

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1293-07
FROM	Dianne Theriault	SHIFT:	0630 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	13 th April, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-0010

**SUBJECT: 9th 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 9th of April, 2009. Alison Giovannetti and Jennifer Andrews 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: Southwest

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
9th 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 100m South of Spar Rd. And Spar Rd. Ext Intersection	0700	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 60m Northwest of Spar Rd. And Lingan Rd. Intersection	0700	155	63	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
3 60m Northwest of Spar Rd. And Lingan Rd. Intersection	0735	155	70	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
4 100m South of Spar Rd. And Spar Rd. Ext Intersection	0800	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 60m Northwest of Spar Rd. And Lingan Rd. Intersection	0800	155	81	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
6 60m Northwest of Spar Rd. And Lingan Rd. Intersection	0815	155	86	Southwest	Downwind	Machines in operation	Equipment malfunction

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 100m South of Spar Rd. And Spar Rd. Ext Intersection	0900	155	21	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 60m Northwest of Spar Rd. And Lingan Rd. Intersection	0900	155	16	Southwest	Downwind	Machines in operation	Changed DustTrak unit
9 60m Northwest of Spar Rd. And Lingan Rd. Intersection	0930	155	16	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
10 100m South of Spar Rd. And Spar Rd. Ext Intersection	1000	155	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1000	155	12	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1045	155	14	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
13 100m South of Spar Rd. And Spar Rd. Ext Intersection	1100	155	16	Southwest	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 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1100	155	14	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
15 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1120	155	14	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
16 100m South of Spar Rd. And Spar Rd. Ext Intersection	1200	155	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1200	155	16	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
18 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1230	155	15	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
19 100m South of Spar Rd. And Spar Rd. Ext Intersection	1300	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1300	155	12	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 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1335	155	16	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
22 100m South of Spar Rd. And Spar Rd. Ext Intersection	1400	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1400	155	13	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
24 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1415	155	15	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
25 100m South of Spar Rd. And Spar Rd. Ext Intersection	1500	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1500	155	13	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
27 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1520	155	13	Southwest	Downwind	Machines in operation	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 100m South of Spar Rd. And Spar Rd. Ext Intersection	1600	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1600	155	13	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
30 60m Northwest of Spar Rd. And Lingan Rd. Intersection	1645	155	12	Southwest	Downwind	Machines in operation	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 ($\mu\text{g}/\text{m}^3$)
60m Northwest of Spar Rd. And Lingan Rd. Intersection	0700 to 0759	67	990
60m Northwest of Spar Rd. And Lingan Rd. Intersection	0800 to 0859	151	990
60m Northwest of Spar Rd. And Lingan Rd. Intersection	0900 to 0959	167	990
60m Northwest of Spar Rd. And Lingan Rd. Intersection	1000 to 1059	180	990
60m Northwest of Spar Rd. And Lingan Rd. Intersection	1100 to 1159	194	990
60m Northwest of Spar Rd. And Lingan Rd. Intersection	1200 to 1259	210	990
60m Northwest of Spar Rd. And Lingan Rd. Intersection	1300 to 1359	224	990
60m Northwest of Spar Rd. And Lingan Rd. Intersection	1400 to 1459	238	990
60m Northwest of Spar Rd. And Lingan Rd. Intersection	1500 to 1559	251	990
60m Northwest of Spar Rd. And Lingan Rd. Intersection	1600 to 1659	264	990

VOC Monitoring

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