

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1207-18
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1730
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	27 <sup>th</sup> October, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>PS-0089</b>

**SUBJECT: 27<sup>th</sup> October 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – South Pond Pilot Study  
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 27<sup>th</sup> of October, 2008. Kelly Morrison 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:

- Partly cloudy
- Temperature: approximately 13°C
- Wind Direction: South to Southwest

**Comments:** *ALL-TECH was on-Site at 0730 and sampling began as soon as there was site activity. Air monitoring was performed during EarthTech'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 Kelly Morrison 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 – South Pond Pilot Study**  
**27<sup>th</sup> October, 2008**

<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 5m S of Terminal Rd and Inglis St. intersection	0800	155	6	South	Upwind	Background	No observations seen to affect sampling integrity
2 40m NE of Ferry St. bridge	0800	155	17	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 40m NE of Ferry St. bridge	0830	155	14	South	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
4 30m SW of Inglis St. and Sparr Rd intersection	0900	155	13	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
5 30m SW of Inglis St. and Sparr Rd intersection	0930	155	14	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
6 1m N from the Intercolonial St. fixed station	1000	155	27	South West	Upwind	Background	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 30m SW of Inglis St. and Sparr Rd intersection	1000	155	15	South West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
8 30m SW of Inglis St. and Sparr Rd intersection	1040	155	14	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
9 1m N from the Intercolonial St. fixed station	1100	155	19	South West	Upwind	Background	No observations seen to affect sampling integrity
10 30m SW of Inglis St. and Sparr Rd intersection	1100	155	15	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
11 30m SW of Inglis St. and Sparr Rd intersection	1145	155	15	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
12 1m N from the Intercolonial St. fixed station	1200	155	15	South West	Upwind	Background	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>
13 30m SW of Inglis St. and Sparr Rd intersection	1200	155	16	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
14 30m SW of Inglis St. and Sparr Rd intersection	1245	155	20	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
15 1m N from the Intercolonial St. fixed station	1300	155	13	South West	Upwind	Background	No observations seen to affect sampling integrity
16 30m SW of Inglis St. and Sparr Rd intersection	1300	155	15	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
17 30m SW of Inglis St. and Sparr Rd intersection	1325	155	14	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
18 1m N from the Intercolonial St. fixed station	1400	155	13	South 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
19 30m SW of Inglis St. and Sparr Rd intersection	1400	155	13	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
20 30m SW of Inglis St. and Sparr Rd intersection	1430	155	14	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
21 1m N from the Intercolonial St. fixed station	1500	155	14	South West	Upwind	Background	No observations seen to affect sampling integrity
22 30m SW of Inglis St. and Sparr Rd intersection	1500	155	14	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
23 30m SW of Inglis St. and Sparr Rd intersection	1525	155	13	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
24 1m N from the Intercolonial St. fixed station	1600	155	13	South 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
25 30m SW of Inglis St. and Sparr Rd intersection	1600	155	12	South West	Downwind	Cleaning equipment on site	No observations seen to affect sampling integrity
26 30m SW of Inglis St. and Sparr Rd intersection	1645	155	13	South West	Downwind	Cleaning equipment on site	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 ( $\mu\text{g}/\text{m}^3$ )
40m NE of Ferry St. bridge	0800 to 0859	16	990
30m SW of Inglis St. and Sparr Rd intersection	0900 to 0959	30	990
30m SW of Inglis St. and Sparr Rd intersection	1000 to 1059	45	990
30m SW of Inglis St. and Sparr Rd intersection	1100 to 1159	60	990
30m SW of Inglis St. and Sparr Rd intersection	1200 to 1259	78	990
30m SW of Inglis St. and Sparr Rd intersection	1300 to 1359	93	990
30m SW of Inglis St. and Sparr Rd intersection	1400 to 1459	106	990
30m SW of Inglis St. and Sparr Rd intersection	1500 to 1559	120	990
30m SW of Inglis St. and Sparr Rd intersection	1600 to 1659	133	990



### VOC Monitoring

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