

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1330-12
<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>	17 <sup>th</sup> June, 2009	<b>STPA NO.</b>	<b>CO2-NSL-0076</b>

**SUBJECT: 16<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 16<sup>th</sup> of June, 2009. Jennifer Andrews and Dwayne Timmons 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 15°C
- Wind Direction: Northwest to Southeast to East

**Comments:** *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity, but was later put on standby at 0715 hours due to fog. Air monitoring resumed at 0900 hours when weather was within instrument specifications. 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 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 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**  
**16<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 50m Northwest of railway maintenance building (N46°08.797' W060°11.589')	0700	180	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 160m North of Ferry St. and Inglis St. intersection (N46°08.946' W060°11.272')	0700	180	6	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
3 50m Northwest of railway maintenance building (N46°08.797' W060°11.589')	0900	180	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
4 380m North of Ferry St. and Inglis St. intersection (N46°09.034' W060°11.399')	0900	180	20	Northwest	Downwind	Excavator in operation	No observations seen to affect sampling integrity
5 380m North of Ferry St. and Inglis St. intersection (N46°09.034' W060°11.399')	0920	180	31	Northwest	Downwind	Excavator 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 50m Northwest of railway maintenance building (N46°08.797' W060°11.589')	1000	180	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
7 380m North of Ferry St. and Inglis St. intersection (N46°09.034' W060°11.399')	1000	180	10	Northwest	Downwind	Excavator in operation	No observations seen to affect sampling integrity
8 120m Northeast of railway maintenance building (N46°08.974' W060°11.813')	1040	180	5	Southeast	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
9 25m North of TP2 main entrance (N46°08.980' W060°11.284')	1100	180	5	Southeast	Upwind	Background	No observations seen to affect sampling integrity
10 120m Northeast of railway maintenance building (N46°08.974' W060°11.813')	1100	180	5	Southeast	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
11 120m Northeast of railway maintenance building (N46°08.974' W060°11.813')	1130	180	4	Southeast	Downwind	Activity not visible from monitoring 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
12 25m North of TP2 main entrance (N46°08.980' W060°11.284')	1200	180	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
13 120m Northeast of railway maintenance building (N46°08.974' W060°11.813')	1200	180	7	Southeast	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
14 120m Northeast of railway maintenance building (N46°08.974' W060°11.813')	1245	180	6	Southeast	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
15 25m North of TP2 main entrance (N46°08.980' W060°11.284')	1300	180	8	Southeast	Upwind	Background	No observations seen to affect sampling integrity
16 120m Northeast of railway maintenance building (N46°08.974' W060°11.813')	1300	180	4	Southeast	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
17 120m Northeast of railway maintenance building (N46°08.974' W060°11.813')	1330	180	6	Southeast	Downwind	Activity not visible from monitoring 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
18 25m North of TP2 main entrance (N46°08.980' W060°11.284')	1400	180	13	Southeast	Upwind	Background	No observations seen to affect sampling integrity
19 120m Northeast of railway maintenance building (N46°08.974' W060°11.813')	1400	180	5	Southeast	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
20 115m Northeast of railway maintenance building (N46°08.972' W060°11.810')	1445	180	6	East	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
21 120m West of Ferry St. and Spar Rd. Extension intersection (N46°09.206' W060°11.367')	1500	180	9	East	Upwind	Background	No observations seen to affect sampling integrity
22 115m Northeast of railway maintenance building (N46°08.972' W060°11.810')	1500	180	6	East	Downwind	Excavator in operation	No observations seen to affect sampling integrity
23 115m Northeast of railway maintenance building (N46°08.972' W060°11.810')	1525	180	5	East	Downwind	Activity not visible from monitoring 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
24 120m West of Ferry St. and Spar Rd. Extension intersection (N46°09.206' W060°11.367')	1600	180	7	East	Upwind	Background	No observations seen to affect sampling integrity
25 115m Northeast of railway maintenance building (N46°08.972' W060°11.810')	1600	180	6	East	Downwind	Excavator in operation	No observations seen to affect sampling integrity
26 115m Northeast of railway maintenance building (N46°08.972' W060°11.810')	1615	180	7	East	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
27 120m West of Ferry St. and Spar Rd. Extension intersection (N46°09.206' W060°11.367')	1700	180	9	East	Upwind	Background	No observations seen to affect sampling integrity
28 115m Northeast of railway maintenance building (N46°08.972' W060°11.810')	1700	180	5	East	Downwind	Excavator in operation	No observations seen to affect sampling integrity
29 115m Northeast of railway maintenance building (N46°08.972' W060°11.810')	1745	180	4	East	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> )
20	1	125
21	4	85
14	8	70

### VOC Monitoring

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