

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1208-12
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0900 to 1730
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	20 <sup>th</sup> October, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0037</b>

**SUBJECT: 17<sup>th</sup> October, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Material Processing Facility  
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 17<sup>th</sup> of October, 2008. Grant Harrigan and Alison Giovannetti of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Overcast, morning showers
- Temperature: approximately 8°C
- Wind Direction: North to Northeast

**Comments:** *ALL-TECH was on-Site at 0900 and sampling began as soon as weather conditions were within instrument specifications. Air monitoring was performed during EarthTech's construction activities.*

All downwind and upwind measurements of PM<sub>10</sub> were 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) and high humidity, TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Alison Giovannetti and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



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Dianne Theriault, 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 – Material Processing Facility**  
**17<sup>th</sup> October, 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 100m North of Inglis and Ferry Street intersection	1100	155	6	North	Upwind	Background	No observations seen to affect sampling integrity
2 100m W of Ferry & Inglis Intersection	1120	155	6	North	Downwind	Excavators in operation	No observations seen to effect sampling integrity
3 100m W of Ferry & Inglis Intersection	1140	155	6	North	Downwind	Excavators in operation	No observations seen to effect sampling integrity
4 100m North of Inglis and Ferry Street intersection	1200	155	4	North	Upwind	Background	No observations seen to affect sampling integrity
5 100m W of Ferry & Inglis Intersection	1200	155	4	North	Downwind	Excavators in operation	No observations seen to effect sampling integrity
6 100m W of Ferry & Inglis Intersection	1215	155	4	North	Downwind	Excavators in operation	No observations seen to effect sampling integrity
7 100m North of Inglis and Ferry Street intersection	1300	155	3	North	Upwind	Background	No observations seen to affect 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
8 150 m East of Ferry St. bridge	1330	155	10	Northeast	Downwind	No activity observed on site	No observations seen to effect sampling integrity
9 150 m East of Ferry St. bridge	1345	155	22	Northeast	Downwind	Excavators in operation	No observations seen to effect sampling integrity
10 100m North of Inglis and Ferry Street intersection	1400	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
11 150 m East of Ferry St. bridge	1400	155	19	Northeast	Downwind	Excavators in operation	No observations seen to effect sampling integrity
12 150 m East of Ferry St. bridge	1415	155	12	Northeast	Downwind	Excavators in operation	No observations seen to effect sampling integrity
13 100m North of Inglis and Ferry Street intersection	1500	155	8	Northeast	Upwind	Background	No observations seen to affect sampling integrity
14 150 m East of Ferry St. bridge	1500	155	9	Northeast	Downwind	Excavators in operation	No observations seen to effect sampling integrity
15 150 m East of Ferry St. bridge	1530	155	11	Northeast	Downwind	Excavators in operation	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 100m North of Inglis and Ferry Street intersection	1600	155	9	Northeast	Upwind	Background	No observations seen to affect sampling integrity
17 150 m East of Ferry St. bridge	1600	155	11	Northeast	Downwind	Excavators in operation	No observations seen to effect sampling integrity
18 150 m East of Ferry St. bridge	1645	155	7	Northeast	Downwind	Excavators in operation	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 ( $\mu\text{g}/\text{m}^3$ )
100m W of Ferry & Inglis Intersection	1100 to 1159	6	990
100m W of Ferry & Inglis Intersection	1200 to 1259	10	990
150 m East of Ferry St. bridge	1300 to 1359	25	990
150 m East of Ferry St. bridge	1400 to 1459	41	990
150 m East of Ferry St. bridge	1500 to 1559	51	990
150 m East of Ferry St. bridge	1600 to 1659	60	990

### VOC Monitoring

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