

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
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**DATE** 9<sup>th</sup> March, 2009

**FILE NO.** S-1280-03  
**SHIFT:** 0730 to 1730  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH

**STPA NO.** **BTD-0003**

**SUBJECT: 6<sup>th</sup> March, 2009, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Benzol Tank Demolition  
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 6<sup>th</sup> of March, 2009. Jennifer Andrews and Reg Peters, 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 -3°C
- Wind Direction: Southwest

**Comments:** *ALL-TECH was on-Site at 0730 hours and sampling began as soon as there was site activity. Air monitoring was performed during Nova Scotia Lands' construction activities.*

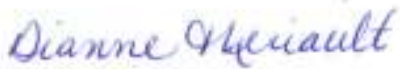
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 – Benzol Tank Demolition**  
**6<sup>th</sup> March, 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 80 M SE of Spar Rd and Spar Rd Extension Intersection	0800	155	33	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 70 M NE of Coke Ovens Security Gate	0800	155	15	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
3 70 M NE of Coke Ovens Security Gate	0825	155	11	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
4 80 M SE of Spar Rd and Spar Rd Extension Intersection	0900	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 70 M NE of Coke Ovens Security Gate	0900	155	5	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
6 70 M NE of Coke Ovens Security Gate	0920	155	5	Southwest	Downwind	Machine moving material	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>
7 80 M SE of Spar Rd and Spar Rd Extension Intersection	1000	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 70 M NE of Coke Ovens Security Gate	1000	155	4	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
9 70 M NE of Coke Ovens Security Gate	1020	155	4	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
10 80 M SE of Spar Rd and Spar Rd Extension Intersection	1100	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 70 M NE of Coke Ovens Security Gate	1100	155	3	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
12 70 M NE of Coke Ovens Security Gate	1145	155	2	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
13 80 M SE of Spar Rd and Spar Rd Extension Intersection	1200	155	19	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
14 70 M NE of Coke Ovens Security Gate	1200	155	2	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
15 70 M NE of Coke Ovens Security Gate	1235	155	3	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 80 M SE of Spar Rd and Spar Rd Extension Intersection	1300	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 70 M NE of Coke Ovens Security Gate	1300	155	3	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 70 M NE of Coke Ovens Security Gate	1345	155	3	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
19 80 M SE of Spar Rd and Spar Rd Extension Intersection	1400	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 70 M NE of Coke Ovens Security Gate	1400	155	2	Southwest	Downwind	Machine moving material	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
21 70 M NE of Coke Ovens Security Gate	1440	155	3	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
22 80 M SE of Spar Rd and Spar Rd Extension Intersection	1500	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 70 M NE of Coke Ovens Security Gate	1500	155	3	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
24 70 M NE of Coke Ovens Security Gate	1515	155	4	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
25 80 M SE of Spar Rd and Spar Rd Extension Intersection	1600	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 70 M NE of Coke Ovens Security Gate	1600	155	4	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
27 70 M NE of Coke Ovens Security Gate	1645	155	4	Southwest	Downwind	Machine moving material	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 ( $\mu\text{g}/\text{m}^3$ )
70 M NE of Coke Ovens Security Gate	0800 to 0859	13	990
70 M NE of Coke Ovens Security Gate	0900 to 0959	18	990
70 M NE of Coke Ovens Security Gate	1000 to 1059	22	990
70 M NE of Coke Ovens Security Gate	1100 to 1159	24	990
70 M NE of Coke Ovens Security Gate	1200 to 1259	26	990
70 M NE of Coke Ovens Security Gate	1300 to 1359	29	990
70 M NE of Coke Ovens Security Gate	1400 to 1459	32	990
70 M NE of Coke Ovens Security Gate	1500 to 1559	35	990
70 M NE of Coke Ovens Security Gate	1600 to 1659	39	990

### VOC Monitoring

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