

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1100-07
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	0945 to 1445
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	7 <sup>th</sup> March, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CP-0092</b>

**SUBJECT: 6<sup>th</sup> March, 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 6<sup>th</sup> of March, 2008. Colin MacIsaac and Reggie Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities for the asphalt pad North of the Cooling Pond.

Weather conditions on the day of sampling:

- Clear Skies
- Temperature: approximately 3°C (data unavailable from Environment Canada)
- Wind Direction: West to Northwest

**Comments:** *ALL-TECH was on-Site at 0945 and sampling began as soon as there was Site activity. Air monitoring was performed during EarthTech's construction activities. Sampling was halted at 1415 due to no activity being observed on the asphalt pad.*

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 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 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:

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**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Cooling Pond**  
**6<sup>th</sup> March, 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 West of Intercolonial Street fixed station	0945	155	9	West	Upwind	Background	No observations seen to effect sampling integrity
2 35m Northeast of Cooling Pond main gate	1010	155	7	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
3 40m Southeast of Cooling Pond main gate	1032	155	7	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
4 50m North of Ferry Street, Walker Street intersection	1100	155	5	Northwest	Upwind	Background	No observations seen to effect sampling integrity
5 40m Southeast of Cooling Pond main gate	1120	155	6	Northwest	Downwind	Payloader and excavator moving material	No observations seen to effect sampling integrity
6 40m Southeast of Cooling Pond main gate	1140	155	8	Northwest	Downwind	Payloader and excavator moving material	No observations seen to effect sampling integrity
7 50m North of Ferry Street, Walker Street intersection	1208	155	5	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 40m Southeast of Cooling Pond main gate	1208	155	5	Northwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
9 40m Southeast of Cooling Pond main gate	1230	155	8	Northwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
10 40m Southeast of Cooling Pond main gate	1247	155	66	Northwest	Downwind	Bobcat sweeping activity site road	Visible dust coming from sweeping of road
11 40m Southeast of Cooling Pond main gate	1303	155	6	Northwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
12 10m East of Ferry Street, Walker Street intersection	1319	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
13 40m Southeast of Cooling Pond main gate	1320	155	8	Northwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
14 40m Southeast of Cooling Pond main gate	1335	155	5	Northwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
15 50m North of Ferry Street, Walker Street intersection	1400	155	5	Northwest	Upwind	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 ( $\mu\text{g}/\text{m}^3$ )
35m Northeast of Cooling Pond main gate	1000 to 1059	7	990
40m Southeast of Cooling Pond main gate	1100 to 1159	14	990
40m Southeast of Cooling Pond main gate	1200 to 1259	51	990
40m Southeast of Cooling Pond main gate	1300 to 1359	58	990

### VOC Monitoring

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