

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1207-07
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1730
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<b>DATE</b>	10 <sup>th</sup> October, 2008	<b>STPA NO.</b>	<b>PS-0078</b>

**SUBJECT: 9<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 9<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:

- Mainly cloudy, sunny periods, shower late in the day
- Temperature: approximately 10°C
- Wind Direction: Southeast / 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 Tyler Rowe and reviewed by Kelly Morrison. 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**  
**9<sup>th</sup> October, 2008**

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
1 200m North of STPA building	0800	155	13	Southeast	Upwind	Background	No observations seen to affect sampling integrity
2 Railway property, 80m North of Ferry Street	0800	155	9	Southeast	Downwind	Crane operating	No observations seen to effect sampling integrity
3 Railway property, 80m North of Ferry Street	0825	155	7	Southeast	Downwind	Crane operating	No observations seen to effect sampling integrity
4 10m East of Intercolonial Street fixed station	0900	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 30m Southwest of Inglis Street and Spar Road intersection	0900	155	10	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
6 30m Southwest of Inglis Street and Spar Road intersection	0930	155	10	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
7 10m East of Intercolonial Street fixed station	1000	155	9	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
8 30m Southwest of Inglis Street and Spar Road intersection	1000	155	10	Southwest	Downwind	No activity	No observations seen to effect sampling integrity
9 30m Southwest of Inglis Street and Spar Road intersection	1030	155	8	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
10 10m East of Intercolonial Street fixed station	1100	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 30m Southwest of Inglis Street and Spar Road intersection	1100	155	9	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
12 30m Southwest of Inglis Street and Spar Road intersection	1130	155	9	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
13 10m East of Intercolonial Street fixed station	1200	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 30m Southwest of Inglis Street and Spar Road intersection	1200	155	8	Southwest	Downwind	No activity	No observations seen to effect sampling integrity
15 30m Southwest of Inglis Street and Spar Road intersection	1245	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	1300	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 30m Southwest of Inglis Street and Spar Road intersection	1300	155	10	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
18 30m Southwest of Inglis Street and Spar Road intersection	1340	155	10	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
19 10m East of Intercolonial Street fixed station	1400	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 30m Southwest of Inglis Street and Spar Road intersection	1400	155	11	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
21 30m Southwest of Inglis Street and Spar Road intersection	1440	155	9	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
22 10m East of Intercolonial Street fixed station	1500	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 30m Southwest of Inglis Street and Spar Road intersection	1500	155	10	Southwest	Downwind	No activity	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 30m Southwest of Inglis Street and Spar Road intersection	1520	155	10	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
25 10m East of Intercolonial Street fixed station	1600	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 30m Southwest of Inglis Street and Spar Road intersection	1600	155	10	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
27 30m Southwest of Inglis Street and Spar Road intersection	1645	155	10	Southwest	Downwind	No activity	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 ( $\mu\text{g}/\text{m}^3$ )
Railway property, 80m North of Ferry Street	0800 to 0859	8	990
30m Southwest of Inglis Street and Spar Road intersection	0900 to 0959	18	990
30m Southwest of Inglis Street and Spar Road intersection	1000 to 1059	27	990
30m Southwest of Inglis Street and Spar Road intersection	1100 to 1159	36	990
30m Southwest of Inglis Street and Spar Road intersection	1200 to 1259	45	990
30m Southwest of Inglis Street and Spar Road intersection	1300 to 1359	55	990
30m Southwest of Inglis Street and Spar Road intersection	1400 to 1459	65	990
30m Southwest of Inglis Street and Spar Road intersection	1500 to 1559	75	990
30m Southwest of Inglis Street and Spar Road intersection	1600 to 1659	85	990

### VOC Monitoring

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