

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1257-06
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1700
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	13 <sup>th</sup> January, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0084</b>

**SUBJECT: 12<sup>th</sup> January, 2009, 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 12<sup>th</sup> of January, 2009. 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:

- Mainly cloudy with flurries
- Temperature: approximately -4°C
- Wind Direction: West

**Comments:** *ALL-TECH was on-Site at 0730 hours and sampling began as soon as there was site activity. Air monitoring was put on standby between 1500 and 1700 hours due to precipitation. Air monitoring was performed during AECOM'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**  
**12<sup>th</sup> January, 2009**

<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 Walker Street, 20m North of Ferry Street	0800	155	11	West	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis Street, 80m North of Spar Road	0800	155	9	West	Upwind	No activity observed on site	No observations seen to affect sampling integrity
3 Inglis Street, 80m North of Spar Road	0845	155	5	West	Upwind	Machines moving material	No observations seen to affect sampling integrity
4 Walker Street, 20m North of Ferry Street	0900	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis Street, 80m North of Spar Road	0900	155	3	West	Upwind	Machines moving material	No observations seen to affect sampling integrity
6 Inglis Street, 80m North of Spar Road	0945	155	4	West	Upwind	Machines moving material	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 Walker Street, 20m North of Ferry Street	1000	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
8 Inglis Street, 80m North of Spar Road	1000	155	4	West	Upwind	No activity observed on site	No observations seen to affect sampling integrity
9 Inglis Street, 80m North of Spar Road	1040	155	4	West	Upwind	Machines moving material	No observations seen to affect sampling integrity
10 Walker Street, 20m North of Ferry Street	1100	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
11 Inglis Street, 80m North of Spar Road	1100	155	3	West	Upwind	Machines moving material	No observations seen to affect sampling integrity
12 Inglis Street, 80m North of Spar Road	1145	155	4	West	Upwind	Machines moving material	No observations seen to affect sampling integrity
13 Walker Street, 20m North of Ferry Street	1200	155	3	West	Upwind	Background	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>
14 Inglis Street, 80m North of Spar Road	1200	155	3	West	Upwind	No activity observed on site	No observations seen to affect sampling integrity
15 Inglis Street, 80m North of Spar Road	1240	155	4	West	Upwind	Machines moving material	No observations seen to affect sampling integrity
16 Walker Street, 20m North of Ferry Street	1300	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
17 Inglis Street, 80m North of Spar Road	1300	155	5	West	Upwind	Machines moving material	No observations seen to affect sampling integrity
18 Inglis Street, 80m North of Spar Road	1345	155	6	West	Upwind	Machines moving material	No observations seen to affect sampling integrity
19 Walker Street, 20m North of Ferry Street	1400	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
20 Inglis Street, 80m North of Spar Road	1400	155	5	West	Upwind	Machines moving material	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
21 Inglis Street, 80m North of Spar Road	1440	155	6	West	Upwind	Machines moving material	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 ( $\mu\text{g}/\text{m}^3$ )
Inglis Street, 80m North of Spar Road	0800 to 0859	7	990
Inglis Street, 80m North of Spar Road	0900 to 0959	11	990
Inglis Street, 80m North of Spar Road	1100 to 1159	15	990
Inglis Street, 80m North of Spar Road	1200 to 1259	19	990
Inglis Street, 80m North of Spar Road	1300 to 1359	23	990
Inglis Street, 80m North of Spar Road	1400 to 1459	29	990

### VOC Monitoring

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