

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1280-02
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 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>	6 <sup>th</sup> March, 2009	<b>STPA NO.</b>	<b>BTD-0002</b>

**SUBJECT: 5<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 5<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:

- Cloudy with flurries
- Temperature: approximately -9°C
- Wind Direction: West to Northwest

**Comments:** *ALL-TECH was on-Site at 0730 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 – Benzol Tank Demolition**  
**5<sup>th</sup> March, 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>
1 100 SE of Spar Rd and Spar Rd Extension Intersection	0800	155	11	West	Upwind	Background	No observations seen to affect sampling integrity
2 60 M NE of Coke ovens security gate	0800	155	5	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 60 M NE of Coke ovens security gate	0830	155	3	West	Downwind	Machines digging	No observations seen to affect sampling integrity
4 100 SE of Spar Rd and Spar Rd Extension Intersection	0900	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
5 60 M NE of Coke ovens security gate	0900	155	5	West	Downwind	Machines digging	No observations seen to affect sampling integrity
6 60 M NE of Coke ovens security gate	0925	155	5	West	Downwind	Machines digging	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>
7 100 SE of Spar Rd and Spar Rd Extension Intersection	1000	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
8 60 M NE of Coke ovens security gate	1000	155	3	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 60 M NE of Coke ovens security gate	1030	155	3	West	Downwind	Machines moving	No observations seen to affect sampling integrity
10 100 SE of Spar Rd and Spar Rd Extension Intersection	1100	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
11 60 M NE of Coke ovens security gate	1100	155	4	West	Downwind	Machines moving	No observations seen to affect sampling integrity
12 60 M NE of Coke ovens security gate	1120	155	14	West	Downwind	Machines moving	No observations seen to affect sampling integrity
13 100 SE of Spar Rd and Spar Rd Extension Intersection	1200	155	11	West	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 60 M NE of Coke ovens security gate	1200	155	16	West	Downwind	Machines moving	No observations seen to affect sampling integrity
15 60 M NE of Coke ovens security gate	1245	155	5	West	Downwind	Machines moving	No observations seen to affect sampling integrity
16 100 SE of Spar Rd and Spar Rd Extension Intersection	1300	155	19	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 80 M E of Coke ovens security gate	1300	155	2	Northwest	Downwind	Machines moving	No observations seen to affect sampling integrity
18 80 M E of Coke ovens security gate	1340	155	5	Northwest	Downwind	Machines moving	No observations seen to affect sampling integrity
19 100 SE of Spar Rd and Spar Rd Extension Intersection	1400	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 80 M E of Coke ovens security gate	1400	155	2	Northwest	Downwind	Machines moving	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 80 M E of Coke ovens security gate	1440	155	3	Northwest	Downwind	Machines moving	No observations seen to affect sampling integrity
22 100 SE of Spar Rd and Spar Rd Extension Intersection	1500	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 80 M E of Coke ovens security gate	1500	155	9	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 80 M E of Coke ovens security gate	1520	155	3	Northwest	Downwind	Machines moving	No observations seen to affect sampling integrity
25 100 SE of Spar Rd and Spar Rd Extension Intersection	1600	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 80 M E of Coke ovens security gate	1600	155	5	Northwest	Downwind	Machines moving	No observations seen to affect sampling integrity
27 80 M E of Coke ovens security gate	1645	155	5	Northwest	Downwind	Machines moving	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
28 100 SE of Spar Rd and Spar Rd Extension Intersection	1700	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
29 80 M E of Coke ovens security gate	1700	155	5	Northwest	Downwind	Machines moving	No observations seen to affect sampling integrity
30 80 M E of Coke ovens security gate	1745	155	6	Northwest	Downwind	Machines moving	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 ( $\mu\text{g}/\text{m}^3$ )
60 M NE of Coke ovens security gate	0800 to 0859	4	990
60 M NE of Coke ovens security gate	0900 to 0959	9	990
60 M NE of Coke ovens security gate	1000 to 1059	12	990
60 M NE of Coke ovens security gate	1100 to 1159	21	990
60 M NE of Coke ovens security gate	1200 to 1259	32	990
80 M E of Coke ovens security gate	1300 to 1359	35	990
80 M E of Coke ovens security gate	1400 to 1459	38	990
80 M E of Coke ovens security gate	1500 to 1559	44	990
80 M E of Coke ovens security gate	1600 to 1659	49	990
80 M E of Coke ovens security gate	1700 to 1759	54	990



### VOC Monitoring

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