

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
**TEL** (902) 539-3012  
**FAX** (902) 539-3381  
**DATE** 16<sup>th</sup> June, 2009

**FILE NO.** S-1329-10  
**SHIFT:** 0730 to 1730  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH  
**STPA NO.** TP2-0178

**SUBJECT: 15<sup>th</sup> June, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Material Processing Facility  
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 15<sup>th</sup> of June, 2009. Shaun Dove and Alison Giovannetti 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 20°C
- Wind Direction: Southeast to Southwest to South

**Comments:** *ALL-TECH was on-Site at 0730 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 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 Alison Giovannetti 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 – Material Processing Facility**  
**15<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 25m South of Inglis St. and Cape Breton St. intersection (N 46° 08.635' W 060° 10.984')	0800	180	4	Southeast	Upwind	Background	No observations seen to affect sampling integrity
2 80m Northwest of TP2 main entrance (N 46° 08.717' W 060° 10.546')	0800	180	6	Southeast	Downwind	Zoom boom operating	No observations seen to affect sampling integrity
3 80m Northwest of TP2 main entrance (N 46° 08.717' W 060° 10.546')	0820	180	9	Southeast	Downwind	Zoom boom operating	No observations seen to affect sampling integrity
4 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.463')	0900	180	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 60m Southeast of TP2 main entrance (N 46° 08.942' W 060° 11.266')	0900	180	7	Southwest	Downwind	Zoom boom 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 60m Southeast of TP2 main entrance (N 46° 08.942' W 060° 11.266')	0920	180	8	Southwest	Downwind	Zoom boom operating	No observations seen to affect sampling integrity
7 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.463')	1000	180	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 60m Southeast of TP2 main entrance (N 46° 08.942' W 060° 11.266')	1000	180	10	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 60m Southeast of TP2 main entrance (N 46° 08.942' W 060° 11.266')	1015	180	26	Southwest	Downwind	Excavator moving material	No observations seen to affect sampling integrity
10 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.463')	1100	180	2	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 60m Southeast of TP2 main entrance (N 46° 08.942' W 060° 11.266')	1100	180	9	Southwest	Downwind	Excavator 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
12 60m Southeast of TP2 main entrance (N 46° 08.942' W 060° 11.266')	1120	180	7	Southwest	Downwind	Excavator moving material	No observations seen to affect sampling integrity
13 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.463')	1200	180	1	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 60m Southeast of TP2 main entrance (N 46° 08.942' W 060° 11.266')	1200	180	14	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 60m Southeast of TP2 main entrance (N 46° 08.942' W 060° 11.266')	1240	180	7	Southwest	Downwind	Zoom boom operating	No observations seen to affect sampling integrity
16 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.463')	1300	180	2	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 60m Southeast of TP2 main entrance (N 46° 08.942' W 060° 11.266')	1300	180	13	Southwest	Downwind	Excavator 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 60m Northwest of TP2 main entrance (N 46° 09.006' W 060° 11.362')	1320	180	8	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
19 40m Northwest of Inglis St. and Terminal Rd. intersection (N 46° 08.558' W 060° 11.040')	1400	180	2	South	Upwind	Background	No observations seen to affect sampling integrity
20 60m Northwest of TP2 main entrance (N 46° 09.006' W 060° 11.362')	1400	180	8	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
21 60m Northwest of TP2 main entrance (N 46° 09.006' W 060° 11.362')	1420	180	9	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
22 40m Northwest of Inglis St. and Terminal Rd. intersection (N 46° 08.558' W 060° 11.040')	1500	180	2	South	Upwind	Background	No observations seen to affect sampling integrity
23 60m Northwest of TP2 main entrance (N 46° 09.006' W 060° 11.362')	1500	180	8	South	Downwind	No activity visible 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
24 60m Northwest of TP2 main entrance (N 46° 09.006' W 060° 11.362')	1520	180	17	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
25 40m Northwest of Inglis St. and Terminal Rd. intersection (N 46° 08.558' W 060° 11.040')	1600	180	2	South	Upwind	Background	No observations seen to affect sampling integrity
26 60m Northwest of TP2 main entrance (N 46° 09.006' W 060° 11.362')	1600	180	45	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
27 60m Northwest of TP2 main entrance (N 46° 09.006' W 060° 11.362')	1640	180	58	South	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> )
8	1	125
11	4	85
11	8	70

### VOC Monitoring

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