

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1312-13
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
FAX	(902) 539-3381		
DATE	13 th May, 2009	STPA NO.	CO2-NSL-0044

**SUBJECT: 12th May, 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 12th of May, 2009. Colin 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 8°C
- Wind Direction: Northwest to Southwest to Northeast to North to Northeast

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 Colin 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:

Shawn Bernon shawn@tarpondscleanup.ca, Wilfred Kaiser wilfred@tarpondscleanup.ca, Nancy LeDrew nancy@tarpondscleanup.ca, Trish Magliaro trish@tarpondscleanup.ca, Terry Smith tsmith@toalltech.com, Phyllis Low pilow@toalltech.com, Dianne Theriault dtheriault@toalltech.com, Darren Gardiner dgardiner@croworld.com, Darren Lawless dlawless@toalltech.com, Kevin Mac Pherson kevinmacp@cbcl.ca, Kathy Harquail kharquail@toalltech.com

**Real-time Airborne PM₁₀ Concentration Results
 Sydney Tar Ponds Agency – Tar Cell, Sysco Site
 12th May, 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 60m Northeast of railway building	0700	155	13	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 300m South of old incinerator	0700	155	13	Northwest	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
3 300m South of old incinerator	0735	155	13	Northwest	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
4 60m Northeast of railway building	0800	155	16	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 300m South of old incinerator	0800	155	16	Northwest	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
6 300m South of old incinerator	0830	155	12	Northwest	Downwind	Dump trucks arriving, leaving site	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 70m Southeast of railway building	0900	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 150m South of old incinerator	0900	155	15	Southwest	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
9 150m South of old incinerator	0915	155	18	Southwest	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
10 200m South of old incinerator	1000	155	12	Northeast	Upwind	Background	No observations seen to affect sampling integrity
11 25m Northeast of maintenance shop on railway property	1000	155	10	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
12 25m Northeast of maintenance shop on railway property	1045	155	10	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
13 200m South of old incinerator	1100	155	27	Northeast	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 25m Northeast of maintenance shop on railway property	1100	155	15	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
15 25m Northeast of maintenance shop on railway property	1125	155	13	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
16 250m South of old incinerator	1200	155	22	North	Upwind	Background	No observations seen to affect sampling integrity
17 50m East of maintenance shop on railway property	1200	155	18	North	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
18 50m East of maintenance shop on railway property	1215	155	14	North	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
19 250m South of old incinerator	1300	155	14	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 25m Northeast of maintenance shop on railway property	1300	155	19	Northeast	Downwind	Activity not visible from sample location	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
21 25m Northeast of maintenance shop on railway property	1330	155	18	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
22 250m South of old incinerator	1400	155	9	Northeast	Upwind	Background	No observations seen to affect sampling integrity
23 25m Northeast of maintenance shop on railway property	1400	155	26	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
24 25m Northeast of maintenance shop on railway property	1440	155	20	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
25 250m South of old incinerator	1500	155	7	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 25m Northeast of maintenance shop on railway property	1500	155	11	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
27 25m Northeast of maintenance shop on railway property	1530	155	11	Northeast	Downwind	Dump trucks arriving, leaving site	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 250m South of old incinerator	1600	155	8	Northeast	Upwind	Background	No observations seen to affect sampling integrity
29 25m Northeast of maintenance shop on railway property	1600	155	11	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
30 25m Northeast of maintenance shop on railway property	1615	155	11	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
31 250m South of old incinerator	1700	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
32 25m Northeast of maintenance shop on railway property	1700	155	9	Northeast	Downwind	Dump trucks arriving, leaving site	No observations seen to affect sampling integrity
33 25m Northeast of maintenance shop on railway property	1745	155	7	Northeast	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	13	990
300m South of old incinerator	0800 to 0859	27	990
150m South of old incinerator	0900 to 0959	44	990
25m Northeast of maintenance shop on railway property	1000 to 1059	54	990
25m Northeast of maintenance shop on railway property	1100 to 1159	68	990
50m East of maintenance shop on railway property	1200 to 1259	83	990
25m Northeast of maintenance shop on railway property	1300 to 1359	101	990
25m Northeast of maintenance shop on railway property	1400 to 1459	124	990
25m Northeast of maintenance shop on railway property	1500 to 1559	135	990
25m Northeast of maintenance shop on railway property	1600 to 1659	146	990
25m Northeast of maintenance shop on railway property	1700 to 1759	154	990

VOC Monitoring

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