

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1053-11
FROM	Grant Harrigan	SHIFT:	0630 to 1845
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	15 th January, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0044

**SUBJECT: 14th 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 14th of January, 2008. Peter Ibrahim, Tyler Rowe 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
- Temperature: approximately -1°C (Data unavailable from Environment Canada)
- Wind Direction: Northeast to East

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.

This report has been prepared by Tyler Rowe 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
14th January, 2008

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
1 100m North of intersection of Inglis Street and Terminal Road	0713	155	7	North	Downwind	No observable activity	No observations seen to effect sampling integrity
2 North end of Inglis Street	0715	155	10	North	Upwind	Background	No observations seen to effect sampling integrity
3 100m North of intersection of Inglis Street and Terminal Road	0730	155	9	North	Downwind	Excavators digging	No observations seen to effect sampling integrity
4 North end of Inglis Street	0745	155	15	North	Upwind	Background	No observations seen to effect sampling integrity
5 100m North of intersection of Inglis Street and Terminal Road	0815	155	34	North	Downwind	Excavators digging	No observations seen to effect sampling integrity
6 North end of Inglis Street	0815	155	26	North	Upwind	Background	No observations seen to effect sampling integrity
7 80m North of intersection of Inglis Street and Terminal Road	0835	155	31	North	Downwind	Excavators digging	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 North end of Inglis Street	0845	155	21	North	Upwind	Background	No observations seen to effect sampling integrity
9 20m Northwest of intersection of Inglis Street and Terminal Road	0925	155	24	North	Downwind	Excavators digging	No observations seen to effect sampling integrity
10 20m East of Coke Ovens Security Gate	0925	155	22	North	Upwind	Background	No observations seen to effect sampling integrity
11 20m Northwest of intersection of Inglis Street and Terminal Road	0942	155	18	North	Downwind	Excavators digging	No observations seen to effect sampling integrity
12 20m East of Coke Ovens Security Gate	0947	155	19	Northeast	Upwind	Background	No observations seen to effect sampling integrity
13 20m Northwest of intersection of Inglis Street and Terminal Road	1016	155	15	North	Downwind	Excavators digging	No observations seen to effect sampling integrity
14 50m East of Cooling Pond main gate	1018	155	10	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	Activity Description	Observations that may affect sample
15 30m North of Acadian Lines	1040	155	11	Northeast	Downwind	Excavators digging	No observations seen to effect sampling integrity
16 50m East of Cooling Pond main gate	1042	155	9	Northeast	Upwind	Background	No observations seen to effect sampling integrity
17 50m East of Cooling Pond main gate	1106	155	10	Northeast	Upwind	Background	No observations seen to effect sampling integrity
18 30m North of Acadian Lines	1108	155	11	Northeast	Downwind	Excavators digging	No observations seen to effect sampling integrity
19 30m North of Acadian Lines	1133	155	11	Northeast	Downwind	Excavators digging	No observations seen to effect sampling integrity
20 50m East of Cooling Pond main gate	1140	155	7	Northeast	Upwind	Background	No observations seen to effect sampling integrity
21 50m East of Cooling Pond main gate	1201	155	9	Northeast	Upwind	Background	No observations seen to effect sampling integrity
22 50m East of Cooling Pond main gate	1222	155	9	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	Activity Description	Observations that may affect sample
23 30m East of Intercolonial Street fixed sampling station	1230	155	13	Northeast	Downwind	Excavators digging	No observations seen to effect sampling integrity
24 30m East of Intercolonial Street fixed sampling station	1245	155	15	Northeast	Downwind	Excavators digging	No observations seen to effect sampling integrity
25 50m East of Cooling Pond main gate	1315	155	11	Northeast	Upwind	Background	No observations seen to effect sampling integrity
26 30m East of Intercolonial Street fixed sampling station	1316	155	15	Northeast	Downwind	Excavation, dumping	No observations seen to effect sampling integrity
27 30m East of Intercolonial Street fixed sampling station	1333	155	13	Northeast	Downwind	Excavation, dumping	No observations seen to effect sampling integrity
28 80m East of Cooling Pond fence, 30m North of STPA office	1415	155	7	Northeast	Upwind	Background	No observations seen to effect sampling integrity
29 60m Northeast of former train station	1417	155	14	Northeast	Downwind	Excavation, 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	Activity Description	Observations that may affect sample
30 60m Northeast of former train station	1435	155	10	Northeast	Downwind	Excavation, dumping	No observations seen to effect sampling integrity
31 80m East of Cooling Pond fence, 30m North of STPA office	1515	155	3	Northeast	Upwind	Background	No observations seen to effect sampling integrity
32 60m Northeast of former train station	1517	155	8	Northeast	Downwind	Excavation, dumping	No observations seen to effect sampling integrity
33 60m Northeast of former train station	1533	155	11	Northeast	Downwind	Excavation, dumping	No observations seen to effect sampling integrity
34 80m East of Cooling Pond fence, 30m North of STPA office	1615	155	4	Northeast	Upwind	Background	No observations seen to effect sampling integrity
35 60m Northeast of former train station	1615	155	9	Northeast	Downwind	Dumping material	No observations seen to effect sampling integrity
36 60m Northeast of former train station	1630	155	9	Northeast	Downwind	Excavator digging	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
37 80m East of Cooling Pond fence, 30m North of STPA office	1715	155	4	Northeast	Upwind	Background	No observations seen to effect sampling integrity
38 60m Northeast of former train station	1715	155	9	Northeast	Downwind	Excavator digging	No observations seen to effect sampling integrity
39 60m Northeast of former train station	1730	155	9	Northeast	Downwind	Excavator digging	No observations seen to effect sampling integrity
40 60m Northeast of former train station	1802	155	11	Northeast	Downwind	Excavator digging	No observations seen to effect sampling integrity
41 80m East of Cooling Pond fence, 30m North of STPA office	1803	155	7	Northeast	Upwind	Background	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 ($\mu\text{g}/\text{m}^3$)
100m North of intersection of Inglis Street and Terminal Road	0713 to 0745	8	990
100m / 80m North of intersection of Inglis Street and Terminal Road	0815 to 0850	41	990
20m Northwest of intersection of Inglis Street and Terminal Road	0925 to 0957	62	990
20m Northwest of intersection of Inglis Street and Terminal Road / 30m North of Acadian Lines	1016 to 1055	75	990
30m North of Acadian Lines	1108 to 1148	86	990
30m East of Intercolonial Street fixed sampling station	1230 to 1300	100	990
30m East of Intercolonial Street fixed sampling station	1316 to 1348	114	990
60m Northeast of former train station	1417 to 1450	126	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
60m Northeast of former train station	1517 to 1548	136	990
60m Northeast of former train station	1615 to 1645	145	990
60m Northeast of former train station	1715 to 1745	154	990
60m Northeast of former train station	1802 to 1817	165	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.