

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1225-15
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1715
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	26 <sup>th</sup> November, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0059</b>

**SUBJECT: 25<sup>th</sup> November, 2008, 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 25<sup>th</sup> of November, 2008. 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 0°C
- Wind Direction: East to West to North

**Comments:** *ALL-TECH was on-Site at 0730 and sampling began as soon as there was site activity. Air monitoring was performed during EarthTech'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**  
**25<sup>th</sup> November, 2008**

<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 120m N of Inglis and Spar Intersection	0800	155	41	East	Upwind	Background	No observations seen to affect sampling integrity
2 45m N of Ferry St and Railway Rd Intersection	0800	155	59	East	Downwind	Excavators in operation	No observations seen to effect sampling integrity
3 45m N of Ferry St and Railway Rd Intersection	0825	155	49	East	Downwind	Excavators in operation	No observations seen to effect sampling integrity
4 120m N of Inglis and Spar Intersection	0900	155	48	East	Upwind	Background	No observations seen to affect sampling integrity
5 45m N of Ferry St and Railway Rd Intersection	0900	155	23	East	Downwind	Excavators in operation	No observations seen to effect sampling integrity
6 45m N of Ferry St and Railway Rd Intersection	0935	155	18	East	Downwind	Excavators in operation	No observations seen to effect sampling integrity
7 120m N of Inglis and Spar Intersection	1000	155	28	East	Upwind	Background	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
8 45m N of Ferry St and Railway Rd Intersection	1000	155	13	East	Downwind	No activity observed on site	No observations seen to effect sampling integrity
9 20m N of Inglis and Ferry Intersection	1045	155	19	West	Downwind	Excavators in operation	No observations seen to effect sampling integrity
10 100m N of Ferry St. on Railway tracks	1100	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
11 20m N of Inglis and Ferry Intersection	1100	155	8	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
12 20m N of Inglis and Ferry Intersection	1120	155	7	West	Downwind	Excavators in operation	No observations seen to effect sampling integrity
13 100m N of Ferry St. on Railway tracks	1200	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
14 20m N of Inglis and Ferry Intersection	1200	155	14	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
15 20m N of Inglis and Ferry Intersection	1245	155	4	West	Downwind	Excavators in operation	No observations seen to effect 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
16 100m N of Ferry St. on Railway tracks	1300	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
17 20m N of Inglis and Ferry Intersection	1300	155	6	West	Downwind	Excavators in operation	No observations seen to effect sampling integrity
18 20m N of Inglis and Ferry Intersection	1330	155	10	West	Downwind	Excavators in operation	No observations seen to effect sampling integrity
19 150m N of Ferry St. on Railway tracks	1400	155	5	North	Upwind	Background	No observations seen to affect sampling integrity
20 60m W of Inglis and Ferry Intersection	1400	155	9	North	Downwind	Excavators in operation	No observations seen to effect sampling integrity
21 60m W of Inglis and Ferry Intersection	1415	155	7	North	Downwind	Excavators in operation	No observations seen to effect sampling integrity
22 150m N of Ferry St. on Railway tracks	1500	155	6	North	Upwind	Background	No observations seen to affect sampling integrity
23 60m W of Inglis and Ferry Intersection	1500	155	7	North	Downwind	Excavators in operation	No observations seen to effect 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
24 60m W of Inglis and Ferry Intersection	1520	155	6	North	Downwind	No activity observed on site	No observations seen to effect sampling integrity
25 150m N of Ferry St. on Railway tracks	1600	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
26 60m W of Inglis and Ferry Intersection	1600	155	10	North	Downwind	Excavators in operation	No observations seen to effect sampling integrity
27 60m W of Inglis and Ferry Intersection	1645	155	18	North	Downwind	No activity observed on site	No observations seen to effect 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 ( $\mu\text{g}/\text{m}^3$ )
45m N of Ferry St. and Railway Rd. Intersection	0800 to 0859	54	990
45m N of Ferry St. and Railway Rd. Intersection	0900 to 0959	75	990
45m N of Ferry St. and Railway Rd. Intersection / 20m N of Inglis and Ferry Intersection	1000 to 1059	91	990
20m N of Inglis and Ferry Intersection	1100 to 1159	99	990
20m N of Inglis and Ferry Intersection	1200 to 1259	108	990
20m N of Inglis and Ferry Intersection	1300 to 1359	116	990
60m W of Inglis and Ferry Intersection	1400 to 1459	124	990
60m W of Inglis and Ferry Intersection	1500 to 1559	131	990
60m W of Inglis and Ferry Intersection	1600 to 1659	145	990

### VOC Monitoring

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