

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1074-07
FROM	Grant Harrigan	SHIFT:	0630 to 1845
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	7 th February, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0064

**SUBJECT: 7th February, 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 7th of February, 2008. Ryan Butts and Reggie Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities on the Cooling Pond.

Weather conditions on the day of sampling:

- Overcast
- Temperature: approximately -5°C (data unavailable from Environment Canada)
- Wind Direction: Northwest 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 construction activities.*

All downwind and upwind measurements of PM₁₀ were well 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 Ryan Butts 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
7th February, 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 110m East of Ferry Street bridge	0700	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
2 100m Northeast of intersection of Inglis Street and Terminal Road	0700	155	8	Northwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
3 100m Northeast of intersection of Inglis Street and Terminal Road	0716	155	8	Northwest	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
4 110m East of Ferry Street bridge	0800	155	1	Northwest	Upwind	Background	No observations seen to effect sampling integrity
5 90m Northeast of intersection of Inglis Street and Terminal road	0800	155	10	Northwest	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
6 90m Northeast of intersection of Inglis Street and Terminal Road	0816	155	8	Northwest	Downwind	Excavators and Dump trucks 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
7 110m East of Ferry Street bridge	0900	155	10	Northwest	Upwind	Background	No observations seen to effect sampling integrity
8 90m Northeast of intersection of Inglis Street and Terminal Road	0900	155	11	Northwest	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
9 90m Northeast of intersection of Inglis Street and Terminal Road	0925	155	23	Northwest	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
10 110m East of Ferry Street bridge	1002	155	13	Northwest	Upwind	Background	No observations seen to effect sampling integrity
11 90m Northeast of intersection of Inglis Street and Terminal Road	1010	155	22	Northwest	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
12 100m Northeast of intersection of Inglis Street and Terminal Road	1025	155	11	Northwest	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
13 10m East of Second gate East of yellow bridge off Ferry Street	1100	155	14	North	Upwind	Excavators and Dump trucks 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
14 15m Northwest of Inglis Street and Terminal Road intersection	1100	155	12	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
15 15m Northwest of Inglis Street and Terminal Road intersection	1120	155	15	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
16 15m North of Inglis Street and Spar Road Intersection	1200	155	8	Northeast	Upwind	Background	No observations seen to effect sampling integrity
17 15m Northwest of Inglis Street and Terminal Road intersection	1200	155	7	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
18 15m Northwest of Inglis Street and Terminal Road intersection	1216	155	16	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
19 15m North of Inglis Street and Spar Road Intersection	1300	155	7	Northeast	Upwind	Background	No observations seen to effect sampling integrity
20 30m Northwest of Inglis Street and Terminal Road intersection	1300	155	8	Northeast	Downwind	Excavators and Dump trucks 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
21 30m Northwest of Inglis Street and Terminal Road intersection	1315	155	9	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
22 15m North of Inglis Street and Spar Road Intersection	1400	155	7	Northeast	Upwind	Background	No observations seen to effect sampling integrity
23 30m Northwest of Inglis Street and Terminal Road intersection	1400	155	8	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
24 30m Northwest of Inglis Street and Terminal Road intersection	1415	155	10	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
25 15m North of Inglis Street and Spar Road Intersection	1500	155	10	Northeast	Upwind	Background	No observations seen to effect sampling integrity
26 30m Northwest of Inglis Street and Terminal Road intersection	1500	155	12	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
27 30m Northwest of Inglis Street and Terminal Road intersection	1515	155	12	Northeast	Downwind	Excavators and Dump trucks 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
28 40m Northeast of Inglis Street and Terminal Road intersection	1600	155	12	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
29 15m North of Inglis Street and Spar Road Intersection	1614	155	10	Northeast	Upwind	Background	No observations seen to effect sampling integrity
30 40m North of Inglis Street and Terminal Road intersection	1615	155	12	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
31 15m North of Inglis Street and Spar Road Intersection	1700	155	10	Northeast	Upwind	Background	No observations seen to effect sampling integrity
32 40m North of Inglis Street and Terminal Road intersection	1700	155	14	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
33 60m North of Inglis Street and Terminal Road intersection	1717	155	12	Northeast	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
34 15m North of Inglis Street and Spar Road Intersection	1800	155	12	Northeast	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
35 60m North of Inglis Street and Terminal Road intersection	1800	155	13	Northeast	Downwind	Excavators and Dump trucks moving material	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 ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
100m Northeast of intersection of Inglis Street and Terminal Road	0700 to 0731	8	990
90m Northeast of intersection of Inglis Street and Terminal Road	0800 to 0831	17	990
90m Northeast of intersection of Inglis Street and Terminal Road	0900 to 0940	34	990
90m/60m Northeast of intersection of Inglis Street and Terminal Road	1010 to 1040	51	990
15m Northeast of intersection of Inglis street and Terminal Road	1100 to 1135	65	990
15m Northwest of intersection of Inglis Street and Terminal Road	1200 to 1231	77	990
30m Northeast of intersection of Inglis Street and Terminal Road	1300 to 1330	86	990
30m Northwest of intersection of Inglis and Terminal Road	1400 to 1430	95	990
30m Northwest of intersection of Inglis and Terminal Road	1500 to 1530	107	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
40m Northwest of intersection of Inglis Street and Terminal Road	1600 to 1630	119	990
60m Northwest of intersection of Inglis Street and Terminal Road	1700 to 1732	132	990
40m Northwest of intersection of Inglis Street and Terminal Road	1800 to 1815	145	990

VOC Monitoring

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