

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1332-20
FROM	Dianne Theriault	SHIFT:	0630 to 1630
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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DATE	22 nd June, 2009	STPA NO.	COCW-SB-0063

**SUBJECT: 19th June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Vertical Cut-Off Walls, Soil-bentonite Wall
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 19th of June, 2009. Dave Reeves 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 overcast
- Temperature: approximately 25°C
- Wind Direction: West

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 180 µg/m³.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were below the established Site Action Level for this parameter of 8 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, Soil-bentonite Wall
19th June, 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 115m Northwest of Cape Breton St. and Victoria Rd. intersection (N46°08.881' W060°10.752')	0700	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
2 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	0705	155	10	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	0730	155	14	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
4 115m Northwest of Cape Breton St. and Victoria Rd. intersection (N46°08.881' W060°10.752')	0800	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
5 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	0800	155	13	West	Downwind	Roller and excavator 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
6 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	0825	155	13	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
7 115m Northwest of Cape Breton St. and Victoria Rd. intersection (N46°08.881' W060°10.752')	0900	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
8 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	0900	155	9	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
9 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	0915	155	11	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
10 115m Northwest of Cape Breton St. and Victoria Rd. intersection (N46°08.881' W060°10.752')	1000	155	9	West	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
11 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1000	155	9	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
12 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1040	155	16	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
13 115m Northwest of Cape Breton St. and Victoria Rd. intersection (N46°08.881' W060°10.752')	1100	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
14 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1100	155	14	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
15 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1130	155	9	West	Downwind	Roller and excavator 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
16 115m Northwest of Cape Breton St. and Victoria Rd. intersection (N46°08.881' W060°10.752')	1200	155	13	West	Upwind	Background	No observations seen to affect sampling integrity
17 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1200	155	12	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
18 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1220	155	15	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
19 115m Northwest of Cape Breton St. and Victoria Rd. intersection (N46°08.881' W060°10.752')	1300	155	11	West	Upwind	Background	No observations seen to affect sampling integrity
20 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1300	155	13	West	Downwind	No activity observed on site	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 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1325	155	13	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
22 115m Northwest of Cape Breton St. and Victoria Rd. intersection (N46°08.881' W060°10.752')	1400	155	13	West	Upwind	Background	No observations seen to affect sampling integrity
23 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1400	155	27	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
24 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1415	155	15	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
25 115m Northwest of Cape Breton St. and Victoria Rd. intersection (N46°08.881' W060°10.752')	1500	155	12	West	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
26 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1500	155	11	West	Downwind	Roller and excavator operating	No observations seen to affect sampling integrity
27 60m Southwest of Lingan Rd. and Spar Rd. intersection (N46°09.059' W060°10.646')	1545	155	9	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity

Notes: Air sample duration for each monitoring event was 15 minutes.

Summary of Downwind PM₁₀ Action Levels

Average PM ₁₀ Concentration (µg/m ³)	Averaging Period (Hours)	Downwind Action Level (µg/m ³)
12	1	125
13	4	85
14	8	70

VOC Monitoring

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