

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1312-01
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1530
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
<b>FAX</b>	(902) 539-3381		
<b>DATE</b>	4 <sup>th</sup> May, 2009	<b>STPA NO.</b>	<b>CO2-STPA-0032</b>

**SUBJECT: 1<sup>st</sup> May, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Tar Cell  
FINAL REPORT**

---

Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 1<sup>st</sup> of May, 2009. Alison Giovannetti and Donald MacIsaac of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly cloudy, rain
- Temperature: approximately 13°C
- Wind Direction: South

**Comments:** ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity, but was later put on standby at 1330 hours and cancelled for the day at 1530 due to ongoing precipitation. Air monitoring was performed during SLR's construction activities.

An exceedance of the Site Action Level of 155 µg/m<sup>3</sup> was measured at the downwind location at 1030 hours (see sample 12) with a value of 178 µg/m<sup>3</sup>. On site personnel and STPA were notified. Site activities were put on hold and the site was watered down. Continuous monitoring was initiated and continued until monitoring was put on standby at 1330 hours.

All 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,



---

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 – Tar Cell**  
**1<sup>st</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 10m Northeast of Cape Breton St.	0700	155	18	South	Upwind	Background	No observations seen to affect sampling integrity
2 50m East of Spar Rd. and Spar Rd. Ext. intersection	0700	155	15	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 50m East of Spar Rd. and Spar Rd. Ext. intersection	0730	155	19	South	Downwind	Excavator, dump trucks operating	No observations seen to affect sampling integrity
4 10m Northeast of Cape Breton St.	0800	155	20	South	Upwind	Background	No observations seen to affect sampling integrity
5 50m East of Spar Rd. and Spar Rd. Ext. intersection	0800	155	15	South	Downwind	Excavator, dump trucks operating	No observations seen to affect sampling integrity
6 50m East of Spar Rd. and Spar Rd. Ext. intersection	0820	155	18	South	Downwind	Excavator, dump trucks operating	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 10m Northeast of Cape Breton St.	0900	155	18	South	Upwind	Background	No observations seen to affect sampling integrity
8 50m East of Spar Rd. and Spar Rd. Ext. intersection	0900	155	50	South	Downwind	Excavator, dump trucks operating	No observations seen to affect sampling integrity
9 50m East of Spar Rd. and Spar Rd. Ext. intersection	0945	155	29	South	Downwind	Excavator, dump trucks operating	No observations seen to affect sampling integrity
10 10m Northeast of Cape Breton St.	1000	155	20	South	Upwind	Background	No observations seen to affect sampling integrity
11 50m East of Spar Rd. and Spar Rd. Ext. intersection	1000	155	20	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 50m East of Spar Rd. and Spar Rd. Ext. intersection	1030	155	<b>178</b>	South	Downwind	Excavator, dump trucks operating	High winds, visible dust kicked up

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
13 50m East of Spar Rd. and Spar Rd. Ext. intersection	1045	155	24	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
14 10m Northeast of Cape Breton St.	1100	155	23	South	Upwind	Background	No observations seen to affect sampling integrity
15 50m East of Spar Rd. and Spar Rd. Ext. intersection	1100	155	144	South	Downwind	No activity observed on site	High winds, visible dust blowing from roads
16 10m Northeast of Cape Breton St.	1115	155	23	South	Upwind	Background	No observations seen to affect sampling integrity
17 50m East of Spar Rd. and Spar Rd. Ext. intersection	1115	155	107	South	Downwind	No activity observed on site	High winds, visible dust blowing from roads
18 10m Northeast of Cape Breton St.	1130	155	25	South	Upwind	Background	No observations seen to affect sampling integrity
19 50m East of Spar Rd. and Spar Rd. Ext. intersection	1130	155	100	South	Downwind	No activity observed on site	High winds, visible dust blowing from roads

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
20 10m Northeast of Cape Breton St.	1145	155	30	South	Upwind	Background	No observations seen to affect sampling integrity
21 50m East of Spar Rd. and Spar Rd. Ext. intersection	1145	155	111	South	Downwind	Excavator moving materials	High winds, visible dust blowing from roads
22 10m Northeast of Cape Breton St.	1200	155	15	South	Upwind	Background	No observations seen to affect sampling integrity
23 50m East of Spar Rd. and Spar Rd. Ext. intersection	1200	155	58	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 10m Northeast of Cape Breton St.	1220	155	25	South	Upwind	Background	No observations seen to affect sampling integrity
25 50m East of Spar Rd. and Spar Rd. Ext. intersection	1220	155	25	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
26 10m Northeast of Cape Breton St.	1235	155	21	South	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
27 10m Northeast of Cape Breton St.	1300	155	23	South	Upwind	Background	No observations seen to affect sampling integrity
28 50m East of Spar Rd. and Spar Rd. Ext. intersection	1300	155	30	South	Downwind	Excavator moving materials	No observations seen to affect sampling integrity
29 50m East of Spar Rd. and Spar Rd. Ext. intersection	1315	155	19	South	Downwind	Excavator moving materials	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 ( $\mu\text{g}/\text{m}^3$ )
50m East of Spar Rd. and Spar Rd. Ext. intersection	0700 to 0759	17	990
50m East of Spar Rd. and Spar Rd. Ext. intersection	0800 to 0859	34	990
50m East of Spar Rd. and Spar Rd. Ext. intersection	0900 to 0959	74	990
50m East of Spar Rd. and Spar Rd. Ext. intersection	1000 to 1059	148	990
50m East of Spar Rd. and Spar Rd. Ext. intersection	1100 to 1159	264	990
50m East of Spar Rd. and Spar Rd. Ext. intersection	1200 to 1259	306	990
50m East of Spar Rd. and Spar Rd. Ext. intersection	1300 to 1359	331	990

### VOC Monitoring

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