

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1325-03
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	26 th May, 2009		Terry Smith, ALL-TECH
		STPA NO.	COCW-0039

**SUBJECT: 25th May, 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 25th of May, 2009. Keith Neville and Jeff King of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly sunny, cloudy with rain
- Temperature: approximately 19°C
- Wind Direction: Northwest to West to Northwest

Comments: *ALL-TECH was on-Site at 0630 and sampling began as soon as there was site activity, but was later put on standby at 1715 and cancelled for the day at 1830 due to ongoing precipitation. 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 Jeff King 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
 25th 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 25m West of monitoring station on Curry's Lane	0700	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 300m Southeast of coke ovens security trailer	0700	155	6	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
3 300m Southeast of coke ovens security trailer	0730	155	6	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 50m North of CO5 gate on Cape Breton St.	0800	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 300m Southeast of coke ovens security trailer	0800	155	5	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
6 300m Southeast of coke ovens security trailer	0820	155	6	Northwest	Downwind	Equipment operating	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
7 50m North of CO5 gate on Cape Breton St.	0900	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 300m Southeast of coke ovens security trailer	0900	155	6	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
9 300m Southeast of coke ovens security trailer	0940	155	5	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
10 50m North of CO5 gate on Cape Breton St.	1000	155	2	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 300m Southeast of coke ovens security trailer	1000	155	7	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 300m Southeast of coke ovens security trailer	1030	155	7	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
13 50m North of CO5 gate on Cape Breton St.	1100	155	4	Northwest	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 300m Southeast of coke ovens security trailer	1100	155	8	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
15 300m Southeast of coke ovens security trailer	1140	155	6	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
16 50m North of CO5 gate on Cape Breton St.	1200	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 250m Southeast of coke ovens security trailer	1200	155	7	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
18 250m Southeast of coke ovens security trailer	1215	155	5	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
19 15m Southwest of CO5 gate on Cape Breton St.	1300	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
20 30m Southwest of coke ovens security trailer	1300	155	7	West	Downwind	Equipment operating	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
21 30m Southwest of coke ovens security trailer	1330	155	8	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
22 15m Southwest of CO5 gate on Cape Breton St.	1400	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
23 30m Southwest of coke ovens security trailer	1400	155	22	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
24 30m Southwest of coke ovens security trailer	1420	155	7	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
25 15m Southwest of CO5 gate on Cape Breton St.	1500	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
26 30m Northeast of coke ovens security trailer	1500	155	14	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
27 30m Northeast of coke ovens security trailer	1535	155	13	West	Downwind	Equipment 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
28 15m Southwest of CO5 gate on Cape Breton St.	1600	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
29 30m Northeast of coke ovens security trailer	1600	155	8	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
30 30m Northeast of coke ovens security trailer	1625	155	10	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
31 50m North of CO5 gate on Cape Breton St.	1700	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
32 100m Southeast of coke ovens security trailer	1700	155	11	Northwest	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 Southeast of coke ovens security trailer	0700 to 0759	6	990
300m Southeast of coke ovens security trailer	0800 to 0859	12	990
300m Southeast of coke ovens security trailer	0900 to 0959	18	990
300m Southeast of coke ovens security trailer	1000 to 1059	25	990
300m Southeast of coke ovens security trailer	1100 to 1159	32	990
250m Southeast of coke ovens security trailer	1200 to 1259	38	990
30m Southwest of coke ovens security trailer	1300 to 1359	46	990
30m Southwest of coke ovens security trailer	1400 to 1459	61	990
30m Northeast of coke ovens security trailer	1500 to 1559	74	990
30m Northeast of coke ovens security trailer	1600 to 1659	83	990
100m Southeast of coke ovens security trailer	1700 to 1759	94	990

VOC Monitoring

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