

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1075-09
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	0630 to 1700
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	18 <sup>th</sup> February, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>COB-0036</b>

**SUBJECT: 15<sup>th</sup> February, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Coke Ovens Brook  
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 15<sup>th</sup> of February, 2008. Tyler Rowe and Trevor Rowe, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Overcast with periods of snow later in the afternoon
- Temperature: approximately -3°C (data unavailable from Environment Canada)
- Wind Direction: West

**Comments:** *ALL-TECH was on-Site at 0630 and sampling began as soon as there was Site activity. Air monitoring was performed during EarthTech's construction activities.*

All downwind and upwind measurements of PM<sub>10</sub> were well 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 well 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), TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Tyler Rowe and reviewed by Darren Lawless and Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



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Grant Harrigan, 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 – Coke Ovens Brook  
 15<sup>th</sup> February, 2008**

<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 50m West of Victoria Road bridge	0700	155	8	West	Upwind	Background	No observations seen to effect sampling integrity
2 5m West of Coke Ovens Brook main gate, 10m North of landfill	0700	155	12	West	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
3 5m West of Coke Ovens Brook main gate, 10m North of landfill	0715	155	10	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
4 50m West of Victoria Road bridge	0800	155	7	West	Upwind	Background	No observations seen to effect sampling integrity
5 5m West of Coke Ovens Brook main gate, 10m North of landfill	0800	155	8	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
6 5m West of Coke Ovens Brook main gate, 10m North of landfill	0815	155	7	West	Downwind	Excavator operating	No observations seen to effect 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 50m West of Victoria Road bridge	0900	155	10	West	Upwind	Background	No observations seen to effect sampling integrity
8 5m West of Coke Ovens Brook main gate, 10m North of landfill	0900	155	8	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
9 5m West of Coke Ovens Brook main gate, 10m North of landfill	0915	155	8	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
10 50m West of Victoria Road bridge	1000	155	7	West	Upwind	Background	No observations seen to effect sampling integrity
11 5m West of Coke Ovens Brook main gate, 10m North of landfill	1000	155	8	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
12 5m West of Coke Ovens Brook main gate, 10m North of landfill	1015	155	9	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
13 50m West of Victoria Road bridge	1100	155	5	West	Upwind	Background	No observations seen to effect 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 5m West of Coke Ovens Brook main gate, 10m North of landfill	1100	155	8	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
15 5m West of Coke Ovens Brook main gate, 10m North of landfill	1115	155	7	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
16 50m West of Victoria Road bridge	1200	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
17 5m West of Coke Ovens Brook main gate, 10m North of landfill	1200	155	5	West	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
18 5m West of Coke Ovens Brook main gate, 10m North of landfill	1215	155	6	West	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
19 50m West of Victoria Road bridge	1300	155	17	West	Upwind	Background	No observations seen to effect sampling integrity
20 5m West of Coke Ovens Brook main gate, 10m North of landfill	1300	155	7	West	Downwind	No activity observed on-site	No observations seen to effect 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 5m West of Coke Ovens Brook main gate, 10m North of landfill	1315	155	7	West	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
22 50m West of Victoria Road bridge	1400	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
23 5m West of Coke Ovens Brook main gate, 10m North of landfill	1400	155	5	West	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
24 5m West of Coke Ovens Brook main gate, 10m North of landfill	1415	155	4	West	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
25 50m West of Victoria Road bridge	1500	155	4	West	Upwind	Background	No observations seen to effect sampling integrity
26 5m West of Coke Ovens Brook main gate, 10m North of landfill	1500	155	4	West	Downwind	Excavator operating	No observations seen to effect sampling integrity
27 5m West of Coke Ovens Brook main gate, 10m North of landfill	1515	155	5	West	Downwind	Excavator operating	No observations seen to effect 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 50m West of Victoria Road bridge	1600	155	10	West	Upwind	Background	No observations seen to effect sampling integrity
29 5m West of Coke Ovens Brook main gate, 10m North of landfill	1600	155	7	West	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
30 5m West of Coke Ovens Brook main gate, 10m North of landfill	1615	155	7	West	Downwind	No activity observed on-site	No observations seen to effect 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 ( $\mu\text{g}/\text{m}^3$ )
5m West of Coke Ovens Brook main gate, 10m North of landfill	0700 to 0730	11	990
5m West of Coke Ovens Brook main gate, 10m North of landfill	0800 to 0830	19	990
5m West of Coke Ovens Brook main gate, 10m North of landfill	0900 to 0930	27	990
5m West of Coke Ovens Brook main gate, 10m North of landfill	1000 to 1030	36	990
5m West of Coke Ovens Brook main gate, 10m North of landfill	1100 to 1130	44	990
5m West of Coke Ovens Brook main gate, 10m North of landfill	1200 to 1230	50	990
5m West of Coke Ovens Brook main gate, 10m North of landfill	1300 to 1330	57	990
5m West of Coke Ovens Brook main gate, 10m North of landfill	1400 to 1430	62	990
5m West of Coke Ovens Brook main gate, 10m North of landfill	1500 to 1530	67	990
5m West of Coke Ovens Brook main gate, 10m North of landfill	1600 to 1630	74	990



### VOC Monitoring

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