

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1234-08
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1715
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	24 <sup>th</sup> November, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>COCW-0008</b>

**SUBJECT: 23<sup>rd</sup> November, 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 23<sup>rd</sup> of November, 2008. Colin MacIsaac and Jennifer Andrews of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly sunny
- Temperature: approximately -3°C
- Wind Direction: West

**Comments:** *ALL-TECH was on-Site at 0730 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 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 Colin MacIsaac 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**  
**23<sup>rd</sup> November, 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 40m West of Victoria Road bridge	0800	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
2 60m South of Lingan Road and Spar Road intersection	0800	155	13	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
3 60m South of Lingan Road and Spar Road intersection	0815	155	3	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
4 40m West of Victoria Road bridge	0900	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
5 60m South of Lingan Road and Spar Road intersection	0900	155	9	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 60m South of Lingan Road and Spar Road intersection	0915	155	7	West	Downwind	Machines moving material	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>
7 40m West of Victoria Road bridge	1000	155	1	West	Upwind	Background	No observations seen to affect sampling integrity
8 60m South of Lingan Road and Spar Road intersection	1000	155	9	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
9 60m South of Lingan Road and Spar Road intersection	1015	155	9	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 40m West of Victoria Road bridge	1100	155	1	West	Upwind	Background	No observations seen to affect sampling integrity
11 60m South of Lingan Road and Spar Road intersection	1100	155	23	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 60m South of Lingan Road and Spar Road intersection	1115	155	25	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 40m West of Victoria Road bridge	1200	155	1	West	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 60m South of Lingan Road and Spar Road intersection	1200	155	8	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
15 60m South of Lingan Road and Spar Road intersection	1215	155	5	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 40m West of Victoria Road bridge	1300	155	1	West	Upwind	Background	No observations seen to affect sampling integrity
17 60m South of Lingan Road and Spar Road intersection	1300	155	4	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 60m South of Lingan Road and Spar Road intersection	1315	155	3	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 40m West of Victoria Road bridge	1400	155	4	West	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
20 60m South of Lingan Road and Spar Road intersection	1400	155	19	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
21 60m South of Lingan Road and Spar Road intersection	1415	155	18	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 40m West of Victoria Road bridge	1500	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
23 60m South of Lingan Road and Spar Road intersection	1500	155	10	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 60m South of Lingan Road and Spar Road intersection	1515	155	9	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 40m West of Victoria Road bridge	1600	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
26 60m South of Lingan Road and Spar Road intersection	1600	155	4	West	Downwind	No activity observed on site	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>
27 60m South of Lingan Road and Spar Road intersection	1630	155	4	West	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 ( $\mu\text{g}/\text{m}^3$ )
60m South of Lingan Road and Spar Road intersection	0800 to 0859	8	990
60m South of Lingan Road and Spar Road intersection	0900 to 0959	16	990
60m South of Lingan Road and Spar Road intersection	1000 to 1059	25	990
60m South of Lingan Road and Spar Road intersection	1100 to 1159	49	990
60m South of Lingan Road and Spar Road intersection	1200 to 1259	56	990
60m South of Lingan Road and Spar Road intersection	1300 to 1359	60	990
60m South of Lingan Road and Spar Road intersection	1400 to 1459	79	990
60m South of Lingan Road and Spar Road intersection	1500 to 1559	89	990



Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
60m South of Lingan Road and Spar Road intersection	1600 to 1659	93	990

### VOC Monitoring

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