

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1279-11
<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>	18 <sup>th</sup> March, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0127</b>

**SUBJECT: 18<sup>th</sup> March, 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 18<sup>th</sup> of March, 2009. Alison Giovannetti and Jennifer Andrews, 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 5°C
- Wind Direction: South

**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.*

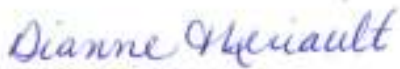
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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**  
**18<sup>th</sup> March, 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 15m East of Ferry St. Bridge	0800	155	20	South	Upwind	Background	No observations seen to affect sampling integrity
2 70m North of Inglis St. and Spar Rd. Intersection	0800	155	12	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
3 70m North of Inglis St. and Spar Rd. Intersection	0845	155	12	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
4 15m East of Ferry St. Bridge	0900	155	15	South	Upwind	Background	No observations seen to affect sampling integrity
5 70m North of Inglis St. and Spar Rd. Intersection	0900	155	14	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
6 70m North of Inglis St. and Spar Rd. Intersection	0925	155	13	South	Downwind	Workers using hand tools	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 15m East of Ferry St. Bridge	1000	155	12	South	Upwind	Background	No observations seen to affect sampling integrity
8 70m North of Inglis St. and Spar Rd. Intersection	1000	155	13	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
9 70m North of Inglis St. and Spar Rd. Intersection	1035	155	10	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
10 15m East of Ferry St. Bridge	1100	155	11	South	Upwind	Background	No observations seen to affect sampling integrity
11 70m North of Inglis St. and Spar Rd. Intersection	1100	155	14	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
12 70m North of Inglis St. and Spar Rd. Intersection	1120	155	9	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
13 15m East of Ferry St. Bridge	1200	155	13	South	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 70m North of Inglis St. and Spar Rd. Intersection	1200	155	8	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 70m North of Inglis St. and Spar Rd. Intersection	1230	155	11	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
16 15m East of Ferry St. Bridge	1300	155	7	South	Upwind	Background	No observations seen to affect sampling integrity
17 70m North of Inglis St. and Spar Rd. Intersection	1300	155	12	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
18 70m North of Inglis St. and Spar Rd. Intersection	1345	155	20	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
19 15m East of Ferry St. Bridge	1400	155	7	South	Upwind	Background	No observations seen to affect sampling integrity
20 70m North of Inglis St. and Spar Rd. Intersection	1400	155	15	South	Downwind	Workers using hand tools	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 70m North of Inglis St. and Spar Rd. Intersection	1425	155	20	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
22 15m East of Ferry St. Bridge	1500	155	8	South	Upwind	Background	No observations seen to affect sampling integrity
23 70m North of Inglis St. and Spar Rd. Intersection	1500	155	21	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
24 70m North of Inglis St. and Spar Rd. Intersection	1515	155	32	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
25 15m East of Ferry St. Bridge	1600	155	11	South	Upwind	Background	No observations seen to affect sampling integrity
26 70m North of Inglis St. and Spar Rd. Intersection	1600	155	27	South	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
27 70m North of Inglis St. and Spar Rd. Intersection	1645	155	16	South	Downwind	Workers using hand tools	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 ( $\mu\text{g}/\text{m}^3$ )
70m North of Inglis St. and Spar Rd. Intersection	0800 to 0859	12	990
70m North of Inglis St. and Spar Rd. Intersection	0900 to 0959	25	990
70m North of Inglis St. and Spar Rd. Intersection	1000 to 1059	37	990
70m North of Inglis St. and Spar Rd. Intersection	1100 to 1159	49	990
70m North of Inglis St. and Spar Rd. Intersection	1200 to 1259	59	990
70m North of Inglis St. and Spar Rd. Intersection	1300 to 1359	74	990
70m North of Inglis St. and Spar Rd. Intersection	1400 to 1459	92	990
70m North of Inglis St. and Spar Rd. Intersection	1500 to 1559	119	990
70m North of Inglis St. and Spar Rd. Intersection	1600 to 1659	141	990

### VOC Monitoring

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