

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1325-05
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
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DATE	28 th May, 2009		Terry Smith, ALL-TECH
		STPA NO.	COCW-0041

**SUBJECT: 27th 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 27th 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
- Temperature: approximately 8°C
- Wind Direction: West to Northwest to North to East

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 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:

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Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Vertical Cut-off Walls
27th 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 20m West of COCW gate on Cape Breton St.	0700	155	1	West	Upwind	Background	No observations seen to affect sampling integrity
2 20m Southwest of coke ovens security trailer	0700	155	5	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 20m Southwest of coke ovens security trailer	0740	155	6	West	Downwind	Two excavators moving material	No observations seen to affect sampling integrity
4 20m West of COCW gate on Cape Breton St.	0800	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
5 20m Southwest of coke ovens security trailer	0800	155	13	West	Downwind	Two excavators moving material	No observations seen to affect sampling integrity
6 50m Southwest of coke ovens security trailer	0825	155	8	West	Downwind	Two excavators 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 40m North of COCW gate on Cape Breton St.	0900	155	2	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 350m Southwest of coke ovens security trailer	0900	155	5	Northwest	Downwind	Two excavators moving material	No observations seen to affect sampling integrity
9 350m Southwest of coke ovens security trailer	0920	155	5	Northwest	Downwind	Two excavators moving material	No observations seen to affect sampling integrity
10 40m North of COCW gate on Cape Breton St.	1000	155	1	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 350m Southwest of coke ovens security trailer	1000	155	6	Northwest	Downwind	Two excavators moving material	No observations seen to affect sampling integrity
12 350m Southwest of coke ovens security trailer	1035	155	5	Northwest	Downwind	Two excavators moving material	No observations seen to affect sampling integrity
13 40m North of COCW gate on Cape Breton St.	1100	155	1	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 350m Southwest of coke ovens security trailer	1100	155	4	Northwest	Downwind	Two excavators moving material	No observations seen to affect sampling integrity
15 350m Southwest of coke ovens security trailer	1145	155	3	Northwest	Downwind	Two excavators moving material	No observations seen to affect sampling integrity
16 20m East of Lingan Rd. and Frederick St. intersection	1200	155	1	North	Upwind	Background	No observations seen to affect sampling integrity
17 50m Northeast of Salvation Army	1225	155	3	North	Downwind	Two excavators moving material	Late sample due to location change
18 50m Northeast of salvation army	1245	155	3	North	Downwind	Two excavators moving material	No observations seen to affect sampling integrity
19 35m East of Lingan Rd. and Frederick St. intersection	1300	155	4	North	Upwind	Background	No observations seen to affect sampling integrity
20 50m Northeast of Salvation Army	1300	155	3	North	Downwind	No activity observed on site	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 50m Northeast of Salvation Army	1320	155	3	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
22 35m East of Lingan Rd. and Frederick St. intersection	1400	155	1	North	Upwind	Background	No observations seen to affect sampling integrity
23 50m Northeast of Salvation Army	1400	155	4	North	Downwind	Two excavators operating	No observations seen to affect sampling integrity
24 50m Northeast of Salvation Army	1420	155	6	North	Downwind	Two excavators operating	No observations seen to affect sampling integrity
25 35m East of Lingan Rd. and Frederick St. intersection	1500	155	1	North	Upwind	Background	No observations seen to affect sampling integrity
26 50m Northeast of Salvation Army	1500	155	4	North	Downwind	Two excavators operating	No observations seen to affect sampling integrity
27 50m Northeast of Salvation Army	1535	155	5	North	Downwind	Two excavators 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 300m East of Lingan Rd. and Frederick St. intersection	1600	155	1	East	Upwind	Background	No observations seen to affect sampling integrity
29 5m East of Cape Breton St. and Victoria Rd intersection	1600	155	8	East	Downwind	Two excavators operating	No observations seen to affect sampling integrity
30 5m East of Cape Breton St. and Victoria Rd intersection	1630	155	19	East	Downwind	Two excavators operating	No observations seen to affect sampling integrity
31 400m East of Lingan Rd. and Frederick St. intersection	1700	155	0	East	Upwind	Background	No observations seen to affect sampling integrity
32 5m East of Cape Breton St. and Victoria Rd intersection	1700	155	6	East	Downwind	Two excavators operating	No observations seen to affect sampling integrity
33 5m East of Cape Breton St. and Victoria Rd intersection	1745	155	4	East	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 Southwest of coke ovens security trailer	0700 to 0759	6	990
20m Southwest of coke ovens security trailer	0800 to 0859	17	990
350m Southwest of coke ovens security trailer	0900 to 0959	22	990
350m Southwest of coke ovens security trailer	1000 to 1059	28	990
350m Southwest of coke ovens security trailer	1100 to 1159	32	990
50m Northeast of salvation army	1200 to 1259	35	990
50m Northeast of salvation army	1300 to 1359	38	990
50m Northeast of salvation army	1400 to 1459	43	990
50m Northeast of salvation army	1500 to 1559	48	990
5m East of Cape Breton St. and Victoria Rd intersection	1600 to 1659	62	990
5m East of Cape Breton St. and Victoria Rd intersection	1700 to 1759	67	990

VOC Monitoring

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