

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1207-17
FROM	Dianne Theriault	SHIFT:	0730 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	27 th October, 2008		Terry Smith, ALL-TECH
		STPA NO.	PS-0088

**SUBJECT: 24th October 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – South Pond Pilot Study
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 24th of October, 2008. Reg Peters and Tyler Rowe 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: approximately 10°C
- Wind Direction: Northwest

Comments: *ALL-TECH was on-Site at 0730 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 Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



Dianne Theriault, 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 – South Pond Pilot Study
24th October, 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 Railway property, 100m North of Ferry Street	0800	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 40m Northwest of Inglis Street and Cape Breton Street intersection	0800	155	9	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
3 40m Northwest of Inglis Street and Cape Breton Street intersection	0830	155	4	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
4 Railway property, 100m North of Ferry Street	0900	155	31	Northwest	Upwind	Background	Cement truck loading rail car upwind
5 40m Northwest of Inglis Street and Cape Breton Street intersection	0900	155	3	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
6 40m Northwest of Inglis Street and Cape Breton Street intersection	0920	155	5	Northwest	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
7 Railway property, 100m North of Ferry Street	1000	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 30m Southeast of STPA building	1000	155	5	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
9 30m Southeast of STPA building	1020	155	6	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
10 Railway property, 100m North of Ferry Street	1100	155	12	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 30m Southeast of STPA building	1100	155	7	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
12 30m Southeast of STPA building	1130	155	6	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
13 Railway property, 100m North of Ferry Street	1200	155	14	Northwest	Upwind	Background	No observations seen to affect sampling integrity
14 30m Southeast of STPA building	1200	155	15	Northwest	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
15 30m Southeast of STPA building	1230	155	9	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
16 Railway property, 100m North of Ferry Street	1300	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 30m Southeast of STPA building	1300	155	7	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
18 30m Southeast of STPA building	1345	155	10	Northwest	Downwind	Pressure spraying machinery	No observations seen to effect sampling integrity
19 Railway property, 100m North of Ferry Street	1400	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 30m Southeast of STPA building	1400	155	12	Northwest	Downwind	Pressure spraying machinery	No observations seen to effect sampling integrity
21 30m Southeast of STPA building	1445	155	15	Northwest	Downwind	Machine moving material	No observations seen to effect sampling integrity
22 Railway property, 100m North of Ferry Street	1500	155	10	Northwest	Upwind	Background	No observations seen to affect 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
23 30m Southeast of STPA building	1500	155	18	Northwest	Downwind	Machine moving material	No observations seen to effect sampling integrity
24 30m Southeast of STPA building	1530	155	11	Northwest	Downwind	Machine moving material	No observations seen to effect sampling integrity
25 Railway property, 100m North of Ferry Street	1600	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 30m Southeast of STPA building	1600	155	9	Northwest	Downwind	Machine moving material	No observations seen to effect sampling integrity
27 30m Southeast of STPA building	1645	155	7	Northwest	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 ($\mu\text{g}/\text{m}^3$)
40m Northwest of Inglis Street and Cape Breton Street intersection	0800 to 0859	7	990
40m Northwest of Inglis Street and Cape Breton Street intersection	0900 to 0959	11	990
30m Southeast of STPA building	1000 to 1059	17	990
30m Southeast of STPA building	1100 to 1159	24	990
30m Southeast of STPA building	1200 to 1259	36	990
30m Southeast of STPA building	1300 to 1359	45	990
30m Southeast of STPA building	1400 to 1459	59	990
30m Southeast of STPA building	1500 to 1559	74	990
30m Southeast of STPA building	1600 to 1659	82	990

VOC Monitoring

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