

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1114-13
FROM	Grant Harrigan	SHIFT:	0630 to 1815
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	16 th April, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0124

**SUBJECT: 15th 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 15th of April, 2008. Tyler Rowe and Reg Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly sunny
- Temperature: 5°C
- Wind Direction: West

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.*

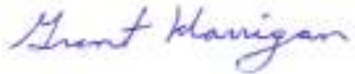
All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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:

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Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Cooling Pond
15th 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 10m North of Intercolonial Street fixed station	0710	155	8	West	Upwind	Background	No observations seen to effect sampling integrity
2 30m Southwest of STPA office	0710	155	10	West	Downwind	No activity	No observations seen to effect sampling integrity
3 30m Southwest of STPA office	0745	155	15	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
4 50m North of Intercolonial Street fixed station	0800	155	7	West	Upwind	Background	No observations seen to effect sampling integrity
5 30m Southwest of STPA office	0800	155	18	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
6 30m Southwest of STPA office	0835	155	48	West	Downwind	Machines moving material	Dust from site
7 50m North of Intercolonial Street fixed station	0900	155	6	West	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 30m Southwest of STPA office	0900	155	22	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
9 30m Southwest of STPA office	0945	155	24	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
10 50m North of Intercolonial Street fixed station	1000	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
11 40m Southwest of STPA office	1000	155	46	West	Downwind	Trucks dumping	Dust from site
12 40m Southwest of STPA office	1030	155	29	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
13 100m North of Intercolonial Street fixed station	1100	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
14 40m Southwest of STPA office	1100	155	18	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
15 40m Southwest of STPA office	1120	155	23	West	Downwind	Machines 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 100m North of Intercolonial Street fixed station	1200	155	6	West	Upwind	Background	No observations seen to effect sampling integrity
17 40m Southwest of STPA office	1200	155	13	West	Downwind	Trucks dumping material	No observations seen to effect sampling integrity
18 40m Southwest of STPA office	1220	155	22	West	Downwind	Trucks dumping material	No observations seen to effect sampling integrity
19 100m North of Intercolonial Street fixed station	1300	155	10	West	Upwind	Background	No observations seen to effect sampling integrity
20 40m Southwest of STPA office	1300	155	30	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
21 40m Southwest of STPA office	1340	155	28	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
22 100m North of Intercolonial Street fixed station	1400	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
23 30m Southwest of STPA office	1400	155	14	West	Downwind	Machines 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 30m Southwest of STPA office	1430	155	14	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
25 100m North of Intercolonial Street fixed station	1500	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
26 30m Southwest of STPA office	1500	155	12	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
27 30m Southwest of STPA office	1535	155	32	West	Downwind	Machines moving material	Dust from site
28 100m North of Intercolonial Street fixed station	1600	155	8	West	Upwind	Background	No observations seen to effect sampling integrity
29 30m Southwest of STPA office	1600	155	17	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
30 30m Southwest of STPA office	1620	155	12	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
31 100m North of Intercolonial Street fixed station	1700	155	7	West	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 Southwest of STPA office	1700	155	17	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
33 30m Southwest of STPA office	1730	155	12	West	Downwind	No activity	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 ($\mu\text{g}/\text{m}^3$)
30m Southwest of STPA building	0700 to 0759	13	990
30m Southwest of STPA building	0800 to 0859	46	990
30m Southwest of STPA building	0900 to 0959	69	990
40m Southwest of STPA building	1000 to 1059	107	990
40m Southwest of STPA building	1100 to 1159	128	990
40m Southwest of STPA building	1200 to 1259	146	990
40m Southwest of STPA building	1300 to 1359	175	990
30m Southwest of STPA building	1400 to 1459	189	990
30m Southwest of STPA building	1500 to 1559	211	990
30m Southwest of STPA building	1600 to 1659	226	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
30m Southwest of STPA building	1700 to 1759	241	990

VOC Monitoring

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