

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1291-03
<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
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<b>DATE</b>	6 <sup>th</sup> April, 2009	<b>STPA NO.</b>	<b>TP2-0137</b>

**SUBJECT: 3<sup>rd</sup> April, 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 3<sup>rd</sup> of April, 2009. Jennifer Andrews 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: East/West/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:

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**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Material Processing Facility**  
**3<sup>rd</sup> April, 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 5m North of Inglis Street and Spar Road Intersection	0800	155	27	East	Upwind	Background	No observations seen to affect sampling integrity
2 30m North of Ferry St. and Railway Intersection	0800	155	25	East	Downwind	Machines in operation	No observations seen to affect sampling integrity
3 30m North of Ferry St. and Railway Intersection	0830	155	40	East	Downwind	Machines in operation	No observations seen to affect sampling integrity
4 5m North of Inglis Street and Spar Road Intersection	0900	155	40	East	Upwind	Background	No observations seen to affect sampling integrity
5 30m North of Ferry St. and Railway Intersection	0900	155	24	East	Downwind	Machines in operation	No observations seen to affect sampling integrity
6 30m North of Ferry St. and Railway Intersection	0915	155	24	East	Downwind	Machines in operation	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 5m North of Inglis Street and Spar Road Intersection	1000	155	27	East	Upwind	Background	No observations seen to affect sampling integrity
8 30m North of Ferry St. and Railway Intersection	1000	155	16	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 40m North of Inglis Street and Spar Road Intersection	1045	155	31	West	Downwind	Machines in operation	No observations seen to affect sampling integrity
10 25m North of Ferry St. and Railway Intersection	1100	155	15	West	Upwind	Background	No observations seen to affect sampling integrity
11 40m North of Inglis Street and Spar Road Intersection	1100	155	32	West	Downwind	Machines in operation	No observations seen to affect sampling integrity
12 40m North of Inglis St. and Spar Rd. Intersection	1125	155	18	West	Downwind	Machines in operation	No observations seen to affect sampling integrity
13 10m West of fixed station on Intercolonial St.	1200	155	13	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 60m North of Inglis Street and Spar Road Intersection	1200	155	13	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 60m North of Inglis Street and Spar Road Intersection	1230	155	14	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 10m West of fixed station on Intercolonial St.	1300	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 60m North of Inglis Street and Spar Road Intersection	1300	155	21	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
18 60m North of Inglis Street and Spar Road Intersection	1340	155	12	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
19 10m West of fixed station on Intercolonial St.	1400	155	25	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 60m North of Inglis Street and Spar Road Intersection	1400	155	13	Southwest	Downwind	Machines in operation	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 60m North of Inglis Street and Spar Road Intersection	1415	155	14	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
22 10m West of fixed station on Intercolonial St.	1500	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 60m North of Inglis Street and Spar Road Intersection	1500	155	10	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
24 60m North of Inglis Street and Spar Road Intersection	1530	155	10	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
25 10m West of fixed station on Intercolonial St.	1600	155	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 60m North of Inglis Street and Spar Road Intersection	1600	155	8	Southwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
27 60m North of Inglis Street and Spar Road Intersection	1645	155	8	Southwest	Downwind	Machines in operation	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 ( $\mu\text{g}/\text{m}^3$ )
30m North of Ferry Street and Railway Intersection	0800 to 0859	33	990
30m North of Ferry St. and Railway Intersection	0900 to 0959	57	990
30m North of Ferry St. and Railway Intersection / 40m North of Inglis St. and Spar Rd. Intersection	1000 to 1059	81	990
40m North of Inglis Street and Spar Road Intersection	1100 to 1159	107	990
60m North of Inglis Street and Spar Road Intersection	1200 to 1259	121	990
60m North of Inglis Street and Spar Road Intersection	1300 to 1359	138	990
60m North of Inglis Street and Spar Road Intersection	1400 to 1459	152	990
60m North of Inglis Street and Spar Road Intersection	1500 to 1559	162	990
60m North of Inglis Street and Spar Road Intersection	1600 to 1659	170	990

### VOC Monitoring

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