

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1074-16
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	0630 to 1745
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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<b>DATE</b>	21 <sup>st</sup> February, 2008	<b>STPA NO.</b>	<b>CP-0073</b>

**SUBJECT: 20<sup>th</sup> February 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 20<sup>th</sup> of February, 2008. Tyler Rowe 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, sunny, flurries
- Temperature: -1°C
- Wind Direction: West

**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.*

Sustained Odours were detected at 1400 at the downwind location. Draeger Tube tests were performed and showed no detection of Benzene.

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>.

Levels above detection limit will be noted in the table below. 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.

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 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**  
**20<sup>th</sup> 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 8m North of Intercolonial Street fixed station	0700	155	11	West	Upwind	Background	No observations seen to effect sampling integrity
2 30m Northwest of STPA office	0700	155	12	West	Downwind	No activity observed	No observations seen to effect sampling integrity
3 30m Northwest of STPA office	0716	155	9	West	Downwind	No activity observed	No observations seen to effect sampling integrity
4 8m North of Intercolonial Street fixed station	0800	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
5 30m Southwest of STPA office	0800	155	9	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
6 30m Southwest of STPA office	0816	155	9	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
7 8m North of Intercolonial Street fixed station	0900	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 30m Southwest of STPA office	0900	155	10	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
9 30m Southwest of STPA office	0916	155	10	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
10 8m North of Intercolonial Street fixed station	1000	155	7	West	Upwind	Background	No observations seen to effect sampling integrity
11 30m Southwest of STPA office	1000	155	9	West	Downwind	No activity observed	No observations seen to effect sampling integrity
12 30m Southwest of STPA office	1015	155	12	West	Downwind	Excavators moving material, trucks dumping	No observations seen to effect sampling integrity
13 8m North of Intercolonial Street fixed station	1100	155	8	West	Upwind	Background	No observations seen to effect sampling integrity
14 30m Southwest of STPA office	1100	155	12	West	Downwind	Excavators moving material, trucks dumping	No observations seen to effect sampling integrity
15 30m Southwest of STPA office	1116	155	10	West	Downwind	Excavators moving material, trucks dumping	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 8m North of Intercolonial Street fixed station	1200	155	7	West	Upwind	Background	No observations seen to effect sampling integrity
17 30m Southwest of STPA office	1200	155	9	West	Downwind	No activity observed	No observations seen to effect sampling integrity
18 30m Southwest of STPA office	1215	155	9	West	Downwind	Trucks dumping material	No observations seen to effect sampling integrity
19 8m North of Intercolonial Street fixed station	1300	155	7	West	Upwind	Background	No observations seen to effect sampling integrity
20 30m Southwest of STPA office	1300	155	13	West	Downwind	Excavators moving material, trucks dumping	No observations seen to effect sampling integrity
21 30m Southwest of STPA office	1315	155	12	West	Downwind	Excavators moving material, trucks dumping	No observations seen to effect sampling integrity
22 8m North of Intercolonial Street fixed station	1400	155	8	West	Upwind	Background	No observations seen to effect sampling integrity
23 30m Southwest of STPA office	1400	155	14	West	Downwind	Excavators moving material, trucks dumping	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	1415	155	15	West	Downwind	Excavators moving material, trucks dumping	No observations seen to effect sampling integrity
25 8m North of Intercolonial Street fixed station	1500	155	9	West	Upwind	Background	No observations seen to effect sampling integrity
26 30m Southwest of STPA office	1500	155	11	West	Downwind	Trucks dumping material	No observations seen to effect sampling integrity
27 30m Southwest of STPA office	1516	155	11	West	Downwind	Trucks dumping material	No observations seen to effect sampling integrity
28 8m North of Intercolonial Street fixed station	1600	155	9	West	Upwind	Background	No observations seen to effect sampling integrity
29 30m Southwest of STPA office	1600	155	11	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
30 30m Southwest of STPA office	1615	155	11	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
31 8m North of Intercolonial Street fixed station	1700	155	9	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
32 30m Southwest of STPA office	1700	155	12	West	Downwind	Excavators moving material	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 Northwest of STPA office	0700 to 0731	11	990
30m Souhwest of STPA office	0800 to 0831	20	990
30m Souhwest of STPA office	0900 to 0930	30	990
30m Souhwest of STPA office	1000 to 1030	41	990
30m Souhwest of STPA office	1100 to 1131	52	990
30m Souhwest of STPA office	1200 to 1230	61	990
30m Souhwest of STPA office	1300 to 1330	74	990
30m Souhwest of STPA office	1400 to 1430	88	990
30m Souhwest of STPA office	1500 to 1531	99	990
30m Souhwest of STPA office	1600 to 1630	110	990
30m Souhwest of STPA office	1700 to 1715	122	990



### VOC Monitoring

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