

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1193-08
FROM	Dianne Theriault	SHIFT:	0730 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	10 th September, 2008		Terry Smith, ALL-TECH
		STPA NO.	PS-0052

**SUBJECT: 9th September, 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 9th of September, 2008. Allison Giovannetti 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 23°C
- Wind Direction: Southwest

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.*

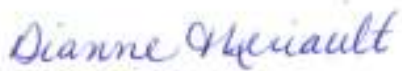
All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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
9th September, 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 5m North of Intercolonial Street fixed station	0815	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 25m Southwest of Inglis Street and Spar Road intersection	0825	155	52	Southwest	Downwind	Personnel working with hand tools	Recalibration required
3 25m Southwest of Inglis Street and Spar Road intersection	0845	155	55	Southwest	Downwind	Personnel working with hand tools	Recalibration required
4 5m North of Intercolonial Street fixed station	0900	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 25m Southwest of Inglis Street and Spar Road intersection	0908	155	52	Southwest	Downwind	Personnel working with hand tools	Instrument malfunction
6 25m Southwest of Inglis Street and Spar Road intersection	0945	155	14	Southwest	Downwind	Personnel working with hand tools	No observations seen to affect sampling integrity
7 5m North of Intercolonial Street fixed station	1000	155	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity

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
8 25m Southwest of Inglis Street and Spar Road intersection	1000	155	14	Southwest	Downwind	Personnel working with hand tools	No observations seen to affect sampling integrity
9 25m Southwest of Inglis Street and Spar Road intersection	1015	155	14	Southwest	Downwind	Personnel working with hand tools	No observations seen to affect sampling integrity
10 5m North of Intercolonial Street fixed station	1100	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 25m Southwest of Inglis Street and Spar Road intersection	1100	155	15	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
12 25m Southwest of Inglis Street and Spar Road intersection	1125	155	17	Southwest	Downwind	Personnel working with hand tools	No observations seen to affect sampling integrity
13 5m North of Intercolonial Street fixed station	1200	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 25m Southeast of Inglis Street and Spar Road intersection	1200	155	13	Southwest	Downwind	No activity observed on site	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
15 25m Southeast of Inglis Street and Spar Road intersection	1245	155	13	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
16 5m North of Intercolonial Street fixed station	1300	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 25m Southeast of Inglis Street and Spar Road intersection	1300	155	19	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
18 25m Southeast of Inglis Street and Spar Road intersection	1345	155	16	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
19 5m North of Intercolonial Street fixed station	1400	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 25m Southeast of Inglis Street and Spar Road intersection	1400	155	14	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
21 25m Southeast of Inglis Street and Spar Road intersection	1440	155	15	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
22 5m North of Intercolonial Street fixed station	1500	155	14	Southwest	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 25m Southeast of Inglis Street and Spar Road intersection	1500	155	14	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
24 25m Southeast of Inglis Street and Spar Road intersection	1530	155	13	Southwest	Downwind	Personnel working with hand tools	No observations seen to affect sampling integrity
25 5m North of Intercolonial Street fixed station	1600	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 25m Southeast of Inglis Street and Spar Road intersection	1600	155	18	Southwest	Downwind	Personnel working with hand tools	No observations seen to affect sampling integrity
27 25m Southeast of Inglis Street and Spar Road intersection	1645	155	13	Southwest	Downwind	Personnel working with hand tools	No observations seen to affect 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 ($\mu\text{g}/\text{m}^3$)
25m Southwest of Inglis Street and Spar Road intersection	0800 to 0859	54	990
25m Southwest of Inglis Street and Spar Road intersection	0900 to 0959	87	990
25m Southwest of Inglis Street and Spar Road intersection	1000 to 1059	101	990
25m Southwest of Inglis Street and Spar Road intersection	1100 to 1159	117	990
25m Southeast of Inglis Street and Spar Road intersection	1200 to 1259	130	990
25m Southeast of Inglis Street and Spar Road intersection	1300 to 1359	148	990
25m Southeast of Inglis Street and Spar Road intersection	1400 to 1459	163	990
25m Southeast of Inglis Street and Spar Road intersection	1500 to 1559	177	990
25m Southeast of Inglis Street and Spar Road intersection	1600 to 1659	193	990

VOC Monitoring

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