

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1293-27
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	1 st May, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-STPA-0030

**SUBJECT: 30th 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 30th of April, 2009. Alison Giovannetti and Donald MacIsaac 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 8°C
- Wind Direction: Southwest to West to Northwest

Comments: *ALL-TECH was on-Site at 0630 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 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
30th April, 2009

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
1 250m South of Spar Rd. and Spar Rd. Ext. intersection	0700	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 100m West of coke ovens security trailer	0730	155	8	Southwest	Downwind	No activity visible from sampling location	Late sample due to equipment malfunction
3 100m West of coke ovens security trailer	0745	155	11	Southwest	Downwind	Trucks operating	No observations seen to affect sampling integrity
4 50m South of Spar Rd. and Spar Rd. Ext. intersection	0800	155	15	West	Upwind	Background	No observations seen to affect sampling integrity
5 20m Southwest of Spar Rd. and Langan Rd. intersection	0800	155	8	West	Downwind	Excavators moving material	No observations seen to affect sampling integrity
6 20m Southwest of Spar Rd. and Langan Rd. intersection	0830	155	9	West	Downwind	Excavators moving 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 50m South of Spar Rd. and Spar Rd. Ext. intersection	0900	155	13	West	Upwind	Background	No observations seen to affect sampling integrity
8 20m Southwest of Spar Rd. and Lingan Rd. intersection	0900	155	9	West	Downwind	Excavators moving material	No observations seen to affect sampling integrity
9 20m Southwest of Spar Rd. and Lingan Rd. intersection	0920	155	7	West	Downwind	Excavators moving material	No observations seen to affect sampling integrity
10 50m South of Spar Rd. and Spar Rd. Ext. intersection	1000	155	17	West	Upwind	Background	No observations seen to affect sampling integrity
11 20m Southwest of Spar Rd. and Lingan Rd. intersection	1000	155	13	West	Downwind	Excavators moving material	No observations seen to affect sampling integrity
12 20m Southwest of Spar Rd. and Lingan Rd. intersection	1040	155	17	West	Downwind	Excavators moving 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
13 50m South of Spar Rd. and Spar Rd. Ext. intersection	1100	155	26	West	Upwind	Background	No observations seen to affect sampling integrity
14 20m Southwest of Spar Rd. and Lingan Rd. intersection	1100	155	15	West	Downwind	Excavators moving material	No observations seen to affect sampling integrity
15 20m Southwest of Spar Rd. and Lingan Rd. intersection	1130	155	12	West	Downwind	Excavators moving material	No observations seen to affect sampling integrity
16 25m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1200	155	27	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 300m Southwest of coke ovens security trailer	1200	155	11	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
18 300m Southwest of coke ovens security trailer	1230	155	11	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
19 25m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1300	155	11	Northwest	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
20 300m Southwest of coke ovens security trailer	1300	155	9	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
21 300m Southwest of coke ovens security trailer	1340	155	9	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
22 25m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1400	155	24	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 300m Southwest of coke ovens security trailer	1400	155	9	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
24 300m Southwest of coke ovens security trailer	1415	155	10	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
25 25m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1500	155	19	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 300m Southwest of coke ovens security trailer	1500	155	8	Northwest	Downwind	No activity visible from sampling location	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
27 300m Southwest of coke ovens security trailer	1530	155	8	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
28 25m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1600	155	13	Northwest	Upwind	Background	No observations seen to affect sampling integrity
29 300m Southwest of coke ovens security trailer	1600	155	7	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
30 300m Southwest of coke ovens security trailer	1645	155	8	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
31 25m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1700	155	12	Northwest	Upwind	Background	No observations seen to affect sampling integrity
32 300m Southwest of coke ovens security trailer	1700	155	8	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
33 300m Southwest of coke ovens security trailer	1745	155	4	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 ($\mu\text{g}/\text{m}^3$)
100m West of CO2 security trailer	0700 to 0759	10	990
20m Southwest of Spar Rd. and Lingan Rd. intersection	0800 to 0859	19	990
20m Southwest of Spar Rd. and Lingan Rd. intersection	0900 to 0959	27	990
20m Southwest of Spar Rd. and Lingan Rd. intersection	1000 to 1059	42	990
20m Southwest of Spar Rd. and Lingan Rd. intersection	1100 to 1159	56	990
300m Southwest of coke ovens security trailer	1200 to 1259	67	990
300m Southwest of coke ovens security trailer	1300 to 1359	76	990
300m Southwest of coke ovens security trailer	1400 to 1459	86	990
300m Southwest of coke ovens security trailer	1500 to 1559	94	990
300m Southwest of coke ovens security trailer	1600 to 1659	102	990
300m Southwest of coke ovens security trailer	1700 to 1759	108	990

VOC Monitoring

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