

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1293-20
FROM	Dianne Theriault	SHIFT:	0630 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	27 th April, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-NSL-0023

**SUBJECT: 24th April, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Tar Cell, Sysco Site
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 24th of April, 2009. Jennifer Andrews 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:

- Mainly cloudy
- Temperature: approximately 8°C
- Wind Direction: Southwest to West

Comments: *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity. Air monitoring was performed during SLR'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 Jennifer Andrews 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 – Tar Cell, Sysco Site
24th April, 2009

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 East of railway building entrance	0700	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 90m North of North end of Inglis St.	0700	155	15	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 90m North of North end of Inglis St.	0735	155	17	Southwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
4 30m East of railway building entrance	0800	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 90m North of North end of Inglis St.	0800	155	12	Southwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
6 90m North of North end of Inglis St.	0830	155	10	Southwest	Downwind	Trucks dumping material	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
7 30m East of railway building entrance	0900	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 90m North of North end of Inglis St.	0900	155	10	Southwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
9 90m North of North end of Inglis St.	0945	155	9	Southwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
10 30m East of railway building entrance	1000	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 90m North of North end of Inglis St.	1000	155	5	Southwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
12 90m North of North end of Inglis St.	1020	155	4	Southwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
13 30m East of railway building entrance	1100	155	5	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
14 90m North of North end of Inglis St.	1100	155	2	Southwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
15 90m North of North end of Inglis St.	1125	155	7	Southwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
16 50m East of railway building entrance	1200	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
17 30m North of North end of Inglis St.	1200	155	17	West	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
18 30m North of North end of Inglis St.	1235	155	37	West	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
19 50m East of railway building entrance	1300	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
20 30m North of North end of Inglis St.	1300	155	32	West	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
21 30m North of North end of Inglis St.	1345	155	59	West	Downwind	Trucks dumping material	Visible dust from site roads
22 50m East of railway building entrance	1400	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
23 30m North of North end of Inglis St.	1400	155	26	West	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
24 30m North of North end of Inglis St.	1440	155	4	West	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
25 50m East of railway building entrance	1500	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
26 30m North of North end of Inglis St.	1500	155	11	West	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
27 30m North of North end of Inglis St.	1530	155	20	West	Downwind	Trucks dumping material	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
28 50m East of railway building entrance	1600	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
29 30m North of North end of Inglis St.	1600	155	11	West	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
30 30m North of North end of Inglis St.	1645	155	9	West	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 ($\mu\text{g}/\text{m}^3$)
90m North of North end of Inglis St.	0700 to 0759	16	990
90m North of North end of Inglis St.	0800 to 0859	27	990
90m North of North end of Inglis St.	0900 to 0959	37	990
90m North of North end of Inglis St.	1000 to 1059	42	990
90m North of North end of Inglis St.	1100 to 1159	47	990
30m North of North end of Inglis St.	1200 to 1259	74	990
30m North of North end of Inglis St.	1300 to 1359	120	990
30m North of North end of Inglis St.	1400 to 1459	135	990
30m North of North end of Inglis St.	1500 to 1559	151	990
30m North of North end of Inglis St.	1600 to 1659	161	990

VOC Monitoring

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