

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1313-32
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0700 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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<b>DATE</b>	29 <sup>th</sup> May, 2009	<b>STPA NO.</b>	<b>TP6D-CO-0070</b>

**SUBJECT: 28<sup>th</sup> May, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, Coke Ovens  
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 28<sup>th</sup> of May, 2009. Jennifer Andrews and Dwayne Timmons 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: approximately 14°C
- Wind Direction: Southwest to Northwest

**Comments:** *Air monitoring was delayed until 0700 hours due to precipitation, and began at 0900 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 Jennifer Andrews 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 – Access Roads, Coke Ovens**  
**28<sup>th</sup> May, 2009**

<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 90m East of Spar Rd. and Ferry St. intersection	0900	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 10m West of coke ovens brook main gate	0900	155	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 10m West of coke ovens brook main gate	0940	155	8	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
4 90m East of Spar Rd. and Ferry St. intersection	1000	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 10m West of coke ovens brook main gate	1000	155	9	Southwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
6 10m West of coke ovens brook main gate	1020	155	8	Southwest	Downwind	Activity not visible from monitoring location	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 90m East of Spar Rd. and Ferry St. intersection	1100	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 10m West of coke ovens brook main gate	1100	155	10	Southwest	Downwind	Backhoe moving material	No observations seen to affect sampling integrity
9 10m West of coke ovens brook main gate	1115	155	10	Southwest	Downwind	Backhoe moving material	No observations seen to affect sampling integrity
10 90m East of Spar Rd. and Ferry St. intersection	1200	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 10m West of coke ovens brook main gate	1200	155	10	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 10m West of coke ovens brook main gate	1240	155	10	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
13 1m South of fixed station on Curry's Lane	1300	155	9	Northwest	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 350m Northeast of coke ovens security trailer	1300	155	13	Northwest	Downwind	Backhoe moving material	No observations seen to affect sampling integrity
15 350m Northeast of coke ovens security trailer	1330	155	10	Northwest	Downwind	Backhoe moving material	No observations seen to affect sampling integrity
16 1m South of fixed station on Curry's Lane	1400	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 350m Northeast of coke ovens security trailer	1400	155	9	Northwest	Downwind	Backhoe moving material	No observations seen to affect sampling integrity
18 350m Northeast of coke ovens security trailer	1445	155	10	Northwest	Downwind	Backhoe moving material	No observations seen to affect sampling integrity
19 1m South of fixed station on Curry's Lane	1500	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 350m Northeast of coke ovens security trailer	1500	155	9	Northwest	Downwind	No activity observed on site	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 350m Northeast of coke ovens security trailer	1545	155	9	Northwest	Downwind	Backhoe moving material	No observations seen to affect sampling integrity
22 1m South of fixed station on Curry's Lane	1600	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 350m Northeast of coke ovens security trailer	1600	155	9	Northwest	Downwind	Backhoe moving material	No observations seen to affect sampling integrity
24 350m Northeast of coke ovens security trailer	1625	155	9	Northwest	Downwind	Backhoe moving material	No observations seen to affect sampling integrity
25 1m South of fixed station on Curry's Lane	1700	155	18	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 350m Northeast of coke ovens security trailer	1700	155	11	Northwest	Downwind	Activity not visible from sampling location	No observations seen to affect sampling integrity
27 350m Northeast of coke ovens security trailer	1745	155	9	Northwest	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 ( $\mu\text{g}/\text{m}^3$ )
10m West of coke ovens brook main gate	0900 to 0959	9	990
10m West of coke ovens brook main gate	1000 to 1059	18	990
10m West of coke ovens brook main gate	1100 to 1159	28	990
10m West of coke ovens brook main gate	1200 to 1259	38	990
350m Northeast of coke ovens security trailer	1300 to 1359	50	990
350m Northeast of coke ovens security trailer	1400 to 1459	60	990
350m Northeast of coke ovens security trailer	1500 to 1559	69	990
350m Northeast of coke ovens security trailer	1600 to 1659	78	990
350m Northeast of coke ovens security trailer	1700 to 1759	88	990

### VOC Monitoring

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