

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1309-08
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1730
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
<b>FAX</b>	(902) 539-3381		
<b>DATE</b>	15 <sup>th</sup> May, 2009	<b>STPA NO.</b>	<b>TP2-0162</b>

**SUBJECT: 14<sup>th</sup> May, 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 14<sup>th</sup> of May, 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 19°C
- Wind Direction: Southwest to West to Southwest

**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**  
**14<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 90m South of Ferry St. and Railway Rd. intersection	0800	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 50m Southeast of TP2 main entrance	0800	155	30	Southwest	Downwind	Worker activity	No observations seen to affect sampling integrity
3 50m Southeast of TP2 main entrance	0815	155	29	Southwest	Downwind	Worker activity	No observations seen to affect sampling integrity
4 90m South of Ferry St. and Railway Rd. intersection	0900	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 50m Southeast of TP2 main entrance	0900	155	33	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 50m Southeast of TP2 main entrance	0925	155	45	Southwest	Downwind	Machines 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
7 125m North of Ferry St. and Railway Rd. intersection	1000	155	12	West	Upwind	Background	No observations seen to affect sampling integrity
8 20m Northwest of Ferry St. and Inglis St. intersection	1000	155	21	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 20m Northwest of Ferry St. and Inglis St. intersection	1025	155	55	West	Downwind	Machines moving material	Dust from street traffic
10 125m North of Ferry St. and Railway Rd. intersection	1100	155	14	West	Upwind	Background	No observations seen to affect sampling integrity
11 20m Northwest of Ferry St. and Inglis St. intersection	1100	155	39	West	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
12 20m Northwest of Ferry St. and Inglis St. intersection	1120	155	33	West	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
13 90m South of Ferry St. and Railway Rd. intersection	1200	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity

<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>
14 50m Southeast of TP2 main entrance	1200	155	20	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
15 50m Southeast of TP2 main entrance	1245	155	28	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 90m South of Ferry St. and Railway Rd. intersection	1300	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 50m Southeast of TP2 main entrance	1300	155	41	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 50m Southeast of TP2 main entrance	1315	155	31	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 90m South of Ferry St. and Railway Rd. intersection	1400	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 50m Southeast of TP2 main entrance	1400	155	41	Southwest	Downwind	Activity not visible from sampling location	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 50m Southeast of TP2 main entrance	1415	155	56	Southwest	Downwind	Activity not visible from sampling location	Dust from street traffic
22 90m South of Ferry St. and Railway Rd. intersection	1500	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 50m Southeast of TP2 main entrance	1500	155	47	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
24 50m Southeast of TP2 main entrance	1520	155	25	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 90m South of Ferry St. and Railway Rd. intersection	1600	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 50m Southeast of TP2 main entrance	1600	155	47	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 50m Southeast of TP2 main entrance	1640	155	54	Southwest	Downwind	No activity observed on site	Dust from street traffic

**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 ( $\mu\text{g}/\text{m}^3$ )
50m Southeast of TP2 main entrance	0800 to 0859	30	990
50m Southeast of TP2 main entrance	0900 to 0959	69	990
20m Northwest of Ferry St. and Inglis St. intersection	1000 to 1059	108	990
20m Northwest of Ferry St. and Inglis St. intersection	1100 to 1159	144	990
50m Southeast of TP2 main entrance	1200 to 1259	168	990
50m Southeast of TP2 main entrance	1300 to 1359	204	990
50m Southeast of TP2 main entrance	1400 to 1459	253	990
50m Southeast of TP2 main entrance	1500 to 1559	289	990
50m Southeast of TP2 main entrance	1600 to 1659	340	990

### VOC Monitoring

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