

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1269-14
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	1100 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>	24 <sup>th</sup> February, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0112</b>

**SUBJECT: 23<sup>rd</sup> February, 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 23<sup>rd</sup> of February, 2009. Colin MacIsaac and Tyler Rowe, 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 2°C
- Wind Direction: West

**Comments:** *ALL-TECH's air monitoring was put on standby until 1300 hours due to precipitation and high humidity, and began as soon as weather conditions were within instrument specifications. 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 Colin MacIsaac 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**  
**23<sup>rd</sup> February, 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 70m Southeast of Midland Building	1300	155	18	West	Upwind	Background	No observations seen to affect sampling integrity
2 100m North of Spar Road, Inglis Street intersection	1330	155	17	West	Downwind	Excavators operating	No observations seen to affect sampling integrity
3 100m North of Spar Road, Inglis Street intersection	1345	155	18	West	Downwind	Excavators operating	No observations seen to affect sampling integrity
4 70m Southeast of Midland Building	1400	155	20	West	Upwind	Background	No observations seen to affect sampling integrity
5 100m North of Spar Road, Inglis Street intersection	1400	155	20	West	Downwind	Excavators and forklift operating	No observations seen to affect sampling integrity
6 100m North of Spar Road, Inglis Street intersection	1420	155	22	West	Downwind	Excavators and forklift operating	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 70m Southeast of Midland Building	1500	155	23	West	Upwind	Background	No observations seen to affect sampling integrity
8 100m North of Spar Road, Inglis Street intersection	1500	155	21	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 100m North of Spar Road, Inglis Street intersection	1530	155	18	West	Downwind	Excavator operating	No observations seen to affect sampling integrity
10 70m Southeast of Midland Building	1600	155	22	West	Upwind	Background	No observations seen to affect sampling integrity
11 100m North of Spar Road, Inglis Street intersection	1600	155	15	West	Downwind	Excavator operating	No observations seen to affect sampling integrity
12 100m North of Spar Road, Inglis Street intersection	1645	155	9	West	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 ( $\mu\text{g}/\text{m}^3$ )
Standby (Background value of $33 \mu\text{g}/\text{m}^3$ )	0800 to 0859	33	990
Standby (Background value of $33 \mu\text{g}/\text{m}^3$ )	0900 to 0959	66	990
Standby (Background value of $33 \mu\text{g}/\text{m}^3$ )	1000 to 1059	99	990
Standby (Background value of $33 \mu\text{g}/\text{m}^3$ )	1100 to 1159	132	990
Standby (Background value of $33 \mu\text{g}/\text{m}^3$ )	1200 to 1259	165	990
100m North of Spar Road, Inglis Street intersection	1300 to 1359	183	990
100m North of Spar Road, Inglis Street intersection	1400 to 1459	204	990
100m North of Spar Road, Inglis Street intersection	1500 to 1559	224	990
100m North of Spar Road, Inglis Street intersection	1600 to 1659	236	990

### VOC Monitoring

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