

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
TEL (902) 539-3012
FAX (902) 539-3381
DATE 4th June, 2009

FILE NO. S-1331-05
SHIFT: 0630 to 1800
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP6D-CO-0079

**SUBJECT: 3rd June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads, Coke Ovens
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 3rd of June, 2009. Jennifer Andrews and Dwayne Timmons 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 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 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 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, Coke Ovens
3rd 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 60m South of Ferry St. and Spar Rd. intersection (N46°09.005' W060°10.879')	0700	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	0700	155	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	0730	155	14	Southwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
4 60m South of Ferry St. and Spar Rd. intersection (N46°09.005' W060°10.879')	0800	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	0800	155	6	Southwest	Downwind	Grader 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 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	0830	155	8	Southwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
7 60m South of Ferry St. and Spar Rd. intersection (N46°09.005' W060°10.879')	0900	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	0900	155	13	Southwest	Downwind	Grader in operation	No observations seen to affect sampling integrity
9 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	0940	155	6	Southwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
10 60m South of Ferry St. and Spar Rd. intersection (N46°09.005' W060°10.879')	1000	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1000	155	5	Southwest	Downwind	Grader and roller 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
12 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1020	155	5	Southwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
13 60m South of Ferry St. and Spar Rd. intersection (N46°09.005' W060°10.879')	1100	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1100	155	7	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1140	155	7	Southwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
16 40m South of Ferry St. and Spar Rd. intersection (N46°08.996' W060°10.864')	1200	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
17 12m West of coke ovens brook main gate (N46°09.143' W060°09.797')	1200	155	6	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 12m West of coke ovens brook main gate (N46°09.143' W060°09.797')	1240	155	6	West	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
19 40m South of Ferry St. and Spar Rd. intersection (N46°08.996' W060°10.864')	1300	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
20 12m West of coke ovens brook main gate (N46°09.143' W060°09.797')	1300	155	6	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
21 12m West of coke ovens brook main gate (N46°09.143' W060°09.797')	1345	155	7	West	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
22 60m South of Ferry St. and Spar Rd. intersection (N46°09.005' W060°10.879')	1400	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1400	155	17	Southwest	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
24 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1440	155	6	Southwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
25 60m South of Ferry St. and Spar Rd. intersection (N46°09.005' W060°10.879')	1500	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1500	155	7	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1535	155	9	Southwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
28 60m South of Ferry St. and Spar Rd. intersection (N46°09.005' W060°10.879')	1600	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1600	155	10	Southwest	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
30 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1630	155	9	Southwest	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
31 60m South of Ferry St. and Spar Rd. intersection (N46°09.005' W060°10.879')	1700	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
32 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1700	155	7	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
33 8m West of coke ovens brook main gate (N46°09.144' W060°09.791')	1715	155	7	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 ($\mu\text{g}/\text{m}^3$)
8m West of coke ovens brook main gate	0700 to 0759	12	990
8m West of coke ovens brook main gate	0800 to 0859	19	990
8m West of coke ovens brook main gate	0900 to 0959	29	990
8m West of coke ovens brook main gate	1000 to 1059	34	990
8m West of coke ovens brook main gate	1100 to 1159	41	990
12m West of coke ovens brook main gate	1200 to 1259	47	990
12m West of coke ovens brook main gate	1300 to 1359	54	990
8m West of coke ovens brook main gate	1400 to 1459	66	990
8m West of coke ovens brook main gate	1500 to 1559	70	990
8m West of coke ovens brook main gate	1600 to 1659	80	990
8m West of coke ovens brook main gate	1700 to 1759	87	990

VOC Monitoring

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