

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1292-13
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	21 <sup>st</sup> April, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP6D-0023</b>

**SUBJECT: 20<sup>th</sup> April, 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 20<sup>th</sup> of April, 2009. Tyler Rowe 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 sunny
- Temperature: approximately 6°C
- Wind Direction: West to North

**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 Tyler Rowe 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**  
**20<sup>th</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 Railway property, 400m North of Ferry Street	0700	155	37	West	Upwind	Background	No observations seen to affect sampling integrity
2 250m Northwest of Inglis St., Spar Rd. Intersection	0700	155	29	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 250m Northwest of Inglis St., Spar Rd. Intersection	0728	155	29	West	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
4 Railway property, 400m North of Ferry Street	0800	155	17	West	Upwind	Background	No observations seen to affect sampling integrity
5 250m Northwest of Inglis St., Spar Rd. Intersection	0800	155	35	West	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
6 250m Northwest of Inglis St., Spar Rd. Intersection	0820	155	15	West	Downwind	Excavators, dump trucks 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
7 100m North of railway office	0900	155	15	North	Upwind	Background	No observations seen to affect sampling integrity
8 50m Northeast of Acadian Lines terminal	0900	155	12	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
9 50m Northeast of Acadian Lines terminal	0930	155	12	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
10 100m North of railway office	1000	155	15	North	Upwind	Background	No observations seen to affect sampling integrity
11 50m Northeast of Acadian Lines terminal	1000	155	11	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 50m Northeast of Acadian Lines terminal	1040	155	13	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
13 100m North of railway office	1100	155	21	North	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 50m Northeast of Acadian Lines terminal	1100	155	11	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
15 50m Northeast of Acadian Lines terminal	1120	155	10	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
16 100m North of railway office	1200	155	15	North	Upwind	Background	No observations seen to affect sampling integrity
17 50m Northeast of Acadian Lines terminal	1200	155	10	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 50m Northeast of Acadian Lines terminal	1230	155	11	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
19 100m North of railway office	1300	155	27	North	Upwind	Background	No observations seen to affect sampling integrity
20 50m Northeast of Acadian Lines terminal	1300	155	11	North	Downwind	Excavators, dump trucks 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 50m Northeast of Acadian Lines terminal	1315	155	11	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
22 100m North of railway office	1400	155	26	North	Upwind	Background	No observations seen to affect sampling integrity
23 50m Northeast of Acadian Lines terminal	1400	155	12	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
24 50m Northeast of Acadian Lines terminal	1440	155	13	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
25 100m North of railway office	1500	155	23	North	Upwind	Background	No observations seen to affect sampling integrity
26 50m Northeast of Acadian Lines terminal	1500	155	11	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 50m Northeast of Acadian Lines terminal	1530	155	11	North	Downwind	Excavators, dump trucks 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 100m North of railway office	1600	155	39	North	Upwind	Background	No observations seen to affect sampling integrity
29 50m Northeast of Acadian Lines terminal	1600	155	N/A	North	Downwind	Excavators, dump trucks moving material	No sample due to equipment malfunction
30 50m Northeast of Acadian Lines terminal	1618	155	11	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
31 100m North of railway office	1700	155	16	North	Upwind	Background	No observations seen to affect sampling integrity
32 50m Northeast of Acadian Lines terminal	1700	155	9	North	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
33 50m Northeast of Acadian Lines terminal	1740	155	10	North	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 ( $\mu\text{g}/\text{m}^3$ )
250m Northwest of Inglis St., Spar Rd. Intersection	0700 to 0759	29	990
250m Northwest of Inglis St., Spar Rd. Intersection	0800 to 0859	54	990
50m Northeast of Acadian Lines terminal	0900 to 0959	66	990
50m Northeast of Acadian Lines terminal	1000 to 1059	78	990
50m Northeast of Acadian Lines terminal	1100 to 1159	89	990
50m Northeast of Acadian Lines terminal	1200 to 1259	100	990
50m Northeast of Acadian Lines terminal	1300 to 1359	111	990
50m Northeast of Acadian Lines terminal	1400 to 1459	124	990
50m Northeast of Acadian Lines terminal	1500 to 1559	135	990
50m Northeast of Acadian Lines terminal	1600 to 1659	146	990
50m Northeast of Acadian Lines terminal	1700 to 1759	156	990



### VOC Monitoring

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