

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1053-21
FROM	Grant Harrigan	SHIFT:	0630 to 1630
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	28 th January, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0054

**SUBJECT: 26th January, 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 26th of January, 2008. Grant Harrigan and Tyler Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities on the Cooling Pond Site.

Weather conditions on the day of sampling:

- Overcast with clear periods, mixed with periods of snow
- Temperature: -14.5°C
- Wind Direction: Southwest to West to Northwest to North

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 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 was halted and resumed after the precipitation had ended.

This report has been prepared by Grant Harrigan and reviewed by 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
26th January, 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 200m South of Intercolonial Street fixed station	0703	155	5	Southwest	Upwind	Background	Varying wind direction
2 75m East of Cooling Pond Main Gate	0708	155	5	West	Downwind	No visible activity	No observations seen to effect sampling integrity
3 75m East of Cooling Pond Main Gate	0724	155	1	West	Downwind	Excavator moving material	No observations seen to effect sampling integrity
4 Intercolonial Street fixed station	0800	155	10	West	Upwind	Background	No observations seen to effect sampling integrity
5 15m North of STPA office	0800	155	Ø	West	Downwind	Excavator and machinery moving material	No observations seen to effect sampling integrity
6 15m North of STPA office	0815	155	-3	West	Downwind	Excavator and machinery moving material	Changed DustTrak instrument
7 Intercolonial Street fixed station	0900	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
8 15m North of STPA office	0900	155	8	West	Downwind	Excavator and machinery moving material	No observations seen to effect sampling integrity
9 15m North of STPA office	0915	155	10	West	Downwind	Excavator and machinery moving material	No observations seen to effect sampling integrity
10 Intercolonial Street fixed station	1000	155	9	West	Upwind	Background	No observations seen to effect sampling integrity
11 15m North of STPA office	1000	155	-3	West	Downwind	Excavator and machinery moving material	No observations seen to effect sampling integrity
12 15m North of STPA office	1015	155	-2	West	Downwind	Excavator and machinery moving material	Zeroing performed on DustTrak
13 Intercolonial Street fixed station	1100	155	7	West	Upwind	Background	No observations seen to effect sampling integrity
14 15m North of STPA office	1100	155	15	West	Downwind	Excavator and machinery moving material	No observations seen to effect sampling integrity
15 15m North of STPA office	1115	155	11	West	Downwind	Excavator and machinery 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 Intercolonial Street fixed station	1200	155	8	West	Upwind	Background	Varying wind direction
17 20m West of STPA office	1200	155	8	Northwest	Downwind	No visible activity	No observations seen to effect sampling integrity
18 20m West of STPA office	1215	155	7	Northwest	Downwind	Excavator and machinery moving material	No observations seen to effect sampling integrity
19 215m North of Intercolonial Street fixed station	1305	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 20m West of STPA office	1300	155	5	Northwest	Downwind	Excavator and machinery moving material	No observations seen to effect sampling integrity
21 20m West of STPA office	1315	155	9	Northwest	Downwind	Excavator and machinery moving material	No observations seen to effect sampling integrity
22 215m North of Intercolonial Street fixed station	1400	155	6	North	Upwind	Background	Varying wind direction
23 105m South of STPA office	1400	155	1	North	Downwind	Excavator and machinery 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 105m South of STPA office	1415	155	2	North	Downwind	Excavator and machinery moving material	Zeroing performed on DustTrak
25 105m South of STPA office	1440	155	-20	North	Downwind	Excavator and machinery moving material	Changed DustTrak instrument
26 215m North of Intercolonial Street fixed station	1500	155	6	North	Upwind	Background	Varying wind direction
27 105m South of STPA office	1518	155	1	North	Downwind	Excavator and machinery moving material	Zeroing performed on DustTrak
28 105m South of STPA office	1535	155	1	North	Downwind	No visible 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 ($\mu\text{g}/\text{m}^3$)
75m East of Cooling Pond Main Gate	0708 to 0739	3	990
15m North of STPA office	0800 to 0830	3	990
15m North of STPA office	0900 to 0930	12	990
15m North of STPA office	1000 to 1030	12	990
15m North of STPA office	1100 to 1130	25	990
20m West of STPA office	1200 to 1230	33	990
20m West of STPA office	1300 to 1330	40	990
105m South of STPA office	1400 to 1430	42	990
105m South of STPA office	1440 to 1533	43	990
105m South of STPA office	1535 to 1550	44	990

VOC Monitoring

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

***P.I.D. was used for all samples and was below detection level.**