

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1053-06
FROM	Grant Harrigan	SHIFT:	0630 to 1715
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	14 th January, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0039

**SUBJECT: 7th January, 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 7th of January, 2008. Grant Harrigan, Nigel MacLean and Reggie Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring for activities on the Cooling Pond Site.

Weather conditions on the day of sampling:


- Overcast
- Temperature: 1°C
- Wind Direction: South West

Comments: *ALL-TECH was on-Site at 0630 and sampling began as soon construction activity commenced. Air monitoring was performed during EarthTech construction activities on the Cooling Pond Site.*

All downwind and upwind measurements of PM₁₀ were well below the established Site Action Level for this parameter of 155 µg/m³.

This report has been prepared by Grant Harrigan and reviewed by 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
7th January, 2008

Sample No. & Air Monitoring Location	Time of Day	PM₁₀ Action Level (µg/m³)	Average Result (µg/m³)	Wind Direction	Relative Position	Activity Description	Observations that may affect sample
1 100m North of STPA office	0715	155	25	Southwest	Downwind	No observable activity	No observations seen to effect sampling integrity
2 230m North of STPA office	0717	155	31	Southwest	Downwind	Machines moving around	No observations seen to effect sampling integrity
3 70m South of Intercolonial Street fixed station	0721	155	27	Southwest	Upwind	Background	No observations seen to effect sampling integrity
4 100m North of STPA office	0732	155	27	Southwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
5 230m North of STPA office	0736	155	31	Southwest	Downwind	Excavator digging material	No observations seen to effect sampling integrity
6 70m South of Intercolonial Street fixed station	0815	155	27	Southwest	Upwind	Background	No observations seen to effect sampling integrity
7 240m North of STPA office	0815	155	30	Southwest	Downwind	Excavator digging 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	Activity Description	Observations that may affect sample
8 130m North of STPA office	0815	155	28	Southwest	Downwind	No observable activity	Debris being blown off road due to traffic
9 130m North of STPA office	0832	155	32	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
10 240m North of STPA office	0834	155	31	Southwest	Downwind	Excavator digging material	Debris being blown off road due to traffic
11 70m South of Intercolonial Street fixed station	0915	155	37	South West	Upwind	Background	Debris being blown off road due to traffic
12 130m North of STPA office	0915	155	30	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
13 240m North of STPA office	0917	155	33	Southwest	Downwind	Excavator digging material	Debris being blown off road due to traffic
14 130m North of STPA office	0932	155	30	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
15 240m North of STPA office	0935	155	32	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
16 110m South of Intercolonial Street fixed station	1015	155	53	South West	Upwind	Background	Debris being blown off road due to traffic

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Activity Description	Observations that may affect sample
17 80m North of STPA office	1019	155	33	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
18 215m North of STPA office	1021	155	33	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
19 80m North of STPA office	1036	155	37	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
20 215m North of STPA office	1037	155	38	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
21 110m South of Intercolonial Street fixed station	1115	155	58	Southwest	Upwind	Background	Debris being blown off road due to traffic
22 30m Southwest of STPA office	1115	155	37	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
23 15m North of STPA office	1115	155	35	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
24 15m North of STPA office	1131	155	36	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
25 30m Southwest of STPA office	1132	155	40	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Activity Description	Observations that may affect sample
26 110m South of Intercolonial Street fixed station	1215	155	58	Southwest	Upwind	Background	Debris being blown off road due to traffic
27 30m Southwest of STPA office	1215	155	31	Southwest	Downwind	No observable activity	Debris being blown off road due to traffic
28 15m North of STPA office	1215	155	33	Southwest	Downwind	No observable activity	Debris being blown off road due to traffic
29 15m North of STPA office	1230	155	33	Southwest	Downwind	No observable activity	Debris being blown off road due to traffic
30 30m Southwest of STPA office	1231	155	31	Southwest	Downwind	No observable activity	Debris being blown off road due to traffic
31 110m South of Intercolonial Street fixed station	1315	155	52	Southwest	Upwind	Background	Debris being blown off road due to traffic
32 35m Southwest of STPA office	1318	155	32	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
33 35m Southwest of STPA office	1333	155	30	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
34 110m South of Intercolonial Street fixed station	1415	155	31	Southwest	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	Activity Description	Observations that may affect sample
35 35m Southwest of STPA office	1416	155	38	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
36 35m Southwest of STPA office	1432	155	35	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
37 110m South of Intercolonial Street fixed station	1515	155	48	Southwest	Upwind	Background	Debris being blown off road due to traffic
38 30m Southwest of STPA office	1515	155	36	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
39 30m Southwest of STPA office	1531	155	36	Southwest	Downwind	Material being deposited	Debris being blown off road due to traffic
40 110m South of Intercolonial Street fixed station	1415	155	36	Southwest	Upwind	Background	Debris being blown off road due to traffic
41 30m Southwest of STPA office	1617	155	31	Southwest	Downwind	No observable activity	Debris being blown off road due to traffic
42 30m Southwest of STPA office	1632	155	24	Southwest	Downwind	No observable activity	Debris being blown off road due to traffic

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 ($\mu\text{g}/\text{m}^3$)
100m & 230m North of STPA office	0715 to 0751	29	990
130m & 240m North of STPA office	0815 to 0847	60	990
130m & 240m North of STPA office	0915 to 0950	92	990
80m & 215m North of STPA office	1019 to 1052	128	990
30m Southwest & 15m North of STPA office	1115 to 1147	166	990
30m Southwest & 15m North of STPA office	1215 to 1246	198	990
35m Southwest of STPA office	1318 to 1348	229	990
35m Southwest of STPA office	1416 to 1447	266	990
30m West of STPA office	1515 to 1546	302	990
30m West of STPA office	1617 to 1647	336	990

VOC Monitoring

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

***P.I.D. was used for all samples and was below detection level.**