

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1114-18
FROM	Grant Harrigan	SHIFT:	0830 to 1745
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	23 rd April, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-00129

**SUBJECT: 22nd 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 22nd 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:

- Clear Skies
- Temperature: approximately 12°C (data unavailable from Environment Canada)
- Wind Direction: South to North to Northeast to East

Comments: *ALL-TECH was on-Site at 0830 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 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
22nd 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 30m Northeast of Acadian Lines terminal	0855	155	25	South	Upwind	Background	No observations seen to effect sampling integrity
2 60m Southwest of Inglis Street, Spar Road intersection	0915	155	20	South	Downwind	Excavator moving material	No observations seen to effect sampling integrity
3 60m Southwest of Inglis Street, Spar Road intersection	0935	155	18	South	Downwind	Excavator moving material	No observations seen to effect sampling integrity
4 30m Southeast of Cooling Pond main gate	1000	155	14	North	Upwind	Background	No observations seen to effect sampling integrity
5 30m Northwest of Inglis Street, Terminal Road intersection	1000	155	13	North	Downwind	Excavator moving material	No observations seen to effect sampling integrity
6 30m Northwest of Inglis Street, Terminal Road intersection	1035	155	13	North	Downwind	Excavator moving material	No observations seen to effect sampling integrity
7 30m Southeast of Cooling Pond main gate	1100	155	14	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
8 30m Northwest of Inglis Street, Terminal Road intersection	1100	155	13	North	Downwind	Excavator moving material	No observations seen to effect sampling integrity
9 30m Northwest of Inglis Street, Terminal Road intersection	1125	155	4	North	Downwind	Excavator moving material	No observations seen to effect sampling integrity
10 30m Southeast of Cooling Pond main gate	1200	155	12	North	Upwind	Background	No observations seen to effect sampling integrity
11 30m Northwest of Inglis Street, Terminal Road intersection	1200	155	4	North	Downwind	No activity observed	Recalibrated using zero filter
12 30m Northwest of Inglis Street, Terminal Road intersection	1240	155	1	North	Downwind	Excavator moving material	Recalibrated using zero filter
13 30m Southeast of Cooling Pond main gate	1300	155	9	North	Upwind	Background	No observations seen to effect sampling integrity
14 40m Northwest of Inglis Street, Terminal Road intersection	1300	155	3	North	Downwind	Excavator moving material	No observations seen to effect sampling integrity
15 40m Northwest of Inglis Street, Terminal Road intersection	1330	155	12	North	Downwind	Excavator 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 40m North of STPA building	1400	155	13	Northeast	Upwind	Background	No observations seen to effect sampling integrity
17 30m Northeast of Acadian Lines terminal	1400	155	6	Northeast	Downwind	Excavator moving material	No observations seen to effect sampling integrity
18 30m Northeast of Acadian Lines terminal	1425	155	6	Northeast	Downwind	Excavator moving material	No observations seen to effect sampling integrity
19 40m North of STPA building	1500	155	13	East	Upwind	Background	No observations seen to effect sampling integrity
20 30m Northeast of old train station	1505	155	4	East	Downwind	Excavator moving material	No observations seen to effect sampling integrity
21 30m Northeast of old train station	1530	155	6	East	Downwind	Excavator moving material	No observations seen to effect sampling integrity
22 40m North of STPA building	1600	155	11	East	Upwind	Background	No observations seen to effect sampling integrity
23 30m Northeast of old train station	1600	155	3	East	Downwind	Excavator 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
24 30m Northeast of old train station	1615	155	6	East	Downwind	Excavator moving material	No observations seen to effect sampling integrity
25 40m North of STPA building	1700	155	9	East	Upwind	Background	No observations seen to effect sampling integrity
26 30m Northeast of old train station	1700	155	1	East	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 ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
60m Southwest of Inglis Street, Spar Road intersection	0900 to 0959	19	990
30m Northwest of Inglis Street, Terminal Road intersection	1000 to 1059	32	990
30m Northwest of Inglis Street, Terminal Road intersection	1100 to 1159	41	990
30m Northwest of Inglis Street, Terminal Road intersection	1200 to 1259	44	990
40m Northwest of Inglis Street, Terminal Road	1300 to 1359	52	990
30m Northeast of Acadian Lines terminal	1400 to 1459	58	990
30m Northeast of old train station	1500 to 1559	63	990
30m Northeast of old train station	1600 to 1659	68	990
30m Northeast of old train station	1700 to 1759	69	990

VOC Monitoring

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