

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1313-03
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1530
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	4 <sup>th</sup> May, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	TP6D-SP-0041

**SUBJECT: 1<sup>st</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 1<sup>st</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 cloudy, rain
- Temperature: approximately 13°C
- Wind Direction: South

**Comments:** *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity, but was later put on standby at 1330 hours and cancelled for the day at 1530 due to ongoing precipitation. 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**  
**1<sup>st</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 110m Northeast of Plaza Ford	0700	155	15	South	Upwind	Background	No observations seen to affect sampling integrity
2 20m West of Inglis St. and Spar Rd. intersection	0700	155	20	South	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
3 20m West of Inglis St. and Spar Rd. intersection	0720	155	21	South	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
4 110m Northeast of Plaza Ford	0800	155	17	South	Upwind	Background	No observations seen to affect sampling integrity
5 20m West of Inglis St. and Spar Rd. intersection	0800	155	24	South	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
6 20m West of Inglis St. and Spar Rd. intersection	0840	155	23	South	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 110m Northeast of Plaza Ford	0900	155	17	South	Upwind	Background	No observations seen to affect sampling integrity
8 20m West of Inglis St. and Spar Rd. intersection	0900	155	23	South	Downwind	Workers on site by shoreline	No observations seen to affect sampling integrity
9 20m West of Inglis St. and Spar Rd. intersection	0935	155	21	South	Downwind	Excavator operating	No observations seen to affect sampling integrity
10 110m Northeast of Plaza Ford	1000	155	18	South	Upwind	Background	No observations seen to affect sampling integrity
11 20m West of Inglis St. and Spar Rd. intersection	1000	155	23	South	Downwind	Excavator operating	No observations seen to affect sampling integrity
12 20m West of Inglis St. and Spar Rd. intersection	1025	155	21	South	Downwind	Excavator operating	No observations seen to affect sampling integrity
13 110m Northeast of Plaza Ford	1100	155	32	South	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 20m West of Inglis St. and Spar Rd. intersection	1100	155	38	South	Downwind	Excavator operating	No observations seen to affect sampling integrity
15 20m West of Inglis St. and Spar Rd. intersection	1120	155	22	South	Downwind	Excavator operating	No observations seen to affect sampling integrity
16 110m Northeast of Plaza Ford	1200	155	48	South	Upwind	Background	No observations seen to affect sampling integrity
17 20m West of Inglis St. and Spar Rd. intersection	1200	155	60	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 20m West of Inglis St. and Spar Rd. intersection	1225	155	23	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 110m Northeast of Plaza Ford	1300	155	20	South	Upwind	Background	No observations seen to affect sampling integrity
20 20m West of Inglis St. and Spar Rd. intersection	1300	155	26	South	Downwind	Activity not visible from monitoring 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 ( $\mu\text{g}/\text{m}^3$ )
20m West of Inglis St. and Spar Rd. intersection	0700 to 0759	21	990
20m West of Inglis St. and Spar Rd. intersection	0800 to 0859	45	990
20m West of Inglis St. and Spar Rd. intersection	0900 to 0959	67	990
20m West of Inglis St. and Spar Rd. intersection	1000 to 1059	89	990
20m West of Inglis St. and Spar Rd. intersection	1100 to 1159	119	990
20m West of Inglis St. and Spar Rd. intersection	1200 to 1259	161	990
20m West of Inglis St. and Spar Rd. intersection	1300 to 1359	187	990

### VOC Monitoring

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