

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1313-15
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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DATE	12 th May, 2009	STPA NO.	TP6D-SP-0053

**SUBJECT: 11th May, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads, South Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 11th of May, 2009. Nigel MacLean and David Reeves 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 6°C
- Wind Direction: North to Northeast 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 Nigel MacLean 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 – Access Roads, South Pond
11th 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 75m East of Walker St. and Ferry St. intersection	0700	155	16	North	Upwind	Background	No observations seen to affect sampling integrity
2 30m Northwest of Plaza Ford	0700	155	9	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 30m Northwest of Plaza Ford	0730	155	77	North	Downwind	Excavators and dump trucks in operation	Visible dust from excavator
4 75m East of Walker St. and Ferry St. intersection	0800	155	17	North	Upwind	Background	No observations seen to affect sampling integrity
5 30m Northwest of Plaza Ford	0800	155	63	North	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
6 30m Northwest of Plaza Ford	0830	155	62	North	Downwind	Excavators and dump trucks in operation	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 25m West of Inglis St. and Ferry St. intersection	0900	155	17	North	Upwind	Background	No observations seen to affect sampling integrity
8 30m Northwest of Plaza Ford	0900	155	34	North	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
9 30m Northwest of Plaza Ford	0930	155	34	North	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
10 25m West of Inglis St. and Ferry St. intersection	1000	155	16	North	Upwind	Background	No observations seen to affect sampling integrity
11 30m Northwest of Plaza Ford	1000	155	23	North	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
12 30m Northwest of Plaza Ford	1030	155	45	North	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
13 25m West of Inglis St. and Ferry St. intersection	1100	155	20	North	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 30m Northwest of Plaza Ford	1100	155	12	North	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
15 30m Northwest of Plaza Ford	1130	155	13	North	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
16 25m West of Inglis St. and Ferry St. intersection	1200	155	20	North	Upwind	Background	No observations seen to affect sampling integrity
17 30m Northwest of Plaza Ford	1200	155	8	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 30m Northwest of Plaza Ford	1230	155	11	North	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
19 60m South of Inglis St. and Ferry St. intersection	1300	155	12	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 50m Northwest of Plaza Ford	1300	155	16	Northeast	Downwind	Excavators and dump trucks in operation	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 Northwest of Plaza Ford	1330	155	14	Northeast	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
22 60m South of Inglis St. and Ferry St. intersection	1400	155	12	Northeast	Upwind	Background	No observations seen to affect sampling integrity
23 50m Northwest of Plaza Ford	1400	155	11	Northeast	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
24 50m Northwest of Plaza Ford	1435	155	10	Northeast	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
25 60m South of Inglis St. and Ferry St. intersection	1500	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 50m Northwest of Plaza Ford	1500	155	12	Northeast	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
27 50m Northwest of Plaza Ford	1530	155	11	Northeast	Downwind	Excavators and dump trucks in operation	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 60m South of Inglis St. and Ferry St. intersection	1600	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
29 50m Northwest of Plaza Ford	1600	155	16	Northeast	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
30 50m Northwest of Plaza Ford	1630	155	9	Northeast	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
31 20m North of STPA building	1700	155	12	East	Upwind	Background	No observations seen to affect sampling integrity
32 30m East of Dodd St., Richie St. intersection	1700	155	8	East	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
33 30m East of Dodd St., Richie St. intersection	1745	155	9	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 ($\mu\text{g}/\text{m}^3$)
30m Northwest of Plaza Ford	0700 to 0759	43	990
30m Northwest of Plaza Ford	0800 to 0859	106	990
30m Northwest of Plaza Ford	0900 to 0959	140	990
30m Northwest of Plaza Ford	1000 to 1059	174	990
30m Northwest of Plaza Ford	1100 to 1159	187	990
30m Northwest of Plaza Ford	1200 to 1259	197	990
50m Northwest of Plaza Ford	1300 to 1359	212	990
50m Northwest of Plaza Ford	1400 to 1459	223	990
50m Northwest of Plaza Ford	1500 to 1559	235	990
50m Northwest of Plaza Ford	1600 to 1659	248	990
30m off Dodd St. at Richie St. intersection	1700 to 1759	257	990

VOC Monitoring

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