

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1293-08
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 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>	14 <sup>th</sup> April, 2009	<b>STPA NO.</b>	<b>CO2-STPA-0011</b>

**SUBJECT: 13<sup>th</sup> April, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Tar Cell  
FINAL REPORT (Revised)**

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Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 13<sup>th</sup> of April, 2009. Alison Giovannetti and Trevor Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Cloudy with sunny periods, showers
- Temperature: approximately 4°C
- Wind Direction: Southwest

**Comments:** *ALL-TECH was on-Site at 0630 and sampling began as soon as there was site activity. Air monitoring was performed during SLR'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 Alison Giovannetti 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 – Tar Cell**  
**13<sup>th</sup> April, 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 125m South of Spar Rd. and Spar Rd. ext Intersection	0700	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 75m West of Traffic lights on Spar Road	0700	155	5	Southwest	Downwind	Excavators in operation and trucks dumping	No observations seen to affect sampling integrity
3 75m West of Traffic lights on Spar Road	0740	155	3	Southwest	Downwind	Excavators in operation and trucks dumping	No observations seen to affect sampling integrity
4 125m South of Spar Rd. And Spar Rd. Ext Intersection	0800	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 75m West of Traffic lights on Spar Road	0800	155	6	Southwest	Downwind	Excavators in operation and trucks dumping	No observations seen to affect sampling integrity
6 75m West of Traffic lights on Spar Road	0825	155	4	Southwest	Downwind	Excavators in operation and trucks dumping	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 125m South of Spar Rd. And Spar Rd. Ext Intersection	0900	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 75m West of Traffic lights on Spar Road	0900	155	7	Southwest	Downwind	Excavators in operation and trucks dumping	No observations seen to affect sampling integrity
9 75m West of Traffic lights on Spar Road	0930	155	6	Southwest	Downwind	Excavators in operation and trucks dumping	No observations seen to affect sampling integrity
10 125m South of Spar Rd. And Spar Rd. Ext Intersection	1000	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 75m West of Traffic lights on Spar Road	1000	155	4	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 75m West of Traffic lights on Spar Road	1025	155	3	Southwest	Downwind	Excavators in operation and trucks dumping	No observations seen to affect sampling integrity
13 125m South of Spar Rd. And Spar Rd. Ext Intersection	1100	155	5	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 75m West of Traffic lights on Spar Road	1100	155	9	Southwest	Downwind	Excavators in operation, trucks dumping	No observations seen to affect sampling integrity
15 75m West of Traffic lights on Spar Road	1115	155	8	Southwest	Downwind	Excavators in operation, trucks dumping	No observations seen to affect sampling integrity
16 125m South of Spar Rd. And Spar Rd. Ext Intersection	1200	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 75m West of Traffic lights on Spar Road	1200	155	6	Southwest	Downwind	Excavators in operation, trucks dumping	No observations seen to affect sampling integrity
18 75m West of Traffic lights on Spar Road	1245	155	6	Southwest	Downwind	Excavators in operation, trucks dumping	No observations seen to affect sampling integrity
19 125m South of Spar Rd. And Spar Rd. Ext Intersection	1300	155	N/A	Southwest	Upwind	Background	DustTrak malfunction
20 75m West of Traffic lights on Spar Road	1300	155	4	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
21 75m West of Traffic lights on Spar Road	1330	155	5	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
22 125m South of Spar Rd. And Spar Rd. Ext Intersection	1400	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 75m West of Traffic lights on Spar Road	1400	155	5	Southwest	Downwind	Excavators in operation, trucks dumping	No observations seen to affect sampling integrity
24 75m West of Traffic lights on Spar Road	1415	155	6	Southwest	Downwind	Excavators in operation, trucks dumping	No observations seen to affect sampling integrity
25 125m South of Spar Rd. And Spar Rd. Ext Intersection	1500	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 75m West of Traffic lights on Spar Road	1500	155	6	Southwest	Downwind	Excavators in operation, trucks dumping	No observations seen to affect sampling integrity
27 75m West of Traffic lights on Spar Road	1530	155	7	Southwest	Downwind	Excavators in operation, trucks dumping	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 125m South of Spar Rd. And Spar Rd. Ext Intersection	1600	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 75m West of Traffic lights on Spar Road	1600	155	5	Southwest	Downwind	Excavators in operation, trucks dumping	No observations seen to affect sampling integrity
30 75m West of Traffic lights on Spar Road	1620	155	6	Southwest	Downwind	Excavators in operation, trucks dumping	No observations seen to affect sampling integrity
31 125m South of Spar Rd. And Spar Rd. Ext Intersection	1700	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
32 75m West of Traffic lights on Spar Road	1700	155	5	Southwest	Downwind	Excavators in operation, trucks dumping	No observations seen to affect sampling integrity
33 75m West of Traffic lights on Spar Road	1745	155	8	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.  
 N/A denotes not available**

### Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
75m West of Traffic lights on Spar Road	0700 to 0759	4	990
75m West of Traffic lights on Spar Road	0800 to 0859	9	990
75m West of Traffic lights on Spar Road	0900 to 0959	16	990
75m West of Traffic lights on Spar Road	1000 to 1059	20	990
75m West of Traffic lights on Spar Road	1100 to 1159	29	990
75m West of Traffic lights on Spar Road	1200 to 1259	35	990
75m West of Traffic lights on Spar Road	1300 to 1359	40	990
75m West of Traffic lights on Spar Road	1400 to 1459	46	990
75m West of Traffic lights on Spar Road	1500 to 1559	53	990
75m West of Traffic lights on Spar Road	1600 to 1659	59	990
75m West of Traffic lights on Spar Road	1700 to 1759	66	990



### VOC Monitoring

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