

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1312-24
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	22 nd May, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-PM-0055

**SUBJECT: 21st 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 21st of May, 2009. Donald MacIsaac and Dave Reeves 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 20°C
- Wind Direction: South to 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 Donald MacIsaac 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
21st 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 300m Southeast of old incinerator	0705	155	10	South	Upwind	Background	No observations seen to affect sampling integrity
2 Shore Rd., 20m South of Broadway St.	0710	155	8	South	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
3 Shore Rd., 20m South of Broadway St.	0730	155	9	South	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
4 300m Southeast of old incinerator	0800	155	7	South	Upwind	Background	No observations seen to affect sampling integrity
5 Shore Rd., 20m South of Broadway St.	0800	155	9	South	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
6 Shore Rd., 20m South of Broadway St.	0830	155	9	South	Downwind	Site 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 300m Southeast of old incinerator	0900	155	12	South	Upwind	Background	No observations seen to affect sampling integrity
8 Shore Rd., 20m South of Broadway St.	0900	155	10	South	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
9 Shore Rd., 20m South of Broadway St.	0930	155	12	South	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
10 300m Southeast of old incinerator	1000	155	20	South	Upwind	Background	No observations seen to affect sampling integrity
11 Shore Rd., 20m South of Broadway St.	1000	155	12	South	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
12 Shore Rd., 20m South of Broadway St.	1030	155	14	South	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
13 300m Southeast of old incinerator	1100	155	17	South	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 Shore Rd., 20m South of Broadway St.	1100	155	16	South	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
15 Shore Rd., 20m South of Broadway St.	1130	155	16	South	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
16 200m South of old incinerator	1200	155	21	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 Shore Rd., 200m North of Dominion St.	1200	155	42	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
18 Shore Rd., 200m North of Dominion St.	1230	155	22	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
19 300m South of old incinerator	1300	155	35	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 Shore Rd., 200m North of Dominion St.	1300	155	18	Southwest	Downwind	Site 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 Shore Rd., 200m North of Dominion St.	1330	155	18	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
22 300m South of old incinerator	1400	155	25	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 Shore Rd., 200m North of Dominion St.	1400	155	23	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
24 Shore Rd., 200m North of Dominion St.	1430	155	16	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
25 300m South of old incinerator	1500	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 Shore Rd., 200m North of Dominion St.	1500	155	20	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
27 Shore Rd., 200m North of Dominion St.	1530	155	16	Southwest	Downwind	Site 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
28 300m South of old incinerator	1600	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 Shore Rd., 200m North of Dominion St.	1600	155	18	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
30 Shore Rd., 200m North of Dominion St.	1630	155	25	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
31 300m South of old incinerator	1700	155	93	Southwest	Upwind	Background	Visible dust from site road
32 Shore Rd., 200m North of Dominion St.	1700	155	18	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
33 Shore Rd., 200m North of Dominion St.	1745	155	20	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., 20m South of Broadway St.	0700 to 0759	9	990
Shore Rd., 20m South of Broadway St.	0800 to 0859	18	990
Shore Rd., 20m South of Broadway St.	0900 to 0959	29	990
Shore Rd., 20m South of Broadway St.	1000 to 1059	42	990
Shore Rd., 20m South of Broadway St.	1100 to 1159	58	990
Shore Rd., 200m North of Dominion St.	1200 to 1259	90	990
Shore Rd., 200m North of Dominion St.	1300 to 1359	108	990
Shore Rd., 200m North of Dominion St.	1400 to 1459	128	990
Shore Rd., 200m North of Dominion St.	1500 to 1559	146	990
Shore Rd., 200m North of Dominion St.	1600 to 1659	168	990
Shore Rd., 200m North of Dominion St.	1700 to 1759	187	990

VOC Monitoring

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