

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1244-16
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1730
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	22 <sup>nd</sup> December, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>COCW-0031</b>

**SUBJECT: 19<sup>th</sup> December, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Coke Ovens Vertical Cutoff Walls  
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 19<sup>th</sup> of December, 2008. Alison Giovannetti 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:

- Cloudy with snow flurries
- Temperature: approximately -11°C
- Wind Direction: Northwest

**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 1030 to 1200 hours, 1230 to 1300 hours and 1430 to 1530 hours due to periods of precipitation. Air monitoring resumed at 1530 hours when weather conditions were within instrument specifications. 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 Alison Giovannetti 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 – Coke Ovens Vertical Cutoff Walls**  
**19<sup>th</sup> December, 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 5m Northwest of Spar and Spar Rd. intersection	0700	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 15m North of Coke Ovens Security trailer	0700	155	9	Northwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
3 15m North of Coke Ovens Security trailer	0730	155	8	Northwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
4 5m Northwest of Spar and Spar Rd. intersection	0800	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 15m North of Coke Ovens Security trailer	0800	155	8	Northwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
6 15m North of Coke Ovens Security trailer	0830	155	8	Northwest	Downwind	Excavator operating	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 5m Northwest of Spar and Spar Rd. intersection	0915	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 15m North of Coke Ovens Security trailer	0915	155	6	Northwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
9 15m North of Coke Ovens Security trailer	0935	155	7	Northwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
10 5m Northwest of Spar and Spar Rd. intersection	1000	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 15m North of Coke Ovens Security trailer	1000	155	10	Northwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
12 10m Northwest of Spar and Spar Rd. intersection	1215	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM10 Action Level (µg/m3)	Average Result (µg/m3)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
13 15m North of Coke Ovens Security trailer	1215	155	6	Northwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
14 10m Northwest of Spar and Spar Rd. intersection	1300	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
15 15m North of Coke Ovens Security trailer	1300	155	4	Northwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
16 15m North of Coke Ovens Security trailer	1340	155	4	Northwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
17 10m Northwest of Spar and Spar Rd. intersection	1530	155	-1	Northwest	Upwind	Background	No observations seen to affect sampling integrity
18 15m North of Coke Ovens Security trailer	1530	155	6	Northwest	Downwind	Excavator operating	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM10 Action Level (µg/m3)	Average Result (µg/m3)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
19 15m North of Coke Ovens Security trailer	1545	155	8	Northwest	Upwind	Excavator operating	No observations seen to affect sampling integrity
20 10m Northwest of Spar and Spar Rd. intersection	1600	155	9	Northwest	Upwind	Background	Re-zeroed DustTrak due to negative sample
21 15m North of Coke Ovens Security trailer	1600	155	7	Northwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
22 15m North of Coke Ovens Security trailer	1645	155	6	Northwest	Downwind	No activity observed onsite	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 ( $\mu\text{g}/\text{m}^3$ )
15m North of Coke Ovens Security trailer	0700 to 0759	9	990
15m North of Coke Ovens Security trailer	0800 to 0859	17	990
15m North of Coke Ovens Security trailer	0900 to 0959	24	990
15m North of Coke Ovens Security trailer	1000 to 1059	34	990
15m North of Coke Ovens Security trailer	1200 to 1259	41	990
15m North of Coke Ovens Security trailer	1300 to 1359	45	990
15m North of Coke Ovens Security trailer	1500 to 1559	52	990
15m North of Coke Ovens Security trailer	1600 to 1659	59	990

### VOC Monitoring

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