

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1074-03
FROM	Grant Harrigan	SHIFT:	0630 to 1930
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	5 th February, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0060

**SUBJECT: 4th 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 4th of February, 2008. Peter Ibrahim 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:

- Overcast
- Temperature: approximately -5°C (data unavailable from Environment Canada)
- Wind Direction: Northwest to North

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 Peter Ibrahim 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 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 150m North of Intercolonial Street fixed station	0705	155	3	Northwest	Upwind	Background	No observations seen to effect sampling integrity
2 60m North of Inglis Street and Terminal Road intersection	0708	155	14	Northwest	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
3 60m North of Inglis Street and Terminal Road intersection	0725	155	5	Northwest	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
4 100m West of Inglis Street and Ferry Street intersection	0800	155	14	North	Upwind	Background	No observations seen to effect sampling integrity
5 50m North of Inglis Street and Terminal Road intersection	0804	155	11	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
6 50m North of Inglis Street and Terminal Road intersection	0820	155	11	North	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 100m West of Inglis Street and Ferry Street intersection	0900	155	14	North	Upwind	Background	No observations seen to effect sampling integrity
8 50m North of Inglis Street and Terminal Road intersection	0900	155	10	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
9 50m North of Inglis Street and Terminal Road intersection	0916	155	18	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
10 100m West of Inglis Street and Ferry Street intersection	1000	155	20	North	Upwind	Background	No observations seen to effect sampling integrity
11 50m North of Inglis Street and Terminal Road intersection	1000	155	14	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
12 50m North of Inglis Street and Terminal Road intersection	1016	155	10	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
13 60m North of Inglis Street and Terminal Road intersection	1100	155	11	North	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
14 100m West of Inglis Street and Ferry Street intersection	1108	155	8	North	Upwind	Background	No observations seen to effect sampling integrity
15 70m Northeast of Inglis Street and Terminal Road intersection	1117	155	15	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
16 100m West of Inglis Street and Ferry Street intersection	1200	155	11	North	Upwind	Background	No observations seen to effect sampling integrity
17 50m North of Inglis Street and Terminal Road intersection	1200	155	11	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
18 50m North of Inglis Street and Terminal Road intersection	1216	155	9	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
19 50m North of Inglis Street and Terminal Road intersection	1300	155	27	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
20 100m West of Inglis Street and Ferry Street intersection	1303	155	28	North	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
21 50m North of Inglis Street and Terminal Road intersection	1317	155	22	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
22 100m West of Inglis Street and Ferry Street intersection	1400	155	15	North	Upwind	Background	No observations seen to effect sampling integrity
23 50m North of Inglis Street and Terminal Road intersection	1400	155	26	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
24 50m North of Inglis Street and Terminal Road intersection	1416	155	27	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
25 100m West of Inglis Street and Ferry Street intersection	1500	155	23	North	Upwind	Background	No observations seen to effect sampling integrity
26 50m North of Inglis Street and Terminal Road intersection	1500	155	22	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
27 50m North of Inglis Street and Terminal Road intersection	1518	155	15	North	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 100m West of Inglis Street and Ferry Street intersection	1600	155	7	North	Upwind	Background	No observations seen to effect sampling integrity
29 40m North of Inglis Street and Terminal Road intersection	1601	155	17	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
30 40m North of Inglis Street and Terminal Road intersection	1617	155	31	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
31 100m West of Inglis Street and Ferry Street intersection	1700	155	15	North	Upwind	Background	No observations seen to effect sampling integrity
32 60m North of Inglis Street and Terminal Road intersection	1700	155	31	North	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	26	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
34 100m West of Inglis Street and Ferry Street intersection	1800	155	6	North	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
35 60m North of Inglis Street and Terminal Road intersection	1800	155	19	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
36 60m North of Inglis Street and Terminal Road intersection	1816	155	15	North	Downwind	Excavators and Dump trucks moving material	No observations seen to effect sampling integrity
37 100m West of Inglis Street and Ferry Street intersection	1845	155	8	North	Upwind	Background	No observations seen to effect sampling integrity
38 60m North of Inglis Street and Terminal Road intersection	1845	155	7	North	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 ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
60m North of Inglis Street and Terminal Road intersection	0708 to 0740	10	990
50m North of Inglis Street and Terminal Road intersection	0804 to 0835	21	990
50m North of Inglis Street and Terminal Road intersection	0900 to 0931	35	990
50m North of Inglis Street and Terminal Road intersection	1000 to 1031	45	990
60m / 70m North of Inglis Street and Terminal Road intersection	1100 to 1132	58	990
50m North of Inglis Street and Terminal Road intersection	1200 to 1231	68	990
50m North of Inglis Street and Terminal Road intersection	1300 to 1332	93	990
50m North of Inglis Street and Terminal Road intersection	1400 to 1431	120	990
50m North of Inglis Street and Terminal Road intersection	1500 to 1532	139	990
40m North of Inglis Street and Terminal Road intersection	1601 to 1632	163	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
60m North of Inglis Street and Terminal Road intersection	1700 to 1732	192	990
60m North of Inglis Street and Terminal Road intersection	1800 to 1831	209	990
50m North of Inglis Street and Terminal Road intersection	1845 to 1900	216	990

VOC Monitoring

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