

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1100-09
FROM	Grant Harrigan	SHIFT:	0630 to 1745
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	11 th March, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0094

**SUBJECT: 10th 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 10th of March, 2008. Colin MacIsaac and Reggie Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities for the Cooling Pond.

Weather conditions on the day of sampling:

- Clear skies
- Temperature: approximately -6°C (data unavailable from Environment Canada)
- Wind Direction: Northwest to North to Northeast

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 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
10th 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 30m East of Ferry Street bridge	0700	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
2 90m Northeast of Inglis Street, Terminal Road intersection	0700	155	5	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
3 90m Northeast of Inglis Street, Terminal Road intersection	0730	155	12	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
4 30m East of Ferry Street bridge	0800	155	7	Northwest	Upwind	Background	No observations seen to effect sampling integrity
5 90m Northeast of Inglis Street, Terminal Road intersection	0800	155	7	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
6 90m Northeast of Inglis Street, Terminal Road intersection	0845	155	20	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
7 30m East of Ferry Street bridge	0900	155	17	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
8 80m Northeast of Inglis Street, Terminal Road intersection	0900	155	18	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
9 80m Northeast of Inglis Street, Terminal Road intersection	0920	155	16	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
10 30m East of Ferry Street bridge	1000	155	18	North	Upwind	Background	No observations seen to effect sampling integrity
11 80m Northeast of Inglis Street, Terminal Road intersection	1000	155	8	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
12 80m Northeast of Inglis Street, Terminal Road intersection	1045	155	8	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
13 30m East of Ferry Street bridge	1100	155	10	North	Upwind	Background	No observations seen to effect sampling integrity
14 80m Northeast of Inglis Street, Terminal Road intersection	1105	155	4	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
15 80m Northeast of Inglis Street, Terminal Road intersection	1130	155	4	North	Downwind	Excavators moving material	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 East of Ferry Street bridge	1200	155	5	Northeast	Upwind	Background	Wind changing directions
17 20m Northwest of Inglis Street, Terminal Road intersection	1200	155	4	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
18 20m Northwest of Inglis Street, Terminal Road intersection	1245	155	3	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
19 35m East of Cooling Pond main gate	1300	155	42	Northeast	Upwind	Background	Visible dust coming from tractor sweeping Spar Road
20 20m Northwest of Inglis Street, Terminal Road intersection	1300	155	5	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
21 20m Northwest of Inglis Street, Terminal Road intersection	1345	155	11	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
22 30m East of Ferry Street bridge	1400	155	6	Northeast	Upwind	Background	No observations seen to effect sampling integrity
23 20m Northwest of Inglis Street, Terminal Road intersection	1400	155	7	Northeast	Downwind	Excavators moving material	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 20m Northwest of Inglis Street, Terminal Road intersection	1415	155	5	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
25 30m East of Ferry Street bridge	1500	155	5	North	Upwind	Background	No observations seen to effect sampling integrity
26 20m Northwest of Inglis Street, Terminal Road intersection	1500	155	5	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
27 20m Northwest of Inglis Street, Terminal Road intersection	1530	155	4	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
28 30m East of Cooling Pond main gate	1600	155	7	Northeast	Upwind	Background	No observations seen to effect sampling integrity
29 30m Northwest of Inglis Street, Terminal Road intersection	1600	155	4	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
30 30m Northwest of Inglis Street, Terminal Road intersection	1630	155	4	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
31 30m East of Cooling Pond main gate	1700	155	4	Northeast	Upwind	Background	No observations seen to effect sampling integrity

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
32 30m Northwest of Inglis Street, Terminal Road intersection	1700	155	1	Northeast	Downwind	No activity observed on-site	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 ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
90m Northeast of Inglis Street, Terminal Road intersection	0700 to 0759	9	990
90m Northeast of Inglis Street, Terminal Road intersection	0800 to 0859	23	990
80m Northeast of Inglis Street, Terminal Road intersection	0900 to 0959	37	990
80m Northeast of Inglis Street, Terminal Road intersection	1000 to 1059	45	990
80m Northeast of Inglis Street, Terminal Road intersection	1100 to 1159	49	990
20m Northwest of Inglis Street, Terminal Road intersection	1200 to 1259	53	990
20m Northwest of Inglis Street, Terminal Road intersection	1300 to 1359	61	990
20m Northwest of Inglis Street, Terminal Road intersection	1400 to 1459	67	990
20m Northwest of Inglis Street, Terminal Road intersection	1500 to 1559	72	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, Terminal Road intersection	1600 to 1659	76	990
30m Northwest of Inglis Street, Terminal Road intersection	1700 to 1759	77	990

VOC Monitoring

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