

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1225-08
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 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>	14 <sup>th</sup> November, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0052</b>

**SUBJECT: 13<sup>th</sup> November, 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 13<sup>th</sup> of November, 2008. Jennifer Andrews, and Reggie Peters, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Cloudy skies
- Temperature: approximately 5°C
- Wind Direction: West to Northwest

**Comments:** *ALL-TECH was on-Site at 0730 and sampling began as soon as there was site activity. Air monitoring was performed during EarthTech's construction activities.*

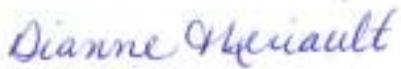
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 Jennifer Andrews 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**  
**13<sup>th</sup> November, 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 40 m Northwest of Inglis and Sparr Road Intersection	0800	155	7	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
2 30 m North of Ferry St. and Walker St. Intersection	0815	155	28	West	Upwind	Background	No observations seen to affect sampling integrity
3 40 m Northwest of Inglis and Sparr Road Intersection	0840	155	4	West	Downwind	Machines moving materials	No observations seen to affect sampling integrity
4 30 m North of Ferry St. and Walker St. Intersection	0900	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
5 40 m Northwest of Inglis and Sparr Road Intersection	0900	155	2	West	Downwind	Machines moving materials	No observations seen to affect sampling integrity
6 40 m Northwest of Inglis and Sparr Road Intersection	0945	155	5	West	Downwind	Machines moving materials	No observations seen to affect 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>
7 5 m West of Inglis and Sparr Road Intersection	1000	155	8	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
8 40 m North of Ferry St. and Railway Rd. Intersection	1005	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
9 5 m West of Inglis and Sparr Road Intersection	1030	155	9	Northwest	Downwind	Machines moving materials	No observations seen to affect sampling integrity
10 40 m North of Ferry St. and Railway Rd. Intersection	1100	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 5 m West of Inglis and Sparr Road Intersection	1100	155	18	Northwest	Downwind	Machines moving materials	No observations seen to affect sampling integrity
12 5 m West of Inglis and Sparr Road Intersection	1135	155	10	Northwest	Downwind	Machines moving materials	No observations seen to affect 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>
13 40 m North of Ferry St. and Railway Rd. Intersection	1200	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
14 5 m West of Inglis and Sparr Road Intersection	1200	155	8	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 5 m West of Inglis and Sparr Road Intersection	1245	155	4	Northwest	Downwind	Machines moving materials	No observations seen to affect sampling integrity
16 40 m North of Ferry St. and Railway Rd. Intersection	1300	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 5 m West of Inglis and Sparr Road Intersection	1300	155	5	Northwest	Downwind	Machines moving materials	No observations seen to affect sampling integrity
18 5 m West of Inglis and Sparr Road Intersection	1340	155	7	Northwest	Downwind	Machines moving materials	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
19 40 m North of Ferry St. and Railway Rd. Intersection	1400	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 5 m West of Inglis and Sparr Road Intersection	1400	155	7	Northwest	Downwind	Machines moving materials	No observations seen to affect sampling integrity
21 5 m West of Inglis and Sparr Road Intersection	1415	155	10	Northwest	Downwind	Machines moving materials	No observations seen to affect sampling integrity
22 40 m North of Ferry St. and Railway Rd. Intersection	1500	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 5 m West of Inglis and Sparr Road Intersection	1500	155	15	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 5 m West of Inglis and Sparr Road Intersection	1530	155	14	Northwest	Downwind	Machines moving materials	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
25 40 m North of Ferry St. and Railway Rd. Intersection	1600	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 5 m West of Inglis and Sparr Road Intersection	1600	155	9	Northwest	Downwind	Machines moving materials	No observations seen to affect sampling integrity
27 5 m West of Inglis and Sparr Road Intersection	1645	155	36	Northwest	Downwind	No activity observed on site	No observations seen to affect 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 ( $\mu\text{g}/\text{m}^3$ )
40 m Northwest of Inglis and Sparr Road Intersection	0800 to 0859	6	990
40 m Northwest of Inglis and Sparr Road Intersection	0900 to 0959	10	990
5 m West of Inglis and Sparr Road Intersection	1000 to 1059	19	990
5 m West of Inglis and Sparr Road Intersection	1100 to 1159	33	990
5 m West of Inglis and Sparr Road Intersection	1200 to 1259	39	990
5 m West of Inglis and Sparr Road Intersection	1300 to 1359	45	990
5 m West of Inglis and Sparr Road Intersection	1400 to 1459	54	990
5 m West of Inglis and Sparr Road Intersection	1500 to 1559	69	990
5 m West of Inglis and Sparr Road Intersection	1600 to 1659	92	990



### VOC Monitoring

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