

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1331-22
<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>	19 <sup>th</sup> June, 2009	<b>STPA NO.</b>	TP6D-CP-0096

**SUBJECT: 18<sup>th</sup> June, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, Cooling 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 18<sup>th</sup> of June, 2009. Tyler Rowe and Dwayne Timmons 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 25°C
- Wind Direction: Southwest to West

**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 180 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 8 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, Cooling Pond**  
**18<sup>th</sup> June, 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 80m Northeast of Dodd St., Prince St. intersection (N46°08.395' W060°11.357')	0700	180	41	Southwest	Upwind	Background	Car carrier created dust upwind of sample
2 40m Northwest of Cape Breton St. and Inglis St. intersection (N46°08.676' W060°11.005')	0700	180	6	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
3 40m Northwest of Cape Breton St. and Inglis St. intersection (N46°08.676' W060°11.005')	0725	180	6	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
4 80m Northeast of Dodd St., Prince St. intersection (N46°08.395' W060°11.357')	0800	180	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 40m Northwest of Cape Breton St. and Inglis St. intersection (N46°08.676' W060°11.005')	0800	180	17	Southwest	Downwind	Excavator 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
6 40m Northwest of Cape Breton St. and Inglis St. intersection (N46°08.676' W060°11.005')	0820	180	16	Southwest	Downwind	Dump truck operating	No observations seen to affect sampling integrity
7 80m Northeast of Dodd St., Prince St. intersection (N46°08.395' W060°11.357')	0900	180	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 15m North of Cape Breton St. and Inglis St. intersection (N46°08.674' W060°10.994')	0900	180	16	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
9 15m North of Cape Breton St. and Inglis St. intersection (N46°08.674' W060°10.994')	0920	180	12	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
10 90m Northeast of Acadian Lines (N46°08.533' W060°11.123')	1000	180	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 15m North of Cape Breton St. and Inglis St. intersection (N46°08.674' W060°10.994')	1000	180	28	Southwest	Downwind	Excavator, dump truck 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
12 15m North of Cape Breton St. and Inglis St. intersection (N46°08.674' W060°10.994')	1040	180	15	Southwest	Downwind	Dump truck operating	No observations seen to affect sampling integrity
13 90m Northeast of Acadian Lines (N46°08.533' W060°11.123')	1100	180	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 15m North of Cape Breton St. and Inglis St. intersection (N46°08.674' W060°10.994')	1100	180	33	Southwest	Downwind	Dump truck operating	No observations seen to affect sampling integrity
15 15m North of Cape Breton St. and Inglis St. intersection (N46°08.674' W060°10.994')	1130	180	31	Southwest	Downwind	Dump truck operating	No observations seen to affect sampling integrity
16 90m Northeast of Acadian Lines (N46°08.533' W060°11.123')	1200	180	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 1m North of Cape Breton St. and Inglis St. intersection (N46°08.658' W060°10.987')	1200	180	63	Southwest	Downwind	Excavator and dump truck 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
18 1m North of Cape Breton St. and Inglis St. intersection (N46°08.658' W060°10.987')	1245	180	149	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
19 90m Northeast of Acadian Lines (N46°08.533' W060°11.123')	1300	180	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 1m North of Cape Breton St. and Inglis St. intersection (N46°08.658' W060°10.987')	1300	180	126	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
21 90m Northeast of Acadian Lines (N46°08.533' W060°11.123')	1320	180	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
22 1m North of Cape Breton St. and Inglis St. intersection (N46°08.658' W060°10.987')	1320	180	64	Southwest	Downwind	Dump truck operating	No observations seen to affect sampling integrity
23 90m Northeast of Acadian Lines (N46°08.533' W060°11.123')	1400	180	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
24 1m North of Cape Breton St. and Inglis St. intersection (N46°08.658' W060°10.987')	1400	180	82	Southwest	Downwind	Excavator and water truck operating	No observations seen to affect sampling integrity
25 1m North of Cape Breton St. and Inglis St. intersection (N46°08.658' W060°10.987')	1420	180	53	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
26 90m Northeast of Acadian Lines (N46°08.533' W060°11.123')	1500	180	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
27 1m North of Cape Breton St. and Inglis St. intersection (N46°08.658' W060°10.987')	1500	180	37	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
28 1m North of Cape Breton St. and Inglis St. intersection (N46°08.658' W060°10.987')	1530	180	14	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
29 20m North of Intercolonial St. fixed station (N46°08.585' W060°11.410')	1600	180	11	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
30 5m Southwest of Cape Breton St. and Inglis St. intersection (N46°08.640' W060°11.003')	1600	180	23	West	Upwind	Excavator operating	No observations seen to affect sampling integrity
31 5m Southwest of Cape Breton St. and Inglis St. intersection (N46°08.640' W060°11.003')	1625	180	90	West	Upwind	Excavator operating	No observations seen to affect sampling integrity
32 20m North of Intercolonial St. fixed station (N46°08.585' W060°11.410')	1700	180	11	West	Upwind	Background	No observations seen to affect sampling integrity
33 5m Southwest of Cape Breton St. and Inglis St. intersection (N46°08.640' W060°11.003')	1700	180	99	West	Upwind	Excavator operating	No observations seen to affect sampling integrity
34 5m Southwest of Cape Breton St. and Inglis St. intersection (N46°08.640' W060°11.003')	1745	180	11	West	Upwind	No activity observed on site	No observations seen to affect sampling integrity

**Notes:** Air sample duration for each monitoring event was 15 minutes.



### Summary of Downwind PM<sub>10</sub> Action Levels

Average PM <sub>10</sub> Concentration (µg/m <sup>3</sup> )	Averaging Period (Hours)	Downwind Action Level (µg/m <sup>3</sup> )
6	1	125
15	4	85
45	8	70

### VOC Monitoring

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