

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1291-02
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1730
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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<b>DATE</b>	3 <sup>rd</sup> April, 2009	<b>STPA NO.</b>	<b>TP2-0136</b>

**SUBJECT: 2<sup>nd</sup> April, 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 2<sup>nd</sup> of April, 2009. Shaun Dove and Alison Giovannetti, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Sunny with cloudy periods
- Temperature: approximately 4°C
- Wind Direction: Southwest

**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 Alison Giovannetti 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**  
**2<sup>nd</sup> April, 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 15m Northwest of fixed station on Intercolonial	0800	155	21	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis St. 150m Northeast of TP2 site	0800	155	21	Southwest	Downwind	Worker activity/Zoom boom operating	No observations seen to affect sampling integrity
3 Inglis St. 150m Northeast of TP2 site	0830	155	22	Southwest	Downwind	Worker activity/Zoom boom operating	No observations seen to affect sampling integrity
4 15m Northwest of fixed station on Intercolonial	0900	155	28	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis St. 150m Northeast of TP2 site	0900	155	25	Southwest	Downwind	Zoom boom operating/ dump trucks moving material	No observations seen to affect sampling integrity
6 Inglis St. 150m Northeast of TP2 site	0930	155	24	Southwest	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 15m Northwest of fixed station on Intercolonial	1000	155	29	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 Inglis St. 150m Northeast of TP2 site	1000	155	22	Southwest	Downwind	No activity visible on-site	No observations seen to affect sampling integrity
9 Inglis St. 150m Northeast of TP2 site	1020	155	22	Southwest	Downwind	Worker activity	No observations seen to affect sampling integrity
10 15m Northwest of fixed station on Intercolonial	1100	155	25	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 Inglis St. 150m Northeast of TP2 site	1100	155	19	Southwest	Downwind	Worker activity	No observations seen to affect sampling integrity
12 Inglis St. 150m Northeast of TP2 site	1120	155	20	Southwest	Downwind	Worker activity	No observations seen to affect sampling integrity
13 15m Northwest of fixed station on Intercolonial	1200	155	33	Southwest	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
14 Inglis St. 150m Northeast of TP2 site	1200	155	19	Southwest	Downwind	No activity visible on-site	No observations seen to affect sampling integrity
15 Inglis St. 150m Northeast of TP2 site	1240	155	20	Southwest	Downwind	Worker activity	No observations seen to affect sampling integrity
16 15m Northwest of fixed station on Intercolonial	1300	155	21	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 Inglis St. 150m Northeast of TP2 site	1300	155	19	Southwest	Downwind	Worker activity	No observations seen to affect sampling integrity
18 Inglis St. 150m Northeast of TP2 site	1320	155	18	Southwest	Downwind	Worker activity/ Cement truck dumping	No observations seen to affect sampling integrity
19 15m Northwest of fixed station on Intercolonial	1400	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 Inglis St. 150m Northeast of TP2 site	1400	155	15	Southwest	Downwind	Worker activity	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 St. 150m Northeast of TP2 site	1420	155	15	Southwest	Downwind	Worker activity	No observations seen to affect sampling integrity
22 15m Northwest of fixed station on Intercolonial	1500	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 Inglis St. 150m Northeast of TP2 site	1500	155	15	Southwest	Downwind	No activity visible on-site	No observations seen to affect sampling integrity
24 Inglis St. 150m Northeast of TP2 site	1530	155	16	Southwest	Downwind	Worker activity	No observations seen to affect sampling integrity
25 15m Northwest of fixed station on Intercolonial	1600	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 Inglis St. 150m Northeast of TP2 site	1600	155	16	Southwest	Downwind	Worker activity	No observations seen to affect sampling integrity
27 Inglis St. 150m Northeast of TP2 site	1630	155	16	Southwest	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 ( $\mu\text{g}/\text{m}^3$ )
Inglis St. 150m Northeast of TP2 site	0800 to 0859	22	990
Inglis St. 150m Northeast of TP2 site	0900 to 0959	47	990
Inglis St. 150m Northeast of TP2 site	1000 to 1059	69	990
Inglis St. 150m Northeast of TP2 site	1100 to 1159	89	990
Inglis St. 150m Northeast of TP2 site	1200 to 1259	109	990
Inglis St. 150m Northeast of TP2 site	1300 to 1359	128	990
Inglis St. 150m Northeast of TP2 site	1400 to 1459	143	990
Inglis St. 150m Northeast of TP2 site	1500 to 1559	159	990
Inglis St. 150m Northeast of TP2 site	1600 to 1659	175	990

### VOC Monitoring

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