

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1074-11
FROM	Grant Harrigan	SHIFT:	0630 to 1900
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	14 th February, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0068

**SUBJECT: 13th February 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Cooling Ponds
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 13th of February, 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:

- Overcast, snow and freezing rain in the evening
- Temperature: -5°C (data unavailable from Environment Canada)
- Wind Direction: West to Southwest to Southeast

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 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
13th 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 60m Northwest of Sydney Tar Ponds Agency	0705	155	9	West	Downwind	No visible activity on-Site	No observations seen to effect sampling integrity
2 20m East of Bus Terminal	0710	155	11	West	Upwind	Background	No observations seen to effect sampling integrity
3 60m Northwest of Sydney Tar Ponds Agency	0720	155	10	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
4 20m East of Bust Terminal	0800	155	18	West	Upwind	Background	No observations seen to effect sampling integrity
5 60m Northwest of Sydney Tar Ponds Agency	0800	155	25	West	Downwind	Excavator moving material, truck dumping	No observations seen to effect sampling integrity
6 60m Northwest of Sydney Tar Ponds Agency	0816	155	19	West	Downwind	Excavator moving material, truck dumping	No observations seen to effect sampling integrity
7 20m East of Bus Terminal	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 50m Northwest of Sydney Tar Ponds Agency	0900	155	12	West	Downwind	Excavators moving material, truck dumping	No observations seen to effect sampling integrity
9 50m Northwest of Sydney Tar Ponds Agency	0916	155	14	West	Downwind	Excavators moving material, truck dumping	No observations seen to effect sampling integrity
10 20m East of Bust Terminal	1000	155	8	West	Upwind	Background	No observations seen to effect sampling integrity
11 50m Northwest of Sydney Tar Ponds Agency	1000	155	10	West	Downwind	Excavators moving material, truck dumping	No observations seen to effect sampling integrity
12 90m Northwest of Sydney Tar Ponds Agency	1020	155	45	West	Downwind	Excavators moving material, truck dumping	No observations seen to effect sampling integrity
13 30m Northwest of Bus Terminal	1100	155	8	West	Upwind	Background	No observations seen to effect sampling integrity
14 90m Northwest of Sydney Tar Ponds Agency	1105	155	22	West	Downwind	Excavators moving material, truck dumping	No observations seen to effect sampling integrity
15 90m Northwest of Sydney Tar Ponds Agency	1125	155	13	West	Downwind	Excavators moving material, truck dumping	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 30m Northwest of Bus Terminal	1200	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
17 90m Northwest of Sydney Tar Ponds Agency	1200	155	13	West	Downwind	Excavator moving material, truck dumping	No observations seen to effect sampling integrity
18 90m Northwest of Sydney Tar Ponds Agency	1215	155	8	West	Downwind	Excavator moving material, truck dumping	No observations seen to effect sampling integrity
19 30m Northwest of Bus Terminal	1300	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
20 90m Northwest of Sydney Tar Ponds Agency	1300	155	10	West	Downwind	Excavator moving material, truck dumping	No observations seen to effect sampling integrity
21 90m Northwest of Sydney Tar Ponds Agency	1315	155	9	West	Downwind	Excavator moving material, truck dumping	No observations seen to effect sampling integrity
22 30m Northwest of Bus Terminal	1400	155	5	West	Upwind	Background	No observations seen to effect sampling integrity
23 90m Northwest of Sydney Tar Ponds Agency	1400	155	10	West	Downwind	Excavator moving material, truck dumping	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 90m Northwest of Sydney Tar Ponds Agency	1416	155	20	West	Downwind	Excavator moving material, truck dumping	No observations seen to effect sampling integrity
25 30m Northwest of Bus Terminal	1500	155	7	West	Upwind	Background	No observations seen to effect sampling integrity
26 100m Northwest of Sydney Tar Ponds Agency	1500	155	8	West	Downwind	Excavator moving material, truck dumping	No observations seen to effect sampling integrity
27 100m Northwest of STPA	1516	155	9	West	Downwind	Excavator moving material, truck dumping	No observations seen to effect sampling integrity
28 15m Southeast of Inglis Street and Terminal Road Intersections	1600	155	8	Southeast	Upwind	Background	No observations seen to effect sampling integrity
29 60m North of Inglis and Spar Road Intersection	1600	155	6	Southwest	Downwind	Excavation of material	No observations seen to effect sampling integrity
30 10m Southwest of Inglis and Spar Road Intersection	1625	155	9	Southeast	Downwind	Excavation of material	No observations seen to effect sampling integrity
31 15m Southeast of Inglis and Terminal Road Intersection	1700	155	8	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
32 10m Southwest of Inglis and Spar Road Intersection	1700	155	8	Southeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
33 10m Southwest of Inglis and Spar Road Intersection	1715	155	8	Southeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
34 10m Southeast of Inglis and Terminal Road Intersection	1800	155	12	Southeast	Upwind	Background	No observations seen to effect sampling integrity
35 10m Southwest of Inglis and Spar Road Intersection	1800	155	11	Southeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
36 10m Southwest of Inglis and Spar Road Intersection	1815	155	10	Southeast	Downwind	Excavators 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 ($\mu\text{g}/\text{m}^3$)
60m Northwest of Sydney Tar Ponds Agency Building	0705 to 0735	10	990
60m Northwest of Sydney Tar Ponds Agency Building	0800 to 0831	32	990
50m Northwest of Sydney Tar Ponds Agency Building	0900 to 0931	45	990
50m Northwest of Sydney Tar Ponds Agency Building	1000 to 1035	73	990
90m Northwest of Sydney Tar Ponds Agency Building	1105 to 1140	91	990
90m Northwest of Sydney Tar Ponds Agency Building	1200 to 1230	102	990
90m Northwest of Sydney Tar Ponds Agency Building	1300 to 1330	112	990
90m Northwest of Sydney Tar Ponds Agency Building	1400 to 1431	127	990
100m Northwest of Sydney Tar Ponds Agency Building	1500 to 1531	135	990
60m North of Inglis and Spar Road Intersection	1600 to 1640	150	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
10m Southwest of Inglis and Spar Road Intersection	1700 to 1730	158	990
10m Southwest of Inglis and Spar Road Intersection	1800 to 1830	169	990

VOC Monitoring

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