

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1207-10
<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>	15 <sup>th</sup> October, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>PS-0081</b>

**SUBJECT: 14<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 14<sup>th</sup> of October, 2008. Reg Peters and Tyler Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- High humidity in the morning, then sunny with cloudy periods
- Temperature: approximately 12°C
- Wind Direction: Northwest to Southwest

**Comments:** *ALL-TECH was on-Site at 0730 and sampling began as soon as weather conditions were within instrument specifications. 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 Tyler Rowe 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**  
**14<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 Railway property, 100m North of Ferry Street	0930	155	19	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis Street, 100m South of Spar Road	0930	155	25	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
3 Inglis Street, 100m South of Spar Road	0945	155	24	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
4 Railway property, 100m North of Ferry Street	1000	155	24	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis Street, 100m South of Spar Road	1000	155	24	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
6 Inglis Street, 100m South of Spar Road	1035	155	16	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
7 Railway property, 100m North of Ferry Street	1100	155	10	Northwest	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 Inglis Street, 100m South of Spar Road	1100	155	15	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
9 Inglis Street, 100m South of Spar Road	1120	155	13	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
10 Railway property, 100m North of Ferry Street	1200	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 Inglis Street, 100m South of Spar Road	1200	155	20	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
12 Inglis Street, 100m South of Spar Road	1240	155	9	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
13 10m East of Intercolonial Street fixed station	1300	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 30m Northwest of Inglis Street and Spar Road intersection	1300	155	9	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
15 30m Northwest of Inglis Street and Spar Road intersection	1330	155	9	Southwest	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 10m East of Intercolonial Street fixed station	1400	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 30m Northwest of Inglis Street and Spar Road intersection	1400	155	10	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
18 30m Northwest of Inglis Street and Spar Road intersection	1420	155	8	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
19 10m East of Intercolonial Street fixed station	1500	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 30m Northwest of Inglis Street and Spar Road intersection	1500	155	7	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
21 30m Northwest of Inglis Street and Spar Road intersection	1530	155	9	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
22 10m East of Intercolonial Street fixed station	1600	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 30m Northwest of Inglis Street and Spar Road intersection	1600	155	7	Southwest	Downwind	Crane operating	No observations seen to effect 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>
24 30m Northwest of Inglis Street and Spar Road intersection	1645	155	9	Southwest	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 ( $\mu\text{g}/\text{m}^3$ )
Inglis Street, 100m South of Spar Road	0900 to 0959	25	990
Inglis Street, 100m South of Spar Road	1000 to 1059	45	990
Inglis Street, 100m South of Spar Road	1100 to 1159	59	990
Inglis Street, 100m South of Spar Road	1200 to 1259	74	990
30m Northwest of Inglis Street and Spar Road intersection	1300 to 1359	83	990
30m Northwest of Inglis Street and Spar Road intersection	1400 to 1459	92	990
30m Northwest of Inglis Street and Spar Road intersection	1500 to 1559	100	990
30m Northwest of Inglis Street and Spar Road intersection	1600 to 1659	108	990

### VOC Monitoring

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