

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1074-21
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	0930 to 1745
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	26 <sup>th</sup> February, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CP-0078</b>

**SUBJECT: 25<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 25<sup>th</sup> of February, 2008. Colin MacIsaac, Peter Ibrahim and Trevor Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities on the asphalt pad North of the Cooling Pond.

Weather conditions on the day of sampling:

- Clear skies
- Temperature: approximately -1°C (data unavailable from Environment Canada)
- Wind Direction: West to Southwest

**Comments:** *ALL-TECH was on-Site at 0930 and sampling began as soon as there was Site activity. Air monitoring was performed during EarthTech's construction activities.*

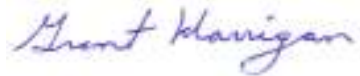
All downwind and upwind measurements of PM<sub>10</sub> were well below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 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**  
**25<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 10m Southwest of Inglis Sreet and Spar Road intersection	0945	155	14	West	Downwind	Excavators removing materials	No observations seen to effect sampling integrity
2 50m Northeast of Plaza Ford Dealership	1000	155	14	West	Upwind	Background	No observations seen to effect sampling integrity
3 10m Southwest Inglis Street and Spar Road intersection	1005	155	10	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
4 10m Southwest of Inglis Street and Spar Road intersection	1030	155	11	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
5 20m South of Dodd Street and Ritchie Street intersection	1100	155	12	West	Upwind	Background	No observations seen to effect sampling integrity
6 10m East of Cooling Ponds security gates	1105	155	10	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
7 10m East of Cooling Ponds security gates	1125	155	11	West	Downwind	Excavators moving materials	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 20m South of Dodd Street, Ritchie Street intersection	1200	155	24	West	Upwind	Background	No observations seen to effect sampling integrity
9 10m East of Cooling Ponds security gate	1200	155	10	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
10 10m East of Cooling Ponds security gate	1215	155	11	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
11 20m South of Dodd Street, Ritchie Street intersection	1300	155	12	Southwest	Upwind	Background	No observations seen to effect sampling integrity
12 10m Southeast of Spar Road, Inglis Street intersections	1300	155	12	Southwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
13 10m Southeast of Spar Road, Inglis Street intersections	1315	155	14	Southwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
14 20m South of Dodd Street, Ritchie Street intersection	1400	155	8	Southwest	Upwind	Background	No observations seen to effect sampling integrity
15 10m Southeast of Spar Road, Inglis Street intersections	1400	155	12	Southwest	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
16 10m Southeast of Spar Road, Inglis Street intersections	1415	155	13	Southwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
17 20m South of Dodd Street, Ritchie Street intersection	1500	155	9	Southwest	Upwind	Background	No observations seen to effect sampling integrity
18 10m Southeast of Spar Road, Inglis Street intersections	1500	155	14	Southwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
19 10m Southeast of Spar Road, Inglis Street intersections	1515	155	14	Southwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
20 20m South of Dodd Street, Ritchie Street intersection	1600	155	12	Southwest	Upwind	Background	No observations seen to effect sampling integrity
21 10m Southeast of Spar Road, Inglis Street intersections	1600	155	13	Southwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
22 10m Southeast of Spar Road, Inglis Street intersections	1615	155	15	Southwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
23 20m South of Dodd Street, Ritchie Street intersection	1700	155	12	Southwest	Upwind	Background	No observations seen to effect sampling integrity

<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>
24 10m Southeast of Spar Road, Inglis Street intersections	1700	155	14	Southwest	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 ( $\mu\text{g}/\text{m}^3$ )
10m Southwest of Inglis Sreet and Spar Road intersection	0945 to 1000	14	990
10m Southwest of Inglis Sreet and Spar Road intersection	1005 to 1045	25	990
10m East of Cool Ponds security gate	1105 to 1140	36	990
10m East of Cool Ponds security gate	1200 to 1230	47	990
10m South East of Spar Road and Inglis Street	1300 to 1330	60	990
10m South East of Spar Road and Inglis Street	1400 to 1430	73	990
10m South East of Spar Road and Inglis Street	1500 to 1530	87	990
10m South East of Spar Road and Inglis Street	1600 to 1630	101	990
10m South East of Spar Road and Inglis Street	1700 to 1715	115	990

### VOC Monitoring

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