

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1293-22
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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DATE	28 th April, 2009	STPA NO.	CO2-NSL-0025

**SUBJECT: 27th 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 27th 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 sunny
- Temperature: approximately 10°C
- Wind Direction: North

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
27th 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 90m Northwest of the north end of Inglis St.	0700	155	11	North	Upwind	Background	No observations seen to affect sampling integrity
2 250m Southeast of railway maintenance building	0700	155	18	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 250m Southeast of railway maintenance building	0745	155	15	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
4 90m Northwest of the north end of Inglis St.	0800	155	13	North	Upwind	Background	No observations seen to affect sampling integrity
5 250m Southeast of railway maintenance building	0800	155	23	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
6 250m Southeast of railway maintenance building	0840	155	10	North	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
7 90m Northwest of the north end of Inglis St.	0900	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
8 250m Southeast of railway maintenance building.	0900	155	8	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
9 250m Southeast of railway maintenance building	0940	155	12	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
10 90m Northwest of the north end of Inglis St.	1000	155	22	North	Upwind	Background	No observations seen to affect sampling integrity
11 250m Southeast of railway maintenance building	1000	155	7	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 250m Southeast of railway maintenance building	1025	155	9	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
13 90m Northwest of the north end of Inglis St.	1100	155	8	North	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 250m Southeast of railway maintenance building	1100	155	5	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
15 250m Southeast of railway maintenance building.	1115	155	7	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
16 90m Northwest of the north end of Inglis St.	1200	155	8	North	Upwind	Background	No observations seen to affect sampling integrity
17 250m Southeast of railway maintenance building	1200	155	5	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
18 250m Southeast of railway maintenance building	1225	155	8	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
19 90m Northwest of the north end of Inglis St.	1300	155	8	North	Upwind	Background	No observations seen to affect sampling integrity
20 250m Southeast of railway maintenance building	1300	155	8	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity

Notes: Air sample duration for each monitoring event was 15 minutes.

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 250m Southeast of railway maintenance building	1345	155	10	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
22 90m Northwest of the north end of Inglis St.	1400	155	22	North	Upwind	Background	No observations seen to affect sampling integrity
23 250m Southeast of railway maintenance building	1400	155	14	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
24 250m Southeast of railway maintenance building	1445	155	10	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
25 90m Northwest of the north end of Inglis St.	1500	155	8	North	Upwind	Background	No observations seen to affect sampling integrity
26 250m Southeast of railway maintenance building	1500	155	12	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 250m Southeast of railway maintenance building	1535	155	10	North	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
28 90m Northwest of the north end of Inglis St.	1600	155	10	North	Upwind	Background	No observations seen to affect sampling integrity
29 250m Southeast of railway maintenance building	1600	155	18	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
30 250m Southeast of railway maintenance building	1620	155	15	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
31 90m Northwest of the north end of Inglis St.	1700	155	11	North	Upwind	Background	No observations seen to affect sampling integrity
32 250m Southeast of railway maintenance building	1700	155	16	North	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
33 250m Southeast of railway maintenance building	1745	155	12	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity

Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
250m Southeast of railway maintenance building	0700 to 0759	17	990
250m Southeast of railway maintenance building	0800 to 0859	34	990
250m Southeast of railway maintenance building	0900 to 0959	44	990
250m Southeast of railway maintenance building	1000 to 1059	52	990
250m Southeast of railway maintenance building	1100 to 1159	58	990
250m Southeast of railway maintenance building	1200 to 1259	65	990
250m Southeast of railway maintenance building	1300 to 1359	74	990
250m Southeast of railway maintenance building	1400 to 1459	86	990
250m Southeast of railway maintenance building	1500 to 1559	97	990
250m Southeast of railway maintenance building	1600 to 1659	114	990
250m Southeast of railway maintenance building	1700 to 1759	128	990

VOC Monitoring

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