

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1312-21
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	21 st May, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-NSL-0052

**SUBJECT: 20th 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 20th of 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 11°C
- Wind Direction: Southwest to West to Northwest

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 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
20th 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 250m Southeast of railway building	0700	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 30m Northwest of new truck scale	0700	155	6	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 30m Northwest of new truck scale	0745	155	7	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 250m Southeast of railway building	0800	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 30m Northwest of new truck scale	0800	155	7	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
6 30m Northwest of new truck scale	0840	155	6	Southwest	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 250m Southeast of railway building	0900	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 30m Northwest of new truck scale	0900	155	9	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
9 30m Northwest of new truck scale	0920	155	10	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
10 250m Southeast of railway building	1000	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 20m Northwest of new truck scale	1000	155	5	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 20m Northwest of new truck scale	1020	155	6	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
13 100m East of railway building	1100	155	7	West	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 30m Southeast of new truck scale	1100	155	7	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
15 30m Southeast of new truck scale	1130	155	7	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
16 100m East of railway building	1200	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
17 50m Southeast of new truck scale	1200	155	12	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
18 50m Southeast of new truck scale	1240	20155	12	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
19 150m South of old incinerator	1300	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 120m North of Material Processing Facility	1300	155	13	Northwest	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 120m North of Material Processing Facility	1345	155	8	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
22 150m South of old incinerator	1400	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 120m North of Material Processing Facility	1400	155	10	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
24 120m North of Material Processing Facility	1425	155	9	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
25 150m South of old incinerator	1500	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 120m North of Material Processing Facility	1500	155	9	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
27 120m North of Material Processing Facility	1535	155	10	Northwest	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 150m South of old incinerator	1600	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
29 120m North of Material Processing Facility	1600	155	8	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
30 120m North of Material Processing Facility	1615	155	10	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
31 150m South of old incinerator	1700	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
32 120m North of Material Processing Facility	1700	155	13	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
33 120m North of Material Processing Facility	1745	155	8	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 ($\mu\text{g}/\text{m}^3$)
30m Northwest of new truck scale	0700 to 0759	7	990
30m Northwest of new truck scale	0800 to 0859	14	990
30m Northwest of new truck scale	0900 to 0959	24	990
20m Northwest of new truck scale	1000 to 1059	30	990
30m Southeast of new truck scale	1100 to 1159	37	990
50m Southeast of new truck scale	1200 to 1259	49	990
120m North of Material Processing Facility	1300 to 1359	55	990
120m North of Material Processing Facility	1400 to 1459	65	990
120m North of Material Processing Facility	1500 to 1559	75	990
120m North of Material Processing Facility	1600 to 1659	84	990
120m North of Material Processing Facility	1700 to 1759	95	990

VOC Monitoring

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