

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1312-20
FROM	Dianne Theriault	SHIFT:	0630 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	19 th May, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-PM-0051

**SUBJECT: 15th May, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Tar Cell, Pug Mill
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 15th of May, 2009. Jeff King and Dwayne Timmons of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly cloudy, showers
- Temperature: approximately 13°C
- Wind Direction: Southwest

Comments: *ALL-TECH was on-Site at 0630 and sampling began as soon as there was site activity, but was later put on standby at 0830 hours due to precipitation. Air monitoring resumed at 1000 hours when weather conditions were within instrument specifications. 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 Jeff King 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, Pug Mill
15th May, 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 150m North of railway building	0700	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 Shore Rd., 200m North of Dominion St.	0700	155	11	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
3 Shore Rd., 200m North of Dominion St.	0735	155	13	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
4 150m North of railway building	0800	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 Shore Rd., 200m North of Dominion St.	0800	155	13	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
6 Shore Rd., 200m North of Dominion St.	0815	155	13	Southwest	Downwind	Activity not visible from sampling location	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 North of railway building	1000	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 Shore Rd., 200m North of Dominion St.	1030	155	14	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
9 Shore Rd., 200m North of Dominion St.	1045	155	15	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
10 150m North of railway building	1100	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 Shore Rd., 200m North of Dominion St.	1100	155	21	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
12 Shore Rd., 200m North of Dominion St.	1125	155	37	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
13 150m North of railway building	1200	155	6	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 20m South of Matilda St. and Dominion St. intersection	1200	155	35	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
15 20m South of Matilda St. and Dominion St. intersection	1245	155	27	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
16 150m North of railway building	1300	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 20m South of Matilda St. and Dominion St. intersection	1300	155	18	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
18 20m South of Matilda St. and Dominion St. intersection	1335	155	20	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
19 150m North of railway building	1400	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 20m South of Matilda St. and Dominion St. intersection	1400	155	23	Southwest	Downwind	Activity not 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
21 20m South of Matilda St. and Dominion St. intersection	1415	155	19	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
22 150m North of railway building	1500	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 20m South of Matilda St. and Dominion St. intersection	1500	155	32	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
24 20m South of Matilda St. and Dominion St. intersection	1525	155	22	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
25 150m North of railway building	1600	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 20m South of Matilda St. and Dominion St. intersection	1600	155	14	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
27 20m South of Matilda St. and Dominion St. intersection	1645	155	18	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 ($\mu\text{g}/\text{m}^3$)
Shore Rd., 200m North of Dominion St.	0700 to 0759	12	990
Shore Rd., 200m North of Dominion St.	0800 to 0859	25	990
Shore Rd., 200m North of Dominion St.	0900 to 0959	58	990
Shore Rd., 200m North of Dominion St.	1000 to 1059	73	990
Shore Rd., 200m North of Dominion St.	1100 to 1159	102	990
20m South of Matilda St. and Dominion St. intersection	1200 to 1259	133	990
20m South of Matilda St. and Dominion St. intersection	1300 to 1359	152	990
20m South of Matilda St. and Dominion St. intersection	1400 to 1459	173	990
20m South of Matilda St. and Dominion St. intersection	1500 to 1559	200	990
20m South of Matilda St. and Dominion St. intersection	1600 to 1659	216	990

VOC Monitoring

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