

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1312-16
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
<b>FAX</b>	(902) 539-3381		
<b>DATE</b>	14 <sup>th</sup> May, 2009	<b>STPA NO.</b>	<b>CO2-PM-0047</b>

**SUBJECT: 13<sup>th</sup> May, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Tar Cell, Pug Mill  
FINAL REPORT**

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Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 13<sup>th</sup> of May, 2009. Tyler Rowe, David Reeves and Reg Peters 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 16°C
- Wind Direction: West to Southwest to North to South

**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 PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 David Reeves and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



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Dianne Theriault, B.Tech  
Environmental Technologist  
**ALL-TECH Environmental Services Cape Breton Ltd.**

Copied via e-mail:

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**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Tar Cell, Pug Mill**  
**13<sup>th</sup> May, 2009**

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 80 m North of railway building	0700	155	13	West	Upwind	Background	No observations seen to affect sampling integrity
2 50m South of Matilda St. and Dominion St. intersection	0700	155	11	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 50m South of Matilda St. and Dominion St. intersection	0720	155	12	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 120m East of railway building	0800	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 Shore Rd., 100 m North of Matilda St.	0800	155	16	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
6 Shore Rd., 100 m North of Matilda St.	0840	155	8	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
7 120m East of railway building	0900	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 Shore Rd., 100 m North of Matilda St.	0900	155	8	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
9 Shore Rd., 100 m North of Matilda St.	0920	155	9	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
10 Shore Rd., 30m South of Broadway St.	1000	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
11 160m Southeast of old incinerator	1000	155	11	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 160m Southeast of old incinerator	1035	155	11	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
13 Shore Rd., 30m South of Broadway St.	1100	155	9	North	Upwind	Background	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
14 160m Southeast of old incinerator	1100	155	12	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
15 160m Southeast of old incinerator	1120	155	13	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
16 Shore Rd., 30m South of Broadway St.	1200	155	11	North	Upwind	Background	No observations seen to affect sampling integrity
17 160m Southeast of old incinerator	1200	155	12	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
18 160m Southeast of old incinerator	1225	155	13	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
19 Shore Rd., 30m South of Broadway St.	1300	155	11	North	Upwind	Background	No observations seen to affect sampling integrity
20 160m Southeast of old incinerator	1300	155	13	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
21 160m Southeast of old incinerator	1340	155	14	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
22 Shore Rd., 30m South of Broadway St.	1400	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
23 160m Southeast of old incinerator	1400	155	15	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
24 160m Southeast of old incinerator	1420	155	16	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
25 140m South of old incinerator	1500	155	14	South	Upwind	Background	No observations seen to affect sampling integrity
26 Shore Rd., 60m South of Broadway St.	1500	155	16	South	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
27 Shore Rd., 60m South of Broadway St.	1530	155	15	South	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
28 140m South of old incinerator	1600	155	18	South	Upwind	Background	No observations seen to affect sampling integrity
29 Shore Rd., 60m South of Broadway St.	1600	155	13	South	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
30 Shore Rd., 60m South of Broadway St.	1630	155	14	South	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
31 140m South of old incinerator	1700	155	11	South	Upwind	Background	No observations seen to affect sampling integrity
32 Shore Rd., 60m South of Broadway St.	1700	155	13	South	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
33 Shore Rd., 60m South of Broadway St.	1745	155	13	South	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 South of Matilda St. and Dominion St. intersection	0700 to 0759	12	990
Shore Rd., 100 m North of Matilda St.	0800 to 0859	24	990
Shore Rd., 100 m North of Matilda St.	0900 to 0959	33	990
160m Southeast of old incinerator	1000 to 1059	44	990
160m Southeast of old incinerator	1100 to 1159	57	990
160m Southeast of old incinerator	1200 to 1259	70	990
160m Southeast of old incinerator	1300 to 1359	84	990
160m Southeast of old incinerator	1400 to 1459	100	990
Shore Rd., 60m South of Broadway St.	1500 to 1559	116	990
Shore Rd., 60m South of Broadway St.	1600 to 1659	130	990
Shore Rd., 60m South of Broadway St.	1700 to 1759	143	990



### VOC Monitoring

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