

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1330-14
<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
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<b>DATE</b>	19 <sup>th</sup> June, 2009	<b>STPA NO.</b>	<b>CO2-NSL-0078</b>

**SUBJECT: 18<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 18<sup>th</sup> of June, 2009. Jennifer Andrews and Jeff King 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 25°C
- Wind Direction: Southwest to West

**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 180 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 8 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 Jennifer Andrews 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**  
**18<sup>th</sup> June, 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 20m North of railway maintenance building (N46°08.875' W060°11.651')	0700	180	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 115 Northwest of new truck scale (N46°09.355' W060°11.720')	0700	180	5	Southwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
3 115 Northwest of new truck scale (N46°09.355' W060°11.720')	0730	180	19	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
4 20m North of railway maintenance building (N46°08.875' W060°11.651')	0800	180	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 115 Northwest of new truck scale (N46°09.355' W060°11.720')	0800	180	27	Southwest	Downwind	Machines in operation	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
6 115 Northwest of new truck scale (N46°09.355' W060°11.720')	0820	180	17	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
7 20m North of railway maintenance building (N46°08.875' W060°11.651')	0900	180	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 115 Northwest of new truck scale (N46°09.355' W060°11.720')	0900	180	17	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
9 115 Northwest of new truck scale (N46°09.355' W060°11.720')	0940	180	22	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
10 20m North of railway maintenance building (N46°08.875' W060°11.651')	1000	180	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1000	180	50	Southwest	Downwind	Machines in operation	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
12 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1015	180	12	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
13 20m North of railway maintenance building (N46°08.875' W060°11.651')	1100	180	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1100	180	42	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
15 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1120	180	47	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
16 20m North of railway maintenance building (N46°08.875' W060°11.651')	1200	180	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1200	180	65	Southwest	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
18 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1245	180	102	Southwest	Downwind	Machines in operation	Trucks travelling near sample location
19 20m North of railway maintenance building (N46°08.875' W060°11.651')	1300	180	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1300	180	64	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
21 20m North of railway maintenance building (N46°08.875' W060°11.651')	1315	180	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
22 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1315	180	82	Southwest	Downwind	Machines in operation	Trucks travelling near sample location
23 20m North of railway maintenance building (N46°08.875' W060°11.651')	1330	180	13	Southwest	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
24 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1335	180	203	Southwest	Downwind	Machines in operation	Trucks travelling near sample location
25 20m North of railway maintenance building (N46°08.875' W060°11.651')	1350	180	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1350	180	42	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
27 20m North of railway maintenance building (N46°08.875' W060°11.651')	1405	180	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
28 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1410	180	33	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
29 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1445	180	41	Southwest	Downwind	Machines in operation	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
30 20m North of railway maintenance building (N46°08.875' W060°11.651')	1500	180	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity
31 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1500	180	49	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
32 115 Northwest of new truck scale (N46°09.355' W060°11.720')	1530	180	156	Southwest	Downwind	Machines in operation	Trucks travelling near sample location
33 50m Northwest of railway maintenance building (N46°08.940' W060°11.750')	1600	180	14	West	Upwind	Background	No observations seen to affect sampling integrity
34 140m South of new truck scale (N46°09.248' W060°11.626')	1600	180	74	West	Downwind	Machines in operation	Trucks travelling near sample location
35 140m South of new truck scale (N46°09.248' W060°11.626')	1630	180	82	West	Downwind	Machines in operation	Trucks travelling near sample location



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
36 50m Northwest of railway maintenance building (N46°08.940' W060°11.750')	1700	180	18	West	Upwind	Background	No observations seen to affect sampling integrity
37 140m South of new truck scale (N46°09.248' W060°11.626')	1700	180	28	West	Downwind	Machines in operation	No observations seen to affect sampling integrity
38 140m South of new truck scale (N46°09.248' W060°11.626')	1745	180	14	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity

**Notes:** Air sample duration for each monitoring event was 15 minutes.

### Summary of Downwind PM<sub>10</sub> Action Levels

Average PM <sub>10</sub> Concentration (µg/m <sup>3</sup> )	Averaging Period (Hours)	Downwind Action Level (µg/m <sup>3</sup> )
12	1	125
21	4	85
49	8	70

### VOC Monitoring

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