

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1114-14
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	0630 to 1815
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	17 <sup>th</sup> April, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CP-0125</b>

**SUBJECT: 16<sup>th</sup> April, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Cooling Pond  
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 16<sup>th</sup> of April, 2008. Tyler Rowe 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:

- Mainly sunny
- Temperature: 11°C
- Wind Direction: Southwest to Northwest

**Comments:** *ALL-TECH was on-Site at 0630 and sampling began as soon as there was Site activity. Air monitoring was performed during EarthTech's construction activities.*

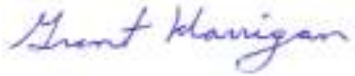
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 Grant Harrigan. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



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Grant Harrigan, 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 – Cooling Pond**  
**16<sup>th</sup> April, 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 East of Acadian Lines terminal	0710	155	28	Southwest	Upwind	Background	No observations seen to effect sampling integrity
2 90m Southeast of corner of Inglis Street and Spar Road	0710	155	26	Southwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
3 90m Southeast of corner of Inglis Street and Spar Road	0740	155	41	Southwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
4 50m East of Acadian Lines terminal	0800	155	25	Southwest	Upwind	Background	No observations seen to effect sampling integrity
5 110m Southeast of corner of Inglis Street and Spar Road	0800	155	34	Southwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
6 110m Southeast of corner of Inglis Street and Spar Road	0845	155	17	Southwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
7 50m East of Acadian Lines terminal	0900	155	13	Southwest	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 110m Southeast of corner of Inglis Street and Spar Road	0900	155	15	Southwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
9 110m Southeast of corner of Inglis Street and Spar Road	0930	155	12	Southwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
10 200m North of Intercolonial Street fixed station	1000	155	12	Northwest	Upwind	Background	No observations seen to effect sampling integrity
11 30m Southwest of STPA office	1000	155	21	Northwest	Downwind	Trucks dumping	No observations seen to effect sampling integrity
12 30m Southwest of STPA office	1020	155	13	Northwest	Downwind	Trucks dumping	No observations seen to effect sampling integrity
13 200m North of Intercolonial Street fixed station	1100	155	9	Northwest	Upwind	Background	No observations seen to effect sampling integrity
14 30m Southwest of STPA office	1100	155	69	Northwest	Downwind	Machines moving material	Dust from site
15 30m Southwest of STPA office	1120	155	27	Northwest	Downwind	Machines moving material	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 200m North of Intercolonial Street fixed station	1200	155	12	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 30m Southwest of STPA office	1200	155	25	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
18 30m Southwest of STPA office	1215	155	13	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
19 200m North of Intercolonial Street fixed station	1300	155	12	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 30m Southwest of STPA office	1300	155	17	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
21 30m Southwest of STPA office	1325	155	18	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
22 200m North of Intercolonial Street fixed station	1400	155	13	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 30m Southwest of STPA office	1400	155	17	Northwest	Downwind	Machines moving material	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 STPA office	1430	155	17	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
25 200m North of Intercolonial Street fixed station	1500	155	18	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 30m Southwest of STPA office	1500	155	14	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
27 30m Southwest of STPA office	1545	155	14	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
28 200m North of Intercolonial Street fixed station	1600	155	11	Northwest	Upwind	Background	No observations seen to effect sampling integrity
29 30m Southwest of STPA office	1600	155	13	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
30 30m Southwest of STPA office	1620	155	16	Northwest	Downwind	Machines moving material	No observations seen to effect sampling integrity
31 200m North of Intercolonial Street fixed station	1700	155	12	Northwest	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
32 30m Southwest of STPA office	1700	155	14	Northwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
33 30m Southwest of STPA office	1730	155	13	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 ( $\mu\text{g}/\text{m}^3$ )
90m Southeast of corner of Inglis Street and Spar Road	0700 to 0759	34	990
110m Southeast of corner of Inglis Street and Spar Road	0800 to 0859	60	990
110m Southeast of corner of Inglis Street and Spar Road	0900 to 0959	74	990
30m Southwest of STPA building	1000 to 1059	91	990
30m Southwest of STPA building	1100 to 1159	139	990
30m Southwest of STPA building	1200 to 1259	158	990
30m Southwest of STPA building	1300 to 1359	176	990
30m Southwest of STPA building	1400 to 1459	193	990
30m Southwest of STPA building	1500 to 1559	207	990
30m Southwest of STPA building	1600 to 1659	222	990



Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
30m Southwest of STPA building	1700 to 1759	236	990

### VOC Monitoring

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