

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1291-07
<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>	13 <sup>th</sup> April, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0141</b>

**SUBJECT: 9<sup>th</sup> April, 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 9<sup>th</sup> of April, 2009. Nigel MacLean 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 sunny
- Temperature: approximately 10°C
- Wind Direction: Southwest

**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 Nigel MacLean 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:

Shawn Bernon [shawn@tarpondscleanup.ca](mailto:shawn@tarpondscleanup.ca), Wilfred Kaiser [wilfred@tarpondscleanup.ca](mailto:wilfred@tarpondscleanup.ca), Nancy LeDrew [nancy@tarpondscleanup.ca](mailto:nancy@tarpondscleanup.ca), Trish Magliaro [trish@tarpondscleanup.ca](mailto:trish@tarpondscleanup.ca), Terry Smith [tsmith@toalltech.com](mailto:tsmith@toalltech.com), Phyllis Low [pilow@toalltech.com](mailto:pilow@toalltech.com), Dianne Theriault [dtheriault@toalltech.com](mailto:dtheriault@toalltech.com), Darren Gardiner [dgardiner@croworld.com](mailto:dgardiner@croworld.com), Darren Lawless [dlawless@toalltech.com](mailto:dlawless@toalltech.com), Kevin Mac Pherson [kevinmacp@cbcl.ca](mailto:kevinmacp@cbcl.ca), Kathy Harquail [kharquail@toalltech.com](mailto:kharquail@toalltech.com)

**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Material Processing Facility**  
**9<sup>th</sup> April, 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 10m North of fixed station on Intercolonial St.	0800	155	24	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis Street, 100m North of Spar Road.	0800	155	24	Southwest	Downwind	Excavator/ dozer in operation	No observations seen to affect sampling integrity
3 Inglis Street, 100m North of Spar Road.	0840	155	23	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
4 15m South of Ferry St. and Railway Intersection	0900	155	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis Street, 100m North of Spar Road.	0900	155	22	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
6 Inglis Street, 100m North of Spar Road.	0930	155	20	Southwest	Downwind	Activity not visible from sampling location	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 15m South of Ferry St. and Railway Intersection	1000	155	24	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 Inglis Street, 100m North of Spar Road.	1000	155	17	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
Inglis Street, 100m North of Spar Road.	1015	155	19	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
10 15m South of Ferry St. and Railway Intersection	1100	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 Inglis Street, 100m North of Spar Road.	1100	155	18	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
12 Inglis Street, 100m North of Spar Road.	1135	155	19	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
13 15m South of Ferry St. and Railway Intersection	1200	155	16	Southwest	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 Inglis Street, 100m North of Spar Road.	1200	155	18	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
15 Inglis Street, 100m North of Spar Road.	1245	155	21	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
16 15m South of Ferry St. and Railway Intersection	1300	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 Inglis Street, 100m North of Spar Road.	1300	155	20	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
18 Inglis Street, 100m North of Spar Road.	1325	155	21	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
19 15m South of Ferry St. and Railway Intersection	1400	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 Inglis Street, 100m North of Spar Road.	1400	155	21	Southwest	Downwind	Cement truck being sprayed	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 Inglis Street, 100m North of Spar Road.	1415	155	19	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
22 15m South of Ferry St. and Railway Intersection	1500	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 Inglis Street, 100m North of Spar Road.	1500	155	16	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
24 Inglis Street, 100m North of Spar Road.	1540	155	19	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
25 15m South of Ferry St. and Railway Intersection	1600	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 Inglis Street, 100m North of Spar Road.	1600	155	19	Southwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
27 Inglis Street, 100m North of Spar Road.	1645	155	19	Southwest	Downwind	Activity not visible from sampling location	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 ( $\mu\text{g}/\text{m}^3$ )
Inglis Street, 100m North of Spar Road.	0800 to 0859	24	990
Inglis Street, 100m North of Spar Road.	0900 to 0959	45	990
Inglis Street, 100m North of Spar Road.	1000 to 1059	63	990
Inglis Street, 100m North of Spar Road.	1100 to 1159	82	990
Inglis Street, 100m North of Spar Road..	1200 to 1259	102	990
Inglis Street, 100m North of Spar Road.	1300 to 1359	123	990
Inglis Street, 100m North of Spar Road.	1400 to 1459	143	990
Inglis Street, 100m North of Spar Road.	1500 to 1559	161	990
Inglis Street, 100m North of Spar Road.	1600 to 1659	180	990

### VOC Monitoring

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