

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1292-04
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0800 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>	7 <sup>th</sup> April, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP6D-0014</b>

**SUBJECT: 6<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 6<sup>th</sup> of April, 2009. Tyler Rowe and Nigel MacLean, 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 5°C
- Wind Direction: West

**Comments** *ALL-TECH was on-Site at 0800 hours and sampling began as soon as weather conditions were within instrument specifications. 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**  
**6<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	1015	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
2 85m North of TP6D main gate	1015	155	8	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
3 85m North of TP6D main gate	1040	155	8	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
4 Railway property, 400m North of Ferry Street	1100	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
5 85m North of TP6D main gate	1100	155	10	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
6 85m North of TP6D main gate	1140	155	10	West	Downwind	Excavators, dump trucks operating	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 Railway property, 400m North of Ferry Street	1200	155	11	West	Upwind	Background	No observations seen to affect sampling integrity
8 85m North of TP6D main gate	1200	155	11	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
9 85m North of TP6D main gate	1240	155	13	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
10 Railway property, 400m North of Ferry Street	1300	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
11 85m North of TP6D main gate	1300	155	10	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
12 85m North of TP6D main gate	1345	155	7	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
13 Railway property, 400m North of Ferry Street	1400	155	5	West	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 85m North of TP6D main gate	1400	155	7	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
15 85m North of TP6D main gate	1440	155	7	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
16 Railway property, 400m North of Ferry Street	1500	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
17 85m North of TP6D main gate	1500	155	6	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
18 85m North of TP6D main gate	1520	155	5	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
19 Railway property, 400m North of Ferry Street	1600	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
20 85m North of TP6D main gate	1600	155	6	West	Downwind	Excavators, dump trucks operating	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 85m North of TP6D main gate	1625	155	6	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
22 Railway property, 400m North of Ferry Street	1700	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
23 85m North of TP6D main gate	1700	155	4	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
24 85m North of TP6D main gate	1745	155	4	West	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 ( $\mu\text{g}/\text{m}^3$ )
85m North of TP6D main gate	1000 to 1059	8	990
85m North of TP6D main gate	1100 to 1159	18	990
85m North of TP6D main gate	1200 to 1259	30	990
85m North of TP6D main gate	1300 to 1359	39	990
85m North of TP6D main gate	1400 to 1459	46	990
85m North of TP6D main gate	1500 to 1559	51	990
85m North of TP6D main gate	1600 to 1659	57	990
85m North of TP6D main gate	1700 to 1759	61	990

### VOC Monitoring

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