

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
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**DATE** 27<sup>th</sup> March, 2009

**FILE NO.** S-1279-16  
**SHIFT:** 0730 to 1730  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH  
**STPA NO.** TP2-0132

**SUBJECT: 26<sup>th</sup> March, 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 26<sup>th</sup> of March, 2009. Shaun Dove 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:  
- Snow flurries then overcast  
- Temperature: approximately -1°C  
- Wind Direction: Northeast

**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 Shaun Dove 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**  
**26<sup>th</sup> March, 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 Inglis street, 150 m North of Spar Road	0800	155	8	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 150m South West of Ferry St. Bridge	0800	155	12	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
3 150m South West of Ferry St. Bridge	0830	155	14	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
4 Inglis street, 150 m North of Spar Road	0900	155	9	Northeast	Upwind	Background	No observations seen to affect sampling integrity
5 150m South West of Ferry St. Bridge	0900	155		Northeast	Downwind	Worker activity	Equipment Malfunction
6 150m South West of Ferry St. Bridge	0930	155	13	Northeast	Downwind	Worker activity	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 Inglis street, 150 m North of Spar Road	1000	155	7	Northeast	Upwind	Background	No observations seen to affect sampling integrity
8 150m South West of Ferry St. Bridge	1000	155	13	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 150m South West of Ferry St. Bridge	1030	155	16	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
10 Inglis street, 150 m North of Spar Road	1100	155	7	Northeast	Upwind	Background	No observations seen to affect sampling integrity
11 150m South West of Ferry St. Bridge	1100	155	15	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
12 150m South West of Ferry St. Bridge	1130	155	14	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
13 Inglis street, 150 m North of Spar Road	1200	155	4	Northeast	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 150m South West of Ferry St. Bridge	1200	155	11	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 150m South West of Ferry St. Bridge	1230	155	14	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 Inglis street, 150 m North of Spar Road	1300	155	5	Northeast	Upwind	Background	No observations seen to affect sampling integrity
17 150m South West of Ferry St. Bridge	1300	155	13	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
18 150m South West of Ferry St. Bridge	1330	155	13	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
19 Inglis street, 150 m North of Spar Road	1400	155	4	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 150m South West of Ferry St. Bridge	1400	155	13	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity

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21 150m South West of Ferry St. Bridge	1430	155	12	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
22 Inglis street, 150 m North of Spar Road	1500	155	3	Northeast	Upwind	Background	No observations seen to affect sampling integrity
23 150m South West of Ferry St. Bridge	1500	155	10	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
24 150m South West of Ferry St. Bridge	1545	155	11	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
25 Inglis street, 150 m North of Spar Road	1600	155	2	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 150m South West of Ferry St. Bridge	1600	155	11	Northeast	Downwind	Worker activity	No observations seen to affect sampling integrity
27 150m South West of Ferry St. Bridge	1645	155	10	Northeast	Downwind	Worker activity	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 ( $\mu\text{g}/\text{m}^3$ )
150m South of Ferry Street Bridge	0800 to 0859	13	990
150m South of Ferry Street Bridge	0900 to 0959	26	990
150m South of Ferry Street Bridge	1000 to 1059	40	990
150m South of Ferry Street Bridge	1100 to 1159	55	990
150m South of Ferry Street Bridge	1200 to 1259	68	990
150m South of Ferry Street Bridge	1300 to 1359	81	990
150m South of Ferry Street Bridge	1400 to 1459	94	990
150m South of Ferry Street Bridge	1500 to 1559	105	990
150m South of Ferry Street Bridge	1600 to 1659	116	990

### VOC Monitoring

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