

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1193-22
FROM	Dianne Theriault	SHIFT:	0730 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
FAX	(902) 539-3381		
DATE	25 th September, 2008	STPA NO.	PS-0066

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

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 24th of September, 2008. Alison Giovannetti 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 with cloudy periods
- Temperature: approximately 11°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. Continuous monitoring was performed between 1100 and 1200 due to a high 15 minute average of 109 µg/m³ attributed to off-site truck traffic.*

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 Alison Giovannetti 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 – North Pond Pilot Study
24th September, 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 50m E of Midland along fence on Railway Rd.	0800	155	79	Northwest	Upwind	Background	Dust created from concrete truck moving material
2 40m E of Ferry St. Bridge	0800	155	5	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 40m E of Ferry St. Bridge	0823	155	18	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
4 50m E of Midland along fence on Railway Rd.	0900	155	16	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 40m E of Ferry St. Bridge	0900	155	16	Northwest	Downwind	Crane operating	Dust from site roads
6 40m E of Ferry St. Bridge	0915	155	30	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
7 50m E of Midland along fence on Railway Rd.	1000	155	4	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
8 40m E of Ferry St. Bridge	1000	155	18	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 40m E of Ferry St. Bridge	1040	155	37	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
10 50m E of Midland along fence on Railway Rd.	1100	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 40m E of Ferry St. Bridge	1100	155	109	Northwest	Downwind	Crane operating	Dust from truck traffic at scale
12 50m E of Midland along fence on Railway Rd.	1125	155	20	Northwest	Upwind	Background	Dust created from concrete truck moving material
13 40m E of Ferry St. Bridge	1125	155	21	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
14 50m E of Midland along fence on Railway Rd.	1145	155	52	Northwest	Upwind	Background	Dust created from concrete truck moving material

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 40m E of Ferry St. Bridge	1145	155	46	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
16 50m E of Midland along fence on Railway Rd.	1200	155	71	Northwest	Upwind	Background	Dust created from concrete truck moving material
17 20m E of Ferry St. Bridge	1200	155	69	Northwest	Downwind	No activity observed on site	Dust from truck traffic to scale
18 20m E of Ferry St. Bridge	1245	155	25	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
19 50m E of Midland along fence on Railway Rd.	1300	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 20m E of Ferry St. Bridge	1300	155	13	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
21 20m E of Ferry St. Bridge	1330	155	89	Northwest	Downwind	Crane Operating	Dust from site road
22 50m E of Midland along fence on Railway Rd.	1400	155	6	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 20m E of Ferry St. Bridge	1400	155	25	Northwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
24 20m E of Ferry St. Bridge	1440	155	23	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
25 50m E of Midland along fence on Railway Rd.	1500	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 20m E of Ferry St. Bridge	1500	155	13	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
27 20m E of Ferry St. Bridge	1520	155	28	Northwest	Downwind	No activity observed on site	Dust from site road
28 50m E of Midland along fence on Railway Rd.	1600	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
29 20m E of Ferry St. Bridge	1600	155	53	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
30 20m E of Ferry St. Bridge	1645	155	7	Northwest	Downwind	No activity observed on site	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 ($\mu\text{g}/\text{m}^3$)
40m E of Ferry St. Bridge	0800 to 0859	12	990
40m E of Ferry St. Bridge	0900 to 0959	35	990
40m E of Ferry St. Bridge	1000 to 1059	63	990
40m E of Ferry St. Bridge	1100 to 1159	122	990
20m E of Ferry St. Bridge	1200 to 1259	169	990
20m E of Ferry St. Bridge	1300 to 1359	220	990
20m E of Ferry St. Bridge	1400 to 1459	244	990
20m E of Ferry St. Bridge	1500 to 1559	265	990
20m E of Ferry St. Bridge	1600 to 1659	295	990

VOC Monitoring

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