

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1312-32
FROM	Dianne Theriault	SHIFT:	0700 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
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DATE	29 th May, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-PM-0063

**SUBJECT: 28th 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 28th 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 cloudy
- Temperature: approximately 14°C
- Wind Direction: Southwest to Northwest

Comments: *Air monitoring was delayed until 0700 hours due to precipitation, and began at 0900 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 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, Sysco Site
28th 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 150m Northeast of railway building	0900	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 50m Southwest of Holy Redeemer hall	0900	155	8	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
3 50m Southwest of Holy Redeemer hall	0930	155	8	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 150m Northeast of railway building	1000	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 50m Southwest of Holy Redeemer hall	1000	155	8	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
6 50m Southwest of Holy Redeemer hall	1020	155	8	Southwest	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 Northeast of railway building	1100	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 50m Southwest of Holy Redeemer hall	1100	155	7	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
9 50m Southwest of Holy Redeemer hall	1115	155	7	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 150m Northeast of railway building	1200	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 50m Southwest of Holy Redeemer hall	1200	155	7	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 50m Southwest of Holy Redeemer hall	1220	155	8	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
13 150m North of railway building	1300	155	8	Northwest	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 200m Southwest of Holy Redeemer hall	1300	155	7	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
15 200m Southwest of Holy Redeemer hall	1345	155	7	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 150m North of railway building	1400	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 200m Southwest of Holy Redeemer hall	1400	155	7	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 200m Southwest of Holy Redeemer hall	1420	155	8	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 150m North of Railway building	1500	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 200m Southwest of Holy Redeemer hall	1500	155	8	Northwest	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
21 200m Southwest of Holy Redeemer hall	1525	155	7	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 150m North of Railway building	1600	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 200m Southwest of Holy Redeemer hall	1600	155	8	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 200m Southwest of Holy Redeemer hall	1620	155	8	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 150m North of Railway building	1700	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 200m Southwest of Holy Redeemer hall	1700	155	8	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 200m Southwest of Holy Redeemer hall	1740	155	8	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 ($\mu\text{g}/\text{m}^3$)
50m Southwest of Holy Redeemer hall	0900 to 0959	8	990
50m Southwest of Holy Redeemer hall	1000 to 1059	16	990
50m Southwest of Holy Redeemer hall	1100 to 1159	23	990
50m Southwest of Holy Redeemer hall	1200 to 1259	31	990
200m Southwest of Holy Redeemer hall	1300 to 1359	38	990
200m Southwest of Holy Redeemer hall	1400 to 1459	46	990
200m Southwest of Holy Redeemer hall	1500 to 1559	54	990
200m Southwest of Holy Redeemer hall	1600 to 1659	62	990
200m Southwest of Holy Redeemer hall	1700 to 1759	70	990

VOC Monitoring

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