

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1208-02
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1700
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
<b>FAX</b>	(902) 539-3381		
<b>DATE</b>	3 <sup>rd</sup> October, 2008	<b>STPA NO.</b>	<b>TP2-0027</b>

**SUBJECT: 2<sup>nd</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 2<sup>nd</sup> of October, 2008. Tyler Rowe and Grant Harrigan of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly overcast
- Temperature: approximately 10°C
- Wind Direction: East to Southeast

**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.*

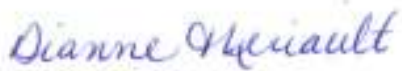
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 – Material Processing Facility**  
**2<sup>nd</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 Inglis Street, 140m North of Spar Road	0800	155	17	East	Upwind	Background	No observations seen to affect sampling integrity
2 Walker Street, 70m North of Ferry Street	0800	155	22	East	Downwind	No activity observed on site	No observations seen to effect sampling integrity
3 Walker Street, 70m North of Ferry Street	0840	155	17	East	Downwind	Excavator operating	No observations seen to effect sampling integrity
4 Inglis Street, 140m North of Spar Road	0900	155	28	East	Upwind	Background	No observations seen to affect sampling integrity
5 Walker Street, 70m North of Ferry Street	0900	155	21	East	Downwind	Excavator operating	No observations seen to effect sampling integrity
6 Walker Street, 70m North of Ferry Street	0945	155	20	East	Downwind	Excavator operating	No observations seen to effect sampling integrity
7 Inglis Street, 15m North of Spar Road	1000	155	15	Southeast	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 Railway property, 120m North of Ferry Street	1020	155	13	Southeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
9 Railway property, 120m North of Ferry Street	1040	155	9	Southeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
10 Inglis Street, 15m North of Spar Road	1100	155	9	Southeast	Upwind	Background	No observations seen to affect sampling integrity
11 Railway property, 120m North of Ferry Street	1100	155	6	Southeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
12 Railway property, 120m North of Ferry Street	1145	155	7	Southeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
13 Inglis Street, 15m North of Spar Road	1200	155	10	Southeast	Upwind	Background	No observations seen to affect sampling integrity
14 Railway property, 120m North of Ferry Street	1200	155	8	Southeast	Downwind	No activity observed on site	No observations seen to effect sampling integrity
15 Railway property, 120m North of Ferry Street	1220	155	8	Southeast	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 Inglis Street, 15m North of Spar Road	1300	155	8	Southeast	Upwind	Background	No observations seen to affect sampling integrity
17 Railway property, 120m North of Ferry Street	1320	155	8	Southeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
18 Railway property, 120m North of Ferry Street	1345	155	10	Southeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
19 Inglis Street, 15m North of Spar Road	1400	155	12	Southeast	Upwind	Background	No observations seen to affect sampling integrity
20 Railway property, 120m North of Ferry Street	1410	155	8	Southeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
21 Railway property, 120m North of Ferry Street	1425	155	6	Southeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
22 Inglis Street, 15m North of Spar Road	1500	155	13	Southeast	Upwind	Background	No observations seen to affect sampling integrity
23 Railway property, 120m North of Ferry Street	1500	155	10	Southeast	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 Railway property, 120m North of Ferry Street	1535	155	6	Southeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
25 Inglis Street, 15m North of Spar Road	1600	155	9	Southeast	Upwind	Background	No observations seen to affect sampling integrity
26 Railway property, 120m North of Ferry Street	1600	155	6	Southeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
27 Railway property, 120m North of Ferry Street	1615	155	9	Southeast	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 ( $\mu\text{g}/\text{m}^3$ )
Walker Street, 70m North of Ferry Street	0800 to 0859	19	990
Walker Street, 70m North of Ferry Street	0900 to 0959	42	990
Railway property, 120m North of Ferry Street	1000 to 1059	53	990
Railway property, 120m North of Ferry Street	1100 to 1159	60	990
Railway property, 120m North of Ferry Street	1200 to 1259	68	990
Railway property, 120m North of Ferry Street	1300 to 1359	77	990
Railway property, 120m North of Ferry Street	1400 to 1459	84	990
Railway property, 120m North of Ferry Street	1500 to 1559	92	990
Railway property, 120m North of Ferry Street	1600 to 1659	100	990

### VOC Monitoring

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