

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1330-02
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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DATE	3 rd June, 2009	STPA NO.	CO2-NSL-0066

**SUBJECT: 2nd June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Tar Cell, Sysco Site
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 2nd of June, 2009. Donald MacIsaac 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 18°C
- Wind Direction: Southwest

Comments: *ALL-TECH was on-Site at 0630 and sampling began as soon as there was site activity, but was later put on standby at 0930 hours due to precipitation. Air monitoring resumed at 1015 when weather conditions were within instrument specifications. Air monitoring was performed during SLR's construction activities.*

All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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,



Dianne Theriault, B.Tech
Environmental Technologist
ALL-TECH Environmental Services Cape Breton Ltd.

Copied via e-mail:

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Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Tar Cell, Sysco Site
2nd June, 2009

Sample No. & Air Monitoring Location	Time of Day	PM₁₀ Action Level (µg/m³)	Average Result (µg/m³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 100m North of Ferry St. rail crossing	0700	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 25m East of new truck scale (N 46°09,323' W 060°11,641')	0700	155	24	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
3 25m East of new truck scale (N 46°09,323' W 060°11,641')	0730	155	10	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 100m North of Ferry St. rail crossing	0800	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 25m East of new truck scale (N 46°09,323' W 060°11,641')	0800	155	39	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
6 25m East of new truck scale (N 46°09,323' W 060°11,641')	0845	155	20	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
7 100m North of Ferry St. rail crossing	0900	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 25m East of new truck scale (N 46°09,323' W 060°11,641')	0900	155	18	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
9 25m East of new truck scale (N 46°09,323' W 060°11,641')	0925	155	17	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
10 100m North of Ferry St. rail crossing	1015	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 40m Southeast of new truck scale (N 46°09,309' W 060°11,630')	1015	155	11	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 40m Southeast of new truck scale (N 46°09,309' W 060°11,630')	1035	155	16	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
13 100m North of Ferry St. rail crossing	1100	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
14 40m Southeast of new truck scale (N 46°09,309' W 060°11,630')	1100	155	13	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
15 40m Southeast of new truck scale (N 46°09,309' W 060°11,630')	1145	155	87	Southwest	Downwind	Equipment operating	Dust from site road traffic
16 100m North of Ferry St. rail crossing	1200	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 40m Southeast of new truck scale (N 46°09,309' W 060°11,630')	1200	155	79	Southwest	Downwind	Equipment operating	Dust from site road traffic
18 40m Southeast of new truck scale (N 46°09,309' W 060°11,630')	1245	155	93	Southwest	Downwind	Equipment operating	Dust from site road traffic
19 100m North of Ferry St. rail crossing	1300	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 40m Southeast of new truck scale (N 46°09,309' W 060°11,630')	1300	155	67	Southwest	Downwind	No activity observed on site	Dust from site road traffic

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
21 40m Southeast of new truck scale (N 46°09,309' W 060°11,630')	1345	155	113	Southwest	Downwind	Equipment operating	Dust from site road traffic
22 60m Southeast of new truck scale (N 46°09,297' W 060°11,620')	1405	155	75	Southwest	Downwind	Equipment operating	Dust from site road traffic
23 100m North of Ferry St. rail crossing	1410	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
24 60m Southeast of new truck scale (N 46°09,297' W 060°11,620')	1420	155	82	Southwest	Downwind	Equipment operating	Dust from site road traffic
25 100m North of Ferry St. rail crossing	1425	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 60m Southeast of new truck scale (N 46°09,297' W 060°11,620')	1440	155	46	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
27 100m North of Ferry St. rail crossing	1500	155	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
28 60m Southeast of new truck scale (N 46°09,297' W 060°11,620')	1500	155	56	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
29 60m Southeast of new truck scale (N 46°09,297' W 060°11,620')	1530	155	49	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
30 100m North of Ferry St. rail crossing	1600	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
31 60m Southeast of new truck scale (N 46°09,297' W 060°11,620')	1600	155	29	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
32 60m Southeast of new truck scale (N 46°09,297' W 060°11,620')	1620	155	32	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
33 100m North of Ferry St. rail crossing	1700	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
34 60m Southeast of new truck scale (N 46°09,297' W 060°11,620')	1700	155	50	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
35 60m Southeast of new truck scale (N 46°09,297' W 060°11,620')	1745	155	11	Southwest	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 ($\mu\text{g}/\text{m}^3$)
25m East of new truck scale	0700 to 0759	17	990
25m East of new truck scale	0800 to 0859	47	990
25m East of new truck scale	0900 to 0959	65	990
40m Southeast of new truck scale	1000 to 1059	79	990
40m Southeast of new truck scale	1100 to 1159	129	990
40m Southeast of new truck scale	1200 to 1259	215	990
40m Southeast of new truck scale	1300 to 1359	305	990
60m Southeast of new truck scale	1400 to 1459	373	990
60m Southeast of new truck scale	1500 to 1559	426	990
60m Southeast of new truck scale	1600 to 1659	457	990
60m Southeast of new truck scale	1700 to 1759	488	990

VOC Monitoring

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