

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1312-23
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	22 nd May, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-NSL-0054

**SUBJECT: 21st May, 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 21st May, 2009. Keith Neville 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 20°C
- Wind Direction: South to Southwest

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 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 Keith Neville 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
21st May 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 150m Southeast of Midland building	0700	155	11	South	Upwind	Background	No observations seen to affect sampling integrity
2 100m Northwest of new truck scale	0700	155	15	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 100m Northwest of new truck scale	0720	155	13	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 150m Southeast of Midland building	0800	155	16	South	Upwind	Background	No observations seen to affect sampling integrity
5 100m Northwest of new truck scale	0800	155	13	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
6 100m Northwest of new truck scale	0830	155	10	South	Downwind	Equipment operating	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 150m Southeast of Midland building	0900	155	21	South	Upwind	Background	No observations seen to affect sampling integrity
8 100m Northwest of new truck scale	0900	155	10	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
9 100m Northwest of new truck scale	0940	155	10	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
10 150m Southeast of Midland building	1000	155	22	South	Upwind	Background	No observations seen to affect sampling integrity
11 100m Northwest of new truck scale	1000	155	11	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 100m Northwest of new truck scale	1015	155	11	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
13 150m Southeast of Midland building	1100	155	17	South	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
14 75m Northwest of new truck scale	1100	155	20	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
15 75m Northwest of new truck scale	1125	155	24	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
16 175m Northeast of Midland building	1200	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 30m Northwest of new truck scale	1200	155	16	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
18 30m Northwest of new truck scale	1225	155	15	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
19 175m Northeast of Midland building	1300	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 30m Northwest of new truck scale	1300	155	32	Southwest	Downwind	No activity observed on site	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
21 30m Northwest of new truck scale	1345	155	23	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
22 175m Northeast of Midland building	1400	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 30m Northwest of new truck scale	1400	155	29	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
24 30m Northwest of new truck scale	1420	155	44	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
25 175m Northeast of Midland building	1500	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 30m Northwest of new truck scale	1500	155	49	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
27 30m Northwest of new truck scale	1545	155	28	Southwest	Downwind	Equipment operating	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 175m Northeast of Midland building	1600	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 30m Northwest of new truck scale	1600	155	28	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
30 30m Northwest of new truck scale	1625	155	46	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
31 175m Northeast of Midland building	1700	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
32 30m Northwest of new truck scale	1700	155	45	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
33 30m Northwest of new truck scale	1745	155	33	Southwest	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 ($\mu\text{g}/\text{m}^3$)
100m Northeast of new truck scale	0700 to 0759	14	990
100m Northeast of new truck scale	0800 to 0859	26	990
100m Northeast of new truck scale	0900 to 0959	36	990
100m Northeast of new truck scale	1000 to 1059	47	990
75m Northwest of new truck scale	1100 to 1159	69	990
30m Northwest of new truck scale	1200 to 1259	85	990
30m Northwest of new truck scale	1300 to 1359	113	990
30m Northwest of new truck scale	1400 to 1459	150	990
30m Northwest of new truck scale	1500 to 1559	189	990
30m Northwest of new truck scale	1600 to 1659	226	990
30m Northwest of new truck scale	1700 to 1759	265	990

VOC Monitoring

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