

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1138-05
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	0630 to 1700
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	30 <sup>th</sup> May, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CP-0137</b>

**SUBJECT: 29<sup>th</sup> May 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 29<sup>th</sup> of May, 2008. Tyler Rowe and Donald MacIsaac of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Rain, cloudy with sunny periods
- Temperature: approximately 13°C
- Wind Direction: Southwest

**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 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**  
**29<sup>th</sup> May, 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 South of Intercolonial Street fixed station	0700	155	6	Southwest	Upwind	Background	No observations seen to effect sampling integrity
2 15m West of STPA building	0700	155	4	Southwest	Downwind	No activity observed On-site	No observations seen to effect sampling integrity
3 15m West of STPA building	0730	155	5	Southwest	Downwind	Trucks operating	No observations seen to effect sampling integrity
4 20m South of Intercolonial Street fixed station	0800	155	4	Southwest	Upwind	Background	No observations seen to effect sampling integrity
5 15m West of STPA building	0800	155	5	Southwest	Downwind	Trucks operating	No observations seen to effect sampling integrity
6 15m West of STPA building	0815	155	4	Southwest	Downwind	Trucks operating	No observations seen to effect sampling integrity
7 20m South of Intercolonial Street fixed station	0900	155	3	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 15m West of STPA building	0900	155	8	Southwest	Downwind	Trucks operating	No observations seen to effect sampling integrity
9 15m West of STPA building	0945	155	11	Southwest	Downwind	Trucks operating	No observations seen to effect sampling integrity
10 20m South of Intercolonial Street fixed station	1000	155	6	Southwest	Upwind	Background	No observations seen to effect sampling integrity
11 15m West of STPA building	1000	155	5	Southwest	Downwind	Trucks operating	No observations seen to effect sampling integrity
12 15m West of STPA building	1030	155	52	Southwest	Downwind	Bulldozer operating	Dust cloud from bulldozer
13 20m South of Intercolonial Street fixed station	1100	155	9	Southwest	Upwind	Background	No observations seen to effect sampling integrity
14 15m West of STPA building	1100	155	24	Southwest	Downwind	Trucks operating	No observations seen to effect sampling integrity
15 15m West of STPA building	1120	155	9	Southwest	Downwind	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 South of Intercolonial Street fixed station	1200	155	13	Southwest	Upwind	Background	No observations seen to effect sampling integrity
17 15m West of STPA building	1200	155	7	Southwest	Downwind	No activity observed On-site	No observations seen to effect sampling integrity
18 15m West of STPA building	1225	155	25	Southwest	Downwind	No activity observed On-site	No observations seen to effect sampling integrity
19 5m East of Intercolonial Street fixed station	1300	155	12	West	Upwind	Background	No observations seen to effect sampling integrity
20 15m West of STPA building	1300	155	12	West	Downwind	Bulldozers operating	No observations seen to effect sampling integrity
21 15m West of STPA building	1345	155	16	West	Downwind	Bulldozers operating	No observations seen to effect sampling integrity
22 5m East of Intercolonial Street fixed station	1400	155	12	West	Upwind	Background	No observations seen to effect sampling integrity
23 15m West of STPA building	1400	155	22	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
24 15m West of STPA building	1430	155	60	West	Downwind	No activity observed On-site	No observations seen to effect sampling integrity
25 5m East of Intercolonial Street fixed station	1500	155	25	West	Upwind	Background	No observations seen to effect sampling integrity
26 15m West of STPA building	1500	155	62	West	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
27 15m West of STPA building	1515	155	22	West	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
28 5m East of Intercolonial Street fixed station	1600	155	12	West	Upwind	Background	No observations seen to effect sampling integrity
29 15m West of STPA building	1600	155	15	West	Downwind	No activity observed On-site	No observations seen to effect sampling integrity
30 15m West of STPA building	1615	155	17	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 ( $\mu\text{g}/\text{m}^3$ )
15m West of STPA building	0700 to 0759	5	990
15m West of STPA building	0800 to 0859	10	990
15m West of STPA building	0900 to 0959	20	990
15m West of STPA building	1000 to 1059	49	990
15m West of STPA building	1100 to 1159	66	990
15m West of STPA building	1200 to 1259	82	990
15m West of STPA building	1300 to 1359	96	990
15m West of STPA building	1400 to 1459	137	990
15m West of STPA building	1500 to 1559	179	990
15m West of STPA building	1600 to 1659	195	990

### VOC Monitoring

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