

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1114-05
FROM	Grant Harrigan	SHIFT:	0630 to 2015
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	7 th April, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0116

**SUBJECT: 4th 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 4th of April, 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 5°C (data unavailable from Environment Canada)
- Wind Direction: Northwest to Southwest to West

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.*

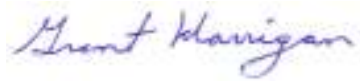
All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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
4th April, 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 25m Southeast of Ferry Street, Walker Street intersection	0710	155	13	Northwest	Upwind	Background	No observations seen to effect sampling integrity
2 5m Northeast of Inglis Street, Cape Breton Street intersection	0715	155	30	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
3 5m Northeast of Inglis Street, Cape Breton Street intersection	0730	155	23	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
4 25m Southeast of Ferry Street, Walker Street intersection	0800	155	15	West	Upwind	Background	No observations seen to effect sampling integrity
5 30m Southwest of STPA building	0805	155	17	Southwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
6 60m Northwest of STPA building	0820	155	18	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
7 15m South of Intercolonial Street fixed station	0900	155	14	West	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 30m Southwest of STPA building	0905	155	31	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
9 30m Southwest of STPA building	0925	155	27	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
10 15m South of Intercolonial Street fixed station	1000	155	15	West	Upwind	Background	No observations seen to effect sampling integrity
11 30m Southwest of STPA building	1000	155	62	West	Downwind	Excavators moving materials	Visible dust coming from activity site
12 30m Southwest of STPA building	1035	155	27	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
13 15m South of Intercolonial Street fixed station	1100	155	13	West	Upwind	Background	No observations seen to effect sampling integrity
14 30m Southwest of STPA building	1100	155	40	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
15 30m Southwest of STPA building	1145	155	28	West	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
16 15m South of Intercolonial Street fixed station	1200	155	12	West	Upwind	Background	No observations seen to effect sampling integrity
17 30m Southwest of STPA building	1200	155	32	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
18 30m Southwest of STPA building	1215	155	77	West	Downwind	Excavators moving materials	Visible dust coming from activity site
19 50m East of Ferry Street bridge	1300	155	11	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 60m Southwest of STPA building	1305	155	32	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
21 60m Southwest of STPA building	1345	155	24	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
22 50m East of Ferry Street bridge	1400	155	12	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 60m Southwest of STPA building	1400	155	31	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
24 60m Southwest of STPA building	1440	155	19	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
25 50m East of Ferry Street bridge	1500	155	11	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 60m Southwest of STPA building	1500	155	24	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
27 60m Southwest of STPA building	1520	155	18	Northwest	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
28 20m East of Ferry Street bridge	1600	155	12	West	Upwind	Background	No observations seen to effect sampling integrity
29 30m Southwest of STPA building	1600	155	28	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
30 30m Southwest of STPA building	1625	155	20	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
31 20m East of Ferry Street bridge	1700	155	11	West	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
32 30m Southwest of STPA building	1700	155	108	West	Downwind	Excavators moving materials	Visible dust coming from activity site
33 30m Southwest of STPA building	1715	155	146	West	Downwind	Excavators moving materials	Visible dust coming from activity site
34 30m Southwest of STPA building	1730	155	83	West	Downwind	Excavators moving materials	Visible dust coming from activity site
35 35m Southeast of Ferry Street, Walker Street intersection	1745	155	14	West	Upwind	Background	No observations seen to effect sampling integrity
36 30m Southwest of STPA building	1750	155	125	West	Downwind	Excavators moving materials	Visible dust coming from activity site
37 35m Southeast of Ferry Street, Walker Street intersection	1800	155	13	West	Upwind	Background	No observations seen to effect sampling integrity
38 30m Southwest of STPA building	1805	155	20	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
39 30m Southwest of STPA building	1820	155	20	West	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
40 35m Southeast of Ferry Street, Walker Street intersection	1900	155	19	West	Upwind	Background	No observations seen to effect sampling integrity
41 30m Southwest of STPA building	1900	155	24	West	Downwind	Excavators moving materials	No observations seen to effect sampling integrity
42 30m Southwest of STPA building	1930	155	18	West	Downwind	Excavators moving materials	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)
5m Northeast of Inglis Street, Cape Breton Street intersection	0700 to 0759	27	990
30m Southwest of STPA building	0800 to 0859	45	990
30m Southwest of STPA building	0900 to 0959	74	990
30m Southwest of STPA building	1000 to 1059	119	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
30m Southwest of STPA building	1100 to 1159	153	990
30m Southwest of STPA building	1200 to 1259	208	990
60m Southwest of STPA building	1300 to 1359	232	990
60m Southwest of STPA building	1400 to 1459	257	990
60m Southwest of STPA building	1500 to 1559	278	990
30m Southwest of STPA building	1600 to 1659	302	990
30m Southwest of STPA building	1700 to 1759	418	990
30m Southwest of STPA building	1800 to 1859	436	990
30m Southwest of STPA building	1900 to 1959	457	990

VOC Monitoring

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