

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1074-02
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	1015 to 1715
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	4 <sup>th</sup> February, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CP-0059</b>

**SUBJECT: 2<sup>nd</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 2<sup>nd</sup> of February, 2008. Grant Harrigan and Peter Ibrahim of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Cloudy with periods of freezing rain and rain
- Temperature: 1°C
- Wind Direction: Southeast to Southwest to West

**Comments:** *ALL-TECH was on-Site at 1015 when activity was observed. Due to periods of rain and no activity observed on-Site, ALL-TECH remained on standby until activities resumed and precipitation ended. 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 Dianne Theriault 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  
 2<sup>nd</sup> February, 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 200m South of STPA Building	1052	155	2	Southeast	Upwind	Background	Freezing rain
2 150m North of Intercolonial Street fixed station	1100	155	2	Southeast	Downwind	Excavators moving material	Freezing rain
3 150m North of Intercolonial Street fixed station	1116	155	3	Southeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
4 15m West of Inglis Street and Terminal Road intersection	1415	155	24	Southeast	Upwind	Background	No observations seen to effect sampling integrity
5 10m East of Cooling Pond security gate	1415	155	21	Southwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
6 10m East of Cooling Pond security gate	1432	155	22	Southwest	Downwind	Front end loader cleaning Site	No observations seen to effect sampling integrity
7 10m East of Cooling Pond security gate	1515	155	26	West	Downwind	Front end loader cleaning 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
8 110m South of Intercolonial Street fixed station	1522	155	23	West	Upwind	Background	No observations seen to effect sampling integrity
9 10m East of Cooling Pond security gate	1532	155	25	West	Downwind	Front end loader cleaning Site	No observations seen to effect sampling integrity
10 20m Southeast of Cooling Pond security gate	1615	155	24	West	Downwind	Front end loader cleaning Site	No observations seen to effect sampling integrity
11 110m South of Intercolonial Street fixed station	1616	155	22	West	Upwind	Background	No observations seen to effect sampling integrity
12 20m Southeast of Cooling Pond security gate	1632	155	26	West	Downwind	Front end loader cleaning 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 ( $\mu\text{g}/\text{m}^3$ )
150m North of Intercolonial Street fixed station	1100 to 1131	3	990
10m East of Cooling Pond security gate	1415 to 1447	25	990
10m East of Cooling Pond security gate	1515 to 1547	51	990
20m Southeast of Cooling Pond security gate	1615 to 1647	76	990

### VOC Monitoring

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