

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1293-10
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	15 th April, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-STPA-0013

**SUBJECT: 14th April, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Tar Cell
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 14th of April, 2009. Alison Giovannetti and Trevor Rowe 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, flurries
- Temperature: approximately 1°C
- Wind Direction: West

Comments: *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity, but was later put on standby between 0800 and 0900 hours due to precipitation. 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 Alison Giovannetti 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
14th 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 60m South of Spar and Spar Rd. ext Intersection	0700	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
2 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	0700	155	6	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
3 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	0745	155	27	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
4 60m South of Spar and Spar Rd. ext Intersection	0900	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
5 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	0900	155	3	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
6 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	0930	155	3	West	Downwind	Machinery 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 60m South of Spar and Spar Rd. ext Intersection	1000	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
8 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1000	155	7	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1035	155	12	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
10 60m South of Spar and Spar Rd. ext Intersection	1100	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
11 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1100	155	16	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
12 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1125	155	11	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
13 60m South of Spar and Spar Rd. ext Intersection	1200	155	11	West	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 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1200	155	8	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
15 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1215	155	7	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
16 60m South of Spar and Spar Rd. ext Intersection	1300	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
17 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1300	155	17	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1345	155	13	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
19 60m South of Spar and Spar Rd. ext Intersection	1400	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
20 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1400	155	13	West	Downwind	Machinery 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
21 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1420	155	12	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
22 60m South of Spar and Spar Rd. ext Intersection	1500	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
23 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1500	155	17	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
24 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1545	155	17	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
25 60m South of Spar and Spar Rd. ext Intersection	1600	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
26 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1600	155	11	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
27 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1630	155	12	West	Downwind	Machinery 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 60m South of Spar and Spar Rd. ext Intersection	1700	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
29 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1700	155	10	West	Downwind	Machinery operating	No observations seen to affect sampling integrity
30 30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1745	155	6	West	Downwind	Machinery operating	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 East of traffic lights on Spar Rd., 15m South of Spar Rd.	0700 to 0759	17	990
30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	0800 to 0859	50 (Background)	990
30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	0900 to 0959	53	990
30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1000 to 1059	63	990
30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1100 to 1159	77	990
30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1200 to 1259	85	990
30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1300 to 1359	100	990
30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1400 to 1459	113	990
30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1500 to 1559	130	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1600 to 1659	141	990
30m East of traffic lights on Spar Rd., 15m South of Spar Rd.	1700 to 1759	149	990

VOC Monitoring

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