

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1309-10
<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>	21 <sup>st</sup> May, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0164</b>

**SUBJECT: 20<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 20<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 11°C
- Wind Direction: Southwest to West to 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**  
**20<sup>th</sup> May, 2009**

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
1 125m South of Ferry St. and Railway Rd. intersection	0800	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 50m Southeast of TP2 main entrance	0800	155	27	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
3 50m Southeast of TP2 main entrance	0830	155	18	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 125m South of Ferry St. and Railway Rd. intersection	0900	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 50m Southeast of TP2 main entrance	0900	155	34	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 50m Southeast of TP2 main entrance	0940	155	41	Southwest	Downwind	Machines moving material	Traffic close to equipment

<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 125m South of Ferry St. and Railway Rd. intersection	1000	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 50m Southeast of TP2 main entrance	1000	155	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 50m Southeast of TP2 main entrance	1030	155	19	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 200m North of Ferry St. and Railway Rd. intersection	1100	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
11 50m Northwest of Inglis St. and Ferry St. intersection	1100	155	8	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 50m Northwest of Inglis St. and Ferry St. intersection	1130	155	8	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 200m North of Ferry St. and Railway Rd. intersection	1200	155	9	West	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 Northwest of Inglis St. and Ferry St. intersection	1200	155	10	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 50m Northwest of Inglis St. and Ferry St. intersection	1235	155	11	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 350m North of Ferry St. and Railway Rd. intersection	1300	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 20m North of Acadian Lines bus terminal	1300	155	14	Northwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
18 20m North of Acadian Lines bus terminal	1320	155	8	Northwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
19 350m North of Ferry St. and Railway Rd. intersection	1400	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 20m North of Acadian Lines bus terminal	1400	155	6	Northwest	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 20m Southwest of Inglis St. and Ferry St. intersection	1420	155	7	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 350m North of Ferry St. and Railway Rd. intersection	1500	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 20m Southwest of Inglis St. and Ferry St. intersection	1500	155	9	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 20m Southwest of Inglis St. and Ferry St. intersection	1515	155	10	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 350m North of Ferry St. and Railway Rd. intersection	1600	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 20m Southwest of Inglis St. and Ferry St. intersection	1600	155	11	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 20m Southwest of Inglis St. and Ferry St. intersection	1640	155	12	Northwest	Downwind	No activity visible from sampling location	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 Southeast of TP2 main entrance	0800 to 0859	23	990
50m Southeast of TP2 main entrance	0900 to 0959	61	990
50m Southeast of TP2 main entrance	1000 to 1059	75	990
50m Northwest of Inglis St. and Ferry St. intersection	1100 to 1159	83	990
50m Northwest of Inglis St. and Ferry St. intersection	1200 to 1259	94	990
20m North of Acadian Lines bus terminal	1300 to 1359	105	990
20m North of Acadian Lines bus terminal / 20m Southwest of Inglis St. and Ferry St. intersection	1400 to 1459	112	990
20m Southwest of Inglis St. and Ferry St. intersection	1500 to 1559	122	990
20m Southwest of Inglis St. and Ferry St. intersection	1600 to 1659	134	990

### VOC Monitoring

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