

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1114-11
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	0630 to 1745
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	14 <sup>th</sup> April, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CP-0122</b>

**SUBJECT: 11<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 11<sup>th</sup> of April, 2008. Colin MacIsaac 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 clear skies with some cloud cover
- Temperature: approximately 5°C (data unavailable from Environment Canada)
- Wind Direction: 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.*

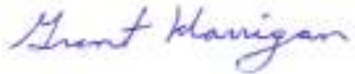
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were well 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 Colin MacIsaac and reviewed by Grant Harrigan and Dianne Theriault. 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:

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 [pjlow@toalltech.com](mailto:pjlow@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 – Cooling Pond**  
**11<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 40m North of Intercolonial Street fixed station	0715	155	12	Northwest	Upwind	Background	No observations seen to effect sampling integrity
2 60m Southwest of STPA building	0715	155	11	Northwest	Downwind	Payloaders and excavators operating	No observations seen to effect sampling integrity
3 60m Southwest of STPA building	0730	155	11	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
4 40m North of Intercolonial Street fixed station	0800	155	13	Northwest	Upwind	Background	No observations seen to effect sampling integrity
5 50m Southwest of STPA building	0800	155	13	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
6 50m Southwest of STPA building	0820	155	12	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
7 40m North of Intercolonial Street fixed station	0900	155	7	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
8 50m Southwest of STPA building	0900	155	6	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
9 50m Southwest of STPA building	0940	155	9	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
10 20m Southeast of Ferry Street, Walker Street intersection	1000	155	7	Northwest	Upwind	Background	No observations seen to effect sampling integrity
11 50m Southwest of STPA building	1000	155	6	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
12 50m Southwest of STPA building	1035	155	14	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
13 20m Southeast of Ferry Street, Walker Street intersection	1100	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
14 50m Southwest of STPA building	1100	155	12	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
15 50m Southwest of STPA building	1125	155	9	Northwest	Downwind	Payloaders, excavators and dump trucks 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 20m Southeast of Ferry Street, Walker Street intersection	1200	155	11	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 50m Southwest of STPA building	1200	155	12	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
18 50m Southwest of STPA building	1215	155	10	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
19 20m Southeast of Ferry Street, Walker Street intersection	1300	155	8	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 50m Southwest of STPA building	1300	155	18	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
21 50m Southwest of STPA building	1320	155	29	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
22 20m Southeast of Ferry Street, Walker Street intersection	1400	155	10	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 50m Southwest of STPA building	1400	155	13	Northwest	Downwind	Payloaders, excavators and dump trucks 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
24 50m Southwest of STPA building	1430	155	13	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
25 20m Southeast of Ferry Street, Walker Street intersection	1500	155	10	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 50m Southwest of STPA building	1500	155	18	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
27 50m Southwest of STPA building	1540	155	11	Northwest	Downwind	Payloaders, excavators and dump trucks operating	No observations seen to effect sampling integrity
28 20m Southeast of Ferry Street, Walker Street intersection	1600	155	15	Northwest	Upwind	Background	No observations seen to effect sampling integrity
29 50m Southwest of STPA building	1600	155	14	Northwest	Downwind	Compactors operating	No observations seen to effect sampling integrity
30 50m Southwest of STPA building	1640	155	5	Northwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
31 20m Southeast of Ferry Street, Walker Street intersection	1700	155	13	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 50m Southwest of STPA building	1700	155	9	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 (µg/m <sup>3</sup> )	Dust Budget Exceedance Value (µg/m <sup>3</sup> )
60m Southwest of STPA building	0700 to 0759	11	990
50m Southwest of STPA building	0800 to 0859	24	990
50m Southwest of STPA building	0900 to 0959	32	990
50m Southwest of STPA building	1000 to 1059	43	990
50m Southwest of STPA building	1100 to 1159	53	990
50m Southwest of STPA building	1200 to 1259	64	990
50m Southwest of STPA building	1300 to 1350	88	990

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
50m Southwest of STPA building	1400 to 1459	101	990
50m Southwest of STPA building	1500 to 1559	116	990
50m Southwest of STPA building	1600 to 1659	126	990
50m Southwest of STPA building	1700 to 1759	135	990

### VOC Monitoring

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