

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1309-14
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1730
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	27 <sup>th</sup> May, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0168</b>

**SUBJECT: 26<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 26<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 cloudy
- Temperature: approximately 8°C
- Wind Direction: Northwest

**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**  
**26<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 325m North of Ferry St. and Railway Rd. intersection	0800	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 20m Southwest of Ferry St. and Inglis St. intersection	0800	155	6	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
3 20m Southwest of Ferry St. and Inglis St. intersection	0840	155	10	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
4 325m North of Ferry St. and Railway Rd. intersection	0900	155	12	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 20m Southwest of Ferry St. and Inglis St. intersection	0900	155	12	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
6 20m Southwest of Ferry St. and Inglis St. intersection	0915	155	9	Northwest	Downwind	Worker activity	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>
7 325m North of Ferry St. and Railway Rd. intersection	1000	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 20m Southwest of Ferry St. and Inglis St. intersection	1000	155	12	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 20m Southwest of Ferry St. and Inglis St. intersection	1020	155	12	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
10 325m North of Ferry St. and Railway Rd. intersection	1100	155	21	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 20m Southwest of Ferry St. and Inglis St. intersection	1100	155	28	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
12 20m Southwest of Ferry St. and Inglis St. intersection	1115	155	26	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
13 325m North of Ferry St. and Railway Rd. intersection	1200	155	20	Northwest	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 20m Southwest of Ferry St. and Inglis St. intersection	1200	155	20	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 20m Southwest of Ferry St. and Inglis St. intersection	1220	155	22	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
16 325m North of Ferry St. and Railway Rd. intersection	1300	155	34	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 20m Southwest of Ferry St. and Inglis St. intersection	1300	155	14	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
18 20m Southwest of Ferry St. and Inglis St. intersection	1320	155	13	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
19 325m North of Ferry St. and Railway Rd. intersection	1400	155	20	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 100m Northwest of Inglis St. and Terminal Rd. intersection	1400	155	24	Northwest	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
21 100m Northwest of Inglis St. and Terminal Rd. intersection	1430	155	11	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
22 325m North of Ferry St. and Railway Rd. intersection	1500	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 100m Northwest of Inglis St. and Terminal Rd. intersection	1500	155	9	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 100m Northwest of Inglis St. and Terminal Rd. intersection	1520	155	9	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
25 325m North of Ferry St. and Railway Rd. intersection	1600	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 100m Northwest of Inglis St. and Terminal Rd. intersection	1600	155	10	Northwest	Downwind	Worker activity	No observations seen to affect sampling integrity
27 100m Northwest of Inglis St. and Terminal Rd. intersection	1640	155	9	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.**

### Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
20m Southwest of Ferry St. and Inglis St. intersection	0800 to 0859	8	990
20m Southwest of Ferry St. and Inglis St. intersection	0900 to 0959	19	990
20m Southwest of Ferry St. and Inglis St. intersection	1000 to 1059	31	990
20m Southwest of Ferry St. and Inglis St. intersection	1100 to 1159	58	990
20m Southwest of Ferry St. and Inglis St. intersection	1200 to 1259	79	990
20m Southwest of Ferry St. and Inglis St. intersection	1300 to 1359	92	990
100m Northwest of Inglis St. and Terminal Rd. intersection	1400 to 1459	110	990
100m Northwest of Inglis St. and Terminal Rd. intersection	1500 to 1559	119	990
100m Northwest of Inglis St. and Terminal Rd. intersection	1600 to 1659	129	990

### VOC Monitoring

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