

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1331-28
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1800
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	26 <sup>th</sup> June, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP6D-SP-0102</b>

**SUBJECT: 25<sup>th</sup> June, 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 25<sup>th</sup> of June, 2009. Donald MacIsaac 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 26°C
- Wind Direction: 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 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 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 Dwayne Timmons 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:

Shawn Bernon [shawn@tarpondscleanup.ca](mailto:shawn@tarpondscleanup.ca), Wilfred Kaiser [wilfred@tarpondscleanup.ca](mailto:wilfred@tarpondscleanup.ca), Nancy LeDrew [nancy@tarpondscleanup.ca](mailto:nancy@tarpondscleanup.ca), Trish Magliaro [trish@tarpondscleanup.ca](mailto:trish@tarpondscleanup.ca), Terry Smith [tsmith@toalltech.com](mailto:tsmith@toalltech.com), Phyllis Low [pilow@toalltech.com](mailto:pilow@toalltech.com), Dianne Theriault [dtheriault@toalltech.com](mailto:dtheriault@toalltech.com), Darren Gardiner [dgardiner@croworld.com](mailto:dgardiner@croworld.com), Darren Lawless [dlawless@toalltech.com](mailto:dlawless@toalltech.com), Kevin Mac Pherson [kevinmacp@cbcl.ca](mailto:kevinmacp@cbcl.ca), Kathy Harquail [kharquail@toalltech.com](mailto:kharquail@toalltech.com)

**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Access Roads, South Pond**  
**25<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 55m Northeast of Acadian Lines building (N46°08.526' W060°11.141')	0700	180	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 50m Northwest of STPA building (N46°08.718' W060°11.154')	0700	180	6	Southwest	Downwind	Excavator travelling to new location	No observations seen to affect sampling integrity
3 50m Northwest of STPA building (N46°08.718' W060°11.154')	0740	180	7	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
4 110m South of Intercolonial St. fixed station (N46°08.493' W060°11.376')	0800	180	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	0800	180	7	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
6 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	0825	180	6	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
7 30m East of Dodd St. and Pitt St. intersection (N46°08.412' W060°11.354')	0900	180	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	0900	180	7	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
9 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	0945	180	16	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
10 30m East of Dodd St. and Pitt St. intersection (N46°08.412' W060°11.354')	1000	180	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1000	180	7	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
12 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1040	180	8	Southwest	Downwind	No activity observed on site	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
13 110m South of Intercolonial St. fixed station (N46°08.493' W060°11.376')	1100	180	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1100	180	8	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1130	180	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 110m South of Intercolonial St. fixed station (N46°08.493' W060°11.376')	1200	180	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1200	180	10	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1245	180	7	Southwest	Downwind	No activity observed on site	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
19 110m South of Intercolonial St. fixed station (N46°08.493' W060°11.376')	1300	180	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1300	180	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
21 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1320	180	13	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
22 110m South of Intercolonial St. fixed station (N46°08.493' W060°11.376')	1400	180	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1400	180	12	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1445	180	10	Southwest	Downwind	No activity observed on site	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
25 110m South of Intercolonial St. fixed station (N46°08.493' W060°11.376')	1500	180	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 25m Southwest of Ferry St. and Inglis St. intersection (N46°08.842' W060°11.319')	1500	180	9	Southwest	Downwind	Excavator travelling to new location	No observations seen to affect sampling integrity
27 120m North of Prince St. and Terminal Rd. intersection (N46°08.410' W060°11.276')	1530	180	18	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
28 30m East of Dodd St. and Pitt St. intersection (N46°08.412' W060°11.354')	1600	180	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 120m North of Prince St. and Terminal Rd. intersection (N46°08.410' W060°11.276')	1600	180	25	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
30 120m North of Prince St. and Terminal Rd. intersection (N46°08.410' W060°11.276')	1620	180	23	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
31 30m East of Dodd St. and Pitt St. intersection (N46°08.412' W060°11.354')	1700	180	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
32 120m North of Prince St. and Terminal Rd. intersection (N46°08.410' W060°11.276')	1700	180	8	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
33 120m North of Prince St. and Terminal Rd. intersection (N46°08.410' W060°11.276')	1715	180	8	Southwest	Downwind	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> )
7	1	125
9	4	85
10	8	70

### VOC Monitoring

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