

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1208-09
<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>	15 <sup>th</sup> October, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0034</b>

**SUBJECT: 14<sup>th</sup> October, 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 14<sup>th</sup> of October, 2008. Kelly Morrison and Nigel McLean of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- High humidity in the morning, then sunny with cloudy periods
- Temperature: approximately 12°C
- Wind Direction: Northwest to Southwest

**Comments:** *ALL-TECH was on-Site at 0730 and sampling began as soon as weather conditions were within instrument specifications. 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 Kelly Morrison 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**  
**14<sup>th</sup> October, 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 60m north down the Railway Rd.	0930	155	26	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 10m North of Inglis St and Spar Rd intersection	0935	155	30	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
3 60m north down the Railway Rd.	1000	155	24	Northwest	Upwind	Background	No observations seen to affect sampling integrity
4 10m North of Inglis St and Spar Rd intersection	1000	155	31	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
5 10m North of Inglis St and Spar Rd intersection	1025	155	28	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
6 60m north down the Railway Rd.	1100	155	10	Northwest	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
7 50m North of Inglis St and Spar Rd intersection	1100	155	13	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
8 50m North of Inglis St and Spar Rd intersection	1115	155	13	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
9 60m north down the Railway Rd.	1200	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
10 50m North of Inglis St and Spar Rd intersection	1200	155	9	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
11 70m North of Inglis St and Spar Rd intersection	1245	155	31	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
12 15m south of the Wintering Harbour grounds off Ferry St.	1300	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
13 25m south of TP2 entrance gate	1300	155	9	Southwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
14 25m south of TP2 entrance gate	1320	155	9	Southwest	Downwind	Excavation of materials	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
15 15m south of the Wintering Harbour grounds off Ferry St.	1400	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
16 25m south of TP2 entrance gate	1400	155	9	Southwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
17 25m south of TP2 entrance gate	1438	155	10	Southwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
18 15m south of the Wintering Harbour grounds off Ferry St.	1500	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
19 25m south of TP2 entrance gate	1500	155	12	Southwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
20 25m south of TP2 entrance gate	1518	155	12	Southwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
21 15m south of the Wintering Harbour grounds off Ferry St.	1600	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
22 25m south of TP2 entrance gate	1600	155	13	Southwest	Downwind	Excavation of materials	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>
23 25m south of TP2 entrance gate	1630	155	14	Southwest	Downwind	Excavation of materials	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 ( $\mu\text{g}/\text{m}^3$ )
10m North of Inglis Street and Spar Rd intersection	0900 to 0959	31	990
10m North of Inglis Street and Spar Rd intersection	1000 to 1059	51	990
10m North of Inglis Street and Spar Rd intersection/50m north of Inglis St. and Spar Rd intersection	1100 to 1159	62	990
50m North of Inglis Street and Spar Road intersection/70m north of InglisSt and Spar Rd intersection	1200 to 1259	82	990
25m south of TP2 entrance gate	1300 to 1359	91	990
25m south of TP2 entrance gate	1400 to 1459	103	990
25m south of TP2 entrance gate	1500 to 1559	116	990
25m south of TP2 entrance gate	1600 to 1659	130	990

### VOC Monitoring

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