

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1292-24
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	30 <sup>th</sup> April, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP6D-NP-0034</b>

**SUBJECT: 29<sup>th</sup> April, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, North Pond  
FINAL REPORT**

---

Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 29<sup>th</sup> of April, 2009. Shaun Dove and Dwayne Timmons 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 3°C
- Wind Direction: Northwest

**Comments:** *ALL-TECH was on-Site at 0630 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 Dwayne Timmons 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 – Access Roads, North Pond**  
**29<sup>th</sup> April, 2009**

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 150m Northeast of rail yard building	0700	155	23	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 150m West of Inglis St. and Terminal Rd. intersection	0700	155	12	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
3 150m West of Inglis St. and Terminal Rd. Intersection	0735	155	13	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
4 150m Northeast of rail yard building	0800	155	17	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 150m West of Inglis St. and Terminal Rd. Intersection	0800	155	24	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
6 150m West of Inglis St. and Terminal Rd. Intersection	0820	155	16	Northwest	Downwind	Activity not visible from monitoring 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 150m East of rail yard building	0900	155	17	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 150m West of Inglis St. and Terminal Rd. intersection	0900	155	13	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
9 150m West of Inglis St. and Terminal Rd. intersection	0930	155	12	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
10 150m East of rail yard building	1000	155	13	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 150m West of Inglis St. and Terminal Rd. intersection	1000	155	15	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
12 150m West of Inglis St. and Terminal Rd. intersection	1020	155	17	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
13 150m East of rail yard building	1100	155	28	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
14 150m West of Inglis St. and Terminal Rd. intersection	1100	155	11	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
15 150m West of Inglis St. and Terminal Rd. intersection	1120	155	18	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
16 150m East of rail yard building	1200	155	20	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 150m West of Inglis St. and Terminal Rd. intersection	1200	155	13	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
18 150m West of Inglis St. and Terminal Rd. intersection	1225	155	8	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
19 150m East of rail yard building	1300	155	22	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 150m West of Inglis St. and Terminal Rd. intersection	1300	155	11	Northwest	Downwind	Activity not visible from monitoring 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
21 150m West of Inglis St. and Terminal Rd. intersection	1330	155	10	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
22 150m East of rail yard building	1400	155	24	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 150m West of Inglis St. and Terminal Rd. intersection	1400	155	11	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
24 150m West of Inglis St. and Terminal Rd. intersection	1420	155	12	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
25 150m East of rail yard building	1500	155	32	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 150m West of Inglis St. and Terminal Rd. intersection	1500	155	14	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
27 150m West of Inglis St. and Terminal Rd. intersection	1520	155	10	Northwest	Downwind	Activity not visible from monitoring 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
28 150m East of rail yard building	1600	155	21	Northwest	Upwind	Background	No observations seen to affect sampling integrity
29 150m West of Inglis St. and Terminal Rd. intersection	1600	155	10	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
30 150m West of Inglis St. and Terminal Rd. intersection	1615	155	11	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
31 150m East of rail yard building	1700	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
32 150m West of Inglis St. and Terminal Rd. intersection	1700	155	10	Northwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
33 150m West of Inglis St. and Terminal Rd. intersection	1740	155	9	Northwest	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 ( $\mu\text{g}/\text{m}^3$ )
150m West of Inglis St. and Terminal Rd. intersection	0700 to 0759	13	990
150m West of Inglis St. and Terminal Rd. intersection	0800 to 0859	33	990
150m West of Inglis St. and Terminal Rd. intersection	0900 to 0959	46	990
150m West of Inglis St. and Terminal Rd. intersection	1000 to 1059	62	990
150m West of Inglis St. and Terminal Rd. intersection	1100 to 1159	77	990
150m West of Inglis St. and Terminal Rd. intersection	1200 to 1259	88	990
150m West of Inglis St. and Terminal Rd. intersection	1300 to 1359	99	990
150m West of Inglis St. and Terminal Rd. intersection	1400 to 1459	111	990
150m West of Inglis St. and Terminal Rd. intersection	1500 to 1559	123	990
150m West of Inglis St. and Terminal Rd. intersection	1600 to 1659	134	990
150m West of Inglis St. and Terminal Rd. intersection	1700 to 1759	144	990



### VOC Monitoring

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