

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1313-14
<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>	12 <sup>th</sup> May, 2009		Terry Smith, ALL_TECH
		<b>STPA NO.</b>	<b>TP6D-CO-0052</b>

**SUBJECT: 11<sup>th</sup> May, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, Coke Ovens  
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 11<sup>th</sup> of May, 2009. Jennifer Andrews and Keith Neville of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly cloudy
- Temperature: approximately 6°C
- Wind Direction: North to Northeast 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 Keith Neville 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, Coke Ovens**  
**11<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 Fredrick St., 250m East of Lingan Rd.	0700	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
2 30m East of Salvation Army	0730	155	11	North	Downwind	No activity observed on site	Late sample due to instrument malfunction
3 30m East of Salvation Army	0745	155	12	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
4 Fredrick St., 250m East of Lingan Rd.	0800	155	14	North	Upwind	Background	No observations seen to affect sampling integrity
5 30m East of Salvation Army	0800	155	11	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
6 30m East of Salvation Army	0815	155	11	North	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
7 Fredrick St., 250m East of Lingan Rd.	0900	155	13	North	Upwind	Background	No observations seen to affect sampling integrity
8 30m East of Salvation Army	0900	155	10	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 30m East of Salvation Army	0925	155	8	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
10 Fredrick St., 250m East of Lingan Rd.	1000	155	10	North	Upwind	Background	No observations seen to affect sampling integrity
11 30m East of Salvation Army	1000	155	7	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 30m East of Salvation Army	1045	155	6	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
13 Fredrick St., 250m East of Lingan Rd.	1100	155	8	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 30m East of Salvation Army	1100	155	7	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 30m East of Salvation Army	1140	155	8	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 Fredrick St., 250m East of Lingan Rd.	1200	155	10	North	Upwind	Background	No observations seen to affect sampling integrity
17 30m East of Salvation Army	1200	155	10	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 30m East of Salvation Army	1220	155	9	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 25m East TP6D (CO) main gate	1300	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 70m Northwest of Cape Breton St. and Victoria Rd. intersection	1300	155	9	Northeast	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
21 70m Northwest of Cape Breton St. and Victoria Rd. intersection	1315	155	10	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
22 Fredrick St., 500m East of Lingan Rd.	1400	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
23 70m Northwest of Cape Breton St. and Victoria Rd. intersection	1400	155	8	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 70m Northwest of Cape Breton St. and Victoria Rd. intersection	1425	155	10	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
25 Fredrick St., 500m East of Lingan Rd.	1500	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 70m Northwest of Cape Breton St. and Victoria Rd. intersection	1500	155	8	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 70m Northwest of Cape Breton St. and Victoria Rd. intersection	1545	155	9	Northeast	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
28 Fredrick St., 500m East of Lingan Rd.	1600	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
29 70m Northwest of Cape Breton St. and Victoria Rd. intersection	1600	155	10	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
30 70m Northwest of Cape Breton St. and Victoria Rd. intersection	1630	155	9	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
31 50m South of Metro Sanitation	1700	155	10	East	Upwind	Background	No observations seen to affect sampling integrity
32 3m East of Spar Rd. and Spar Rd. Ext. intersection	1700	155	9	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
33 3m East of Spar Rd. and Spar Rd. Ext. intersection	1745	155	16	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 ( $\mu\text{g}/\text{m}^3$ )
30m East of Salvation Army	0700 to 0759	12	990
30m East of Salvation Army	0800 to 0859	23	990
30m East of Salvation Army	0900 to 0959	32	990
30m East of Salvation Army	1000 to 1059	39	990
30m East of Salvation Army	1100 to 1159	47	990
30m East of Salvation Army	1200 to 1259	57	990
70m Northwest of Cape Breton St. and Victoria Rd. intersection	1300 to 1359	67	990
70m Northwest of Cape Breton St. and Victoria Rd. intersection	1400 to 1459	77	990
70m Northwest of Cape Breton St. and Victoria Rd. intersection	1500 to 1559	86	990
70m Northwest of Cape Breton St. and Victoria Rd. intersection	1600 to 1659	96	990
3m East of Spar Rd. and Spar Rd. Ext. intersection	1700 to 1759	109	990



### VOC Monitoring

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