

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1193-05
FROM	Dianne Theriault	SHIFT:	0630 to 1945
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	9 th September, 2008		Terry Smith, ALL-TECH
		STPA NO.	PS-0049

**SUBJECT: 8th 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 8th of September, 2008. Reg Peters and Colin MacIsaac of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Cloudy with sunny periods
- Temperature: approximately 20°C
- Wind Direction: 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.*

An exceedance of the Site Action Level of 155 µg/m³ was measured at the downwind location at 1845 (see sample # 36) with a 15-minute average of 205 µg/m³. Earth Tech was immediately notified about the exceedance. Dust levels were below the Site Action Level for the remainder of the day.

All upwind measurements of PM₁₀ were below the established Site Action Level.

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 Colin MacIsaac 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
8th 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 20m North of Walker Street, Ferry Street intersection	0725	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
2 20m North of North Pond main gate	0725	155	6	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
3 20m North of North Pond main gate	0745	155	7	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
4 20m North of Walker Street, Ferry Street intersection	0800	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
5 20m North of North Pond main gate	0800	155	6	West	Downwind	Machines moving	No observations seen to effect sampling integrity
6 20m North of North Pond main gate	0830	155	5	West	Downwind	Machines moving	No observations seen to effect sampling integrity
7 20m North of Walker Street, Ferry Street intersection	0900	155	2	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 20m North of North Pond main gate	0900	155	5	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
9 20m North of North Pond main gate	0930	155	5	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
10 40m East of Midway Building	1000	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 30m Northeast of Ferry Street Bridge	1000	155	7	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
12 30m Northeast of Ferry Street Bridge	1015	155	6	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
13 40m East of Midway Building	1100	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
14 30m Northeast of Ferry Street Bridge	1100	155	60	Northwest	Downwind	Excavators moving material	Visible dust from site
15 30m Northeast of Ferry Street Bridge	1130	155	34	Northwest	Downwind	Excavators moving material	Visible dust from site

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 40m East of Midway Building	1200	155	2	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 30m Northeast of Ferry Street Bridge	1200	155	4	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
18 30m Northeast of Ferry Street Bridge	1220	155	4	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
19 40m East of Midway Building	1300	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 30m Northeast of Ferry Street Bridge	1300	155	1	Northwest	Downwind	Machine moving material	No observations seen to effect sampling integrity
21 30m Northeast of Ferry Street Bridge	1340	155	1	Northwest	Downwind	Machine moving material	No observations seen to effect sampling integrity
22 40m East of Midway Building	1400	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 30m Northeast of Ferry Street Bridge	1400	155	3	Northwest	Downwind	Machine 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 30m Northeast of Ferry Street Bridge	1425	155	2	Northwest	Downwind	Machine moving material	No observations seen to effect sampling integrity
25 40m East of Midway Building	1500	155	2	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 30m Northeast of Ferry Street Bridge	1500	155	∅	Northwest	Downwind	Cleaning equipment	No observations seen to effect sampling integrity
27 30m Northeast of Ferry Street Bridge	1545	155	1	North	Downwind	Cleaning equipment	No observations seen to effect sampling integrity
28 40m East of Midway Building	1600	155	1	North	Upwind	Background	No observations seen to effect sampling integrity
29 15m East of Ferry Street Bridge	1600	155	∅	North	Downwind	Cleaning equipment	No observations seen to effect sampling integrity
30 15m East of Ferry Street Bridge	1645	155	∅	North	Downwind	Cleaning equipment	No observations seen to effect sampling integrity
31 40m East of Midway Building	1700	155	2	North	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
32 15m East of Ferry Street Bridge	1700	155	1	North	Downwind	No activity observed on site	No observations seen to effect sampling integrity
33 15m East of Ferry Street Bridge	1748	155	7	North	Downwind	Truck unloading	No observations seen to effect sampling integrity
34 40m East of Midway Building	1800	155	4	North	Upwind	Background	No observations seen to effect sampling integrity
35 15m East of Ferry Street Bridge	1800	155	38	North	Downwind	Truck unloading	Visible Dust from material being unloaded
36 15m East of Ferry Street Bridge	1845	155	205	North	Downwind	Truck unloading	Visible Dust from material being unloaded
37 40m East of Midway Building	1900	155	12	North	Upwind	Background	No observations seen to effect sampling integrity
38 15m East of Ferry Street Bridge	1900	155	25	North	Downwind	Truck unloading	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 ($\mu\text{g}/\text{m}^3$)
20m North of North Pond Main Gate	0700 to 0759	7	990
20m North of North Pond Main Gate	0800 to 0859	13	990
20m North of North Pond Main Gate	0900 to 0959	23	990
30m Northeast of Ferry Street Bridge	1000 to 1059	30	990
30m Northeast of Ferry Street Bridge	1100 to 1159	77	990
30m Northeast of Ferry Street Bridge	1200 to 1259	81	990
30m Northeast of Ferry Street Bridge	1300 to 1359	82	990
30m Northeast of Ferry Street Bridge	1400 to 1459	84	990
30m Northeast of Ferry Street Bridge	1500 to 1559	85	990
15m East of Ferry Street Bridge	1600 to 1659	85	990
15m East of Ferry Street Bridge	1700 to 1759	108	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
15m East of Ferry Street Bridge	1800 to 1859	230	990
15m East of Ferry Street Bridge	1900 to 1959	255	990

VOC Monitoring

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