

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1325-01
FROM	Dianne Theriault	SHIFT:	0630 to 1700
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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DATE	25 th May, 2009	STPA NO.	COCW-0037

**SUBJECT: 21st 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 21st of May, 2009. Colin MacIsaac, Jeff King and Tyler Rowe 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 20°C
- Wind Direction: South to Southwest

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
21st 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 30m East of Victoria Rd. overpass	0700	155	7	South	Upwind	Background	No observations seen to affect sampling integrity
2 40m East of Spar Rd. and Ferry St. intersection	0700	155	10	South	Downwind	Loading excavator onto flatbed	No observations seen to affect sampling integrity
3 100m East of Spar Rd. and Ferry St. intersection	0730	155	19	South	Downwind	Setting up trailer on site	No observations seen to affect sampling integrity
4 30m East of Victoria Rd. overpass	0800	155	5	South	Upwind	Background	No observations seen to affect sampling integrity
5 100m East of Spar Rd. and Ferry St. intersection	0800	155	11	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
6 100m East of Spar Rd. and Ferry St. intersection	0820	155	10	South	Downwind	Excavator moving material	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 50m East of Victoria Rd. behind Salvation Army thrift store	0900	155	6	South	Upwind	Background	No observations seen to affect sampling integrity
8 100m East of Spar Rd. and Ferry St. intersection	0900	155	10	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
9 100m East of Spar Rd. and Ferry St. intersection	0945	155	15	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
10 50m East of Victoria Rd. behind Salvation Army thrift store	1000	155	6	South	Upwind	Background	No observations seen to affect sampling integrity
11 100m East of Spar Rd. and Ferry St. intersection	1000	155	15	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
12 100m East of Spar Rd. and Ferry St. intersection	1015	155	15	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
13 50m East of Victoria Rd. behind Salvation Army thrift store	1100	155	9	South	Upwind	Background	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
14 100m East of Spar Rd. and Ferry St. intersection	1100	155	14	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 150m East of Spar Rd. and Ferry St. intersection	1130	155	12	South	Downwind	Excavator moving material	No observations seen to affect sampling integrity
16 10m East of Victoria Rd. overpass	1200	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 60m West of Langan Rd. and Spar Rd. intersection	1200	155	10	Southwest	Downwind	Excavator moving material	No observations seen to affect sampling integrity
18 60m West of Langan Rd. and Spar Rd. intersection	1215	155	10	Southwest	Downwind	Excavator moving material	No observations seen to affect sampling integrity
19 1m East of Victoria Rd. and Cape Breton St. intersection	1300	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 50m East of Langan Rd. and Spar Rd. intersection	1300	155	10	Southwest	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
21 50m East of Lingan Rd. and Spar Rd. intersection	1330	155	12	Southwest	Downwind	Excavator moving material	No observations seen to affect sampling integrity
22 1m East of Victoria Rd. and Cape Breton St. intersection	1400	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 50m East of Lingan Rd. and Spar Rd. intersection	1400	155	15	Southwest	Downwind	Excavator moving material	No observations seen to affect sampling integrity
24 50m East of Lingan Rd. and Spar Rd. intersection	1430	155	16	Southwest	Downwind	Excavator moving material	No observations seen to affect sampling integrity
25 1m East of Victoria Rd. and Cape Breton St. intersection	1500	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 50m East of Lingan Rd. and Spar Rd. intersection	1500	155	15	Southwest	Downwind	Excavator moving material	No observations seen to affect sampling integrity
27 50m East of Lingan Rd. and Spar Rd. intersection	1540	155	16	Southwest	Downwind	Activity not visible from sample location	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 1m East of Victoria Rd. and Cape Breton St. intersection	1600	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 50m East of Lingan Rd. and Spar Rd. intersection	1600	155	17	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
30 50m East of Lingan Rd. and Spar Rd. intersection	1615	155	18	Southwest	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 ($\mu\text{g}/\text{m}^3$)
40m / 100m East of Spar Rd. and Ferry St. intersection	0700 to 0759	15	990
100m East of Spar Rd. and Ferry St. intersection	0800 to 0859	26	990
100m East of Spar Rd. and Ferry St. intersection	0900 to 0959	39	990
100m East of Spar Rd. and Ferry St. intersection	1000 to 1059	54	990
100m / 150m East of Spar Rd. and Ferry St. intersection	1100 to 1159	67	990
60m West of Lingan Rd. and Spar Rd. intersection	1200 to 1259	77	990
50m East of Lingan Rd. and Spar Rd. intersection	1300 to 1359	88	990
50m East of Lingan Rd. and Spar Rd. intersection	1400 to 1459	104	990
50m East of Lingan Rd. and Spar Rd. intersection	1500 to 1559	120	990
50m East of Lingan Rd. and Spar Rd. intersection	1600 to 1659	138	990

VOC Monitoring

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