

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1331-12
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	9 th June, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP6D-NP-0086

**SUBJECT: 8th June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads, North Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 8th of June, 2009. Nigel MacLean, Colin 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 17°C
- Wind Direction: Southwest to West

Comments: *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity. Air monitoring was performed during AECOM'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 Reg Peters 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 – Access Roads, North Pond
8th June, 2009

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
1 180m Southeast of railway maintenance building (N46°08.847' W060°11.632')	0700	155	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 380m North of TP2 entrance gate (N46°09.120' W060°11.496')	0700	155	8	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 380m North of TP2 entrance gate (N46°09.120' W060°11.496')	0720	155	4	Southwest	Downwind	Excavator in operation	No observations seen to affect sampling integrity
4 180m Southeast of railway maintenance building (N46°08.847' W060°11.632')	0800	155	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 200m North of TP2 entrance gate (N46°08.947' W060°11.355')	0800	155	6	Southwest	Downwind	Excavator in operation	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
6 200m North of TP2 entrance gate (N46°08.947' W060°11.355')	0825	155	4	Southwest	Downwind	Excavator in operation	No observations seen to affect sampling integrity
7 180m Southeast of railway maintenance building (N46°08.847' W060°11.632')	0900	155	2	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 200m North of TP2 entrance gate (N46°08.947' W060°11.355')	0900	155	4	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
9 200m North of TP2 entrance gate (N46°08.947' W060°11.355')	0935	155	4	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
10 100m Northeast of railway maintenance building (N46°08.964' W060°11.746')	1000	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
11 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1000	155	10	West	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity

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
12 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1035	155	5	West	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
13 100m Northeast of railway maintenance building (N46°08.964' W060°11.746')	1100	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
14 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1100	155	18	West	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
15 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1120	155	8	West	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
16 100m Northeast of railway maintenance building (N46°08.964' W060°11.746')	1200	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
17 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1200	155	23	West	Downwind	No activity observed on 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
18 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1240	155	65	West	Downwind	Excavator and dump trucks in operation	Dust from site road traffic
19 100m Northeast of railway maintenance building (N46°08.964' W060°11.746')	1300	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
20 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1300	155	9	West	Downwind	Dozer and dump trucks in operation	No observations seen to affect sampling integrity
21 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1340	155	13	West	Downwind	Dozer and dump trucks in operation	No observations seen to affect sampling integrity
22 100m Northeast of railway maintenance building (N46°08.964' W060°11.746')	1400	155	3	West	Upwind	Background	No observations seen to affect sampling integrity
23 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1400	155	43	West	Downwind	Dozer and dump trucks in operation	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
24 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1415	155	12	West	Downwind	Dozer and dump trucks in operation	No observations seen to affect sampling integrity
25 100m Northeast of railway maintenance building (N46°08.964' W060°11.746')	1500	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
26 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1500	155	35	West	Downwind	Dozer and dump trucks in operation	No observations seen to affect sampling integrity
27 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1540	155	20	West	Downwind	Dozer and dump trucks in operation	No observations seen to affect sampling integrity
28 100m Northeast of railway maintenance building (N46°08.964' W060°11.746')	1600	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
29 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1600	155	13	West	Downwind	Dozer and dump trucks in operation	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
30 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1625	155	37	West	Downwind	Dozer and dump trucks in operation	No observations seen to affect sampling integrity
31 100m Northeast of railway maintenance building (N46°08.964' W060°11.746')	1700	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
32 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1700	155	32	West	Downwind	Dozer and dump trucks in operation	No observations seen to affect sampling integrity
33 130m North of TP2 entrance gate (N46°09.014' W060°11.390')	1745	155	7	West	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 ($\mu\text{g}/\text{m}^3$)
380m North of TP2 entrance gate	0700 to 0759	6	990
200m North of TP2 entrance gate	0800 to 0859	11	990
200m North of TP2 entrance gate	0900 to 0959	15	990
130m North of TP2 entrance gate	1000 to 1059	23	990
130m North of TP2 entrance gate	1100 to 1159	36	990
130m North of TP2 entrance gate	1200 to 1259	80	990
130m North of TP2 entrance gate	1300 to 1359	91	990
130m North of TP2 entrance gate	1400 to 1459	119	990
130m North of TP2 entrance gate	1500 to 1559	147	990
130m North of TP2 entrance gate	1600 to 1659	172	990
130m North of TP2 entrance gate	1700 to 1759	192	990

VOC Monitoring

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