

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1293-15
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	21 <sup>st</sup> April, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CO2-0018</b>

**SUBJECT: 20<sup>th</sup> April, 2009, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Tar Cell  
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 20<sup>th</sup> of April, 2009. Jennifer Andrews 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 sunny
- Temperature: approximately 6 °C
- Wind Direction: West to Northwest to North

**Comments:** *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity. Air monitoring was performed during SLR'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 – Tar Cell**  
**20<sup>th</sup> April, 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 30m South of Spar Road and Spar Road Extension intersection	0700	155	21	West	Upwind	Background	No observations seen to affect sampling integrity
2 30m Northeast of coke ovens main gate	0700	155	10	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 30M Northeast of coke ovens main gate	0735	155	11	West	Downwind	Excavators in operation	No observations seen to affect sampling integrity
4 30m South of Spar Road and Spar Road Extension intersection	0800	155	19	West	Upwind	Background	No observations seen to affect sampling integrity
5 30M Northeast of coke ovens main gate	0800	155	10	West	Downwind	Excavators in operation	No observations seen to affect sampling integrity
6 30M Northeast of coke ovens main gate	0830	155	6	West	Downwind	Excavators in operation	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 1m Northeast of fixed station on Curry's Lane	0900	155	18	North	Upwind	Background	No observations seen to affect sampling integrity
8 30m East of coke ovens main gate	0900	155	5	Northwest	Downwind	Excavators in operation	No observations seen to affect sampling integrity
9 30m East of coke ovens main gate	0930	155	4	Northwest	Downwind	Excavators in operation	No observations seen to affect sampling integrity
10 1m Northeast of fixed station on Curry's Lane	1000	155	15	North	Upwind	Background	No observations seen to affect sampling integrity
11 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1000	155	4	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1035	155	3	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
13 1m Northeast of fixed station on Curry's Lane	1100	155	10	North	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 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1100	155	4	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
15 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1135	155	6	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
16 1m Northeast of fixed station on Curry's Lane	1200	155	10	North	Upwind	Background	No observations seen to affect sampling integrity
17 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1200	155	7	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
18 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1220	155	9	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
19 1m Northeast of fixed station on Curry's Lane	1300	155	9	North	Upwind	Background	No observations seen to affect sampling integrity
20 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1300	155	10	North	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 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1345	155	10	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
22 1m Northeast of fixed station on Curry's Lane	1400	155	9	North	Upwind	Background	No observations seen to affect sampling integrity
23 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1400	155	12	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
24 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1435	155	9	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
25 1m Northeast of fixed station on Curry's Lane	1500	155	9	North	Upwind	Background	No observations seen to affect sampling integrity
26 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1500	155	9	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
27 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1545	155	8	North	Downwind	Excavators in operation	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 1m Northeast of fixed station on Curry's Lane	1600	155	9	North	Upwind	Background	No observations seen to affect sampling integrity
29 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1600	155	8	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
30 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1630	155	9	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
31 1m Northeast of fixed station on Curry's Lane	1700	155	11	North	Upwind	Background	No observations seen to affect sampling integrity
32 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1700	155	8	North	Downwind	Excavators in operation	No observations seen to affect sampling integrity
33 Cape Breton St., 25m Northeast of Victoria Rd. bridge	1745	155	8	North	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 ( $\mu\text{g}/\text{m}^3$ )
30m Northeast of coke ovens main gate	0700 to 0759	11	990
30m Northeast of coke ovens main gate	0800 to 0859	19	990
30m East of coke ovens main gate	0900 to 0959	24	990
Cape Breton St., 25m Northeast of Victoria Rd. bridge	1000 to 1059	28	990
Cape Breton St., 25m Northeast of Victoria Rd. bridge	1100 to 1159	33	990
Cape Breton St., 25m Northeast of Victoria Rd. bridge	1200 to 1259	41	990
Cape Breton St., 25m Northeast of Victoria Rd. bridge	1300 to 1359	51	990
Cape Breton St., 25m Northeast of Victoria Rd. bridge	1400 to 1459	62	990
Cape Breton St., 25m Northeast of Victoria Rd. bridge	1500 to 1559	71	990
Cape Breton St., 25m Northeast of Victoria Rd. bridge	1600 to 1659	79	990
Cape Breton St., 25m Northeast of Victoria Rd. bridge	1700 to 1759	87	990



### VOC Monitoring

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