

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1280-04
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1745
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	10 <sup>th</sup> March, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>BTD-0004</b>

**SUBJECT: 9<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 9<sup>th</sup> of March, 2009. Colin MacIsaac 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: North

**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 Colin 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:

Shawn Bernon [shawn@tarpondscleanup.ca](mailto:shawn@tarpondscleanup.ca), Wilfred Kaiser [wilfred@tarpondscleanup.ca](mailto:wilfred@tarpondscleanup.ca), Nancy LeDrew [nancy@tarpondscleanup.ca](mailto:nancy@tarpondscleanup.ca), Trish Magliaro [trish@tarpondscleanup.ca](mailto:trish@tarpondscleanup.ca), Terry Smith [tsmith@toalltech.com](mailto:tsmith@toalltech.com), Phyllis Low [pilow@toalltech.com](mailto:pilow@toalltech.com), Dianne Theriault [dtheriault@toalltech.com](mailto:dtheriault@toalltech.com), Darren Gardiner [dgardiner@croworld.com](mailto:dgardiner@croworld.com), Darren Lawless [dlawless@toalltech.com](mailto:dlawless@toalltech.com), Kevin Mac Pherson [kevinmacp@cbcl.ca](mailto:kevinmacp@cbcl.ca), Kathy Harquail [kharquail@toalltech.com](mailto:kharquail@toalltech.com)

**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Benzol Tank Demolition**  
**9<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 40m East of Spar Road, Spar Road Extension intersection	0800	155	13	North	Upwind	Background	No observations seen to affect sampling integrity
2 30m East of South End of Victoria Bridge	0800	155	7	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
3 30m East of South End of Victoria Bridge	0825	155	9	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
4 50m East of Fredrick Street, Lingan Road intersection	0900	155	9	North	Upwind	Background	No observations seen to affect sampling integrity
5 30m East of South End of Victoria Bridge	0900	155	8	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
6 30m East of South End of Victoria Bridge	0945	155	4	North	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
7 50m East of Fredrick Street, Lingan Road intersection	1000	155	16	North	Upwind	Background	No observations seen to affect sampling integrity
8 30m East of South End of Victoria Bridge	1000	155	5	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
9 30m East of South End of Victoria Bridge	1030	155	6	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
10 50m East of Fredrick Street, Lingan Road intersection	1100	155	3	North	Upwind	Background	No observations seen to affect sampling integrity
11 30m East of South End of Victoria Bridge	1100	155	6	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
12 30m East of South End of Victoria Bridge	1125	155	5	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
13 50m East of Fredrick Street, Lingan Road intersection	1200	155	11	North	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 30m East of South End of Victoria Bridge	1200	155	7	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
15 30m East of South End of Victoria Bridge	1245	155	5	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 50m East of Fredrick Street, Lingan Road intersection	1300	155	5	North	Upwind	Background	No observations seen to affect sampling integrity
17 30m East of South End of Victoria Bridge	1300	155	4	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 30m East of South End of Victoria Bridge	1345	155	5	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
19 50m East of Fredrick Street, Lingan Road intersection	1400	155	4	North	Upwind	Background	No observations seen to affect sampling integrity
20 30m East of South End of Victoria Bridge	1400	155	4	North	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 30m East of South End of Victoria Bridge	1420	155	5	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
22 50m East of Fredrick Street, Lingan Road intersection	1500	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
23 30m East of South End of Victoria Bridge	1500	155	5	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
24 30m East of South End of Victoria Bridge	1520	155	3	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
25 50m East of Fredrick Street, Lingan Road intersection	1600	155	4	North	Upwind	Background	No observations seen to affect sampling integrity
26 30m East of South End of Victoria Bridge	1600	155	3	North	Downwind	Machine moving material	No observations seen to affect sampling integrity
27 30m East of South End of Victoria Bridge	1645	155	4	North	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
28 50m East of Fredrick Street, Lingan Road intersection	1700	155	10	North	Upwind	Background	No observations seen to affect sampling integrity
29 30m East of South End of Victoria Bridge	1700	155	4	North	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 ( $\mu\text{g}/\text{m}^3$ )
30m East of South End of Victoria Bridge	0800 to 0859	8	990
30m East of South End of Victoria Bridge	0900 to 0959	14	990
30m East of South End of Victoria Bridge	1000 to 1059	19	990
30m East of South End of Victoria Bridge	1100 to 1159	25	990
30m East of South End of Victoria Bridge	1200 to 1259	31	990
30m East of South End of Victoria Bridge	1300 to 1359	36	990
30m East of South End of Victoria Bridge	1400 to 1459	41	990
30m East of South End of Victoria Bridge	1500 to 1559	45	990
30m East of South End of Victoria Bridge	1600 to 1659	49	990
30m East of South End of Victoria Bridge	1700 to 1800	53	990



### VOC Monitoring

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