8	North	Upwind	Background	No observations seen to effect sampling integrity
35 30m Northwest of Inglis Street, Terminal Road intersection	1800	155	41	North	Downwind	Excavators moving materials	Visible dust clouds moving off-Site
36 30m Northwest of Inglis Street, Terminal Road intersection	1815	155	33	North	Downwind	Excavators moving materials	Visible dust clouds moving off-Site
37 50m North of STPA building	1900	155	9	North	Upwind	Background	No observations seen to effect sampling integrity
38 30m Northwest of Inglis Street, Terminal Road intersection	1900	155	17	North	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
39 30m Northwest of Inglis Street, Terminal Road intersection	1915	155	11	North	Downwind	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
40 50m North of STPA building	1945	155	13	North	Upwind	Background	No observations seen to effect sampling integrity
41 30m Northwest of Inglis Street, Terminal Road intersection	1945	155	12	North	Downwind	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)
90m Northeast of Acadian Lines bus terminal	0700 to 0759	11	990
90m Northeast of Acadian Lines bus terminal	0800 to 0859	22	990
90m Northeast of Acadian Lines bus terminal	0900 to 0959	36	990
90m Northeast of Acadian Lines bus terminal	1000 to 1059	50	990
90m Northeast of Acadian Lines bus terminal	1100 to 1159	87	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
30m Northwest of Inglis Street and Terminal Road intersection	1200 to 1259	122	990
30m Northwest of Inglis Street and Terminal Road intersection	1300 to 1359	160	990
30m Northwest of Inglis Street and Terminal Road intersection	1400 to 1459	182	990
30m Northwest of Inglis Street and Terminal Road intersection	1500 to 1559	200	990
30m Northwest of Inglis Street and Terminal Road intersection	1600 to 1659	223	990
30m Northwest of Inglis Street and Terminal Road intersection	1700 to 1759	262	990
30m Northwest of Inglis Street and Terminal Road intersection	1800 to 1859	299	990
30m Northwest of Inglis Street and Terminal Road intersection	1900 to 1959	313	990

VOC Monitoring

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