

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1053-05
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	0630 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>	9 <sup>th</sup> January 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CP-0038</b>

**SUBJECT: 5<sup>th</sup> January 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 5<sup>th</sup> of January, 2008. Reg Peters and Tyler Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Partly Cloudy
- Temperature: -4°C
- Wind Direction: Northwest/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.*

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>.

This report has been prepared by Reg Peters 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  
 5<sup>th</sup> January 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>Activity Description</b>	<b>Observations that may affect sample</b>
1 10m West of Walker Street, 20m North of Ferry Street	0724	155	13	Northwest	Upwind	Background	No observations seen to effect sampling integrity
2 40m Southeast of Southwest corner of STPA office	0724	155	14	Northwest	Downwind	Excavator loading trucks	No observations seen to effect sampling integrity
3 40m Southeast of Southwest corner of STPA office	0745	155	12	Northwest	Downwind	Excavator loading trucks	No observations seen to effect sampling integrity
4 10m West of Walker Street, 20m North of Ferry Street	0821	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
5 40m Southeast of Southwest corner of STPA office	0825	155	14	Northwest	Downwind	Excavator loading trucks	No observations seen to effect sampling integrity
6 40m Southeast of Southwest corner of STPA office	0840	155	15	Northwest	Downwind	Excavator loading trucks	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	Activity Description	Observations that may affect sample
7 40m Southeast of Southwest corner of STPA office	0905	155	16	Northwest	Downwind	Excavator loading trucks	No observations seen to effect sampling integrity
8 10m West of Walker Street, 20m North of Ferry Street	0916	155	3	Northwest	Upwind	Background	No observations seen to effect sampling integrity
9 40m Southeast of Southwest corner of STPA office	0922	155	16	Northwest	Downwind	Excavator loading trucks	No observations seen to effect sampling integrity
10 15m Southeast of Southwest corner of STPA office	1205	155	16	West	Downwind	No visible activity	No observations seen to effect sampling integrity
11 80m South of intersection of Ferry and Intercolonial Streets	1214	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
12 15m Southeast of Southwest corner of STPA office	1221	155	15	West	Downwind	Excavator loading trucks	No observations seen to effect sampling integrity
13 15m Southeast of Southwest corner of STPA office	1302	155	15	West	Downwind	Excavator loading trucks	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	Activity Description	Observations that may affect sample
14 80m South of intersection of Ferry and Intercolonial Streets	1315	155	3	West	Upwind	Background	No observations seen to effect sampling integrity
15 15m Southeast of Southwest corner of STPA office	1320	155	13	West	Downwind	Excavator loading trucks	No observations seen to effect sampling integrity
16 10m West of Walker Street, 20m North of Ferry Street	1415	155	1	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 5m West of Inglis Street, 100m North of Terminal Road	1430	155	9	Northwest	Downwind	Excavator loading trucks	No observations seen to effect sampling integrity
18 5m West of Inglis Street, 100m North of Terminal Road	1450	155	9	Northwest	Downwind	Excavator loading trucks	No observations seen to effect sampling integrity
19 10m West of Walker Street, 20m North of Ferry Street	1515	155	3	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 5m West of Inglis Street, 100m North of Terminal Road	1515	155	9	Northwest	Downwind	Excavator loading trucks	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	Activity Description	Observations that may affect sample
21 5m West of Inglis Street, 100m North of Terminal Road	1530	155	10	Northwest	Downwind	Excavator loading trucks	No observations seen to effect sampling integrity
22 5m West of Inglis Street, 100m North of Terminal Road	1605	155	9	Northwest	Downwind	No visible activity	No observations seen to effect sampling integrity
23 40m East of Ferry Street Bridge	1615	155	-1	Northwest	Upwind	Background	No observations seen to effect sampling integrity
24 5m West of Inglis Street, 100m North of Terminal Road	1630	155	9	Northwest	Downwind	No visible activity	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 ( $\mu\text{g}/\text{m}^3$ )
40m Southeast of Southwest corner of STPA office	0724 to 0800	13	990
40m Southeast of Southwest corner of STPA office	0825 to 0855	28	990
40m Southeast of Southwest corner of STPA office	0905 to 0947	44	990
15m Southeast of Southwest corner of STPA office	1205 to 1236	60	990
15m Southeast of Southwest corner of STPA office	1302 to 1335	74	990
5m West of Inglis Street/ 100m North of Terminal Road	1430 to 1505	83	990
5m West of Inglis Street/ 100m North of Terminal Road	1515 to 1545	93	990
5m West of Inglis Street/ 100m North of Terminal Road	1605 to 1645	102	990

### VOC Monitoring

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

\*P.I.D. was used for all samples and was below detection level.