

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1312-33
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1730
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	1 <sup>st</sup> June, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CO2-NSL-0064</b>

**SUBJECT: 29<sup>th</sup> May, 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 29<sup>th</sup> of May, 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 sunny
- Temperature: approximately 11°C
- Wind Direction: West to Southwest to Southeast 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 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**  
**29<sup>th</sup> May, 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 110m East of railway building	0700	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
2 30m North of new truck scale (N 46°09,350' W 060°11,666')	0700	155	26	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 30m North of new truck scale (N 46°09,350' W 060°11,666')	0735	155	10	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 140m North of Ferry Street rail crossing	0800	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 90m Northwest of new truck scale (N 46°09,358' W 060°11,685')	0800	155	12	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
6 100m Northwest of railway building (N 46°09,954' W 060°11,840')	0845	155	3	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
7 150m North of material processing facility	0900	155	25	Southeast	Upwind	Background	No observations seen to affect sampling integrity
8 100m Northwest of rail building (N 46°09,954' W 060°11,840')	0900	155	4	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
9 100m Northwest of rail building (N 46°09,954' W 060°11,840')	0915	155	4	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
10 150m North of material processing facility	1000	155	12	Southeast	Upwind	Background	No observations seen to affect sampling integrity
11 100m Northwest of rail building (N 46°09,954' W 060°11,840')	1000	155	3	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 100m Northwest of rail building (N 46°09,954' W 060°11,840')	1020	155	4	Southeast	Downwind	Equipment operating	No observations seen to affect sampling integrity
13 20m South of Ferry Street rail crossing	1100	155	6	South	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 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1100	155	67	South	Downwind	Equipment operating	Dust from road traffic
15 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1135	155	9	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
16 20m South of Ferry Street rail crossing	1200	155	6	South	Upwind	Background	No observations seen to affect sampling integrity
17 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1200	155	12	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
18 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1220	155	15	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
19 20m South of Ferry Street rail crossing	1300	155	7	South	Upwind	Background	No observations seen to affect sampling integrity
20 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1300	155	20	South	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 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1345	155	30	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
22 20m South of Ferry Street rail crossing	1400	155	7	South	Upwind	Background	No observations seen to affect sampling integrity
23 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1400	155	13	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
24 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1435	155	11	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
25 20m South of Ferry street rail crossing	1500	155	8	South	Upwind	Background	No observations seen to affect sampling integrity
26 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1500	155	9	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
27 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1545	155	23	South	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
28 20m South of Ferry street rail crossing	1600	155	6	South	Upwind	Background	No observations seen to affect sampling integrity
29 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1600	155	73	South	Downwind	Equipment operating	Dust from road traffic
30 150m Northwest of new truck scale (N 46°09,369' W 060°11,754')	1645	155	63	South	Downwind	No activity observed on site	Dust from road traffic

**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 ( $\mu\text{g}/\text{m}^3$ )
30m North of new truck scale	0700 to 0759	18	990
90m Northwest of new truck scale/ 100m Northwest of rail building	0800 to 0859	26	990
100m Northwest of rail building	0900 to 0959	30	990
100m Northwest of rail building	1000 to 1059	34	990
150m Northwest of new truck scale	1100 to 1159	72	990
150m Northwest of new truck scale	1200 to 1259	86	990
150m Northwest of new truck scale	1300 to 1359	111	990
150m Northwest of new truck scale	1400 to 1459	123	990
150m Northwest of new truck scale	1500 to 1559	139	990
150m Northwest of new truck scale	1600 to 1659	201	990



### VOC Monitoring

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