

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1194-03
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 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> September, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0007</b>

**SUBJECT: 4<sup>th</sup> September, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Materials 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 4<sup>th</sup> of September, 2008. Kelly Morrison 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:

- Cloudy with sunny periods, brief showers
- Temperature: approximately 20°C
- Wind Direction: Southwest / West

**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.*

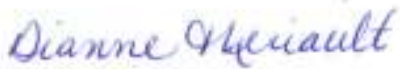
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 Tyler Rowe 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 – Materials Processing Facility**  
**4<sup>th</sup> September, 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 40m Southwest of Walker Street and Ferry Street intersection	0800	155	20	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis Street, 50m North of Spar Road	0800	155	15	Southwest	Downwind	Excavator operating	No observations seen to effect sampling integrity
3 Inglis Street, 50m North of Spar Road	0840	155	12	Southwest	Downwind	Excavator operating	No observations seen to effect sampling integrity
4 40m Southwest of Walker Street and Ferry Street intersection	0900	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis Street, 50m North of Spar Road	0900	155	10	Southwest	Downwind	Excavator operating	No observations seen to effect sampling integrity
6 Inglis Street, 50m North of Spar Road	0920	155	8	Southwest	Downwind	Excavator operating	No observations seen to effect sampling integrity
7 40m Southwest of Walker Street and Ferry Street intersection	1000	155	10	Southwest	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 Inglis Street, 55m North of Spar Road	1000	155	11	Southwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
9 Inglis Street, 55m North of Spar Road	1025	155	10	Southwest	Downwind	Excavator operating	No observations seen to effect sampling integrity
10 40m Southwest of Walker Street and Ferry Street intersection	1100	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 Inglis Street, 55m North of Spar Road	1100	155	4	Southwest	Downwind	Excavator operating	No observations seen to effect sampling integrity
12 Inglis Street, 50m North of Spar Road	1135	155	9	Southwest	Downwind	Excavator operating	No observations seen to effect sampling integrity
13 40m Southwest of Walker Street and Ferry Street intersection	1200	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 Inglis Street, 55m North of Spar Road	1200	155	3	Southwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
15 Inglis Street, 55m North of Spar Road	1215	155	4	Southwest	Downwind	No activity observed on-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
16 Walker Street, 20m North of Ferry Street	1300	155	14	West	Upwind	Background	No observations seen to affect sampling integrity
17 Inglis Street, 45m North of Spar Road	1300	155	14	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
18 Inglis Street, 45m North of Spar Road	1330	155	10	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
19 Walker Street, 50m North of Ferry Street	1400	155	14	West	Upwind	Background	No observations seen to affect sampling integrity
20 Inglis Street, 45m North of Spar Road	1400	155	11	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
21 Inglis Street, 45m North of Spar Road	1420	155	16	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
22 Walker Street, 50m North of Ferry Street	1500	155	14	West	Upwind	Background	No observations seen to affect sampling integrity
23 Inglis Street, 45m North of Spar Road	1500	155	12	West	Downwind	No activity observed on-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
24 Inglis Street, 45m North of Spar Road	1530	155	9	Southwest	Downwind	Excavator operating	No observations seen to effect sampling integrity
25 Walker Street,50m North of Ferry Street	1600	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
26 Inglis Street, 45m North of Spar Road	1600	155	9	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
27 Inglis Street, 45m North of Spar Road	1625	155	6	West	Downwind	No activity observed on-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 ( $\mu\text{g}/\text{m}^3$ )
Inglis Street, 50m North of Spar Road	0800 to 0859	14	990
Inglis Street, 50m North of Spar Road	0900 to 0959	23	990
Inglis Street, 55m North of Spar Road	1000 to 1059	34	990
Inglis Street, 55m North of Spar Road	1100 to 1159	41	990
Inglis Street, 55m North of Spar Road	1200 to 1259	45	990
Inglis Street, 45m North of Spar Road	1300 to 1359	57	990
Inglis Street, 45m North of Spar Road	1400 to 1459	71	990
Inglis Street, 45m North of Spar Road	1500 to 1559	82	990
Inglis Street, 45m North of Spar Road	1600 to 1659	90	990

### VOC Monitoring

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