

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1313-34
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	1 st June, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP6D-SP-0072

**SUBJECT: 29th 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 29th of May, 2009. David Reeves, Jennifer Andrews, and Nigel MacLean 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 11°C
- Wind Direction: West to Southwest to Southeast to South

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 Jennifer Andrews 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
29th 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 50m East of Dodd St. and Pitt St. intersection	0700	155	13	West	Upwind	Background	No observations seen to affect sampling integrity
2 35m West of Plaza Ford (N46° 08.410' W060° 11.279')	0700	155	4	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 35m West of Plaza Ford (N46° 08.410' W060° 11.279')	0740	155	9	West	Downwind	Roller in operation	No observations seen to affect sampling integrity
4 60m North of Plaza Ford	0800	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 20m Southwest of Ferry St. and Inglis St. intersection (N46° 08.866' W060° 11.213')	0800	155	6	Southwest	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
6 20m Southwest of Ferry St. and Inglis St. intersection (N46° 08.866' W060° 11.213')	0820	155	6	Southwest	Downwind	Trucks, grader and roller 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
7 45m Northeast of Acadian Lines terminal	0900	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
8 120m East of Intercolonial St. and Ferry St. intersection (N46° 08.713' W060° 11.474')	0900	155	6	Southeast	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
9 120m East of Intercolonial St. and Ferry St. intersection (N46° 08.713' W060° 11.474')	0930	155	6	Southeast	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
10 45m Northeast of Acadian Lines terminal	1000	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
11 120m East of Intercolonial St. and Ferry St. intersection (N46° 08.713' W060° 11.474')	1000	155	5	Southeast	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
12 120m East of Intercolonial St. and Ferry St. intersection (N46° 08.713' W060° 11.474')	1015	155	4	Southeast	Downwind	Trucks, grader and roller 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
13 80m North of Plaza Ford	1100	155	6	South	Upwind	Background	No observations seen to affect sampling integrity
14 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1100	155	3	South	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
15 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1125	155	5	South	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
16 80m North of Plaza Ford	1200	155	9	South	Upwind	Background	No observations seen to affect sampling integrity
17 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1200	155	8	South	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
18 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1225	155	9	South	Downwind	Trucks, grader and roller 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
19 80m North of Plaza Ford	1300	155	13	South	Upwind	Background	No observations seen to affect sampling integrity
20 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1300	155	8	South	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
21 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1335	155	5	South	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
22 80m North of Plaza Ford	1400	155	12	South	Upwind	Background	No observations seen to affect sampling integrity
23 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1400	155	7	South	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
24 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1445	155	6	South	Downwind	Trucks, grader and roller 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
25 80m North of Plaza Ford	1500	155	9	South	Upwind	Background	No observations seen to affect sampling integrity
26 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1500	155	6	South	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
27 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1530	155	4	South	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
28 80m North of Plaza Ford	1600	155	7	South	Upwind	Background	No observations seen to affect sampling integrity
29 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1600	155	6	South	Downwind	Trucks, grader and roller in operation	No observations seen to affect sampling integrity
30 . 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1615	155	4	South	Downwind	Trucks, grader and roller 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
31 80m North of Plaza Ford	1700	155	10	South	Upwind	Background	No observations seen to affect sampling integrity
32 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1700	155	9	South	Downwind	Trucks, grater and roller in operation	No observations seen to affect sampling integrity
33 30m South of Ferry St. and Inglis St. intersection (N46° 08.859' W060° 11.208')	1745	155	6	South	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 ($\mu\text{g}/\text{m}^3$)
35m West of Plaza Ford	0700 to 0759	7	990
20m Southwest of Ferry St. and Inglis St. intersection	0800 to 0859	13	990
120m East of Intercolonial St. and Ferry St. intersection	0900 to 0959	19	990
120m East of Intercolonial St. and Ferry St. intersection	1000 to 1059	24	990
30m South of Ferry St. and Inglis St. intersection	1100 to 1159	28	990
30m South of Ferry St. and Inglis St. intersection	1200 to 1259	37	990
30m South of Ferry St. and Inglis St. intersection	1300 to 1359	44	990
30m South of Ferry St. and Inglis St. intersection	1400 to 1459	51	990
30m South of Ferry St. and Inglis St. intersection	1500 to 1559	56	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
30m South of Ferry St. and Inglis St. intersection	1600 to 1659	61	990
30m South of Ferry St. and Inglis St. intersection	1700 to 1659	68	990

VOC Monitoring

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