

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1330-03
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	4 th June, 2009	STPA NO.	CO2-NSL-0067

**SUBJECT: 3rd 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 3rd 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:

- Partly cloudy
- Temperature: approximately 19°C
- Wind Direction: Southwest to West to Southwest

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 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
3rd 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 110m Southeast of railway building (N 46°09.922' W 060°11.713')	0700	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 200m Northwest of new truck scale (N 46°09.371' W 060°11.769')	0700	155	23	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 200m Northwest of new truck scale (N 46°09.371' W 060°11.769')	0740	155	20	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 110m Southeast of railway building (N 46°09.922' W 060°11.713')	0800	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 200m Northwest of new truck scale (N 46°09.371' W 060°11.769')	0800	155	12	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
6 200m Northwest of new truck scale (N 46°09.371' W 060°11.769')	0820	155	12	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 110m Southeast of railway building (N 46°09.922' W 060°11.713')	0900	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 200m Northwest of new truck scale (N 46°09.371' W 060°11.769')	0900	155	10	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
9 200m Northwest of new truck scale (N 46°09.371' W 060°11.769')	0925	155	13	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
10 110m Southeast of railway building (N 46°09.922' W 060°11.713')	1000	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 200m Northwest of new truck scale (N 46°09.371' W 060°11.769')	1000	155	12	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 200m Northwest of new truck scale (N 46°09.371' W 060°11.769')	1025	155	17	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
13 110m Southeast of railway building (N 46°09.922' W 060°11.713')	1100	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 200m Northwest of new truck scale (N 46°09.371' W 060°11.769')	1100	155	22	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
15 200m Northwest of new truck scale (N 46°09.371' W 060°11.769')	1140	155	19	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
16 100m East of railway building (N 46°09.953' W 060°11.734')	1200	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
17 100m South of new truck scale (N 46°09.253' W 060°11.632')	1200	155	29	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
18 100m South of new truck scale (N 46°09.253' W 060°11.632')	1215	155	23	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
19 100m East of railway building (N 46°09.953' W 060°11.734')	1300	155	5	West	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
20 100m South of new truck scale (N 46°09.253' W 060°11.632')	1300	155	15	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
21 100m South of new truck scale (N 46°09.253' W 060°11.632')	1330	155	11	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
22 110m Southeast of railway building (N 46°09.922' W 060°11.713')	1400	155	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 40m Northeast of new truck scale (N 46°09.328' W 060°11.642')	1400	155	27	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
24 40m Northeast of new truck scale (N 46°09.328' W 060°11.642')	1425	155	62	Southwest	Downwind	Equipment operating	Dust from site road traffic
25 110m Southeast of railway building (N 46°09.922' W 060°11.713')	1500	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 40m Northeast of new truck scale (N 46°09.328' W 060°11.642')	1500	155	39	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
27 40m Northeast of new truck scale (N 46°09.328' W 060°11.642')	1525	155	27	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
28 110m Southeast of railway building (N 46°09.922' W 060°11.713')	1600	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 40m Northeast of new truck scale (N 46°09.328' W 060°11.642')	1600	155	29	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
30 40m Northeast of new truck scale (N 46°09.328' W 060°11.642')	1620	155	30	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
31 110m Southeast of railway building (N 46°09.922' W 060°11.713')	1700	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
32 40m Northeast of new truck scale (N 46°09.328' W 060°11.642')	1700	155	22	Southwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
33 40m Northeast of new truck scale (N 46°09.328' W 060°11.642')	1745	155	12	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 ($\mu\text{g}/\text{m}^3$)
200m Northwest of new truck scale	0700 to 0759	22	990
200m Northwest of new truck scale	0800 to 0859	34	990
200m Northwest of new truck scale	0900 to 0959	46	990
200m Northwest of new truck scale	1000 to 1059	61	990
200m Northwest of new truck scale	1100 to 1159	82	990
100m South of new truck scale	1200 to 1259	108	990
100m South of new truck scale	1300 to 1359	121	990
40m Northeast of new truck scale	1400 to 1459	166	990
40m Northeast of new truck scale	1500 to 1559	199	990
40m Northeast of new truck scale	1600 to 1659	229	990
40m Northeast of new truck scale	1700 to 1759	246	990

VOC Monitoring

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