

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1288-08
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1830
<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>	27 <sup>th</sup> March, 2009	<b>STPA NO.</b>	<b>TP6D-0008</b>

**SUBJECT: 26<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 26<sup>th</sup> of March, 2009. Reg Peters and Trevor 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 0630 hours and sampling began as soon as weather conditions improved enough for the instruments to be used. 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 – Access Roads  
 26<sup>th</sup> March, 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 Inglis Street, 200m North of Spar Road	0800	155	9	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 40m North of Inglis Street and railway intersection	0825	155	9	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
3 40m North of Inglis Street and railway intersection	0845	155	9	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 Inglis Street, 200m North of Spar Road	0900	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
5 40m North of Inglis Street and railway intersection	0900	155	9	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 40m North of Inglis Street and railway intersection	0930	155	9	Northeast	Downwind	Machines 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 Inglis Street, 200m North of Spar Road	1000	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
8 40m North of Inglis Street and railway intersection	1000	155	8	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 40m North of Inglis Street and railway intersection	1020	155	9	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 Inglis Street, 200m North of Spar Road	1100	155	15	Northeast	Upwind	Background	No observations seen to affect sampling integrity
11 40m North of Inglis Street and railway intersection	1100	155	10	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 40m North of Inglis Street and railway intersection	1130	155	10	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 Inglis Street, 200m North of Spar Road	1200	155	13	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 40m North of Inglis Street and railway intersection	1200	155	8	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 40m North of Inglis Street and railway intersection	1230	155	9	Northeast	Downwind	Machines moving materials.	No observations seen to affect sampling integrity
16 Inglis Street, 200m North of Spar Road	1300	155	14	Northeast	Upwind	Background	No observations seen to affect sampling integrity
17 40m North of Inglis Street and railway intersection	1300	155	8	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 40m North of Inglis Street and railway intersection	1320	155	8	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 Inglis Street, 200m North of Spar Road	1400	155	15	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 40m North of Inglis Street and railway intersection	1400	155	8	Northeast	Downwind	Machines 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 40m North of Inglis Street and railway intersection	1430	155	7	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 Inglis Street, 200m North of Spar Road	1500	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
23 40m North of Inglis Street and railway intersection	1500	155	6	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 40m North of Inglis Street and railway intersection	1545	155	6	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 Inglis Street, 200m North of Spar Road	1600	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 40m North of Inglis Street and railway intersection	1600	155	5	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 40m North of Inglis Street and railway intersection	1630	155	4	Northeast	Downwind	Machines 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
28 Inglis Street, 200m North of Spar Road	1700	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
29 40m North of Inglis Street and railway intersection	1700	155	5	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
30 40m North of Inglis Street and railway intersection	1745	155	4	Northeast	Downwind	Machines 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 ( $\mu\text{g}/\text{m}^3$ )
40m North of Inglis Street and railway intersection	0800 to 0859	9	990
40m North of Inglis Street and railway intersection	0900 to 0959	18	990
40m North of Inglis Street and railway intersection	1000 to 1059	27	990
40m North of Inglis Street and railway intersection	1100 to 1159	37	990
40m North of Inglis Street and railway intersection	1200 to 1259	46	990
40m North of Inglis Street and railway intersection	1300 to 1359	54	990
40m North of Inglis Street and railway intersection	1400 to 1459	62	990
40m North of Inglis Street and railway intersection	1500 to 1559	68	990
40m North of Inglis Street and railway intersection	1600 to 1659	73	990
40m North of Inglis Street and railway intersection	1700 to 1759	78	990



### VOC Monitoring

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