

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1329-08
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1730
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<b>DATE</b>	11 <sup>th</sup> June, 2009	<b>STPA NO.</b>	<b>TP2-0176</b>

**SUBJECT: 10<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 10<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 cloudy
- Temperature: approximately 10°C
- Wind Direction: West to Southeast

**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:

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**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Material Processing Facility**  
**10<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 150m North of Ferry St. and Railway Rd. intersection (N 46° 08.832' W 060° 11.617')	0800	155	12	West	Upwind	Background	No observations seen to affect sampling integrity
2 50m Northwest of Ferry St. and Inglis St. intersection (N 46° 08.908' W 060° 11.233')	0800	155	22	West	Downwind	Mini excavator and zoom boom operating	No observations seen to affect sampling integrity
3 50m Northwest of Ferry St. and Inglis St. intersection (N 46° 08.908' W 060° 11.233')	0825	155	7	West	Downwind	Mini excavator and zoom boom operating	No observations seen to affect sampling integrity
4 25m Southeast of Inglis St. and Cape Breton St. intersection (N 46° 08.638' W 060° 10.965')	0900	155	4	Southeast	Upwind	Background	No observations seen to affect sampling integrity
5 200m East of railway building (N 46° 08.875' W 060° 11.635')	0900	155	4	Southeast	Downwind	Mini excavator and 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 200m East of railway building (N 46° 08.875' W 060° 11.635')	0925	155	6	Southeast	Downwind	Mini excavator and zoom boom operating	No observations seen to affect sampling integrity
7 25m Southeast of Inglis St. and Cape Breton St. intersection (N 46° 08.638' W 060° 10.965')	1000	155	3	Southeast	Upwind	Background	No observations seen to affect sampling integrity
8 200m East of railway building (N 46° 08.875' W 060° 11.635')	1000	155	4	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 200m East of railway building (N 46° 08.875' W 060° 11.635')	1030	155	5	Southeast	Downwind	Worker activity	No observations seen to affect sampling integrity
10 25m Southeast of Inglis St. and Cape Breton St. intersection (N 46° 08.638' W 060° 10.965')	1100	155	2	Southeast	Upwind	Background	No observations seen to affect sampling integrity
11 200m East of railway building (N 46° 08.875' W 060° 11.635')	1100	155	4	Southeast	Downwind	Worker activity	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 200m East of railway building (N 46° 08.875' W 060° 11.635')	1120	155	2	Southeast	Downwind	Worker activity	No observations seen to affect sampling integrity
13 25m Southeast of Inglis St. and Cape Breton St. intersection (N 46° 08.638' W 060° 10.965')	1200	155	2	Southeast	Upwind	Background	No observations seen to affect sampling integrity
14 200m East of railway building (N 46° 08.875' W 060° 11.635')	1200	155	2	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 200m East of railway building (N 46° 08.875' W 060° 11.635')	1215	155	4	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 25m Southeast of Inglis St. and Cape Breton St. intersection (N 46° 08.638' W 060° 10.965')	1300	155	2	Southeast	Upwind	Background	No observations seen to affect sampling integrity
17 200m East of railway building (N 46° 08.875' W 060° 11.635')	1300	155	3	Southeast	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
18 200m East of railway building (N 46° 08.875' W 060° 11.635')	1325	155	4	Southeast	Downwind	Zoom boom operating	No observations seen to affect sampling integrity
19 25m Southeast of Inglis St. and Cape Breton St. intersection (N 46° 08.638' W 060° 10.965')	1400	155	2	Southeast	Upwind	Background	No observations seen to affect sampling integrity
20 200m East of railway building (N 46° 08.875' W 060° 11.635')	1400	155	2	Southeast	Downwind	Worker activity	No observations seen to affect sampling integrity
21 200m East of railway building (N 46° 08.875' W 060° 11.635')	1415	155	3	Southeast	Downwind	Worker activity	No observations seen to affect sampling integrity
22 25m Southeast of Inglis St. and Cape Breton St. intersection (N 46° 08.638' W 060° 10.965')	1500	155	4	Southeast	Upwind	Background	No observations seen to affect sampling integrity
23 200m East of railway building (N 46° 08.875' W 060° 11.635')	1500	155	3	Southeast	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
24 200m East of railway building (N 46° 08.875' W 060° 11.635')	1520	155	3	Southeast	Downwind	Mini excavator operating	No observations seen to affect sampling integrity
25 25m Southeast of Inglis St. and Cape Breton St. intersection (N 46° 08.638' W 060° 10.965')	1600	155	3	Southeast	Upwind	Background	No observations seen to affect sampling integrity
26 200m East of railway building (N 46° 08.875' W 060° 11.635')	1600	155	3	Southeast	Downwind	Mini excavator operating	No observations seen to affect sampling integrity
27 200m East of railway building (N 46° 08.875' W 060° 11.635')	1640	155	6	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity

**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 Northwest of Ferry St. and Inglis St. intersection	0800 to 0859	15	990
200m East of railway building	0900 to 0959	20	990
200m East of railway building	1000 to 1059	25	990
200m East of railway building	1100 to 1159	28	990
200m East of railway building	1200 to 1259	31	990
200m East of railway building	1300 to 1359	35	990
200m East of railway building	1400 to 1459	38	990
200m East of railway building	1500 to 1559	41	990
200m East of railway building	1600 to 1659	46	990

### VOC Monitoring

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



