

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1173-10
<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>	19 <sup>th</sup> August, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>PS-0035</b>

**SUBJECT: 18<sup>th</sup> August, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – North 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 18<sup>th</sup> of August, 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 sunny
- Temperature: approximately 24°C
- Wind Direction: Southwest / 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.*

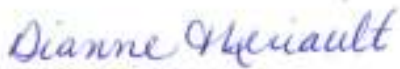
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 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:

Shawn Bernon [shawn@tarpondscleanup.ca](mailto:shawn@tarpondscleanup.ca), Wilfred Kaiser [wilfred@tarpondscleanup.ca](mailto:wilfred@tarpondscleanup.ca), Nancy LeDrew [nancy@tarpondscleanup.ca](mailto:nancy@tarpondscleanup.ca), Trish Magliaro [trish@tarpondscleanup.ca](mailto:trish@tarpondscleanup.ca), Terry Smith [tsmith@toalltech.com](mailto:tsmith@toalltech.com), Phyllis Low [pilow@toalltech.com](mailto:pilow@toalltech.com), Dianne Theriault [dtheriault@toalltech.com](mailto:dtheriault@toalltech.com), Darren Gardiner [dgardiner@croworld.com](mailto:dgardiner@croworld.com), Darren Lawless [dlawless@toalltech.com](mailto:dlawless@toalltech.com), Kevin Mac Pherson [kevinmacp@cbcl.ca](mailto:kevinmacp@cbcl.ca), Kathy Harquail [kharquail@toalltech.com](mailto:kharquail@toalltech.com)

**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – North Pond Pilot Study**  
**18<sup>th</sup> August, 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 20m Southeast of Walker Street and Ferry Street intersection	0800	155	7	Southwest	Upwind	Background	No observations seen to effect sampling integrity
2 30m Southeast of North Pond main gate	0800	155	10	Southwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
3 30m Southeast of North Pond main gate	0845	155	6	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
4 20m Southeast of Walker Street and Ferry Street intersection	0900	155	6	Southwest	Upwind	Background	No observations seen to effect sampling integrity
5 30m Southeast of North Pond main gate	0900	155	6	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
6 30m Southeast of North Pond main gate	0930	155	6	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
7 Walker Street, 20m North of Ferry Street	1000	155	7	West	Upwind	Background	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
8 90m Southeast of North Pond main gate	1000	155	6	West	Downwind	Crane operating	No observations seen to effect sampling integrity
9 90m Southeast of North Pond main gate	1040	155	6	West	Downwind	Crane operating	No observations seen to effect sampling integrity
10 Walker Street, 20m North of Ferry Street	1100	155	10	West	Upwind	Background	No observations seen to effect sampling integrity
11 90m Southeast of North Pond main gate	1100	155	8	West	Downwind	Crane operating	No observations seen to effect sampling integrity
12 90m Southeast of North Pond main gate	1145	155	9	West	Downwind	Crane operating	No observations seen to effect sampling integrity
13 Walker Street, 20m North of Ferry Street	1200	155	12	West	Upwind	Background	No observations seen to effect sampling integrity
14 90m Southeast of North Pond main gate	1200	155	9	West	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
15 90m Southeast of North Pond main gate	1245	155	10	West	Downwind	Crane operating	No observations seen to effect sampling integrity
16 Walker Street, 20m North of Ferry Street	1300	155	16	West	Upwind	Background	No observations seen to effect sampling integrity
17 90m Southeast of North Pond main gate	1300	155	11	West	Downwind	Crane operating	No observations seen to effect sampling integrity
18 90m Southeast of North Pond main gate	1325	155	12	West	Downwind	Crane operating	No observations seen to effect sampling integrity
19 Walker Street, 20m North of Ferry Street	1400	155	13	West	Upwind	Background	No observations seen to effect sampling integrity
20 90m Southeast of North Pond main gate	1400	155	13	West	Downwind	Crane operating	No observations seen to effect sampling integrity
21 90m Southeast of North Pond main gate	1420	155	11	West	Downwind	Crane operating	No observations seen to effect sampling integrity
22 Walker Street, 20m North of Ferry Street	1500	155	12	West	Upwind	Background	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
23 90m Southeast of North Pond main gate	1500	155	31	West	Downwind	Crane operating	No observations seen to effect sampling integrity
24 90m Southeast of North Pond main gate	1540	155	7	West	Downwind	Crane operating	No observations seen to effect sampling integrity
25 Walker Street, 20m North of Ferry Street	1600	155	13	West	Upwind	Background	No observations seen to effect sampling integrity
26 90m Southeast of North Pond main gate	1600	155	6	West	Downwind	Crane operating	No observations seen to effect sampling integrity
27 90m Southeast of North Pond main gate	1645	155	6	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 ( $\mu\text{g}/\text{m}^3$ )
30m Southeast of North Pond main gate	0800 to 0859	8	990
30m Southeast of North Pond main gate	0900 to 0959	15	990
30m Southeast of North Pond main gate	1000 to 1059	21	990
30m Southeast of North Pond main gate	1100 to 1159	29	990
30m Southeast of North Pond main gate	1200 to 1259	39	990
30m Southeast of North Pond main gate	1300 to 1359	51	990
30m Southeast of North Pond main gate	1400 to 1459	63	990
30m Southeast of North Pond main gate	1500 to 1559	82	990
30m Southeast of North Pond main gate	1600 to 1659	88	990

### VOC Monitoring

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