

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
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**DATE** 29<sup>th</sup> May, 2009

**FILE NO.** S-1313-33  
**SHIFT:** 0930 to 1830  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH  
**STPA NO.** TP6D-NP-0071

**SUBJECT: 28<sup>th</sup> May, 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 28<sup>th</sup> of May, 2009. Alison Giovannetti and Keith Hennick of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:  
- Mainly cloudy  
- Temperature: approximately 14°C  
- Wind Direction: Southwest to Northwest

**Comments:** ALL-TECH was on site at 0930 hours and air monitoring began at 1000 hours. 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 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 Alison Giovannetti 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**  
**28<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 150m Northeast of railway building	1000	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 30m North of new truck scale	1040	155	11	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
3 150m Northeast of railway building	1100	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
4 30m North of new truck scale	1100	155	8	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
5 30m North of new truck scale	1145	155	14	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
6 150m Northeast of railway building	1200	155	10	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
7 30m North of new truck scale	1200	155	10	Southwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
8 150m South of new truck scale	1235	155	12	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
9 150m North of railway building	1300	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
10 150m South of new truck scale	1300	155	14	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
11 150m South of new truck scale	1335	155	16	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
12 150m North of railway building	1400	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
13 50m South of new truck scale	1400	155	8	Northwest	Downwind	Site not visible from sampling 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
14 150m South of new truck scale	1440	155	11	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
15 150m North of railway building	1500	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
16 150m South of new truck scale	1500	155	11	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
17 150m South of new truck scale	1520	155	9	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
18 150m North of railway building	1600	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 150m South of new truck scale	1600	155	11	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
21 150m South of new truck scale	1630	155	9	Northwest	Downwind	Site not visible from sampling 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
22 150m North of railway building	1700	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 150m South of new truck scale	1700	155	9	Northwest	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
24 150m South of new truck scale	1745	155	10	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity

**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	1000 to 1059	11	990
30m North of new truck scale	1100 to 1159	22	990
30m North of new truck scale / 50m South of new truck scale	1200 to 1259	33	990
50m South of new truck scale	1300 to 1359	48	990
50m South of new truck scale	1400 to 1459	58	990
50m South of new truck scale	1500 to 1559	68	990
50m South of new truck scale	1600 to 1659	78	990
50m South of new truck scale	1700 to 1759	88	990

### VOC Monitoring

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