

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1325-06
FROM	Dianne Theriault	SHIFT:	0700 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
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DATE	29 th May, 2009		Terry Smith, ALL-TECH
		STPA NO.	COCW-0042

**SUBJECT: 28th 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 28th 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 cloudy
- Temperature: approximately 14°C
- Wind Direction: Southwest to Northwest

Comments: *Air monitoring was delayed until 0700 hours due to precipitation, and began at 0900 hours when weather conditions were within instrument specifications. 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
 28th 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 East of Cape Breton St. and Victoria Rd. intersection	0900	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 300m Southwest of coke ovens security trailer	0900	155	9	Southwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
3 300m Southwest of coke ovens security trailer	0940	155	7	Southwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
4 20m East of Cape Breton St. and Victoria Rd. intersection	1000	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 300m Southwest of coke ovens security trailer	1000	155	8	Southwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
6 300m Southwest of coke ovens security trailer	1045	155	7	Southwest	Downwind	Two excavators 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 20m East of Cape Breton St. and Victoria Rd. intersection	1100	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 300m Southwest of coke ovens security trailer	1100	155	8	Southwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
9 300m Southwest of coke ovens security trailer	1120	155	9	Southwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
10 20m East of Cape Breton St. and Victoria Rd. intersection	1200	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 300m Southwest of coke ovens security trailer	1200	155	9	Southwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
12 300m Southwest of coke ovens security trailer	1225	155	9	Southwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
13 30m North of COCW gate on Cape Breton St.	1300	155	7	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 200m East of Salvation army	1300	155	9	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 200m East of Salvation army	1330	155	8	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 30m North of COCW gate on Cape Breton St.	1400	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 200m East of Salvation army	1400	155	9	Northwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
18 200m East of Salvation army	1425	155	8	Northwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
19 30m North of COCW gate on Cape Breton St.	1500	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 200m East of Salvation army	1500	155	9	Northwest	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
21 200m East of Salvation army	1520	155	9	Northwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
22 30m North of COCW gate on Cape Breton St.	1600	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 200m East of Salvation army	1600	155	9	Northwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
24 200m East of Salvation army	1635	155	9	Northwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
25 30m North of COCW gate on Cape Breton St.	1700	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 200m East of Salvation army	1700	155	11	Northwest	Downwind	Two excavators operating	No observations seen to affect sampling integrity
27 200m East of Salvation army	1740	155	9	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 Southwest of coke ovens security trailer	0900 to 0959	8	990
300m Southwest of coke ovens security trailer	1000 to 1059	16	990
300m Southwest of coke ovens security trailer	1100 to 1159	25	990
300m Southwest of coke ovens security trailer	1200 to 1259	34	990
200m East of Salvation Army	1300 to 1359	43	990
200m East of Salvation Army	1400 to 1459	52	990
200m East of Salvation Army	1500 to 1559	61	990
200m East of Salvation Army	1600 to 1659	70	990
200m East of Salvation Army	1700 to 1759	80	990

VOC Monitoring

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