

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
**TEL** (902) 539-3012  
**FAX** (902) 539-3381  
**DATE** 7<sup>th</sup> July, 2009

**FILE NO.** S-1353-03  
**SHIFT:** 0630 to 1830  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH

**STPA NO.** TP6D-SP-0110

**SUBJECT: 6<sup>th</sup> July, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, South Pond  
FINAL REPORT**

---

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 July, 2009. Donald MacIsaac and Reg Peters 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 16°C  
- Wind Direction: West to Northwest

**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 Donald MacIsaac and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



---

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**  
**6<sup>th</sup> July, 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 90m Northwest of Prince St., Dodd St. intersection (N 46°08.433' W 060°11.358')	0700	180	4	West	Upwind	Background	No observations seen to affect sampling integrity
2 60m North of Terminal Rd., Prince St. intersection (N 46°08.399' W 060°11.273')	0700	180	2	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 60m North of Terminal Rd., Prince St. intersection (N 46°08.399' W 060°11.273')	0730	180	4	West	Downwind	Equipment moving material	No observations seen to affect sampling integrity
4 90m Northwest of Prince St., Dodd St. intersection (N 46°08.433' W 060°11.358')	0800	180	5	West	Upwind	Background	No observations seen to affect sampling integrity
5 60m North of Terminal Rd., Prince St. intersection (N 46°08.399' W 060°11.273')	0800	180	5	West	Downwind	Equipment 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
6 60m North of Terminal Rd., Prince St. intersection (N 46°08.399' W 060°11.273')	0825	180	6	West	Downwind	Equipment moving material	No observations seen to affect sampling integrity
7 80m South of Intercolonial St. fixed station (N 46°08.522' W 060°11.367')	0900	180	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 30m North of Terminal Rd., Prince St. intersection (N 46°08.377' W 060°11.281')	0900	180	2	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
9 30m North of Terminal Rd., Prince St. intersection (N 46°08.377' W 060°11.281')	0925	180	1	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
10 80m South of Intercolonial St. fixed station (N 46°08.522' W 060°11.367')	1000	180	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 30m North of Terminal Rd., Prince St. intersection (N 46°08.377' W 060°11.281')	1000	180	0	Northwest	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
12 30m North of Terminal Rd., Prince St. intersection (N 46°08.377' W 060°11.281')	1035	180	2	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
13 80m South of Intercolonial St. fixed station (N 46°08.522' W 060°11.367')	1100	180	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
14 30m North of Terminal Rd., Prince St. intersection (N 46°08.377' W 060°11.281')	1100	180	0	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
15 30m North of Terminal Rd., Prince St. intersection (N 46°08.377' W 060°11.281')	1125	180	0	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
16 40m South of Intercolonial St. fixed station (N 46°08.547' W 060°11.383')	1200	180	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 30m North of Terminal Rd., Prince St. intersection (N 46°08.377' W 060°11.281')	1200	180	1	Northwest	Downwind	Equipment 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
18 30m North of Terminal Rd., Prince St. intersection (N 46°08.377' W 060°11.281')	1230	180	2	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
19 40m South of Intercolonial St. fixed station (N 46°08.547' W 060°11.383')	1300	180	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 80m North of Terminal Rd., Prince St. intersection (N 46°08.419' W 060°11.275')	1300	180	6	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
21 80m North of Terminal Rd., Prince St. intersection (N 46°08.419' W 060°11.275')	1330	180	62	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
22 40m South of Intercolonial St. fixed station (N 46°08.547' W 060°11.383')	1400	180	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 80m North of Terminal Rd., Prince St. intersection (N 46°08.419' W 060°11.275')	1400	180	8	Northwest	Downwind	Equipment 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
24 80m North of Terminal Rd., Prince St. intersection (N 46°08.419' W 060°11.275')	1420	180	12	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
25 40m South of Intercolonial St. fixed station (N 46°08.547' W 060°11.383')	1500	180	2	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 80m North of Terminal Rd., Prince St. intersection (N 46°08.419' W 060°11.275')	1500	180	5	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 80m North of Terminal Rd., Prince St. intersection (N 46°08.419' W 060°11.275')	1530	180	3	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
28 40m South of Intercolonial St. fixed station (N 46°08.547' W 060°11.383')	1600	180	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
29 80m North of Terminal Rd., Prince St. intersection (N 46°08.419' W 060°11.275')	1600	180	14	Northwest	Downwind	Equipment 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
30 80m North of Terminal Rd., Prince St. intersection (N 46°08.419' W 060°11.275')	1625	180	14	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
31 40m South of Intercolonial St. fixed station (N 46°08.547' W 060°11.383')	1700	180	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
32 80m North of Terminal Rd., Prince St. intersection (N 46°08.419' W 060°11.275')	1700	180	6	Northwest	Downwind	Equipment moving material	No observations seen to affect sampling integrity
33 80m North of Terminal Rd., Prince St. intersection (N 46°08.419' W 060°11.275')	1745	180	6	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.



### 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> )
3	1	125
3	4	85
7	8	70

### VOC Monitoring

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