

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1244-12
<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>	16 <sup>th</sup> December, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>COCW-0027</b>

**SUBJECT: 15<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 15<sup>th</sup> of December, 2008. Tyler Rowe and Reg Peters 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: approx. 5°C
- Wind Direction: Southwest

**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 activity.*

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 Tyler Rowe 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**  
**15<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 30m West of Victoria Road	0700	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 100m Southwest of Spar Road, Lingan Road intersection	0700	155	11	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 100m Southwest of Spar Road, Lingan Road intersection	0730	155	13	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
4 30m West of Victoria Road	0800	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 100m Southwest of Spar Road, Lingan Road intersection	0800	155	13	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 100m Southwest of Spar Road, Lingan Road intersection	0845	155	15	Southwest	Downwind	Machines moving material	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 30m West of Victoria Road	0900	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 100m Southwest of Spar Road, Lingan Road intersection	0900	155	16	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
9 100m Southwest of Spar Road, Lingan Road intersection	0940	155	17	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 30m West of Victoria Road	1000	155	24	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 100m Southwest of Spar Road, Lingan Road intersection	1000	155	18	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 100m Southwest of Spar Road, Lingan Road intersection	1045	155	21	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 30m West of Victoria Road	1100	155	26	Southwest	Upwind	Background	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>
14 100m Southwest of Spar Road, Lingan Road intersection	1100	155	19	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
15 100m Southwest of Spar Road, Lingan Road intersection	1145	155	22	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 30m West of Victoria Road	1200	155	30	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 100m Southwest of Spar Road, Lingan Road intersection	1200	155	22	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 100m Southwest of Spar Road, Lingan Road intersection	1235	155	22	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 30m West of Victoria Road	1300	155	34	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 100m Southwest of Spar Road, Lingan Road intersection	1300	155	23	Southwest	Downwind	Machines moving material	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 100m Southwest of Spar Road, Lingan Road intersection	1345	155	26	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 30m West of Victoria Road	1400	155	32	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 100m Southwest of Spar Road, Lingan Road intersection	1400	155	24	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 100m Southwest of Spar Road, Lingan Road intersection	1435	155	25	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 30m West of Victoria Road	1500	155	32	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 100m Southwest of Spar Road, Lingan Road intersection	1500	155	24	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 100m Southwest of Spar Road, Lingan Road intersection	1545	155	24	Southwest	Downwind	Machines moving material	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 30m West of Victoria Road	1600	155	29	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 100m Southwest of Spar Road, Lingan Road intersection	1600	155	23	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
30 100m Southwest of Spar Road, Lingan Road intersection	1645	155	22	Southwest	Downwind	Machines moving material	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 Southwest of Spar Road, Lingan Road intersection	0700 to 0759	12	990
100m Southwest of Spar Road, Lingan Road intersection	0800 to 0859	26	990
100m Southwest of Spar Road, Lingan Road intersection	0900 to 0959	43	990
100m Southwest of Spar Road, Lingan Road intersection	1000 to 1059	63	990
100m Southwest of Spar Road, Lingan Road intersection	1100 to 1159	84	990
100m Southwest of Spar Road, Lingan Road intersection	1200 to 1259	106	990
100m Southwest of Spar Road, Lingan Road intersection	1300 to 1359	131	990
100m Southwest of Spar Road, Lingan Road intersection	1400 to 1459	156	990
100m Southwest of Spar Road, Lingan Road intersection	1500 to 1559	180	990
100m Southwest of Spar Road, Lingan Road intersection	1600 to 1659	203	990



### VOC Monitoring

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