

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1114-20
FROM	Grant Harrigan	SHIFT:	0630 to 1800
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	25 th April, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0131

**SUBJECT: 24th April 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Cooling Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 24th of April, 2008. Colin MacIsaac 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:

- Clear skies changing to overcast skies later in the day
- Temperature: approximately 2°C (data unavailable from Environment Canada)
- Wind Direction: Northeast to North to Northwest to Southeast

Comments: *ALL-TECH was on-Site at 0630 and sampling began as soon as there was Site activity. Air monitoring was performed during EarthTech'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 Colin MacIsaac and reviewed by Grant Harrigan. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



Grant Harrigan, 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 – Cooling Pond
24th April, 2008

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 Southeast of Cooling Pond main gate	0700	155	15	Northeast	Upwind	Background	No observations seen to effect sampling integrity
2 50m East of Acadian Lines terminal	0700	155	16	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
3 50m East of Acadian Lines terminal	0730	155	14	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
4 50m East of Acadian Lines terminal	0800	155	11	Northeast	Downwind	Excavator moving material	No observations seen to effect sampling integrity
5 30m Southeast of Cooling Pond main gate	0815	155	11	Northeast	Upwind	Background	No observations seen to effect sampling integrity
6 50m East of Acadian Lines terminal	0815	155	13	Northeast	Downwind	Excavator moving material	No observations seen to effect sampling integrity
7 30m Southeast of Cooling Pond main gate	0900	155	15	Northeast	Upwind	Background	No observations seen to effect 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
8 50m East of Acadian Lines terminal	0900	155	11	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
9 50m East of Acadian Lines terminal	0925	155	11	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
10 30m Southeast of Cooling Pond main gate	1000	155	16	Northeast	Upwind	Background	No observations seen to effect sampling integrity
11 50m East of Acadian Lines terminal	1000	155	20	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
12 50m East of Acadian Lines terminal	1040	155	11	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
13 30m Southeast of Cooling Pond main gate	1100	155	17	Northeast	Upwind	Background	No observations seen to effect sampling integrity
14 50m East of Acadian Lines terminal	1100	155	12	Northeast	Downwind	Bulldozer moving material	No observations seen to effect sampling integrity
15 50m East of Acadian Lines terminal	1145	155	8	Northeast	Downwind	Bulldozer moving material	No observations seen to effect 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 30m Southeast of Cooling Pond main gate	1200	155	14	Northeast	Upwind	Background	No observations seen to effect sampling integrity
17 50m East of Acadian Lines terminal	1200	155	9	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
18 15m Northwest of Inglis Street, Terminal Road intersection	1235	155	10	North	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
19 30m Northeast of Cooling Pond main gate	1300	155	23	North	Upwind	Background	No observations seen to effect sampling integrity
20 15m Northwest of Inglis Street, Terminal Road intersection	1300	155	11	North	Downwind	Bulldozer moving material	No observations seen to effect sampling integrity
21 30m South of Cape Breton Street, Inglis Street intersection	1330	155	16	Northwest	Downwind	Bulldozer moving material	No observations seen to effect sampling integrity
22 30m East of Ferry Street bridge	1400	155	14	Northwest	Upwind	Background	No observations seen to effect 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
23 30m South of Cape Breton Street, Inglis Street intersection	1400	155	14	Northwest	Downwind	Bulldozer moving material	No observations seen to effect sampling integrity
24 30m South of Cape Breton Street, Inglis Street intersection	1420	155	11	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
25 30m East of Ferry Street bridge	1500	155	16	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 30m South of Cape Breton Street, Inglis Street intersection	1500	155	6	Northwest	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
27 30m East of Ferry Street bridge	1540	155	8	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
28 30m South of Cape Breton Street, Inglis Street intersection	1600	155	8	Southeast	Upwind	Background	No observations seen to effect sampling integrity
29 30m East of Ferry Street bridge	1600	155	10	Southeast	Downwind	No activity on-Site observed	No observations seen to effect 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
30 30m East of Ferry Street bridge	1645	155	9	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
31 30m South of Cape Breton Street, Inglis Street intersection	1700	155	10	Southeast	Upwind	Background	No observations seen to effect sampling integrity
32 30m East of Ferry Street bridge	1700	155	12	Southeast	Downwind	Excavation of material	No observations seen to effect sampling integrity
33 30m East of Ferry Street bridge	1715	155	9	Southeast	Downwind	No activity on-Site observed	No observations seen to effect 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 (µg/m ³)	Dust Budget Exceedance Value (µg/m ³)
50m East of Acadian Lines terminal	0700 to 0759	15	990
50m East of Acadian Lines terminal	0800 to 0859	27	990
50m East of Acadian Lines terminal	0900 to 0959	38	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
50m East of Acadian Lines terminal	1000 to 1059	54	990
50m East of Acadian Lines terminal	1100 to 1159	64	990
50m East of Acadian Lines terminal	1200 to 1259	74	990
15m Northwest of Inglis Street, Terminal Road intersection	1300 to 1359	88	990
30m South of Cape Breton Street, Inglis Street intersection	1400 to 1459	101	990
30m South of Cape Breton Street, Inglis Street intersection	1500 to 1559	108	990
30m East of Ferry Street bridge	1600 to 1659	118	990
30m East of Ferry Street bridge	1700 to 1759	129	990

VOC Monitoring

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