

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1194-08
<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>	12 <sup>th</sup> September, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0012</b>

**SUBJECT: 11<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 11<sup>th</sup> of September, 2008. Kelly Morrison, Grant Harrigan, Alison Giovannetti 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:

- Sunny
- Temperature: approximately 17°C
- Wind Direction: Southwest 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 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**  
**11<sup>th</sup> September, 2008**

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
1 15m Southeast of Ferry Street and Walker Street intersection	0800	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 150m North of Spar Road on Inglis Street	0800	155	18	Southwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
3 150m North of Spar Road on Inglis Street	0815	155	17	Southwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
4 Railway property, 30m North of Ferry Street	0900	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 50m North of Spar Road on Inglis Street	0900	155	12	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
6 50m North of Spar Road on Inglis Street	0945	155	13	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
7 Railway property, 30m North of Ferry Street	1000	155	6	Northwest	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 10m South of Spar Road on Inglis Street	1000	155	22	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
9 10m South of Spar Road on Inglis Street	1045	155	17	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
10 Railway property, 30m North of Ferry Street	1100	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 10m South of Spar Road on Inglis Street	1100	155	10	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
12 10m South of Spar Road on Inglis Street	1115	155	11	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
13 Railway property, 30m North of Ferry Street	1200	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
14 10m South of Spar Road on Inglis Street	1200	155	12	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
15 10m South of Spar Road on Inglis Street	1215	155	11	Northwest	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 Railway property, 30m North of Ferry Street	1300	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 10m South of Spar Road on Inglis Street	1300	155	12	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
18 10m South of Spar Road on Inglis Street	1315	155	12	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
19 Railway property, 30m North of Ferry Street	1400	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 10m South of Spar Road on Inglis Street	1400	155	12	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
21 10m South of Spar Road on Inglis Street	1415	155	13	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
22 Railway property, 30m North of Ferry Street	1500	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 10m South of Spar Road on Inglis Street	1500	155	13	Northwest	Downwind	Excavator moving material	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 10m South of Spar Road on Inglis Street	1515	155	15	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
25 Railway property, 30m North of Ferry Street	1600	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 10m South of Spar Road on Inglis Street	1600	155	13	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
27 10m South of Spar Road on Inglis Street	1645	155	11	Northwest	Downwind	Excavator moving material	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 ( $\mu\text{g}/\text{m}^3$ )
150m North of Spar Road on Inglis Street	0800 to 0859	18	990
50m North of Spar Road on Inglis Street	0900 to 0959	31	990
10m South of Spar Road on Inglis Street	1000 to 1059	51	990
10m South of Spar Road on Inglis Street	1100 to 1159	62	990
10m South of Spar Road on Inglis Street	1200 to 1259	74	990
10m South of Spar Road on Inglis Street	1300 to 1359	86	990
10m South of Spar Road on Inglis Street	1400 to 1459	99	990
10m South of Spar Road on Inglis Street	1500 to 1559	113	990
10m South of Spar Road on Inglis Street	1600 to 1659	125	990

### VOC Monitoring

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