

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
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**DATE** 14<sup>th</sup> October, 2008

**FILE NO.** S-1207-08  
**SHIFT:** 0730 to 1700  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH

**STPA NO.** PS-0079

**SUBJECT: 10<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 10<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:  
- Overcast  
- Temperature: approximately 15°C  
- Wind Direction: West to Northwest

**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 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**  
**10<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, 20m South of Ferry Street	0800	155	16	West	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis Street, 100m South of Spar Road	0800	155	19	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
3 Inglis Street, 100m South of Spar Road	0830	155	15	West	Downwind	Crane operating	No observations seen to effect sampling integrity
4 Railway property, 20m South of Ferry Street	0900	155	15	West	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis Street, 100m South of Spar Road	0900	155	16	West	Downwind	Crane operating	No observations seen to effect sampling integrity
6 Inglis Street, 100m South of Spar Road	0915	155	17	West	Downwind	Crane operating	No observations seen to effect sampling integrity
7 Railway property, 20m South of Ferry Street	1000	155	14	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 Inglis Street, 100m South of Spar Road	1000	155	13	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
9 Inglis Street, 100m South of Spar Road	1045	155	16	West	Downwind	Crane operating	No observations seen to effect sampling integrity
10 Railway property, 100m North of Ferry Street	1100	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 90m Northwest of STPA building	1100	155	12	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
12 90m Northwest of STPA building	1145	155	12	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
13 Railway property, 100m North of Ferry Street	1200	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
14 90m Northwest of STPA building	1200	155	13	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
15 90m Northwest of STPA building	1230	155	14	Northwest	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 Railway property, 100m North of Ferry Street	1300	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 90m Northwest of STPA building	1300	155	15	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
18 90m Northwest of STPA building	1320	155	14	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
19 Railway property, 100m North of Ferry Street	1400	155	12	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 90m Northwest of STPA building	1400	155	13	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
21 90m Northwest of STPA building	1445	155	14	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
22 Railway property, 100m North of Ferry Street	1500	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 90m Northwest of STPA building	1500	155	16	Northwest	Downwind	No activity observed on site	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 90m Northwest of STPA building	1535	155	11	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
25 Railway property, 100m North of Ferry Street	1600	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 90m Northwest of STPA building	1600	155	12	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
27 90m Northwest of STPA building	1615	155	11	Northwest	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	0800 to 0859	17	990
Inglis Street, 100m South of Spar Road	0900 to 0959	35	990
Inglis Street, 100m South of Spar Road	1000 to 1059	49	990
90m Northwest of STPA building	1100 to 1159	61	990
90m Northwest of STPA building	1200 to 1259	75	990
90m Northwest of STPA building	1300 to 1359	90	990
90m Northwest of STPA building	1400 to 1459	104	990
90m Northwest of STPA building	1500 to 1559	118	990
90m Northwest of STPA building	1600 to 1659	130	990

### VOC Monitoring

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