

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1114-19
FROM	Grant Harrigan	SHIFT:	0630 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	24 rd April, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0130

**SUBJECT: 23rd 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 23rd of April, 2008. Colin MacIsaac and Reg Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly clear skies with some cloud cover
- Temperature: approximately 10°C (data unavailable from Environment Canada)
- Wind Direction: Southeast to Northeast

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 activities.*

Due to EarthTech's varying activities throughout most construction days, ALL-TECH determined that it was prudent to continue monitoring to ensure that all upwind and downwind measurements were captured if activities occurred on-site.

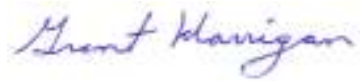
All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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
23rd 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 35m Southeast of Cape Breton Street, Inglis Street intersection	0700	155	18	Southeast	Upwind	Background	No observations seen to effect sampling integrity
2 30m Southeast of Walker Street, Ferry Street intersection	0700	155	18	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
3 30m Southeast of Walker Street, Ferry Street intersection	0720	155	20	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
4 35m Southeast of Cape Breton Street, Inglis Street intersection	0800	155	17	Southeast	Upwind	Background	No observations seen to effect sampling integrity
5 30m Southeast of Walker Street, Ferry Street intersection	0800	155	17	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
6 30m Southeast of Walker Street, Ferry Street intersection	0840	155	8	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
7 35m Southeast of Cape Breton Street, Inglis Street intersection	0900	155	9	Southeast	Upwind	Background	No observations seen to effect sampling integrity
8 30m Southeast of Walker Street, Ferry Street intersection	0900	155	5	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
9 30m Southeast of Walker Street, Ferry Street intersection	0945	155	6	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
10 35m Southeast of Cape Breton Street, Inglis Street intersection	1000	155	13	Southeast	Upwind	Background	No observations seen to effect sampling integrity
11 30m Southeast of Walker Street, Ferry Street intersection	1000	155	11	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
12 30m Southeast of Walker Street, Ferry Street intersection	1045	155	13	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
13 35m Southeast of Cape Breton Street, Inglis Street intersection	1100	155	19	Southeast	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
14 30m Southeast of Walker Street, Ferry Street intersection	1100	155	11	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
15 60m Southeast of Walker Street, Ferry Street intersection	1135	155	14	Southeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
16 35m Southeast of Cape Breton Street, Inglis Street intersection	1200	155	15	Southeast	Upwind	Background	No observations seen to effect sampling integrity
17 60m Southeast of Walker Street, Ferry Street intersection	1200	155	16	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
18 60m Southeast of Walker Street, Ferry Street intersection	1245	155	15	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
19 50m North of STPA building	1300	155	40	Northeast	Upwind	Background	Visible smoke from a distant fire upwind
20 40m Northwest of Inglis Street, Terminal Road intersection	1300	155	47	Northeast	Downwind	No activity on-Site observed	Visible smoke from a distant fire upwind

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 40m Northwest of Inglis Street, Terminal Road intersection	1345	155	38	Northeast	Downwind	No activity on-Site observed	Visible smoke from a distant fire upwind
22 50m North of STPA building	1400	155	26	Northeast	Upwind	Background	Visible smoke from a distant fire upwind
23 40m Northwest of Inglis Street, Terminal Road intersection	1400	155	30	Northeast	Downwind	No activity on-Site observed	Visible smoke from a distant fire upwind
24 40m Northwest of Inglis Street, Terminal Road intersection	1430	155	13	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
25 50m North of STPA building	1500	155	13	Northeast	Upwind	Background	No observations seen to effect sampling integrity
26 40m Northwest of Inglis Street, Terminal Road intersection	1500	155	11	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
27 40m Northwest of Inglis Street, Terminal Road intersection	1525	155	9	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
28 50m North of STPA building	1600	155	8	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
29 40m Northwest of Inglis Street, Terminal Road intersection	1600	155	8	Northeast	Downwind	No activity on-Site observed	No observations seen to effect sampling integrity
30 40m Northwest of Inglis Street, Terminal Road intersection	1645	155	15	Northeast	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)
30m Southeast of Walker Street, Ferry Street intersection	0700 to 0759	19	990
30m Southeast of Walker Street, Ferry Street intersection	0800 to 0859	32	990
30m Southeast of Walker Street, Ferry Street intersection	0900 to 0959	38	990
30m Southeast of Walker Street, Ferry Street intersection	1000 to 1059	50	990
30m Southeast of Walker Street, Ferry Street intersection	1100 to 1159	63	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
60m Southeast of Walker Street, Ferry Street intersection	1200 to 1259	79	990
40m Northwest of Inglis Street, Terminal Road intersection	1300 to 1359	122	990
40m Northwest of Inglis Street, Terminal Road intersection	1400 to 1459	144	990
40m Northwest of Inglis Street, Terminal Road intersection	1500 to 1559	154	990
40m Northwest of Inglis Street, Terminal Road intersection	1600 to 1659	165	990

VOC Monitoring

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