

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1292-14
<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>	22 <sup>nd</sup> April, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP6D-0024</b>

**SUBJECT: 21<sup>st</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 21<sup>st</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 10°C
- Wind Direction: East to Southwest

**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  
 21<sup>st</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 150m North of TP6D main gate	0700	155	50	East	Upwind	Background	No observations seen to affect sampling integrity
2 150m Southeast of railway building	0700	155	35	East	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
3 150m Southeast of railway building	0720	155	30	East	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
4 30m Southeast of Walker St., Ferry St. intersection	0800	155	25	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 200m Northwest of Inglis St., Spar Rd. intersection	0800	155	26	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
6 200m Northwest of Inglis St., Spar Rd. intersection	0820	155	29	Southwest	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 30m Southeast of Walker St., Ferry St. intersection	0900	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 200m Northwest of Inglis St., Spar Rd. intersection	0900	155	46	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
9 200m Northwest of Inglis St., Spar Rd. intersection	0935	155	26	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
10 30m Southeast of Walker St., Ferry St. intersection	1000	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 200m Northwest of Inglis St., Spar Rd. intersection	1000	155	17	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 200m Northwest of Inglis St., Spar Rd. intersection	1020	155	19	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
13 30m Southeast of Walker St., Ferry St. intersection	1100	155	12	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 200m Northwest of Inglis St., Spar Rd. intersection	1100	155	14	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
15 200m Northwest of Inglis St., Spar Rd. intersection	1130	155	14	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
16 30m Southeast of Walker St., Ferry St. intersection	1200	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 200m Northwest of Inglis St., Spar Rd. intersection	1200	155	28	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 200m Northwest of Inglis St., Spar Rd. intersection	1220	155	19	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 30m Southeast of Walker St., Ferry St. intersection	1300	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 200m Northwest of Inglis St., Spar Rd. intersection	1300	155	27	Southwest	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 200m Northwest of Inglis St., Spar Rd. intersection	1335	155	24	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
22 30m Southeast of Walker St., Ferry St. intersection	1400	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 200m Northwest of Inglis St., Spar Rd. intersection	1400	155	20	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
24 200m Northwest of Inglis St., Spar Rd. intersection	1415	155	24	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
25 30m Southeast of Walker St., Ferry St. intersection	1500	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 200m Northwest of Inglis St., Spar Rd. intersection	1500	155	19	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 200m Northwest of Inglis St., Spar Rd. intersection	1520	155	52	Southwest	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 30m Southeast of Walker St., Ferry St. intersection	1600	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 200m Northwest of Inglis St., Spar Rd. intersection	1600	155	17	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
30 200m Northwest of Inglis St., Spar Rd. intersection	1615	155	21	Southwest	Downwind	Excavators, dump trucks moving material	No observations seen to affect sampling integrity
31 30m Southeast of Walker St., Ferry St. intersection	1700	155	94	Southwest	Upwind	Background	Grass fire upwind
32 200m Northwest of Inglis St., Spar Rd. intersection	1700	155	73	Southwest	Downwind	Excavators, dump trucks moving material	Grass fire upwind
33 200m Northwest of Inglis St., Spar Rd. intersection	1745	155	45	Southwest	Downwind	No activity observed on site	Grass fire upwind

**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 Southeast of railway building	0700 to 0759	33	990
200m Northwest of Inglis St., Spar Rd. intersection	0800 to 0859	61	990
200m Northwest of Inglis St., Spar Rd. intersection	0900 to 0959	97	990
200m Northwest of Inglis St., Spar Rd. intersection	1000 to 1059	115	990
200m Northwest of Inglis St., Spar Rd. intersection	1100 to 1159	129	990
200m Northwest of Inglis St., Spar Rd. intersection	1200 to 1259	153	990
200m Northwest of Inglis St., Spar Rd. intersection	1300 to 1359	179	990
200m Northwest of Inglis St., Spar Rd. intersection	1400 to 1459	201	990
200m Northwest of Inglis St., Spar Rd. intersection	1500 to 1559	237	990
200m Northwest of Inglis St., Spar Rd. intersection	1600 to 1659	256	990
200m Northwest of Inglis St., Spar Rd. intersection	1700 to 1759	315	990



### VOC Monitoring

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