

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1100-17
FROM	Grant Harrigan	SHIFT:	0630 to 1845
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	18 th March, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0102

**SUBJECT: 17th March, 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 17th of March, 2008. Colin MacIsaac and Reggie Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities for the Cooling Pond.

Weather conditions on the day of sampling:

- Overcast with strong wind gusts
- Temperature: approximately -4°C (data unavailable from Environment Canada)
- Wind Direction: 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.*

The downwind location had an exceedance at 1720 of 608 ug/m³ and again at 1735 of 451 ug/m³. ALL-TECH began contacting EarthTech at 1727 to let them know about the exceedance. Activities were confirmed to have stopped at 1750 when EarthTech informed ALL-TECH that construction activities were done for the day. ALL-TECH performed continuous sampling for one hour.

All upwind measurements of PM₁₀ were well below the established Site Action Level for this parameter of 155 ug/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
17th March, 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 50m North from STPA building	0700	155	5	Northeast	Upwind	Background	No observations seen to effect sampling integrity
2 60m Northwest of Acadian Lines terminal	0700	155	7	Northeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
3 60m Northwest of Acadian Lines terminal	0745	155	23	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
4 50m North from STPA building	0800	155	6	Northeast	Upwind	Background	No observations seen to effect sampling integrity
5 60m Northwest of Acadian Lines terminal	0800	155	20	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
6 60m Northwest of Acadian Lines terminal	0840	155	27	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
7 50m North from STPA building	0900	155	6	Northeast	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 60m Northwest of Acadian Lines terminal	0900	155	25	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
9 60m Northwest of Acadian Lines terminal	0925	155	24	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
10 50m North from STPA building	1000	155	6	Northeast	Upwind	Background	No observations seen to effect sampling integrity
11 60m Northwest of Acadian Lines terminal	1000	155	34	Northeast	Downwind	Excavators moving material	Dust from activity site
12 60m Northwest of Acadian Lines terminal	1045	155	45	Northeast	Downwind	Excavators moving material	Dust from activity site
13 50m North from STPA building	1100	155	7	Northeast	Upwind	Background	No observations seen to effect sampling integrity
14 60m Northwest of Acadian Lines terminal	1110	155	23	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
15 60m Northwest of Acadian Lines terminal	1145	155	29	Northeast	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 50m North from STPA building	1200	155	10	Northeast	Upwind	Background	No observations seen to effect sampling integrity
17 60m Northwest of Acadian Lines terminal	1200	155	24	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
18 90m Northwest of Acadian Lines terminal	1240	155	25	Northeast	Downwind	Excavators moving material	High winds
19 50m North from STPA building	1300	155	12	Northeast	Upwind	Background	No observations seen to effect sampling integrity
20 90m Northwest of Acadian Lines terminal	1300	155	32	Northeast	Downwind	Excavators moving material	High winds
21 90m Northwest of Acadian Lines terminal	1343	155	20	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
22 50m North from STPA building	1400	155	9	Northeast	Upwind	Background	No observations seen to effect sampling integrity
23 90m Northwest of Acadian Lines terminal	1400	155	12	Northeast	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
24 90m Northwest of Acadian Lines terminal	1425	155	27	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
25 50m North from STPA building	1500	155	10	Northeast	Upwind	Background	No observations seen to effect sampling integrity
26 90m Northwest of Acadian Lines terminal	1500	155	38	Northeast	Downwind	Excavators moving material	High winds
27 90m Northwest of Acadian Lines terminal	1525	155	25	Northeast	Downwind	Excavators moving material	High winds
28 50m North from STPA building	1600	155	10	Northeast	Upwind	Background	No observations seen to effect sampling integrity
29 90m Northwest of Acadian Lines terminal	1600	155	24	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
30 90m Northwest of Acadian Lines terminal	1635	155	19	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
31 50m North from STPA building	1700	155	13	Northeast	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 Northwest of Inglis Street, Terminal Road intersection	1700	155	20	Northeast	Downwind	Excavators moving material	No observations seen to effect sampling integrity
33 10m Northwest of Inglis Street, Terminal Road intersection	1720	155	608	Northeast	Downwind	Excavators moving material	Heavy dust coming from site
34 50m North from STPA building	1723	155	16	Northeast	Upwind	Background	No observations seen to effect sampling integrity
35 10m Northwest of Inglis Street, Terminal Road intersection	1735	155	451	Northeast	Downwind	Excavators moving material	Heavy dust coming from site
36 50m North from STPA building	1740	155	14	Northeast	Upwind	Background	No observations seen to effect sampling integrity
37 50m North from STPA building	1800	155	14	Northeast	Upwind	No activity observed on-site	No observations seen to effect sampling integrity
38 10m Northwest of Inglis Street, Terminal Road intersection	1800	155	17	Northeast	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 Northwest of Acadian Lines terminal	0700 to 0759	15	990
60m Northwest of Acadian Lines terminal	0800 to 0859	39	990
60m Northwest of Acadian Lines terminal	0900 to 0959	64	990
60m Northwest of Acadian Lines terminal	1000 to 1059	104	990
60m Northwest of Acadian Lines terminal	1100 to 1159	130	990
60m Northwest of Acadian Lines terminal	1200 to 1259	155	990
90m Northwest of Acadian Lines terminal	1300 to 1359	181	990
90m Northwest of Acadian Lines terminal	1400 to 1459	201	990
90m Northwest of Acadian Lines terminal	1500 to 1559	233	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
90m Northwest of Acadian Lines terminal	1600 to 1659	255	990
10m Northwest of Inglis Street, Terminal Road intersection	1700 to 1759	614	990
10m Northwest of Inglis Street, Terminal Road intersection	1800 to 1859	631	990

VOC Monitoring

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