

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1312-30
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
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DATE	28 th May, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-PM-0061

**SUBJECT: 27th 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 27th of May, 2009. Alison Giovannetti and Shaun Dove 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: West to Northwest to North to East

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, Pug Mill
27th 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 500m North of Ferry St. and Railway Rd. intersection	0700	155	0	West	Upwind	Background	No observations seen to affect sampling integrity
2 50m Southwest of Holy Redeemer hall	0700	155	9	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
3 50m Southwest of Holy Redeemer hall	0730	155	5	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 500m North of Ferry St. and Railway Rd. intersection	0800	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
5 50m Southwest of Holy Redeemer hall	0800	155	4	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 50m Southwest of Holy Redeemer hall	0815	155	4	West	Downwind	Machines 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
7 150m North of railway building	0900	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 200m South of Holy Redeemer hall	0900	155	4	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
9 200m South of Holy Redeemer hall	0925	155	5	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 150m North of railway building	1000	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 200m South of Holy Redeemer hall	1000	155	4	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 200m South of Holy Redeemer hall	1025	155	4	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 150m North of railway building	1100	155	10	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
14 200m South of Holy Redeemer hall	1100	155	3	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
15 200m South of Holy Redeemer hall	1115	155	3	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 375m North of Shore Rd. and Dominion St. intersection	1200	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
17 200m Southeast of the old incinerator	1200	155	3	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 200m Southeast of the old incinerator	1220	155	3	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 375m North of Shore Rd. and Dominion St. intersection	1300	155	3	North	Upwind	Background	No observations seen to affect sampling integrity
20 200m Southeast of the old incinerator	1300	155	3	North	Downwind	Machines 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
21 200m Southeast of the old incinerator	1315	155	2	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 375m North of Shore Rd. and Dominion St. intersection	1400	155	3	North	Upwind	Background	No observations seen to affect sampling integrity
23 200m Southeast of the old incinerator	1400	155	6	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 200m Southeast of the old incinerator	1425	155	6	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 375m North of Shore Rd. and Dominion St. intersection	1500	155	3	North	Upwind	Background	No observations seen to affect sampling integrity
26 200m Southeast of the old incinerator	1500	155	14	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 200m Southeast of the old incinerator	1530	155	3	North	Downwind	Machines 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
28 75m North of Harbourside Elementary	1600	155	3	East	Upwind	Background	No observations seen to affect sampling integrity
29 150m East of railway building	1600	155	4	East	Downwind	Machines moving material	No observations seen to affect sampling integrity
30 150m East of railway building	1620	155	4	East	Downwind	Machines moving material	No observations seen to affect sampling integrity
31 75m North of Harbourside Elementary	1700	155	4	East	Upwind	Background	No observations seen to affect sampling integrity
32 150m East of railway building	1700	155	6	East	Downwind	Machines moving material	No observations seen to affect sampling integrity
33 150m East of railway building	1740	155	3	East	Downwind	Machines moving material	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 ($\mu\text{g}/\text{m}^3$)
50m Southwest of Holy Redeemer hall	0700 to 0759	7	990
50m Southwest of Holy Redeemer hall	0800 to 0859	11	990
200m South of Holy Redeemer hall	0900 to 0959	16	990
200m South of Holy Redeemer hall	1000 to 1059	20	990
200m South of Holy Redeemer hall	1100 to 1159	23	990
200m Southeast of old incinerator	1200 to 1259	26	990
200m Southeast of old incinerator	1300 to 1359	29	990
200m Southeast of old incinerator	1400 to 1459	35	990
200m Southeast of old incinerator	1500 to 1559	44	990
150m East of railway building	1600 to 1659	48	990
150m East of railway building	1700 to 1759	53	990

VOC Monitoring

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