

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1257-09
<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>	16 <sup>th</sup> January, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0087</b>

**SUBJECT: 15<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 15<sup>th</sup> of January, 2009. Colin MacIsaac 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 sunny
- Temperature: approximately -13°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 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 Colin MacIsaac 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**  
**15<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 25m North of Ferry Street, Walker Street intersection	0800	155	20	West	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis Street, 60m North of Spar Road	0800	155	9	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 Inglis Street, 60m North of Spar Road	0830	155	10	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
4 25m North of Ferry Street, Walker Street intersection	0900	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis Street, 60m North of Spar Road	0900	155	6	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
6 Inglis Street, 60m North of Spar Road	0945	155	7	West	Downwind	Machine 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 25m North of Ferry Street, Walker Street intersection	1000	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
8 Inglis Street, 60m North of Spar Road	1000	155	8	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 Inglis Street, 60m North of Spar Road	1020	155	8	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
10 25m North of Ferry Street, Walker Street intersection	1100	155	0	West	Upwind	Background	Performed re-zeroing of DustTrak
11 Inglis Street, 60m North of Spar Road	1100	155	6	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
12 Inglis Street, 60m North of Spar Road	1145	155	9	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
13 25m North of Ferry Street, Walker Street intersection	1200	155	8	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, 60m North of Spar Road	1200	155	10	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 Inglis Street, 60m North of Spar Road	1245	155	8	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
16 25m North of Ferry Street, Walker Street intersection	1300	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
17 Inglis Street, 60m North of Spar Road	1300	155	8	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
18 Inglis Street, 60m North of Spar Road	1325	155	7	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
19 25m North of Ferry Street, Walker Street intersection	1400	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
20 Inglis Street, 60m North of Spar Road	1400	155	7	West	Downwind	Machine 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, 60m North of Spar Road	1440	155	12	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
22 25m North of Ferry Street, Walker Street intersection	1500	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
23 Inglis Street, 60m North of Spar Road	1500	155	6	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
24 Inglis Street, 60m North of Spar Road	1540	155	9	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
25 25m North of Ferry Street, Walker Street intersection	1600	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
26 Inglis Street, 60m North of Spar Road	1600	155	6	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
27 Inglis Street, 60m North of Spar Road	1645	155	6	West	Downwind	Machine 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, 60m North of Spar Road	0800 to 0859	10	990
Inglis Street, 60m North of Spar Road	0900 to 0959	17	990
Inglis Street, 60m North of Spar Road	1000 to 1059	26	990
Inglis Street, 60m North of Spar Road	1100 to 1159	34	990
Inglis Street, 60m North of Spar Road	1200 to 1259	43	990
Inglis Street, 60m North of Spar Road	1300 to 1359	51	990
Inglis Street, 60m North of Spar Road	1400 to 1459	61	990
Inglis Street, 60m North of Spar Road	1500 to 1559	69	990
Inglis Street, 60m North of Spar Road	1600 to 1659	75	990

### VOC Monitoring

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