

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1100-26
FROM	Grant Harrigan	SHIFT:	0630 to 1915
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	1 st April, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0111

**SUBJECT: 31st March, 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 31st of March, 2008. Colin MacIsaac and Reggie Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Clear Skies
- Temperature: approximately 1°C (data unavailable from Environment Canada)
- Wind Direction: West to Southwest to Northwest

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 well 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), TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Colin MacIsaac and reviewed by Grant Harrigan and Dianne Theriault. 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
31st March, 2008

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 60m South of Intercolonial fixed station	0700	155	10	West	Upwind	Background	No observations seen to effect sampling integrity
2 30m Southwest of STPA building	0705	155	12	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
3 25m Northwest of STPA building	0745	155	22	Southwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
4 60m South of Intercolonial fixed station	0800	155	13	West	Upwind	Background	No observations seen to effect sampling integrity
5 25m Northwest of STPA building	0800	155	22	Southwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
6 40m Southwest of STPA building	0845	155	33	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
7 25m Southeast of Ferry Street, Walker Street intersection	0900	155	15	Northwest	Upwind	Background	No observations seen to effect 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
8 40m Southwest of STPA building	0905	155	40	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
9 40m Southwest of STPA building	0930	155	39	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
10 25m Southeast of Ferry Street, Walker Street intersection	1000	155	15	Northwest	Upwind	Background	No observations seen to effect sampling integrity
11 40m Southwest of STPA building	1000	155	22	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
12 10m Southeast of Inglis Street, Cape Breton Street intersection	1045	155	26	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
13 25m Southeast of Ferry Street, Walker Street intersection	1100	155	19	Northwest	Upwind	Background	No observations seen to effect sampling integrity
14 10m Southeast of Inglis Street, Cape Breton Street intersection	1100	155	28	Northwest	Downwind	Excavators moving materials	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
15 10m Southeast of Inglis Street, Cape Breton Street intersection	1120	155	24	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
16 50m West of Ferry Street bridge	1200	155	8	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 10m Southeast of Inglis Street, Cape Breton Street intersection	1200	155	19	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
18 10m Southeast of Inglis Street, Cape Breton Street intersection	1240	155	28	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
19 50m West of Ferry Street bridge	1300	155	8	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 10m Southeast of Inglis Street, Cape Breton Street intersection	1300	155	33	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
21 10m Southeast of Inglis Street, Cape Breton Street intersection	1325	155	25	Northwest	Downwind	Excavators moving materials	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
22 50m West of Ferry Street bridge	1400	155	7	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 10m Southeast of Inglis Street, Cape Breton Street intersection	1400	155	25	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
24 10m Southeast of Inglis Street, Cape Breton Street intersection	1425	155	15	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
25 50m West of Ferry Street bridge	1500	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 15m Southeast of Inglis Street, Cape Breton Street intersection	1500	155	16	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
27 15m Southeast of Inglis Street, Cape Breton Street intersection	1535	155	20	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
28 50m West of Ferry Street bridge	1600	155	7	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
29 15m Southeast of Inglis Street, Cape Breton Street intersection	1600	155	23	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
30 15m Southeast of Inglis Street, Cape Breton Street intersection	1640	155	108	Northwest	Downwind	Excavators moving materials	Visible dust coming from activity site
31 50m West of Ferry Street bridge	1700	155	7	Northwest	Upwind	Background	No observations seen to effect sampling integrity
32 15m Southeast of Inglis Street, Cape Breton Street intersection	1700	155	18	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
33 15m Southeast of Inglis Street, Cape Breton Street intersection	1715	155	102	Northwest	Downwind	Excavators moving materials	Visible dust coming from activity site
34 50m West of Ferry Street bridge	1717	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
35 15m Southeast of Inglis Street, Cape Breton Street intersection	1735	155	78	Northwest	Downwind	Excavators moving materials	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
36 15m Southeast of Inglis Street, Cape Breton Street intersection	1745	155	8	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
37 50m West of Ferry Street bridge	1800	155	9	Northwest	Upwind	Background	No observations seen to effect sampling integrity
38 15m Southeast of Inglis Street, Cape Breton Street intersection	1800	155	19	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
39 15m Southeast of Inglis Street, Cape Breton Street intersection	1830	155	9	Northwest	Downwind	No activity observed on-Site	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)
30m Southwest of STPA building	0700 to 0759	17	990
25m Northwest of STPA building	0800 to 0859	45	990
40m Southwest of STPA building	0900 to 0959	85	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
10m Southeast of Inglis Street, Cape Breton Street intersection	1000 to 1059	109	990
10m Southeast of Inglis Street, Cape Breton Street intersection	1100 to 1150	135	990
10m Southeast of Inglis Street, Cape Breton Street intersection	1200 to 1259	159	990
10m Southeast of Inglis Street, Cape Breton Street intersection	1300 to 1359	188	990
10m Southeast of Inglis Street, Cape Breton Street intersection	1400 to 1459	208	990
15m Southeast of Inglis Street, Cape Breton Street intersection	1500 to 1559	226	990
15m Southeast of Inglis Street, Cape Breton Street intersection	1600 to 1659	292	990
15m Southeast of Inglis Street, Cape Breton Street intersection	1700 to 1759	358	990
15m Southeast of Inglis Street, Cape Breton Street intersection	1800 to 1859	372	990

VOC Monitoring

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