

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
TEL (902) 539-3012
FAX (902) 539-3381
DATE 9th June, 2009

FILE NO. S-1332-06
SHIFT: 0630 to 1830
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. COCW-0049

SUBJECT: 8th 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 8th of June, 2009. Keith Neville and Dave Reeves 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 Dave Reeves 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 – Vertical Cut-off Walls
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 20m East of Victoria Rd. and Cape Breton St. intersection (N46°08.838') (W060°10.664')	0700	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 50m Southwest of coke ovens security trailer (N46°08.863') (W060°10.166')	0700	155	3	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
3 50m Southwest of coke ovens security trailer (N46°08.863') (W060°10.166')	0730	155	3	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
4 20m East of Victoria Rd. and Cape Breton St. intersection (N46°08.838') (W060°10.664')	0800	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 50m Southwest of coke ovens security trailer (N46°08.863') (W060°10.166')	0800	155	3	Southwest	Downwind	Excavators and dump trucks 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
6 50m Southwest of coke ovens security trailer (N46°08.863') (W060°10.166')	0825	155	3	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
7 20m East of Victoria Rd. and Cape Breton St. intersection (N46°08.838') (W060°10.664')	0900	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 50m Southwest of coke ovens security trailer (N46°08.863') (W060°10.166')	0900	155	3	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
9 50m Southwest of coke ovens security trailer (N46°08.863') (W060°10.166')	0940	155	4	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
10 20m East of Victoria Rd. and Cape Breton St. intersection (N46°08.838') (W060°10.664')	1000	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
11 75m Southwest of coke ovens security trailer (N46°08.857') (W060°10.190')	1000	155	3	West	Downwind	Excavators and dump trucks 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
12 75m Southwest of coke ovens security trailer (N46°08.857') (W060°10.190')	1025	155	6	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
13 20m East of Victoria Rd. and Cape Breton St. intersection (N46°08.838') (W060°10.664')	1100	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
14 250m East of Salvation Army (N46°08.773') (W060°10.394')	1100	155	8	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
15 250m East of Salvation Army (N46°08.773') (W060°10.394')	1140	155	14	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
16 20m East of Victoria Rd. and Cape Breton St. intersection (N46°08.838') (W060°10.664')	1200	155	20	West	Upwind	Background	No observations seen to affect sampling integrity
17 250m East of Salvation Army (N46°08.773') (W060°10.394')	1200	155	20	West	Downwind	Excavators and dump trucks 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
18 250m East of Salvation Army (N46°08.773') (W060°10.394')	1215	155	7	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
19 20m East of Victoria Rd. and Cape Breton St. intersection (N46°08.838') (W060°10.664')	1300	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
20 250m East of Salvation Army (N46°08.773') (W060°10.394')	1300	155	8	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
21 250m East of Salvation Army (N46°08.773') (W060°10.394')	1330	155	4	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
22 20m East of Victoria Rd. and Cape Breton St. intersection (N46°08.838') (W060°10.664')	1400	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
23 250m East of Salvation Army (N46°08.773') (W060°10.394')	1400	155	9	West	Downwind	Excavators and dump trucks 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
24 250m East of Salvation Army (N46°08.773') (W060°10.394')	1420	155	10	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
25 Cape Breton St., 30m East of Victoria Rd. bridge (N46°08.835') (W060°10.673')	1500	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
26 250m East of Salvation Army (N46°08.773') (W060°10.394')	1500	155	10	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
27 250m East of Salvation Army (N46°08.773') (W060°10.394')	1530	155	8	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
28 Cape Breton St., 30m East of Victoria Rd. bridge (N46°08.835') (W060°10.673')	1600	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
29 250m East of Salvation Army (N46°08.773') (W060°10.394')	1600	155	11	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
30 250m East of Salvation Army (N46°08.773') (W060°10.394')	1625	155	18	West	Downwind	Excavators and dump trucks 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
31 Cape Breton St., 30m East of Victoria Rd. bridge (N46°08.835') (W060°10.673')	1700	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
32 250m East of Salvation Army (N46°08.773') (W060°10.394')	1700	155	7	West	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
33 250m East of Salvation Army (N46°08.773') (W060°10.394')	1745	155	6	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 ($\mu\text{g}/\text{m}^3$)
50m Southwest of coke ovens security trailer	0700 to 0759	3	990
50m Southwest of coke ovens security trailer	0800 to 0859	6	990
50m Southwest of coke ovens security trailer	0900 to 0959	10	990
75m Southwest of coke ovens security trailer	1000 to 1059	15	990
250m East of Salvation Army	1100 to 1159	26	990
250m East of Salvation Army	1200 to 1259	40	990
250m East of Salvation Army	1300 to 1359	46	990
250m East of Salvation Army	1400 to 1459	56	990
250m East of Salvation Army	1500 to 1559	65	990
250m East of Salvation Army	1600 to 1659	80	990
250m East of Salvation Army	1700 to 1759	87	990

VOC Monitoring

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