

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1208-13
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1630
<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>TP2-0038</b>

**SUBJECT: 20<sup>th</sup> October, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Material Processing Facility  
FINAL REPORT**

---

Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 20<sup>th</sup> of October, 2008. Tyler Rowe and Reg Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Overcast, rain
- Temperature: approximately 7°C
- Wind Direction: Northeast to East

**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. Air sampling was put on standby between 1515 and 1630 due to precipitation.*

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,



---

Dianne Theriault, B.Tech  
Environmental Technologist  
**ALL-TECH Environmental Services Cape Breton Ltd.**

Copied via e-mail:

Shawn Bernon [shawn@tarpondscleanup.ca](mailto:shawn@tarpondscleanup.ca), Wilfred Kaiser [wilfred@tarpondscleanup.ca](mailto:wilfred@tarpondscleanup.ca), Nancy LeDrew [nancy@tarpondscleanup.ca](mailto:nancy@tarpondscleanup.ca), Trish Magliaro [trish@tarpondscleanup.ca](mailto:trish@tarpondscleanup.ca), Terry Smith [tsmith@toalltech.com](mailto:tsmith@toalltech.com), Phyllis Low [pilow@toalltech.com](mailto:pilow@toalltech.com), Dianne Theriault [dtheriault@toalltech.com](mailto:dtheriault@toalltech.com), Darren Gardiner [dgardiner@croworld.com](mailto:dgardiner@croworld.com), Darren Lawless [dlawless@toalltech.com](mailto:dlawless@toalltech.com), Kevin MacPherson [kevinmacp@cbcl.ca](mailto:kevinmacp@cbcl.ca), Kathy Harquail [kharquail@toalltech.com](mailto:kharquail@toalltech.com)

**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Material Processing Facility**  
**20<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 Inglis Street, 180m North of Spar Road	0800	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 40m Northeast of Ferry Street bridge	0800	155	7	Northeast	Downwind	No activity observed on site	No observations seen to effect sampling integrity
3 40m Northeast of Ferry Street bridge	0830	155	6	Northeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
4 Inglis Street, 180m North of Spar Road	0900	155	2	Northeast	Upwind	Background	No observations seen to affect sampling integrity
5 40m Northeast of Ferry Street bridge	0900	155	2	Northeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
6 40m Northeast of Ferry Street bridge	0930	155	5	Northeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
7 Inglis Street, 180m North of Spar Road	1000	155	3	Northeast	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 40m Northeast of Ferry Street bridge	1000	155	4	Northeast	Downwind	No activity observed on site	No observations seen to effect sampling integrity
9 40m Northeast of Ferry Street bridge	1045	155	4	Northeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
10 Inglis Street, 180m North of Spar Road	1100	155	3	Northeast	Upwind	Background	No observations seen to affect sampling integrity
11 40m Northeast of Ferry Street bridge	1100	155	5	Northeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
12 40m Northeast of Ferry Street bridge	1130	155	5	Northeast	Downwind	Excavator operating	No observations seen to effect sampling integrity
13 Inglis Street, 180m North of Spar Road	1200	155	4	Northeast	Upwind	Background	No observations seen to affect sampling integrity
14 40m Northeast of Ferry Street bridge	1200	155	6	Northeast	Downwind	No activity observed on site	No observations seen to effect sampling integrity
15 40m Northeast of Ferry Street bridge	1245	155	7	Northeast	Downwind	Excavator operating	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, 40m North of Spar Road	1300	155	6	East	Upwind	Background	No observations seen to affect sampling integrity
17 Railway property, 90m North of Ferry Street	1300	155	8	East	Downwind	Excavator operating	No observations seen to effect sampling integrity
18 Railway property, 90m North of Ferry Street	1345	155	7	East	Downwind	Excavator operating	No observations seen to effect sampling integrity
19 Inglis Street, 40m North of Spar Road	1400	155	7	East	Upwind	Background	No observations seen to affect sampling integrity
20 Railway property, 90m North of Ferry Street	1400	155	8	East	Downwind	Excavator operating	No observations seen to effect sampling integrity
21 Railway property, 90m North of Ferry Street	1445	155	10	East	Downwind	Excavator operating	No observations seen to effect sampling integrity
22 Inglis Street, 40m North of Spar Road	1500	155	11	East	Upwind	Background	No observations seen to affect sampling integrity
23 Railway property, 90m North of Ferry Street	1500	155	11	East	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 ( $\mu\text{g}/\text{m}^3$ )
40m Northeast of Ferry Street bridge	0800 to 0859	7	990
40m Northeast of Ferry Street bridge	0900 to 0959	11	990
40m Northeast of Ferry Street bridge	1000 to 1059	15	990
40m Northeast of Ferry Street bridge	1100 to 1159	20	990
40m Northeast of Ferry Street bridge	1200 to 1259	27	990
Railway property, 90m North of Ferry Street	1300 to 1359	35	990
Railway property, 90m North of Ferry Street	1400 to 1459	44	990
Railway property, 90m North of Ferry Street	1500 to 1559	55	990

### VOC Monitoring

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