

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1244-14
FROM	Dianne Theriault	SHIFT:	0630 to 1530
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
FAX	(902) 539-3381		
DATE	18 th December, 2008	STPA NO.	COCW-0029

**SUBJECT: 17th December 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Coke Ovens Vertical Cutoff Walls
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 17th of December, 2008. Colin MacIsaac 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:

- Cloudy with flurries
- Temperature: approximately 0°C
- Wind Direction: North to Northeast

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 1330 hours. Air monitoring was cancelled for the day at 1530 hours 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 Colin MacIsaac 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 – Coke Ovens Vertical Cutoff Walls
17th December, 2008

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 40m East of Spar Road, Spar Extension intersection	0700	155	40	North	Upwind	Background	No observations seen to affect sampling integrity
2 350m Southwest of Spar Road, Lingan Intersection	0700	155	15	Northeast	Downwind	No activity observed on site	No observations seen to effect sampling integrity
3 350m Southwest of Spar Road, Lingan Intersection	0735	155	13	Northeast	Downwind	No activity observed on site	No observations seen to effect sampling integrity
4 50m Southwest of Spar Road, Lingan Road intersection	0800	155	25	Northeast	Upwind	Background	No observations seen to affect sampling integrity
5 350m Southwest of Spar Road, Lingan Intersection	0800	155	15	Northeast	Downwind	Machinery moving	No observations seen to affect sampling integrity
6 350m Southwest of Spar Road, Lingan Intersection	0830	155	12	Northeast	Downwind	Machinery moving	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 50m Southwest of Spar Road, Lingan Road intersection	0900	155	49	Northeast	Upwind	Background	No observations seen to affect sampling integrity
8 350m Southwest of Spar Road, Lingan Intersection	0900	155	13	Northeast	Downwind	Machinery moving	No observations seen to affect sampling integrity
9 350m Southwest of Spar Road, Lingan Intersection	0945	155	8	Northeast	Downwind	Machinery moving	No observations seen to affect sampling integrity
10 50m Southwest of Spar Road, Lingan Road intersection	1000	155	9	Northeast	Upwind	Background	No observations seen to affect sampling integrity
11 350m Southwest of Spar Road, Lingan Intersection	1000	155	7	Northeast	Downwind	Machinery moving	No observations seen to affect sampling integrity
12 350m Southwest of Spar Road, Lingan Intersection	1035	155	7	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
13 50m Southwest of Spar Road, Lingan Road intersection	1100	155	11	Northeast	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 350m Southwest of Spar Road, Lingan Intersection	1100	155	6	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 350m Southwest of Spar Road, Lingan Intersection	1115	155	6	Northeast	Downwind	Machinery moving	No observations seen to affect sampling integrity
16 50m Southwest of Spar Road, Lingan Road intersection	1200	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
17 350m Southwest of Spar Road, Lingan Intersection	1200	155	5	Northeast	Downwind	Machinery moving	No observations seen to affect sampling integrity
18 350m Southwest of Spar Road, Lingan Intersection	1225	155	6	Northeast	Downwind	Machinery moving	No observations seen to affect sampling integrity
19 50m Southwest of Spar Road, Lingan Road intersection	1300	155	7	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 350m Southwest of Spar Road, Lingan Intersection	1300	155	7	Northeast	Downwind	Machinery moving	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 350m Southwest of Spar Road, Lingan Intersection	1345	155	8	Northeast	Downwind	Machinery moving	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 ($\mu\text{g}/\text{m}^3$)
350m Southwest of Spar Road, Lingan Intersection	0700 to 0759	14	990
350m Southwest of Spar Road, Lingan Intersection	0800 to 0859	28	990
350m Southwest of Spar Road, Lingan Intersection	0900 to 0959	39	990
350m Southwest of Spar Road, Lingan Intersection	1000 to 1059	46	990
350m Southwest of Spar Road, Lingan Intersection	1100 to 1159	52	990
350m Southwest of Spar Road, Lingan Intersection	1200 to 1259	58	990
350m Southwest of Spar Road, Lingan Intersection	1300 to 1359	66	990

VOC Monitoring

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