

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
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**DATE** 5<sup>th</sup> June, 2009

**FILE NO.** S-1331-07  
**SHIFT:** 0630 to 1000  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH  
**STPA NO.** TP6D-CO-0081

**SUBJECT: 4<sup>th</sup> June, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, Coke Ovens  
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 4<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:

- Partly cloudy
- Temperature: approximately 15°C
- Wind Direction: Northeast to Southwest

**Comments:** *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity. 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 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 – Access Roads, Coke Ovens**  
**4<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 100m East of Lingan Rd. and Fredrick St. intersection (N46°09.158' W060°10.323')	0700	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 140m North of Cape Breton St. and Victoria Rd. intersection (N46°08.910' W060°10.738')	0700	155	16	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 140m North of Cape Breton St. and Victoria Rd. intersection (N46°08.910' W060°10.738')	0725	155	16	Northeast	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
4 60m West of Cape Breton St. and Victoria Rd. intersection (N46°08.904' W060°10.735')	0800	155	30	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 540m East of Fredrick St. and Lingan Rd. intersection (N46°09.168' W060°10.186')	0800	155	14	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
6 540m East of Fredrick St. and Lingan Rd. intersection (N46°09.168' W060°10.186')	0845	155	10	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
7 10m North of Cape Breton St. and Victoria Rd. intersection (N46°08.841' W060°10.669')	0900	155	23	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 540m East of Fredrick St. and Lingan Rd. intersection (N46°09.168' W060°10.186')	0900	155	10	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 540m East of Fredrick St. and Lingan Rd. intersection (N46°09.168' W060°10.186')	0915	155	12	Southwest	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 ( $\mu\text{g}/\text{m}^3$ )
140m North of Cape Breton St. and Victoria Rd. intersection	0700 to 0759	16	990
540m East of Fredrick St. and Lingan Rd. intersection	0800 to 0859	28	990
540m East of Fredrick St. and Lingan Rd. intersection	0900 to 0959	39	990

### VOC Monitoring

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