

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1293-04
FROM	Dianne Theriault	SHIFT:	0630 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	6 th April, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-0006

**SUBJECT: 3rd April, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – CO2 Tar Cell
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 3rd of April, 2009. Shaun Dove 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 11°C
- Wind Direction: East/West/Southwest

Comments: *ALL-TECH was on-Site at 0700 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 Shaun Dove 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 – CO2 Tar Cell
3rd April, 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 20m South of Coke Ovens Brook Gate	0700	155	19	East	Upwind	Background	No observations seen to affect sampling integrity
2 60m Southwest of C02 Main Gate	0700	155	20	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 60m Southwest of C02 Main Gate	0735	155	21	East	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
4 20m South of Coke Ovens Brook Gate	0800	155	21	East	Upwind	Background	No observations seen to affect sampling integrity
5 60m Southwest of C02 Main Gate	0800	155	26	East	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
6 60m Southwest of C02 Main Gate	0840	155	39	East	Downwind	Excavator Loading Trucks	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 20m South of Coke Ovens Brook Gate	0900	155	32	East	Upwind	Background	No observations seen to affect sampling integrity
8 60m Southwest of C02 Main Gate	0900	155	36	East	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
9 60m Southwest of C02 Main Gate	0915	155	40	East	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
10 150m Southwest of C02 Main Gate	1000	155	22	West	Upwind	Background	No observations seen to affect sampling integrity
11 150m Northeast of C02 Main Gate	1000	155	34	West	Downwind	No Activity	No observations seen to affect sampling integrity
12 150m Northeast of C02 Main Gate	1045	155	22	West	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
13 150m Southwest of C02 Main Gate	1100	155	15	West	Upwind	Background	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
14 60m Northeast of C02 Main Gate	1100	155	13	West	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
15 60m Northeast of C02 Main Gate	1140	155	12	West	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
16 150m South of C02 Main Gate	1200	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 100m Northeast of C02 Main Gate	1200	155	11	Southwest	Downwind	No activity Observed on site	No observations seen to affect sampling integrity
18 100m Northeast of C02 Main Gate	1240	155	14	Southwest	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
19 150m South of C02 Main Gate	1300	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 100m Northeast of C02 Main Gate	1300	155	11	Southwest	Downwind	Excavator Loading Trucks	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
21 100m Northeast of C02 Main Gate	1345	155	12	Southwest	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
22 150m South of C02 Main Gate	1400	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 100m Northeast of C02 Main Gate	1400	155	19	Southwest	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
24 100m Northeast of C02 Main Gate	1430	155	17	Southwest	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
25 150m South of C02 Main Gate	1500	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 100m Northeast of C02 Main Gate	1500	155	29	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 100m Northeast of C02 Main Gate	1525	155	26	Southwest	Downwind	Excavator Loading Trucks	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 150m South of C02 Main Gate	1600	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 100m Northeast of C02 Main Gate	1600	155	13	Southwest	Downwind	Excavator Loading Trucks	No observations seen to affect sampling integrity
30 100m Northeast of C02 Main Gate	1645	155	10	Southwest	Downwind	Excavator Loading Trucks	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 ($\mu\text{g}/\text{m}^3$)
1 60m Southwest of C02 Main Gate	0700 to 0759	21	990
2 60m Southwest of C02 Main Gate	0800 to 0859	52	990
3 60m Southwest of C02 Main Gate	0900 to 0959	90	990
4 60m Northeast of C02 Main Gate	1000 to 1059	118	990
5 60m Northeast of C02 Main Gate	1100 to 1159	131	990
6 100m Northeast of C02 Main Gate	1200 to 1259	144	990
7 100m Northeast of C02 Main Gate	1300 to 1359	156	990
8 100m Northeast of C02 Main Gate	1400 to 1459	174	990
9 100m Northeast of C02 Main Gate	1500 to 1559	202	990
10 100m Northeast of C02 Main Gate	1600 to 1659	214	990

VOC Monitoring

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