

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1330-06
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	11 <sup>th</sup> June, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CO2-NSL-0070</b>

**SUBJECT: 10<sup>th</sup> June, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Tar Cell, Sysco Site  
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 10<sup>th</sup> of June, 2009. Donald MacIsaac 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 cloudy
- Temperature: approximately 10°C
- Wind Direction: West to Southeast

**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 Donald MacIsaac 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, Sysco Site**  
**10<sup>th</sup> June, 2009**

<b>Sample No. &amp; Air Monitoring Location</b>	<b>Time of Day</b>	<b>PM<sub>10</sub> Action Level (µg/m<sup>3</sup>)</b>	<b>Average Result (µg/m<sup>3</sup>)</b>	<b>Wind Direction</b>	<b>Relative Position</b>	<b>Description of Activity</b>	<b>Observations that may affect sample</b>
1 100m North of railway building (N 46°08.961' W 060°11.826')	0700	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
2 150m South of new truck scale (N 46°09.200' W 060°11.583')	0700	155	31	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 150m South of new truck scale (N 46°09.200' W 060°11.583')	0730	155	21	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 100m North of railway building (N 46°08.961' W 060°11.826')	0800	155	13	West	Upwind	Background	No observations seen to affect sampling integrity
5 150m South of new truck scale (N 46°09.200' W 060°11.583')	0800	155	41	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
6 150m South of new truck scale (N 46°09.200' W 060°11.583')	0820	155	15	West	Downwind	Equipment operating	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 200m North of material processing facility (N46°08.017' W 060°11.383')	0900	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
8 110m Northeast of railway building (N 46°08.971' W 060°11.741')	0900	155	4	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
9 110m Northeast of railway building (N 46°08.971' W 060°11.741')	0935	155	3	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
10 200m North of material processing facility (N46°08.017' W 060°11.383')	1000	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
11 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1000	155	3	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1030	155	4	Southeast	Downwind	Equipment operating	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
13 200m North of material processing facility (N46°08.017' W 060°11.383')	1100	155	11	Southeast	Upwind	Background	No observations seen to affect sampling integrity
14 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1100	155	7	Southeast	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
15 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1135	155	8	Southeast	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
16 200m North of material processing facility (N46°08.017' W 060°11.383')	1200	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
17 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1200	155	5	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
18 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1245	155	4	Southeast	Downwind	Equipment operating	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
19 200m North of material processing facility (N46°08.017' W 060°11.383')	1300	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
20 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1300	155	5	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
21 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1340	155	5	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
22 200m North of material processing facility (N46°08.017' W 060°11.383')	1400	155	8	Southeast	Upwind	Background	No observations seen to affect sampling integrity
23 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1400	155	4	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
24 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1435	155	7	Southeast	Downwind	Equipment operating	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
25 200m North of material processing facility (N46°08.017' W 060°11.383')	1500	155	9	Southeast	Upwind	Background	No observations seen to affect sampling integrity
26 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1500	155	7	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
27 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1545	155	9	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
28 200m North of material processing facility (N46°08.017' W 060°11.383')	1600	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
29 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1600	155	5	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
30 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1645	155	5	Southeast	Downwind	Equipment operating	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
31 200m North of material processing facility (N46°08.017' W 060°11.383')	1700	155	4	Southeast	Upwind	Background	No observations seen to affect sampling integrity
32 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1700	155	7	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
33 110m Northeast of railway building (N 46°08.971' W 060°11.741')	1745	155	5	Southeast	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 ( $\mu\text{g}/\text{m}^3$ )
150m South of new truck scale	0700 to 0759	26	990
150m South of new truck scale	0800 to 0859	54	990
110m Northeast of railway building	0900 to 0959	58	990
110m Northeast of railway building	1000 to 1059	62	990
110m Northeast of railway building	1100 to 1159	70	990
110m Northeast of railway building	1200 to 1259	75	990
110m Northeast of railway building	1300 to 1359	80	990
110m Northeast of railway building	1400 to 1459	86	990
110m Northeast of railway building	1500 to 1559	94	990
110m Northeast of railway building	1600 to 1659	99	990
110m Northeast of railway building	1700 to 1759	105	990

### VOC Monitoring

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