

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1312-12
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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DATE	12 th May, 2009	STPA NO.	CO2-PM-0043

**SUBJECT: 11th 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 11th of May, 2009. Reg Peters 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
- Temperature: approximately 6°C
- Wind Direction: North to Northeast to East

Comments: *ALL-TECH was on-Site at 0630 hours 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 Dwayne Timmons 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
11th 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 250m Southwest of pug mill	0700	155	14	North	Upwind	Background	No observations seen to affect sampling integrity
2 120m Southwest of old incinerator	0700	155	12	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 120m Southwest of old incinerator	0725	155	10	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 70m North of pug mill	0800	155	16	North	Upwind	Background	No observations seen to affect sampling integrity
5 120m Southwest of old incinerator	0800	155	10	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
6 120m Southwest of old incinerator	0830	155	10	North	Downwind	Equipment operating	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 70m North of pug mill	0900	155	15	North	Upwind	Background	No observations seen to affect sampling integrity
8 200m Southwest of old incinerator	0900	155	10	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
9 200m Southwest of old incinerator	0945	155	13	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
10 70m North of pug mill	1000	155	11	North	Upwind	Background	No observations seen to affect sampling integrity
11 200m Southwest of old incinerator	1000	155	11	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 200m Southwest of old incinerator	1030	155	9	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
13 70m North of pug mill	1100	155	9	North	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 Southwest of old incinerator	1100	155	8	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
15 200m Southwest of old incinerator	1145	155	8	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
16 70m North of pug mill	1200	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
17 200m Southwest of old incinerator	1200	155	10	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
18 200m Southwest of old incinerator	1220	155	12	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
19 70m Northeast of pug mill	1300	155	16	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 100m Northwest of old incinerator	1300	155	14	Northeast	Downwind	No activity observed on site	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 100m Northwest of old incinerator	1340	155	19	Northeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
22 70m Northeast of pug mill	1400	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
23 100m Northwest of old incinerator	1400	155	26	Northeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
24 100m Northwest of old incinerator	1430	155	22	Northeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
25 70m Northeast of pug mill	1500	155	9	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 100m Northwest of old incinerator	1500	155	19	Northeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
27 100m Northwest of old incinerator	1525	155	14	Northeast	Downwind	Equipment operating	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 70m Northeast of pug mill	1600	155	57	Northeast	Upwind	Background	Locomotive operating upwind of sample location
29 100m Northwest of old incinerator	1600	155	11	Northeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
30 100m Northwest of old incinerator	1625	155	39	Northeast	Downwind	Equipment operating	Vehicles operating on site access road
31 100m East of pug mill	1700	155	11	East	Upwind	Background	No observations seen to affect sampling integrity
32 150m Northwest of old incinerator	1700	155	23	East	Downwind	Equipment operating	No observations seen to affect sampling integrity
33 150m Northwest of old incinerator	1745	155	28	East	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 ($\mu\text{g}/\text{m}^3$)
120m Southwest of old incinerator	0700 to 0759	11	990
120m Southwest of old incinerator	0800 to 0859	21	990
200m Southwest of old incinerator	0900 to 0959	33	990
200m Southwest of old incinerator	1000 to 1059	43	990
200m Southwest of old incinerator	1100 to 1159	51	990
200m Southwest of old incinerator	1200 to 1259	62	990
100m Northwest of old incinerator	1300 to 1359	79	990
100m Northwest of old incinerator	1400 to 1459	103	990
100m Northwest of old incinerator	1500 to 1559	120	990
100m Northwest of old incinerator	1600 to 1659	145	990
150m Northwest of old incinerator	1700 to 1759	171	990

VOC Monitoring

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