

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
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**DATE** 18<sup>th</sup> June, 2009

**FILE NO.** S-1330-13  
**SHIFT:** 0630 to 1830  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH  
**STPA NO.** CO2-NSL-0077

**SUBJECT: 17<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 17<sup>th</sup> of June, 2009. Jennifer Andrews and Nigel MacLean 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 21°C
- Wind Direction: Southwest to West to Southwest 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 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**  
**17<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 100m Northeast of railway maintenance building (N46°09.198' W060°11.375')	0700	180	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 115m Northwest of new truck scale (N46°09.372' W060°11.761')	0700	180	30	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
3 115m Northwest of new truck scale (N46°09.372' W060°11.761')	0730	180	69	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
4 100m Northeast of railway maintenance building (N46°09.198' W060°11.375')	0800	180	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 115m Northwest of new truck scale (N46°09.372' W060°11.761')	0800	180	20	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 115m Northwest of new truck scale (N46°09.372' W060°11.761')	0845	180	17	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
7 100m Northeast of railway maintenance building (N46°09.198' W060°11.375')	0900	180	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 115m Northwest of new truck scale (N46°09.372' W060°11.761')	0900	180	16	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
9 115m Northwest of new truck scale (N46°09.372' W060°11.761')	0920	180	52	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
10 100m Northeast of railway maintenance building (N46°09.198' W060°11.375')	1000	180	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 115m Northwest of new truck scale (N46°09.372' W060°11.761')	1000	180	48	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
12 115m Northwest of new truck scale (N46°09.372' W060°11.761')	1015	180	13	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
13 20m North of railway maintenance building (N46°08.872' W060°11.650')	1100	180	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 115m Northwest of new truck scale (N46°09.372' W060°11.761')	1100	180	14	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
15 115m Northwest of new truck scale (N46°09.372' W060°11.761')	1130	180	15	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
16 20m North of railway maintenance building (N46°08.872' W060°11.650')	1200	180	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 115m Northwest of new truck scale (N46°09.372' W060°11.761')	1200	180	39	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 115m Northwest of new truck scale (N46°09.372' W060°11.761')	1225	180	16	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 50m Northwest of railway maintenance building (N46°08.954' W060°11.837')	1300	180	9	West	Upwind	Background	No observations seen to affect sampling integrity
20 130m South of new truck scale (N46°09.254' W060°11.629')	1300	180	22	West	Downwind	Machines in operation	No observations seen to affect sampling integrity
21 130m South of new truck scale (N46°09.254' W060°11.629')	1335	180	24	West	Downwind	Machines in operation	No observations seen to affect sampling integrity
22 20m North of railway maintenance building (N46°08.872' W060°11.650')	1400	180	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 80m Northwest of new truck scale (N46°09.341' W060°11.654')	1400	180	66	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
24 80m Northwest of new truck scale (N46°09.341' W060°11.654')	1425	180	40	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
25 20m North of railway maintenance building (N46°08.872' W060°11.650')	1500	180	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 80m Northwest of new truck scale (N46°09.341' W060°11.654')	1500	180	43	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
27 80m Northwest of new truck scale (N46°09.341' W060°11.654')	1540	180	35	South	Downwind	Machines in operation	No observations seen to affect sampling integrity
28 80m Northeast of railway maintenance building (N46°08.960' W060°11.823')	1600	180	13	South	Upwind	Background	No observations seen to affect sampling integrity
29 80m Northwest of new truck scale (N46°09.341' W060°11.654')	1600	180	53	South	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 80m Northwest of new truck scale (N46°09.341' W060°11.654')	1630	180	23	South	Downwind	Machines in operation	No observations seen to affect sampling integrity
31 80m Northeast of railway maintenance building (N46°08.960' W060°11.823')	1700	180	9	South	Upwind	Background	No observations seen to affect sampling integrity
32 80m Northwest of new truck scale (N46°09.341' W060°11.654')	1700	180	22	South	Downwind	Machines in operation	No observations seen to affect sampling integrity
33 80m Northwest of new truck scale (N46°09.341' W060°11.654')	1745	180	11	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.**



### 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> )
50	1	125
33	4	85
31	8	70

### VOC Monitoring

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