

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1292-03
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
<b>FAX</b>	(902) 539-3381		
<b>DATE</b>	6 <sup>th</sup> April, 2009	<b>STPA NO.</b>	<b>TP6D-0013</b>

**SUBJECT: 3<sup>rd</sup> April, 2009, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads  
FINAL REPORT**

---

Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 3<sup>rd</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 11°C
- Wind Direction: East/West/Southwest

**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 Nigel MacLean 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 [pjlow@toalltech.com](mailto:pjlow@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**  
**3<sup>rd</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 15m South of TP2 site entrance	0700	155	21	East	Upwind	Background	No observations seen to affect sampling integrity
2 Railroad property 400m North of Ferry Street	0700	155	22	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 Railroad property 400m North of Ferry Street	0730	155	25	East	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 15m South of TP2 site entrance	0800	155	24	East	Upwind	Background	No observations seen to affect sampling integrity
5 Railroad property 400m North of Ferry Street	0800	155	27	East	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 Railroad property 400m North of Ferry Street	0820	155	28	East	Downwind	Machines moving material	Traffic causing swirling dust affecting sample

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 TP2 site entrance	0900	155	46	East	Upwind	Background	Traffic causing swirling dust affecting sample
8 Railroad property 400m North of Ferry Street	0900	155	23	East	Downwind	Machines moving material	No observations seen to affect sampling integrity
9 Railroad property 400m North of Ferry Street	0915	155	21	East	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 15m South of TP2 site entrance	1000	155	43	East	Upwind	Background	No observations seen to affect sampling integrity
11 Railroad property 400m North of Ferry Street	1000	155	16	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 80m North of TP6D main gate	1045	155	16	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 Railroad property 400m North of Ferry St.	1100	155	17	West	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 80m North of TPD6 main gate	1100	155	18	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
15 80m North of TPD6 main gate	1135	155	13	West	Downwind	Machines moving materials.	No observations seen to affect sampling integrity
16 Railroad property 50m North of Ferry St.	1200	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 80m North of TPD6 main gate	1200	155	13	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 80m North of TPD6 main gate	1220	155	13	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 Railroad property 50m North of Ferry St.	1300	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 80m North of TPD6 main gate	1300	155	12	Southwest	Downwind	Machines moving material	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 80m North of TPD6 main gate	1340	155	13	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 Railroad property 50m North of Ferry St.	1400	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 80m North of TPD6 main gate	1400	155	13	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 80m North of TPD6 main gate	1425	155	14	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 Railroad property 50m North of Ferry St.	1500	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 80m North of TPD6 main gate	1500	155	10	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 80m North of TPD6 main gate	1520	155	10	Southwest	Downwind	Machines moving material	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 Railroad property 50m North of Ferry St.	1600	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 80m North of TPD6 main gate	1600	155	9	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
30 80m North of TPD6 main gate	1640	155	9	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
31 Railroad property 50m North of Ferry St.	1700	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
32 80m North of TPD6 main gate	1700	155	10	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
33 80m North of TPD6 main gate	1745	155	9	Southwest	Downwind	No Activity	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 ( $\mu\text{g}/\text{m}^3$ )
Railroad property 400m North of Ferry St	0700 to 0759	24	990
Railroad property 400m North of Ferry St	0800 to 0859	52	990
Railroad property 400m North of Ferry St	0900 to 0959	74	990
Railroad property 400m North of Ferry St / 80m North of TP6D main gate	1000 to 1059	90	990
80m North of TP6D main gate	1100 to 1159	106	990
80m North of TP6D main gate	1200 to 1259	119	990
80m North of TP6D main gate	1300 to 1359	132	990
80m North of TP6D main gate	1400 to 1459	146	990
80m North of TP6D main gate	1500 to 1559	156	990
80m North of TP6D main gate	1600 to 1659	165	990
80m North of TP6D main gate	1700 to 1759	175	990



### VOC Monitoring

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