

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1226-01
<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>	4 <sup>th</sup> November, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>PS-0091</b>

**SUBJECT: 3<sup>rd</sup> November, 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 3<sup>rd</sup> of November, 2008. Reg Peters and Alison Giovannetti of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Cloudy skies
- Temperature: approximately 2°C
- Wind Direction: Southwest to West

**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.*

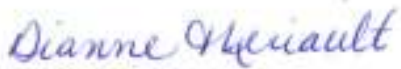
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 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 – South Pond Pilot Study**  
**3<sup>rd</sup> November, 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 N of Intercolonial St. fixed station	0800	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 40m SE of Inglis and Spar Intersection	0800	155	12	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
3 40m SE of Inglis and Spar Intersection	0830	155	8	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
4 5m N of Intercolonial St. fixed station	0900	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 40m SE of Inglis and Spar Intersection	0900	155	4	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
6 40m SE of Inglis and Spar Intersection	0945	155	6	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
7 80m S of Ferry and Intercolonial Intersection	1000	155	4	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
8 60m SE of Inglis and Spar Intersection	1000	155	5	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
9 60m SE of Inglis and Spar Intersection	1045	155	7	West	Downwind	Crane operating	No observations seen to effect sampling integrity
10 80m S of Ferry and Intercolonial Intersection	1100	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
11 60m SE of Inglis and Spar Intersection	1100	155	6	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
12 60m SE of Inglis and Spar Intersection	1120	155	8	West	Downwind	Crane operating	No observations seen to effect sampling integrity
13 80m S of Ferry and Intercolonial Intersection	1200	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
14 60m SE of Inglis and Spar Intersection	1200	155	10	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
15 60m SE of Inglis and Spar Intersection	1245	155	6	West	Downwind	Crane operating	No observations seen to effect 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
16 80m S of Ferry and Intercolonial Intersection	1300	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
17 60m SE of Inglis and Spar Intersection	1300	155	8	West	Downwind	Crane operating	No observations seen to effect sampling integrity
18 60m SE of Inglis and Spar Intersection	1345	155	10	West	Downwind	Crane operating	No observations seen to effect sampling integrity
19 30m NW of Railway tracks on Ferry St.	1400	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
20 60m SE of Inglis and Spar Intersection	1400	155	8	West	Downwind	Crane operating	No observations seen to effect sampling integrity
21 60m SE of Inglis and Spar Intersection	1435	155	8	West	Downwind	Crane operating	No observations seen to effect sampling integrity
22 30m NW of Railway tracks on Ferry St.	1500	155	1	West	Upwind	Background	No observations seen to affect sampling integrity
23 60m SE of Inglis and Spar Intersection	1500	155	5	West	Downwind	Crane operating	No observations seen to effect 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
24 60m SE of Inglis and Spar Intersection	1520	155	6	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
25 30m NW of Railway tracks on Ferry St.	1600	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
26 60m SE of Inglis and Spar Intersection	1600	155	6	West	Downwind	Crane operating	No observations seen to effect sampling integrity
27 60m SE of Inglis and Spar Intersection	1645	155	7	West	Downwind	No activity observed on site	No observations seen to effect 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 SE of Inglis and Spar Intersection	0800 to 0859	10	990
40m SE of Inglis and Spar Intersection	0900 to 0959	15	990
60m SE of Inglis and Spar Intersection	1000 to 1059	21	990
60m SE of Inglis and Spar Intersection	1100 to 1159	28	990
60m SE of Inglis and Spar Intersection	1200 to 1259	36	990
60m SE of Inglis and Spar Intersection	1300 to 1359	45	990
60m SE of Inglis and Spar Intersection	1400 to 1459	53	990
60m SE of Inglis and Spar Intersection	1500 to 1559	59	990
60m SE of Inglis and Spar Intersection	1600 to 1659	66	990

### VOC Monitoring

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