

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1234-09
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1745
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	25 <sup>th</sup> November, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>COCW-0009</b>

**SUBJECT: 24<sup>th</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 24<sup>th</sup> of November, 2008. Colin MacIsaac, Reg Peters and Alison Giovannetti of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly cloudy, flurries
- Temperature: approximately 2°C
- Wind Direction: West

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

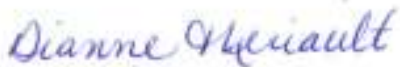
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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 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**  
**24<sup>th</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 W of Victoria Rd. Bridge	0700	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
2 90m SW of Spar and Lingan Intersection	0700	155	4	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
3 90m SW of Spar and Lingan Intersection	0745	155	3	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
4 40m W of Victoria Rd. Bridge	0800	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
5 90m SW of Spar and Lingan Intersection	0800	155	4	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
6 90m SW of Spar and Lingan Intersection	0820	155	7	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
7 40m W of Victoria Rd. Bridge	0900	155	3	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
8 90m SW of Spar and Lingan Intersection	0900	155	6	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
9 90m SW of Spar and Lingan Intersection	0930	155	5	West	Downwind	Machines moving material	No observations seen to effect sampling integrity
10 40m W of Victoria Rd. Bridge	1000	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
11 90m SW of Spar and Lingan Intersection	1000	155	71	West	Downwind	Loading material	Dust from material loading
12 90m SW of Spar and Lingan Intersection	1045	155	69	West	Downwind	Loading material	Dust from material loading
13 40m W of Victoria Rd. Bridge	1100	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
14 90m SW of Spar and Lingan Intersection	1100	155	19	West	Downwind	Loading material	No observations seen to affect sampling integrity
15 90m SW of Spar and Lingan Intersection	1120	155	6	West	Downwind	Machine 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
16 40m W of Victoria Rd. Bridge	1200	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
17 90m SW of Spar and Lingan Intersection	1200	155	5	West	Downwind	Machine moving material	No observations seen to effect sampling integrity
18 90m SW of Spar and Lingan Intersection	1245	155	6	West	Downwind	Machine moving material	No observations seen to effect sampling integrity
19 40m W of Victoria Rd. Bridge	1300	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
20 90m SW of Spar and Lingan Intersection	1300	155	6	West	Downwind	Machine moving material	No observations seen to effect sampling integrity
21 90m SW of Spar and Lingan Intersection	1335	155	80	West	Downwind	Loading material	Dust from material loading
22 40m W of Victoria Rd. Bridge	1400	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
23 90m SW of Spar and Lingan Intersection	1400	155	10	West	Downwind	Loading material	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
24 90m SW of Spar and Lingan Intersection	1440	155	6	West	Downwind	Machine moving material	No observations seen to effect sampling integrity
25 40m W of Victoria Rd. Bridge	1500	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
26 90m SW of Spar and Lingan Intersection	1500	155	9	West	Downwind	Machine moving material	No observations seen to effect sampling integrity
27 90m SW of Spar and Lingan Intersection	1540	155	6	West	Downwind	Machine moving material	No observations seen to effect sampling integrity
28 40m W of Victoria Rd. Bridge	1600	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
29 90m SW of Spar and Lingan Intersection	1600	155	4	West	Downwind	Machine moving material	No observations seen to effect sampling integrity
30 90m SW of Spar and Lingan Intersection	1645	155	4	West	Downwind	Machine moving material	No observations seen to effect sampling integrity
31 40m W of Victoria Rd. Bridge	1700	155	4	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
32 90m SW of Spar and Lingan Intersection	1700	155	5	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 ( $\mu\text{g}/\text{m}^3$ )
90m SW of Spar and Lingan Intersection	0700 to 0759	4	990
90m SW of Spar and Lingan Intersection	0800 to 0859	10	990
90m SW of Spar and Lingan Intersection	0900 to 0959	16	990
90m SW of Spar and Lingan Intersection	100 to 1059	86	990
90m SW of Spar and Lingan Intersection	1100 to 1159	109	990
90m SW of Spar and Lingan Intersection	1200 to 1259	115	990
90m SW of Spar and Lingan Intersection	1300 to 1359	158	990
90m SW of Spar and Lingan Intersection	1400 to 1459	164	990
90m SW of Spar and Lingan Intersection	1500 to 1559	172	990
90m SW of Spar and Lingan Intersection	1600 to 1659	176	990
90m SW of Spar and Lingan Intersection	1700 to 1759	181	990



### VOC Monitoring

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