

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1074-10
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	0630 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	13 <sup>th</sup> February, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CP-0067</b>

**SUBJECT: 12<sup>th</sup> February, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Cooling Pond  
FINAL REPORT**

---

Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 12<sup>th</sup> of February, 2008. Peter Ibrahim and Reggie Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Overcast, Blowing Snow
- Temperature: approximately -2°C (data unavailable from Environment Canada)
- Wind Direction: West 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 well 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), TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Peter Ibrahim 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,



---

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**  
**12<sup>th</sup> of February, 2008**

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
1 20m Southwest of Southwest corner of STPA office building	0705	155	5	West	Downwind	No visible activity observed on-Site	No observations seen to effect sampling integrity
2 10m South of Intercolonial fixed station	0715	155	4	West	Upwind	Background	No observations seen to effect sampling integrity
3 30m Southwest of Southwest corner of STPA office building	0725	155	6	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
4 10m South of Intercolonial fixed station	0800	155	4	West	Upwind	Background	No observations seen to effect sampling integrity
5 60m Southwest of Southwest corner of STPA office building	0800	155	11	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
6 60m Southwest of Southwest corner of STPA office building	0817	155	8	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
7 10m South of Intercolonial fixed station	0900	155	1	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 60m Southwest of Southwest corner of STPA office building	0900	155	11	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
9 60m Southwest of Southwest corner of STPA office building	0915	155	9	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
10 10m South of Intercolonial fixed station	1000	155	∅	West	Upwind	Background	No observations seen to effect sampling integrity
11 60m Southwest of Southwest corner of STPA office building	1000	155	6	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
12 60m Southwest of Southwest corner of STPA office building	1016	155	13	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
13 10m South of Intercolonial fixed station	1100	155	∅	West	Upwind	Background	No observations seen to effect sampling integrity
14 100m Southwest of Southwest corner of STPA office building	1100	155	49	West	Downwind	Excavators 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
15 100m Southwest of Southwest corner of STPA office building	1115	155	16	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
16 10m South of Intercolonial fixed station	1200	155	∅	West	Upwind	Background	No observations seen to effect sampling integrity
17 100m Southwest of Southwest corner of STPA office building	1200	155	4	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
18 100m Southwest of Southwest corner of STPA office building	1216	155	4	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
19 20m East of Ferry Street bridge	1300	155	1	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 130m Southwest of Southwest corner of STPA office building	1300	155	3	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
21 130m Southwest of Southwest corner of STPA office building	1315	155	4	Northwest	Downwind	Excavators 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
22 20m East of Ferry Street bridge	1400	155	∅	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 130m Southwest of Southwest corner of STPA office building	1400	155	13	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
24 130m Southwest of Southwest corner of STPA office building	1415	155	12	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
25 20m East of Ferry Street bridge	1500	155	∅	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 130m Southwest of Southwest corner of STPA office building	1500	155	13	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
27 130m Southwest of Southwest corner of STPA office building	1516	155	12	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
28 20m East of Ferry Street bridge	1600	155	∅	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
29 130m Southwest of Southwest corner of STPA office building	1600	155	5	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
30 130m Southwest of Southwest corner of STPA office building	1621	155	16	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
31 20m East of Ferry Street bridge	1700	155	1	Northwest	Upwind	Background	No observations seen to effect sampling integrity
32 100m Southwest of Southwest corner of STPA office building	1700	155	7	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
33 100m Southwest of Southwest corner of STPA office building	1716	155	3	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
34 20m East of Ferry Street bridge	1745	155	∅	Northwest	Upwind	Background	No observations seen to effect sampling integrity
35 100m Southwest of Southwest corner of STPA office building	1745	155	3	Northwest	Downwind	Background	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 ( $\mu\text{g}/\text{m}^3$ )
20m Southwest of Southwest corner of STPA office building/ 30m Southwest of Southwest corner of STPA office building	0705 to 0740	6	990
60m Southwest of Southwest corner of STPA office building	0800 to 0832	16	990
60m Southwest of Southwest corner of STPA office building	0900 to 0930	26	990
60m Southwest of Southwest corner of STPA office building	1000 to 1031	36	990
100m Southwest of Southwest corner of STPA office building	1100 to 1130	69	990
100m Southwest of Southwest corner of STPA office building	1200 to 1231	73	990
130m Southwest of Southwest corner of STPA office building	1300 to1330	77	990
130m Southwest of Southwest corner of STPA office building	1400 to1430	90	990
130m Southwest of Southwest corner of STPA office building	1500 to 1531	103	990



Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
130m Southwest of Southwest corner of STPA office building	1600 to 1636	114	990
100m Southwest of Southwest corner of STPA office building	1700 to 1731	119	990
100m Southwest of Southwest corner of STPA office building	1745 to 1800	122	990

### VOC Monitoring

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