

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1313-31
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0700 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>	29 <sup>th</sup> May, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP6D-SP-0069</b>

**SUBJECT: 28<sup>th</sup> May, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, South Pond  
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 28<sup>th</sup> of May, 2009. David Reeves 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 14°C
- Wind Direction: Southwest to Northwest

**Comments:** *Air monitoring was delayed until 0700 hours due to precipitation, and began at 0900 hours when 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 David Reeves 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, South Pond**  
**28<sup>th</sup> May, 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 20m North of Prince St. and Dodd St. intersection	0900	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 75m North of Plaza Ford	0900	155	10	Southwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
3 75m North of Plaza Ford	0925	155	10	Southwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
4 20m North of Prince St. and Dodd St. intersection	1000	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 75m North of Plaza Ford	1000	155	9	Southwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
6 75m North of Plaza Ford	1015	155	10	Southwest	Downwind	Dozer, dump trucks, roller in operation	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 20m North of Prince St. and Dodd St. intersection	1100	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 75m North of Plaza Ford	1100	155	9	Southwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
9 75m North of Plaza Ford	1120	155	8	Southwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
10 20m North of Prince St. and Dodd St. intersection	1200	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 75m North of Plaza Ford	1200	155	8	Southwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
12 75m North of Plaza Ford	1225	155	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
13 10m East of former train station	1300	155	8	Northwest	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 55m North of Terminal Rd. and Prince St. intersection	1300	155	8	Northwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
15 55m North of Terminal Rd. and Prince St. intersection	1315	155	9	Northwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
16 10m East of former train station	1400	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 55m North of Terminal Rd. and Prince St. intersection	1400	155	8	Northwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
18 55m North of Terminal Rd. and Prince St. intersection	1440	155	8	Northwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
19 10m East of former train station	1500	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 55m North of Terminal Rd. and Prince St. intersection	1500	155	9	Northwest	Downwind	Dozer, dump trucks, roller in operation	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 55m North of Terminal Rd. and Prince St. intersection	1530	155	10	Northwest	Downwind	Dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
22 10m East of former train station	1600	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 10m North of Terminal Rd. and Prince St. intersection	1600	155	12	Northwest	Downwind	Grader, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
24 10m North of Terminal Rd. and Prince St. intersection	1615	155	9	Northwest	Downwind	Grader, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
25 10m East of former train station	1700	155	31	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 10m North of Terminal Rd. and Prince St. intersection	1700	155	10	Northwest	Downwind	Grader, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
27 10m North of Terminal Rd. and Prince St. intersection	1745	155	11	Northwest	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 ( $\mu\text{g}/\text{m}^3$ )
75m North of Plaza Ford	0900 to 0959	10	990
75m North of Plaza Ford	1000 to 1059	20	990
75m North of Plaza Ford	1100 to 1159	29	990
75m North of Plaza Ford	1200 to 1259	38	990
55m North of Terminal Rd. and Prince St. intersection	1300 to 1359	47	990
55m North of Terminal Rd. and Prince St. intersection	1400 to 1459	55	990
55m North of Terminal Rd. and Prince St. intersection	1500 to 1559	65	990
55m North of Terminal Rd. and Prince St. intersection	1600 to 1659	76	990
55m North of Terminal Rd. and Prince St. intersection	1700 to 1759	87	990

### VOC Monitoring

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