

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1138-02
FROM	Grant Harrigan	SHIFT:	0630 to 1745
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	9 th May, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0134

**SUBJECT: 8th May 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 8th of May, 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:

- Sunny, Cloudy in the afternoon
- Temperature: 15°C
- Wind Direction: West to South

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 Tyler Rowe and reviewed by Peter Ibrahim. 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
8th May, 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 60m North of Intercolonial Street fixed station	0700	155	17	West	Upwind	Background	No observations seen to effect sampling integrity
2 30m Southwest of STPA building	0700	155	16	West	Downwind	No activity	No observations seen to effect sampling integrity
3 30m Southwest of STPA building	0740	155	19	West	Downwind	Dump truck operating	No observations seen to effect sampling integrity
4 60m North of Intercolonial Street fixed station	0800	155	14	West	Upwind	Background	No observations seen to effect sampling integrity
5 30m Southwest of STPA building	0800	155	20	West	Downwind	Dump truck, excavator, bulldozer operating	No observations seen to effect sampling integrity
6 10m Southwest of corner of Cape Breton Street and Inglis Street	0845	155	16	West	Downwind	Dump truck operating	No observations seen to effect sampling integrity
7 60m North of Intercolonial Street fixed station	0900	155	12	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 10m Southwest of corner of Cape Breton Street and Inglis Street	0900	155	20	West	Downwind	Dump truck, excavator, bulldozer operating	No observations seen to effect sampling integrity
9 10m Southwest of corner of Cape Breton Street and Inglis Street	0935	155	9	West	Downwind	Excavator, bulldozer operating	No observations seen to effect sampling integrity
10 120m North of Intercolonial Street fixed station	1000	155	12	West	Upwind	Background	No observations seen to effect sampling integrity
11 10m Southwest of corner of Cape Breton Street and Inglis Street	1000	155	28	West	Downwind	Excavator, bulldozer operating	No observations seen to effect sampling integrity
12 10m Southwest of corner of Cape Breton Street and Inglis Street	1030	155	113	West	Downwind	Excavator, bulldozer operating	Dust from truck on site
13 120m North of Intercolonial Street fixed station	1045	155	19	West	Upwind	Background	No observations seen to effect sampling integrity
14 10m Southwest of corner of Cape Breton Street and Inglis Street	1045	155	28	West	Downwind	Excavator, bulldozer operating	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
15 120m North of Intercolonial Street fixed station	1100	155	37	West	Upwind	Background	Dust from traffic upwind
16 15m Southwest of corner of Cape Breton Street and Inglis Street	1100	155	22	West	Downwind	No activity	No observations seen to effect sampling integrity
17 15m Southwest of corner of Cape Breton Street and Inglis Street	1140	155	45	West	Downwind	Dump trucks, excavators operating	No observations seen to effect sampling integrity
18 120m North of Intercolonial Street fixed station	1200	155	21	West	Upwind	Background	No observations seen to effect sampling integrity
19 15m Southwest of corner of Cape Breton Street and Inglis Street	1200	155	19	West	Downwind	No activity	No observations seen to effect sampling integrity
20 15m Southwest of corner of Cape Breton Street and Inglis Street	1245	155	20	West	Downwind	No activity	No observations seen to effect sampling integrity
21 120m North of Intercolonial Street fixed station	1300	155	13	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
22 15m Southwest of corner of Cape Breton Street and Inglis Street	1300	155	32	West	Downwind	Dump trucks, excavators operating	No observations seen to effect sampling integrity
23 15m East of Ferry Street bridge	1340	155	20	Southeast	Downwind	Dump trucks, excavators operating	No observations seen to effect sampling integrity
24 150m South of STPA building	1400	155	15	Southeast	Upwind	Background	No observations seen to effect sampling integrity
25 15m East of Ferry Street bridge	1400	155	36	Southeast	Downwind	Dump trucks, excavators operating	Dust from Ferry Street
26 130m Southeast of corner of Inglis Street and Spar Road	1440	155	16	South	Downwind	Dump trucks, excavators operating	No observations seen to effect sampling integrity
27 50m East of Acadian Lines terminal	1500	155	12	South	Upwind	Background	No observations seen to effect sampling integrity
28 130m Southeast of corner of Inglis Street and Spar Road	1500	155	29	South	Downwind	Dump trucks, excavators operating	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
29 130m Southeast of corner of Inglis Street and Spar Road	1545	155	50	South	Downwind	Dump trucks, excavators operating	Dust from site
30 50m East of Acadian Lines terminal	1600	155	11	South	Upwind	Background	No observations seen to effect sampling integrity
31 130m Southeast of corner of Inglis Street and Spar Road	1600	155	43	South	Downwind	Dump trucks, excavators operating	Dust from site
32 130m Southeast of corner of Inglis Street and Spar Road	1635	155	32	South	Downwind	Dump trucks, excavators operating	Dust from site
33 50m East of Acadian Lines terminal	1700	155	11	South	Upwind	Background	No observations seen to effect sampling integrity
34 130m Southeast of corner of Inglis Street and Spar Road	1700	155	8	South	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	18	990
30m Southwest of STPA building / 10m Southwest of corner of Cape Breton Street and Inglis Street	0800 to 0859	36	990
10m Southwest of corner of Cape Breton Street and Inglis Street	0900 to 0959	51	990
10m Southwest of corner of Cape Breton Street and Inglis Street	1000 to 1059	107	990
15m Southwest of corner of Cape Breton Street and Inglis Street	1100 to 1159	141	990
15m Southwest of corner of Cape Breton Street and Inglis Street	1200 to 1259	161	990
15m Southwest of corner of Cape Breton Street and Inglis Street / 15m East of Ferry Street bridge	1300 to 1359	187	990
15m East of Ferry Street bridge / 130m Southeast of corner of Inglis Street and Spar Road	1400 to 1459	214	990
130m Southeast of corner of Inglis Street and Spar Road	1500 to 1559	254	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
130m Southeast of corner of Inglis Street and Spar Road	1600 to 1659	292	990
130m Southeast of corner of Inglis Street and Spar Road	1700 to 1759	300	990

VOC Monitoring

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