

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1332-01
FROM	Dianne Theriault	SHIFT:	0900 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	2 nd June, 2009		Terry Smith, ALL-TECH
		STPA NO.	COCW-0044

**SUBJECT: 1st June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Vertical Cut-off Walls
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 1st of June, 2009. Jennifer Andrews and Colin Mac Isaac of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Rain, mainly sunny
- Temperature: approximately 16°C
- Wind Direction: Southwest

Comments: *Air monitoring was delayed until 0900 hours due to precipitation, and began at 1100 hours when weather conditions were within instrument specifications. 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 Jennifer Andrews 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 pjlow@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 – Vertical Cut-off Walls
1st 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 10m North of Cape Breton St. and Victoria Rd. intersection	1100	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 200m East of Fredrick St. and Lingan Rd. intersection (N46°09.137' W060°10.389')	1115	155	12	Southwest	Downwind	Excavators moving materials	No observations seen to affect sampling integrity
3 200m East of Fredrick St. and Lingan Rd. intersection (N46°09.137' W060°10.389')	1140	155	12	Southwest	Downwind	Excavators moving materials	No observations seen to affect sampling integrity
4 20m Northeast of Salvation Army on Victoria Rd.	1200	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 200m East of Fredrick St. and Lingan Rd. intersection (N46°09.137' W060°10.389')	1200	155	9	Southwest	Downwind	Excavators moving materials	No observations seen to affect sampling integrity
6 200m East of Fredrick St. and Lingan Rd. intersection (N46°09.137' W060°10.389')	1230	155	6	Southwest	Downwind	Excavators moving materials	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 20m Northeast of Salvation Army on Victoria Rd.	1300	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 200m East of Fredrick St. and Lingan Rd. intersection (N46°09.137' W060°10.389')	1300	155	7	Southwest	Downwind	Truck dumping material	No observations seen to affect sampling integrity
9 200m East of Fredrick St. and Lingan Rd. intersection (N46°09.137' W060°10.389')	1330	155	6	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
10 20m Northeast of Salvation Army on Victoria Rd.	1400	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 200m East of Fredrick St. and Lingan Rd. intersection (N46°09.137' W060°10.389')	1400	155	7	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
12 200m East of Fredrick St. and Lingan Rd. intersection (N46°09.137' W060°10.389')	1440	155	6	Southwest	Downwind	Excavators moving material	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 20m Northeast of Salvation Army on Victoria Rd.	1500	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 200m East of Fredrick St. and Lingan Rd. intersection (N46°09.137' W060°10.389')	1500	155	6	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
15 200m East of Salvation Army on Victoria Rd. intersection (N46°09.142' W060°10.380')	1530	155	8	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
16 20m Northeast of Salvation Army on Victoria Rd.	1600	155	31	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 200m East of Salvation Army on Victoria Rd. intersection (N46°09.142' W060°10.380')	1600	155	7	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
18 250m North of Fredrick St. and Lingan Rd. intersection (N46°09.137' W060°10.389')	1645	155	23	Southwest	Downwind	Excavators moving material	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
19 20m Northeast of Salvation Army on Victoria Rd.	1700	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 250m North of Fredrick St. and Lingan Rd. intersection (N46°09.138' W060°10.369')	1700	155	13	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
21 250m North of Fredrick St. and Lingan Rd. intersection (N46°09.138' W060°10.369')	1745	155	8	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 East of Frederick St. and Lingan Rd. intersection	1100 to 1159	12	990
200m East of Frederick St. and Lingan Rd. intersection	1200 to 1259	20	990
200m East of Frederick St. and Lingan Rd. intersection	1300 to 1359	27	990
200m East of Frederick St. and Lingan Rd. intersection	1400 to 1459	34	990
200m East of Frederick St. and Lingan Rd. intersection / 200m East of Salvation Army on Victoria Rd.	1500 to 1559	41	990
200m East of Salvation Army on Victoria Rd. / 250m North of Frederick St. and Lingan Rd. intersection	1600 to 1659	56	990
250m North of Frederick St. and Lingan Rd. intersection	1700 to 1759	67	990

VOC Monitoring

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