

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1074-15
FROM	Grant Harrigan	SHIFT:	0730 to 1745
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
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DATE	20 th February, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0072

**SUBJECT: 19th February 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Cooling Ponds
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 19th of February, 2008. Reggie Peters and Trevor Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Clear with cloudy periods
- Temperature: approximately 8°C (data unavailable from Environment Canada)
- Wind Direction: West

Comments: *ALL-TECH was on-Site at 0800 due to heavy precipitation in the early morning. Sampling began as soon as precipitation subsided and personnel arrived. Air monitoring was performed during EarthTech's construction activities.*

Sustained odours were detected throughout the day at downwind locations. Draeger Tube tests were performed at 1100 and 1300 and showed no detection of Benzene.

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 Trevor Rowe 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 Ponds
19th February, 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 Northwest of Northwest corner of STPA building	0800	155	3	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
2 30m Northwest of Northwest corner of STPA building	0820	155	2	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
3 45m South of Dorchester and Dodd Street intersection	0825	155	3	West	Upwind	Background	No observations seen to effect sampling integrity
4 45m South of Dorchester and Dodd Street intersection	0900	155	4	West	Upwind	Background	No observations seen to effect sampling integrity
5 30m Northwest of Northwest corner of STPA building	0900	155	2	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
6 30m Northwest of Northwest corner of STPA building	0916	155	3	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
7 45m South of Dorchester and Dodd Street intersection	1000	155	9	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 Northwest of Northwest corner of STPA building	1000	155	8	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
9 30m Northwest of Northwest corner of STPA building	1020	155	3	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
10 45m South of Dorchester and Dodd Street intersection	1100	155	7	West	Upwind	Background	No observations seen to effect sampling integrity
11 20m Northwest of Northwest corner of STPA building	1100	155	7	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
12 20m Northwest of Northwest corner of STPA building	1116	155	4	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
13 45m South of Dorchester and Dodd Street intersection	1200	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
14 20m Northwest of Northwest corner of STPA building	1200	155	3	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
15 20m Northwest of Northwest corner of STPA building	1215	155	4	West	Downwind	No activity observed on-Site	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 15m Southeast of Ferry and Walker Street intersection	1300	155	10	West	Upwind	Background	No observations seen to effect sampling integrity
17 100m Southwest of Southwest corner of STPA building	1300	155	12	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
18 100m Southwest of Southwest corner of STPA building	1320	155	11	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
19 15m Southeast of Ferry and Walker Street intersection	1400	155	9	West	Upwind	Background	No observations seen to effect sampling integrity
20 90m Southwest of Southwest corner of STPA building	1400	155	11	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
21 90m Southwest of Southwest corner of STPA building	1415	155	10	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
22 15m Southeast of Ferry and Walker Street intersection	1500	155	10	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
23 50m Southwest of Southwest corner of STPA building	1500	155	11	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
24 50m Southwest of Southwest corner of STPA building	1515	155	11	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
25 15m Southeast of Ferry and Walker Street intersection	1600	155	12	West	Upwind	Background	No observations seen to effect sampling integrity
26 50m Southwest of Southwest corner of STPA building	1600	155	12	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
27 50m Southwest of Southwest corner of STPA building	1615	155	12	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
28 15m Southeast of Ferry and Walker Street intersection	1700	155	13	West	Upwind	Background	No observations seen to effect sampling integrity
29 50m Southwest of Southwest corner of STPA building	1700	155	12	West	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 ($\mu\text{g}/\text{m}^3$)
30m Northwest of Northwest corner of STPA building	0800 to 0835	3	990
30m Northwest of Northwest corner of STPA building	0900 to 0931	6	990
30m Northwest of Northwest corner of STPA building	1000 to 1035	12	990
20m Northwest of Northwest corner of STPA building	1100 to 1136	18	990
20m Northwest of Northwest corner of STPA building	1200 to 1235	22	990
100m Southwest of Southwest corner of STPA building	1300 to 1335	34	990
90m Southwest of Southwest corner of STPA building	1400 to 1435	45	990
50m Southwest of Southwest corner of STPA building	1500 to 1535	56	990
50m Southwest of Southwest corner of STPA building	1600 to 1635	68	990

VOC Monitoring

Monitoring Method	Yes	No
Sustained Odours Detected	✓	
P.I.D. Required	✓	