

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1193-25
<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>	29 <sup>th</sup> September, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>PS-0069</b>

**SUBJECT: 26<sup>th</sup> September, 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 26<sup>th</sup> of September, 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:

- Clear skies
- Temperature: approximately 17°C
- Wind Direction: 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**  
**26<sup>th</sup> September, 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 50m South East of Ferry and Intercolonial Street Intersection	0800	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 20m Northwest of Spar and Inglis St. intersection	0800	155	6	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 20m Northwest of Spar and Inglis St. intersection	0825	155	6	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
4 50m South East of Ferry and Intercolonial Street Intersection	0900	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 20m Northwest of Spar and Inglis St. intersection	0900	155	5	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
6 20m Northwest of Spar and Inglis St. Intersection	0945	155	6	Southwest	Downwind	Crane Operating	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
7 50m South East of Ferry and Intercolonial Street Intersection	1000	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 20m Northwest of Spar and Inglis St. intersection	1000	155	8	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 20m Northwest of Spar and Inglis St. intersection	1040	155	8	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
10 50m South East of Ferry and Intercolonial Street Intersection	1100	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 20m Northwest of Spar and Inglis St. intersection	1100	155	13	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
12 20m Northwest of Spar and Inglis St. intersection	1145	155	11	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
13 50m South East of Ferry and Intercolonial Street Intersection	1200	155	7	Southwest	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>
14 20m Northwest of Spar and Inglis St. intersection	1200	155	12	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 20m Northwest of Spar and Inglis St. intersection	1225	155	11	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
16 50m South East of Ferry and Intercolonial Street Intersection	1300	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 20m Northwest of Spar and Inglis St. intersection	1300	155	11	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
18 20m Northwest of Spar and Inglis St. intersection	1325	155	12	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
19 50m South East of Ferry and Intercolonial Street Intersection	1400	155	6	Southwest	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>
20 20m Northwest of Spar and Inglis St. intersection	1400	155	14	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
21 20m Northwest of Spar and Inglis St. intersection	1425	155	12	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
22 50m South East of Ferry and Intercolonial Street Intersection	1500	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 20m Northwest of Spar and Inglis St. intersection	1500	155	11	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
24 20m Northwest of Spar and Inglis St. intersection	1545	155	13	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
25 50m South East of Ferry and Intercolonial Street Intersection	1600	155	6	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
26 20m Northwest of Spar and Inglis St. intersection	1600	155	13	Southwest	Downwind	Crane Operating	No observations seen to affect sampling integrity
27 20m Northwest of Spar and Inglis St. intersection	1645	155	14	Southwest	Downwind	Crane Operating	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 ( $\mu\text{g}/\text{m}^3$ )
20m Northwest of Spar and Inglis St. intersection	0800 to 0859	6	990
20m Northwest of Spar and Inglis St. intersection	0900 to 0959	12	990
20m Northwest of Spar and Inglis St. intersection	1000 to 1059	20	990
20m Northwest of Spar and Inglis St. intersection	1100 to 1159	32	990
20m Northwest of Spar and Inglis St. intersection	1200 to 1259	44	990
20m Northwest of Spar and Inglis St. intersection	1300 to 1359	56	990
20m Northwest of Spar and Inglis St. intersection	1400 to 1459	69	990
20m Northwest of Spar and Inglis St. intersection	1500 to 1559	81	990
20m Northwest of Spar and Inglis St. intersection	1600 to 1659	95	990



### VOC Monitoring

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