

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1309-04
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	1000 to 1730
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<b>DATE</b>	11 <sup>th</sup> May, 2009	<b>STPA NO.</b>	<b>TP2-0158</b>

**SUBJECT: 8<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 8<sup>th</sup> of May, 2009. Dave Reeves and Jeff King 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 14°C
- Wind Direction: Southwest

**Comments:** *Air monitoring was delayed until 1000 hours due to precipitation, and began at 1200 hours when weather conditions were within instrument specifications. 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 Jeff King 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**  
**8<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 150m North of Inglis St. and Ferry St. Intersection	1200	155	3	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
2 60m Southeast of railway property and Ferry St. intersection	1220	155	-1	Southwest	Upwind	Background	High wind
3 150m North of Inglis St. and Ferry St. Intersection	1230	155	3	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
4 60m Southeast of railway property and Ferry St. intersection	1300	155	0	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 175m Northwest of Inglis St. and Ferry St. Intersection	1300	155	4	Southwest	Downwind	Excavator operating, trucks moving material	No observations seen to affect sampling integrity
6 175m Northwest of Inglis St. and Ferry St. Intersection	1335	155	5	Southwest	Downwind	Excavator operating, trucks 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 60m Southeast of railway property and Ferry St. intersection	1400	155	0	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 175m Northwest of Inglis St. and Ferry St. Intersection	1400	155	4	Southwest	Downwind	Excavator operating, trucks moving material	No observations seen to affect sampling integrity
9 175m Northwest of Inglis St. and Ferry St. Intersection	1440	155	5	Southwest	Downwind	Excavator operating, trucks moving material	No observations seen to affect sampling integrity
10 60m Southeast of railway property and Ferry St. intersection	1500	155	-1	Southwest	Upwind	Background	High wind
11 175m Northwest of Inglis St. and Ferry St. Intersection	1510	155	4	Southwest	Downwind	Excavator operating, trucks moving material	No observations seen to affect sampling integrity
12 175m Northwest of Inglis St. and Ferry St. Intersection	1540	155	5	Southwest	Downwind	Excavator operating, trucks moving material	No observations seen to affect sampling integrity
13 60m Southeast of railway property and Ferry St. intersection	1600	155	0	Southwest	Upwind	Background	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
14 175m Northwest of Inglis St. and Ferry St. Intersection	1610	155	7	Southwest	Downwind	Excavator operating, trucks moving material	No observations seen to affect sampling integrity
15 175m Northwest of Inglis St. and Ferry St. Intersection	1645	155	6	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.

### Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
150m North of Inglis St. and Ferry St. Intersection	1200 to 1259	3	990
175m Northwest of Inglis St. and Ferry St. Intersection	1300 to 1359	8	990
175m Northwest of Inglis St. and Ferry St. Intersection	1400 to 1459	13	990
175m Northwest of Inglis St. and Ferry St. Intersection	1500 to 1559	18	990
175m Northwest of Inglis St. and Ferry St. Intersection	1600 to 1659	25	990

### VOC Monitoring

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