

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1325-07
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	1 st June, 2009		Terry Smith, ALL-TECH
		STPA NO.	COCW-0043

**SUBJECT: 29th 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 29th of May, 2009. Keith Hennick 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
- Temperature: approximately 11°C
- Wind Direction: West to Southwest to Southeast to South

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 Keith Hennick 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:

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Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Vertical Cut-off Walls
29th May, 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 East of Victoria Rd. on Cape Breton St.	0700	155	13	West	Upwind	Background	No observations seen to affect sampling integrity
2 20m North of coke ovens security trailer (N 46°08.932') (W 060°10.153')	0700	155	5	West	Downwind	Excavator moving material	No observations seen to affect sampling integrity
3 20m North of coke ovens security trailer (N 46°08.932') (W 060°10.153')	0735	155	8	West	Downwind	Excavator moving material	No observations seen to affect sampling integrity
4 10m East of Victoria Rd. on Cape Breton St.	0800	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 50m West of Spar Rd. and Lingan Rd. intersection (N 46°09.062') (W 060°10.705')	0800	155	3	Southwest	Downwind	Excavator moving material	No observations seen to affect sampling integrity
6 100m West of Spar Rd. and Lingan Rd. intersection (N 46°09.061') (W 060°10.705')	0840	155	1	Southeast	Downwind	Excavator 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
7 10m East of Victoria Rd. on Cape Breton St.	0900	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
8 100m West of Spar Rd. and Lingan Rd. intersection (N 46°09.061') (W 060°10.705')	0900	155	1	Southeast	Downwind	Excavator moving material	No observations seen to affect sampling integrity
9 100m West of Spar Rd. and Lingan Rd. intersection (N 46°09.061') (W 060°10.705')	0930	155	2	Southeast	Downwind	Excavator moving material	No observations seen to affect sampling integrity
10 5m East of Victoria Rd. fixed station	1000	155	4	Southeast	Upwind	Background	No observations seen to affect sampling integrity
11 100m West of Spar Rd. and Lingan Rd. intersection (N 46°09.061') (W 060°10.705')	1000	155	6	Southeast	Downwind	Excavator moving material	No observations seen to affect sampling integrity
12 100m West of Spar Rd. and Lingan Rd. intersection (N 46°09.061') (W 060°10.705')	1040	155	2	Southeast	Downwind	Excavator 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 5m South of Victoria Rd. fixed station	1100	155	4	South	Upwind	Background	No observations seen to affect sampling integrity
14 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606)	1100	155	1	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
15 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1130	155	1	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
16 5m South of Victoria Rd. fixed station	1200	155	4	South	Upwind	Background	No observations seen to affect sampling integrity
17 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1200	155	1	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
18 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606)	1235	155	1	South	Downwind	Excavator 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 5m South of Victoria Rd. fixed station	1300	155	5	South	Upwind	Background	No observations seen to affect sampling integrity
20 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1300	155	1	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
21 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1320	155	1	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
22 5m South of Victoria Rd. fixed station	1400	155	4	South	Upwind	Background	No observations seen to affect sampling integrity
23 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1400	155	1	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
24 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1430	155	2	South	Downwind	Excavator 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
25 5m South of Victoria Rd. fixed station	1500	155	4	South	Upwind	Background	No observations seen to affect sampling integrity
26 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1500	155	5	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
27 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1545	155	5	South	Downwind	Equipment operating	No observations seen to affect sampling integrity
28 5m South of Victoria Rd. fixed station	1600	155	4	South	Upwind	Background	No observations seen to affect sampling integrity
29 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1600	155	5	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
30 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1645	155	1	South	Downwind	Excavator 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
31 5m South of Victoria Rd. fixed station	1700	155	5	South	Upwind	Background	No observations seen to affect sampling integrity
32 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1700	155	1	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
33 10m South of Spar Rd. and Lingan Rd. intersection (N 46°09.071') (W 060°10.606')	1745	155	1	South	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 ($\mu\text{g}/\text{m}^3$)
20m North of coke ovens security trailer	0700 to 0759	6	990
50m/100m West of Spar Rd. and Lingan Rd. intersection	0800 to 0859	8	990
100m West of Spar Rd. and Lingan Rd. intersection	0900 to 0959	10	990
100m West of Spar Rd. and Lingan Rd. intersection	1000 to 1059	14	990
10m South of Spar Rd. and Lingan Rd. intersection	1100 to 1159	14	990
10m South of Spar Rd. and Lingan Rd. intersection	1200 to 1259	15	990
10m South of Spar Rd. and Lingan Rd. intersection	1300 to 1359	16	990
10m South of Spar Rd. and Lingan Rd. intersection	1400 to 1459	17	990
10m South of Spar Rd. and Lingan Rd. intersection	1500 to 1559	22	990
10m South of Spar Rd. and Lingan Rd. intersection	1600 to 1659	25	990
10m South of Spar Rd. and Lingan Rd. intersection	1700 to 1759	26	990

VOC Monitoring

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