

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1331-19
<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>	17 <sup>th</sup> June, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP6D-NP-0093</b>

**SUBJECT: 16<sup>th</sup> June, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, North Pond  
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. Donald MacIsaac 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 15°C
- Wind Direction: Northwest to Southeast to East

**Comments:** *ALL 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 conditions were within instrument specifications. Air monitoring was performed during AECOM'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 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 – Access Roads, North Pond**  
**16<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 80m North of railway building (N 46°08.966' W 060°11.845')	0700	180	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 125m North of TP2 entrance gate (N 46°08.998' W 060°11.386')	0700	180	5	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
3 80m North of railway building (N 46°08.966' W 060°11.845')	0900	180	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
4 125m North of TP2 entrance gate (N 46°08.998' W 060°11.386')	0900	180	17	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
5 125m North of TP2 entrance gate (N 46°08.998' W 060°11.386')	0940	180	12	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
6 80m North of railway building (N 46°08.966' W 060°11.845')	1000	180	10	Northwest	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
7 125m North of TP2 entrance gate (N 46°08.998' W 060°11.386')	1000	180	8	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
8 100m Northwest of railway building (N 46°08.966' W 060°11.845')	1040	180	5	Southeast	Downwind	Dump trucks operating	No observations seen to affect sampling integrity
9 100m North of material processing facility (N46°09.007' W 060°11.384')	1100	180	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
10 100m Northwest of railway building (N 46°08.966' W 060°11.845')	1100	180	6	Southeast	Downwind	Dump trucks operating	No observations seen to affect sampling integrity
11 100m Northwest of railway building (N 46°08.966' W 060°11.845')	1145	180	4	Southeast	Downwind	Dump trucks operating	No observations seen to affect sampling integrity
12 100m North of material processing facility (N46°09.007' W 060°11.384')	1200	180	5	Southeast	Upwind	Background	No observations seen to affect sampling integrity

<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>
13 100m Northwest of railway building (N 46°08.966' W 060°11.845')	1200	180	6	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
14 100m Northwest of railway building (N 46°08.966' W 060°11.845')	1230	180	6	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 100m North of material processing facility (N46°09.007' W 060°11.384')	1300	180	5	Southeast	Upwind	Background	No observations seen to affect sampling integrity
16 100m Northwest of railway building (N 46°08.966' W 060°11.845')	1300	180	5	Southeast	Downwind	Bulldozer operating	No observations seen to affect sampling integrity
17 100m Northwest of railway building (N 46°08.966' W 060°11.845')	1330	180	7	Southeast	Downwind	Bulldozer operating	No observations seen to affect sampling integrity
18 100m North of material processing facility (N46°09.007' W 060°11.384')	1400	180	3	Southeast	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
19 100m Northwest of railway building (N 46°08.966' W 060°11.845')	1400	180	6	Southeast	Downwind	Bulldozer operating	No observations seen to affect sampling integrity
20 100m Northwest of railway building (N 46°08.966' W 060°11.845')	1445	180	7	Southeast	Downwind	Bulldozer, dump truck operating	No observations seen to affect sampling integrity
21 250m North of material processing facility (N46°08.130' W 060°11.487')	1500	180	5	East	Upwind	Background	No observations seen to affect sampling integrity
22 120m Northeast of railway building (N 46°08.969' W 060°11.729')	1500	180	6	East	Downwind	Bulldozer, dump truck operating	No observations seen to affect sampling integrity
23 120m Northeast of railway building (N 46°08.969' W 060°11.729')	1540	180	11	East	Downwind	Bulldozer, dump truck operating	No observations seen to affect sampling integrity
24 250m North of material processing facility (N46°08.130' W 060°11.487')	1600	180	1	East	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
25 120m Northeast of railway building (N 46°08.969' W 060°11.729')	1600	180	10	East	Downwind	Bulldozer, dump truck operating	No observations seen to affect sampling integrity
26 120m Northeast of railway building (N 46°08.969' W 060°11.729')	1620	180	11	East	Downwind	Bulldozer, dump truck operating	No observations seen to affect sampling integrity
27 250m North of material processing facility (N46°08.130' W 060°11.487')	1700	180	6	East	Upwind	Background	No observations seen to affect sampling integrity
28 120m Northeast of railway building (N 46°08.969' W 060°11.729')	1700	180	9	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
29 120m Northeast of railway building (N 46°08.969' W 060°11.729')	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> )
19	1	125
19	4	85
12	8	70

### VOC Monitoring

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