

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1313-09
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1800
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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<b>DATE</b>	6 <sup>th</sup> May, 2009	<b>STPA NO.</b>	TP6D-SP-0047

**SUBJECT: 5<sup>th</sup> May, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, South Pond  
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 5<sup>th</sup> of May, 2009. David Reeves and Nigel MacLean 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 8°C
- Wind Direction: North to East

**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 David Reeves 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 – Access Roads, South Pond**  
**5<sup>th</sup> May, 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 20m West of Inglis St. and Spar Rd. intersection	0700	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
2 100m North of Plaza Ford	0700	155	11	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 100m North of Plaza Ford	0720	155	10	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
4 20m West of Inglis St. and Spar Rd. intersection	0800	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
5 100m North of Plaza Ford	0800	155	7	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
6 100m North of Plaza Ford	0830	155	6	North	Downwind	No activity observed on site	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>
7 20m West of Inglis St. and Spar Rd. intersection	0900	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
8 100m North of Plaza Ford	0900	155	6	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 100m North of Plaza Ford	0925	155	7	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
10 20m West of Inglis St. and Spar Rd. intersection	1000	155	4	North	Upwind	Background	No observations seen to affect sampling integrity
11 100m North of Plaza Ford	1000	155	7	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 100m North of Plaza Ford	1015	155	7	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
13 20m West of Inglis St. and Spar Rd. intersection	1100	155	12	North	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 100m North of Plaza Ford	1100	155	9	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 100m North of Plaza Ford	1120	155	9	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 20m West of Inglis St. and Spar Rd. intersection	1200	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
17 100m North of Plaza Ford	1200	155	9	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 100m North of Plaza Ford	1230	155	10	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 20m West of Inglis St. and Spar Rd. intersection	1300	155	14	North	Upwind	Background	No observations seen to affect sampling integrity
20 100m North of Plaza Ford	1300	155	10	North	Downwind	No activity observed on site	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>
21 100m North of Plaza Ford	1320	155	10	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
22 120m North of STPA building	1400	155	5	East	Upwind	Background	No observations seen to affect sampling integrity
22 50m North of Intercolonial St. and Dorchester St. intersection	1400	155	10	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
23 50m North of Intercolonial St. and Dorchester St. intersection	1445	155	12	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 120m North of STPA building	1500	155	5	East	Upwind	Background	No observations seen to affect sampling integrity
25 50m North of Intercolonial St. and Dorchester St. intersection	1500	155	10	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
26 50m North of Intercolonial St. and Dorchester St. intersection	1540	155	11	East	Downwind	No activity observed on site	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
27 120m North of STPA building	1600	155	6	East	Upwind	Background	No observations seen to affect sampling integrity
28 50m North of Intercolonial St. and Dorchester St. intersection	1600	155	10	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
29 50m North of Intercolonial St. and Dorchester St. intersection	1625	155	10	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
30 120m North of STPA building	1700	155	5	East	Upwind	Background	No observations seen to affect sampling integrity
31 50m North of Intercolonial St. and Dorchester St. intersection	1700	155	11	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
32 50m North of Intercolonial St. and Dorchester St. intersection	1715	155	11	East	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 ( $\mu\text{g}/\text{m}^3$ )
100m North of Plaza Ford	0700 to 0759	11	990
100m North of Plaza Ford	0800 to 0859	18	990
100m North of Plaza Ford	0900 to 0959	25	990
100m North of Plaza Ford	1000 to 1059	32	990
100m North of Plaza Ford	1100 to 1159	41	990
100m North of Plaza Ford	1200 to 1259	51	990
100m North of Plaza Ford	1300 to 1359	61	990
50m North of Intercolonial St. and Dorchester St. Intersection	1400 to 1459	72	990
50m North of Intercolonial St. and Dorchester St. Intersection	1500 to 1559	83	990
50m North of Intercolonial St. and Dorchester St. Intersection	1600 to 1659	93	990
50m North of Intercolonial St. and Dorchester St. Intersection	1700 to 1759	104	990



### VOC Monitoring

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