

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1288-07
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1815
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<b>DATE</b>	26 <sup>th</sup> March, 2009	<b>STPA NO.</b>	<b>TP6D-0007</b>

**SUBJECT: 25<sup>th</sup> March, 2009, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads  
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 25<sup>th</sup> of March, 2009. Alison Giovannetti and Shaun Dove, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly cloudy
- Temperature: approximately -1°C
- Wind Direction: Northeast

**Comments:** *ALL-TECH was on-Site at 0630 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**  
**25<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 75m Northeast of TP2 facility along Inglis St.	0700	155	7	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 150m East of Ferry St. bridge	0700	155	15	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
3 150m East of Ferry St. Bridge	0730	155	21	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
4 75m Northeast of TP2 facility along Inglis St.	0800	155	8	Northeast	Upwind	Background	No observations seen to affect sampling integrity
5 150m East of Ferry St. Bridge	0800	155	21	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
6 150m East of Ferry St. Bridge	0830	155	16	Northeast	Downwind	Excavators dumping and 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 75m Northeast of TP2 facility along Inglis St.	0900	155	8	Northeast	Upwind	Background	No observations seen to affect sampling integrity
8 150m East of Ferry St. Bridge	0900	155	20	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
9 150m East of Ferry St. Bridge	0930	155	20	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
10 75m Northeast of TP2 facility along Inglis St.	1000	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
11 150m East of Ferry St. Bridge	1000	155	15	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
12 150m East of Ferry St. Bridge	1030	155	19	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
13 75m Northeast of TP2 facility along Inglis St.	1100	155	9	Northeast	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 150m East of Ferry St. Bridge	1100	155	14	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
15 150m East of Ferry St. Bridge	1130	155	14	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
16 75m Northeast of TP2 facility along Inglis St.	1200	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
17 150m East of Ferry St. Bridge	1200	155	10	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
18 150m East of Ferry St. Bridge	1230	155	9	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
19 75m Northeast of TP2 facility along Inglis St.	1300	155	9	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 150m East of Ferry St. Bridge	1300	155	11	Northeast	Downwind	Excavators dumping and 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 150m East of Ferry St. Bridge	1330	155	10	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
22 75m Northeast of TP2 facility along Inglis St.	1400	155	7	Northeast	Upwind	Background	No observations seen to affect sampling integrity
23 150m East of Ferry St. Bridge	1400	155	9	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
24 150m East of Ferry St. Bridge	1430	155	9	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
25 75m Northeast of TP2 facility along Inglis St.	1500	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 150m East of Ferry St. Bridge	1500	155	10	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
27 150m East of Ferry St. Bridge	1530	155	11	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM10 Action Level (µg/m3)	Average Result (µg/m3)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
28 75m Northeast of TP2 facility along Inglis St.	1600	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
29 150m East of Ferry St. Bridge	1600	155	11	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
30 150m East of Ferry St. Bridge	1630	155	10	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
31 75m Northeast of TP2 facility along Inglis St.	1700	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
32 150m East of Ferry St. Bridge	1700	155	11	Northeast	Downwind	Excavators dumping and moving material	No observations seen to affect sampling integrity
33 150m East of Ferry St. bridge	1730	155	10	Northeast	Downwind	Excavators dumping and 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

<b>Location</b>	<b>Duration</b>	<b>Dust Budget Value (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Dust Budget Exceedance Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
150m East of Ferry St. Bridge	0700 to 0759	18	990
150m East of Ferry St. Bridge	0800 to 0859	37	990
150m East of Ferry St. Bridge	0900 to 0959	57	990
150m East of Ferry St. Bridge	1000 to 1059	74	990
150m East of Ferry St. Bridge	1100 to 1159	88	990
150m East of Ferry St. Bridge	1200 to 1259	98	990
150m East of Ferry St. Bridge	1300 to 1359	109	990
150m East of Ferry St. Bridge	1400 to 1459	110	990
150m East of Ferry St. Bridge	1500 to 1559	121	990
150m East of Ferry St. Bridge	1600 to 1659	132	990
150m East of Ferry St. Bridge	1700 to 1759	143	990



### VOC Monitoring

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