

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1279-10
<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>	17 <sup>th</sup> March, 2009	<b>STPA NO.</b>	<b>TP2-0126</b>

**SUBJECT: 17<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 17<sup>th</sup> of March, 2009. Alison Giovannetti, Kelly Morrison 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 -3°C  
- Wind Direction: Northwest to North

**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**  
**17<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 175m North of Ferry St. and Railway Intersection	0800	155	12	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 5m North of Inglis and Spar Rd. Intersection	0800	155	11	Northwest	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
3 5m North of Inglis and Spar Rd. Intersection	0845	155	25	Northwest	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
4 175m North of Ferry St. and Railway Intersection	0900	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 5m North of Inglis and Spar Rd. Intersection	0900	155	13	Northwest	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
6 5m North of Inglis and Spar Rd. Intersection	0915	155	16	Northwest	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
7 175m North of Ferry St. and Railway Intersection	1000	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 5m North of Inglis and Spar Rd. Intersection	1000	155	12	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 5m North of Inglis and Spar Rd. Intersection	1030	155	15	Northwest	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
10 175m North of Ferry St. and Railway Intersection	1100	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 5m North of Inglis and Spar Rd. Intersection	1100	155	7	Northwest	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
12 5m North of Inglis and Spar Rd. Intersection	1140	155	9	Northwest	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
13 100m North of Inglis and Spar Intersection	1200	155	8	North	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 30m West of Inglis and Spar Rd. Intersection	1200	155	5	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 30m West of Inglis and Spar Rd. Intersection	1230	155	5	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 100m North of Inglis and Spar Intersection	1300	155	5	North	Upwind	Background	No observations seen to affect sampling integrity
17 30m West of Inglis and Spar Rd. Intersection	1300	155	6	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 30m West of Inglis and Spar Rd. Intersection	1345	155	6	North	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
19 100m North of Inglis and Spar Intersection	1400	155	4	North	Upwind	Background	No observations seen to affect sampling integrity
20 30m West of Inglis and Spar Rd. Intersection	1400	155	6	North	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 30m West of Inglis and Spar Rd. Intersection	1420	155	9	North	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
22 100m North of Inglis and Spar Intersection	1500	155	5	North	Upwind	Background	No observations seen to affect sampling integrity
23 30m West of Inglis and Spar Rd. Intersection	1500	155	11	North	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
24 30m West of Inglis and Spar Rd. Intersection	1545	155	8	North	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
25 100m North of Inglis and Spar Intersection	1600	155	10	North	Upwind	Background	No observations seen to affect sampling integrity
26 30m West of Inglis and Spar Rd. Intersection	1600	155	9	North	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
27 30m West of Inglis and Spar Rd. Intersection	1645	155	6	North	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 ( $\mu\text{g}/\text{m}^3$ )
5m North of Inglis and Spar Rd. Intersection	0800 to 0859	18	990
5m North of Inglis and Spar Rd. Intersection	0900 to 0959	33	990
5m North of Inglis and Spar Rd. Intersection	1000 to 1059	47	990
5m North of Inglis and Spar Rd. Intersection	1100 to 1159	55	990
30m West of Inglis and Spar Rd. Intersection	1200 to 1259	60	990
30m West of Inglis and Spar Rd. Intersection	1300 to 1359	66	990
30m West of Inglis and Spar Rd. Intersection	1400 to 1459	74	990
30m West of Inglis and Spar Rd. Intersection	1500 to 1559	84	990
30m West of Inglis and Spar Rd. Intersection	1600 to 1659	92	990

### VOC Monitoring

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