

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1312-15
<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>	14 <sup>th</sup> May, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CO2-NSL-0046</b>

**SUBJECT: 13<sup>th</sup> May, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Tar Cell, Sysco Site  
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 13<sup>th</sup> of May, 2009. Donald MacIsaac and Keith Neville 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 16°C
- Wind Direction: West to Southwest to North to South

**Comments:** *ALL-TECH was on-Site at 0630 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 Donald 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 – Tar Cell, Sysco Site**  
**13<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 300m South of old incinerator	0700	155	18	West	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
2 120m East of railway building	0705	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
3 300m South of old incinerator	0740	155	13	West	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
4 70m North of Ferry St. railway crossing	0800	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 150m South of old incinerator	0800	155	37	Southwest	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
6 150m South of old incinerator	0815	155	18	Southwest	Downwind	Dump trucks arriving, leaving 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
7 70m North of Ferry St. railway crossing	0900	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 150m South of old incinerator	0900	155	22	Southwest	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
9 150m South of old incinerator	0925	155	10	Southwest	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
10 70m North of Ferry St. railway crossing	1000	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 150m South of old incinerator	1000	155	9	Southwest	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
12 Railway property, 10m North of Ferry St.	1045	155	9	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
13 100m Southwest of old incinerator	1100	155	8	North	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
14 Railway property, 10m North of Ferry St.	1100	155	10	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
15 Railway property, 10m North of Ferry St.	1120	155	10	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
16 150m Northwest of weigh station	1200	155	8	North	Upwind	Background	No observations seen to affect sampling integrity
17 100m East of railway maintenance shop	1200	155	9	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
18 100m East of railway maintenance shop	1220	155	8	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
19 150m Northwest of weigh station	1300	155	8	North	Upwind	Background	No observations seen to affect sampling integrity
20 100m East of railway maintenance shop	1300	155	13	North	Downwind	Activity not visible from sample 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
21 100m East of railway maintenance shop	1325	155	9	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
22 150m Northwest of weigh station	1400	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
23 100m East of railway maintenance shop	1400	155	9	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
24 100m East of railway maintenance shop	1430	155	15	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
25 100m Southwest of old incinerator	1500	155	8	South	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
26 20m North of Ferry St. railway crossing	1510	155	22	South	Upwind	Background	No observations seen to affect sampling integrity
27 100m Southwest of old incinerator	1535	155	19	South	Downwind	Dump trucks arriving, leaving 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
28 15m South of Ferry St. railway crossing	1600	155	7	South	Upwind	Background	No observations seen to affect sampling integrity
29 100m Southwest of old incinerator	1600	155	24	South	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
30 100m Southwest of old incinerator	1645	155	24	South	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
31 15m South of Ferry St. railway crossing	1700	155	8	South	Upwind	Background	No observations seen to affect sampling integrity
32 100m Southwest of old incinerator	1700	155	30	South	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
33 100m Southwest of old incinerator	1745	155	15	South	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 ( $\mu\text{g}/\text{m}^3$ )
300m South of old incinerator	0700 to 0759	16	990
150m South of old incinerator	0800 to 0859	44	990
150m South of old incinerator	0900 to 0959	60	990
150m South of old incinerator / 10m North of Ferry St. detour, West side	1000 to 1059	69	990
10m North of Ferry St. detour, West side	1100 to 1159	79	990
100m East of railway maintenance shop	1200 to 1259	88	990
100m East of railway maintenance shop	1300 to 1359	99	990
100m East of railway maintenance shop	1400 to 1459	111	990
100m Southwest of old incinerator	1500 to 1559	125	990
100m Southwest of old incinerator	1600 to 1659	149	990
100m Southwest of old incinerator	1700 to 1759	172	990



### VOC Monitoring

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