

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1173-01
<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>	5 <sup>th</sup> August, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>PS-0026</b>

**SUBJECT: 1<sup>st</sup> August, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – North Pond Pilot Study  
FINAL REPORT**

---

Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 1<sup>st</sup> of August, 2008. Reg Peters 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:

- Overcast, brief showers
- Temperature: approximately 22°C
- Wind Direction: Southeast

**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 Tyler Rowe and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



---

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 – North Pond Pilot Study**  
**1<sup>st</sup> August, 2008**

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
1 60m East of South Pond main gate	0815	155	23	Southeast	Upwind	Background	No observations seen to effect sampling integrity
2 100m East of Railway Maintenance building	0815	155	24	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
3 100m East of Railway Maintenance building	0840	155	27	Southeast	Downwind	Crane operating	No observations seen to effect sampling integrity
4 60m East of South Pond main gate	0900	155	26	Southeast	Upwind	Background	No observations seen to effect sampling integrity
5 100m East of Railway Maintenance building	0900	155	28	Southeast	Downwind	Crane operating	No observations seen to effect sampling integrity
6 100m East of Railway Maintenance building	0920	155	29	Southeast	Downwind	Welding	No observations seen to effect sampling integrity
7 60m East of South Pond main gate	1000	155	29	Southeast	Upwind	Background	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
8 100m East of Railway Maintenance building	1000	155	29	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
9 100m East of Railway Maintenance building	1045	155	35	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
10 60m East of South Pond main gate	1100	155	32	Southeast	Upwind	Background	No observations seen to effect sampling integrity
11 100m East of Railway Maintenance building	1100	155	33	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
12 100m East of Railway Maintenance building	1145	155	35	Southeast	Downwind	Welding	No observations seen to effect sampling integrity
13 60m East of South Pond main gate	1200	155	30	Southeast	Upwind	Background	No observations seen to effect sampling integrity
14 100m East of Railway Maintenance building	1200	155	35	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
15 100m East of Railway Maintenance building	1230	155	36	Southeast	Downwind	No activity observed on-site	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 60m East of South Pond main gate	1300	155	29	Southeast	Upwind	Background	No observations seen to effect sampling integrity
17 100m East of Railway Maintenance building	1300	155	31	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
18 100m East of Railway Maintenance building	1335	155	29	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
19 60m East of South Pond main gate	1400	155	24	Southeast	Upwind	Background	No observations seen to effect sampling integrity
20 100m East of Railway Maintenance building	1400	155	27	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
21 100m East of Railway Maintenance building	1415	155	27	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
22 60m East of South Pond main gate	1500	155	21	Southeast	Upwind	Background	No observations seen to effect sampling integrity
23 100m East of Railway Maintenance building	1500	155	24	Southeast	Downwind	No activity observed on-site	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 100m East of Railway Maintenance building	1530	155	27	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
25 60m East of South Pond main gate	1600	155	18	Southeast	Upwind	Background	No observations seen to effect sampling integrity
26 100m East of Railway Maintenance building	1600	155	20	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
27 100m East of Railway Maintenance building	1645	155	20	Southeast	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

<b>Location</b>	<b>Duration</b>	<b>Dust Budget Value (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Dust Budget Exceedance Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
100m East of Railway Maintenance building	0800 to 0859	26	990
100m East of Railway Maintenance building	0900 to 0959	55	990
100m East of Railway Maintenance building	1000 to 1059	87	990
100m East of Railway Maintenance building	1100 to 1159	121	990
100m East of Railway Maintenance building	1200 to 1259	157	990
100m East of Railway Maintenance building	1300 to 1359	187	990
100m East of Railway Maintenance building	1400 to 1459	214	990
100m East of Railway Maintenance building	1500 to 1559	240	990
100m East of Railway Maintenance building	1600 to 1659	260	990

### VOC Monitoring

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