

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1257-01
<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>	6 <sup>th</sup> January, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0079</b>

**SUBJECT: 5<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 5<sup>th</sup> of January, 2009. Grant Harrigan, Nigel MacLean, Alison Giovannetti 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 -5°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.*

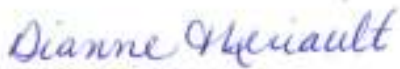
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 Reg Peters 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**  
**5<sup>th</sup> January, 2009**

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 50m North of Ferry Street, Walker Street intersection	0800	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
2 200m North of Inglis Street, Spar Road Intersection	0830	155	10	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
3 200m North of Inglis Street, Spar Road Intersection	0845	155	9	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
4 50m North of Ferry Street, Walker Street intersection	0900	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
5 200m North of Inglis Street, Spar Road Intersection	0900	155	3	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
6 200m North of Inglis Street, Spar Road Intersection	0935	155	1	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 50m North of Ferry Street, Walker Street intersection	1000	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
8 200m North of Inglis Street, Spar Road Intersection	1000	155	1	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 200m North of Inglis Street, Spar Road Intersection	1040	155	2	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
10 50m North of Railway, Ferry Street Intersection	1100	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
11 200m North of Inglis Street, Spar Road Intersection	1100	155	2	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
12 200m North of Inglis Street, Spar Road Intersection	1120	155	1	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
13 50m North of Railway, Ferry Street Intersection	1200	155	5	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 200m North of Inglis Street, Spar Road Intersection	1200	155	2	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 200m North of Inglis Street, Spar Road Intersection	1225	155	1	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
16 50m North of Railway, Ferry Street Intersection	1300	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
17 200m North of Inglis Street, Spar Road Intersection	1300	155	1	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
18 200m North of Inglis Street, Spar Road Intersection	1325	155	11	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
19 50m North of Railway, Ferry Street Intersection	1400	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
20 200m North of Inglis Street, Spar Road Intersection	1400	155	3	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 200m North of Inglis Street, Spar Road Intersection	1430	155	3	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
22 50m North of Railway, Ferry Street Intersection	1500	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
23 200m North of Inglis Street, Spar Road Intersection	1500	155	1	West	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
24 200m North of Inglis Street, Spar Road Intersection	1530	155	1	West	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
25 50m North of Railway, Ferry Street Intersection	1600	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
26 200m North of Inglis Street, Spar Road Intersection	1600	155	1	West	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
27 200m North of Inglis Street, Spar Road Intersection	1645	155	1	West	Downwind	No activity observed on site	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 ( $\mu\text{g}/\text{m}^3$ )
200m North of Inglis Street, Spar Road Intersection	0800 to 0859	10	990
200m North of Inglis Street, Spar Road Intersection	0900 to 0959	12	990
200m North of Inglis Street, Spar Road Intersection	1000 to 1059	14	990
200m North of Inglis Street, Spar Road Intersection	1100 to 1159	16	990
200m North of Inglis Street, Spar Road Intersection	1200 to 1259	18	990
200m North of Inglis Street, Spar Road Intersection	1300 to 1359	24	990
200m North of Inglis Street, Spar Road Intersection	1400 to 1459	27	990
200m North of Inglis Street, Spar Road Intersection	1500 to 1559	28	990
200m North of Inglis Street, Spar Road Intersection	1600 to 1659	29	990

### VOC Monitoring

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