

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1053-24
FROM	Grant Harrigan	SHIFT:	0630 to 1800
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	1 st February, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0057

**SUBJECT: 31st January, 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 31st of January, 2008. Colin MacIsaac and Peter Ibrahim 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 4°C (data unavailable from Environment Canada)
- Wind Direction: West to Northwest

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 Ponds
31st January, 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 5m South of Intercolonial Street Fixed Station	0715	155	6	West	Upwind	Background	No observations seen to effect sampling integrity
2 30m North of Sydney Tar Ponds Agency Building	0728	155	8	West	Downwind	Excavation of material	No observations seen to effect sampling integrity
3 30m North of Sydney Tar Ponds Agency Building	0746	155	9	West	Downwind	Excavation of material, dumping of material	No observations seen to effect sampling integrity
4 5m South of Intercolonial Street Fixed Station	0815	155	8	West	Upwind	Background	No observations seen to effect sampling integrity
5 30m North of Sydney Tar Ponds Agency Building	0815	155	8	West	Downwind	Excavation of material, dumping of material	No observations seen to effect sampling integrity
6 30m North of Sydney Tar Ponds Agency Building	0833	155	9	West	Downwind	Excavation of material, dumping of material	No observations seen to effect sampling integrity
7 20m North of Sydney Tar Ponds Agency Building	0914	155	9	West	Downwind	Excavation of material, dumping of 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
8 5m South of Intercolonial Street Fixed Station	0915	155	10	West	Upwind	Background	No observations seen to effect sampling integrity
9 20m North of Sydney Tar Ponds Agency Building	0931	155	9	West	Downwind	Excavation of material, dumping of material	No observations seen to effect sampling integrity
10 20m North of Sydney Tar Ponds Agency Building	1014	155	9	West	Downwind	Excavation of material	No observations seen to effect sampling integrity
11 5m South of Intercolonial Street Fixed Station	1015	155	9	West	Upwind	Background	No observations seen to effect sampling integrity
12 20m North of Sydney Tar Ponds Agency Building	1031	155	9	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
13 5m South of Intercolonial Street Fixed Station	1115	155	11	West	Upwind	Background	No observations seen to effect sampling integrity
14 20m North of Sydney Tar Ponds Agency Building	1116	155	9	West	Downwind	Excavators moving material	No observations seen to effect sampling integrity
15 20m North of Sydney Tar Ponds Agency Building	1134	155	9	West	Downwind	Excavators 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
16 5m South of Intercolonial Street Fixed Station	1215	155	8	West	Upwind	Background	No observations seen to effect sampling integrity
17 20m North of Sydney Tar Ponds Agency Building	1215	155	9	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
18 20m North of Sydney Tar Ponds Agency Building	1233	155	9	West	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
19 5m South of Intercolonial Street Fixed Station	1315	155	11	West	Upwind	Background	No observations seen to effect sampling integrity
20 20m North of Sydney Tar Ponds Agency Building	1315	155	10	West	Downwind	Excavators moving material, payloader moving material	No observations seen to effect sampling integrity
21 20m North of Sydney Tar Ponds Agency Building	1332	155	10	West	Downwind	Excavators moving material, payloader moving material	No observations seen to effect sampling integrity
22 5m South of Intercolonial Street Fixed Station	1415	155	10	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
23 50m South of Sydney Tar Ponds Agency Building	1420	155	18	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
24 50m South of Sydney Tar Ponds Agency Building	1438	155	12	Northwest	Downwind	Dump trucks moving material	No observations seen to effect sampling integrity
25 20m South of Intercolonial Street Fixed Station	1515	155	13	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 50m South of Sydney Tar Ponds Agency Building	1515	155	13	Northwest	Downwind	Excavation of material	No observations seen to effect sampling integrity
27 50m South of Sydney Tar Ponds Agency Building	1532	155	12	Northwest	Downwind	Excavation of material	No observations seen to effect sampling integrity
28 20m South of Intercolonial Street Fixed Station	1615	155	16	Northwest	Upwind	Background	No observations seen to effect sampling integrity
29 50m South of Sydney Tar Ponds Agency Building	1615	155	11	Northwest	Downwind	Excavation of material	No observations seen to effect sampling integrity
30 50m South of Sydney Tar Ponds Agency Building	1633	155	14	Northwest	Downwind	Excavation of 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
31 20m South of Intercolonial Street Fixed Station	1710	155	11	Northwest	Upwind	Background	No observations seen to effect sampling integrity
32 50m South of Sydney Tar Ponds Agency Building	1710	155	13	Northwest	Downwind	Excavation of 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 ($\mu\text{g}/\text{m}^3$)
30m North of Sydney Tar Ponds Agency Building	0728 to 0801	9	990
30m North of Sydney Tar Ponds Agency Building	0815 to 0848	18	990
20m North of Sydney Tar Ponds Agency Building	0914 to 0946	27	990
20m North of Sydney Tar Ponds Agency Building	1014 to 1046	36	990
20m North of Sydney Tar Ponds Agency Building	1116 to 1149	45	990
20m North of Sydney Tar Ponds Agency Building	1215 to 1248	54	990
20m North of Sydney Tar Ponds Agency Building	1315 to 1347	64	990
50m South of Sydney Tar Ponds Agency Building	1420 to 1453	79	990
50m South of Sydney Tar Ponds Agency Building	1515 to 1547	92	990
50m South of Sydney Tar Ponds Agency Building	1615 to 1648	105	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
50m South of Sydney Tar Ponds Agency Building	1710 to 1725	118	990

VOC Monitoring

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