

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1260-01
FROM	Dianne Theriault	SHIFT:	0930 to 1815
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	14 th January, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP6C-0001

**SUBJECT: 13th January, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Geotechnical Drilling on Ferry Street Bridge
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 13th of January, 2009. Grant Harrigan and Alison Giovannetti, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly sunny
- Temperature: approximately -3°C
- Wind Direction: Southwest

Comments: *ALL-TECH was on-Site at 0930 hours and sampling began as soon as there was site activity. Air monitoring was performed during Jacques Whitford'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 Grant Harrigan and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



Dianne Theriault, 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 – Geotechnical Drilling on Ferry Street Bridge
13th January, 2009

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 Intercolonial Street Fixed Sampling Station	1020	155	14	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 30m North of Inglis Street and Spar Road intersection	1025	155	6	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
3 30m North of Inglis Street and Spar Road intersection	1040	155	5	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
4 Intercolonial Street Fixed Sampling Station	1100	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 30m North of Inglis Street and Spar Road intersection	1100	155	4	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
6 30m North of Inglis Street and Spar Road intersection	1145	155	4	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity

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
7 Intercolonial Street Fixed Sampling Station	1150	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 30m North of Inglis Street and Spar Road intersection	1200	155	3	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
9 30m North of Inglis Street and Spar Road intersection	1230	155	4	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
10 Intercolonial Street Fixed Sampling Station	1300	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 30m North of Inglis Street and Spar Road intersection	1300	155	2	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
12 30m North of Inglis Street and Spar Road intersection	1340	155	3	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
13 Intercolonial Street Fixed Sampling Station	1400	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity

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
14 30m North of Inglis Street and Spar Road intersection	1400	155	3	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
15 30m North of Inglis Street and Spar Road intersection	1430	155	4	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
16 Intercolonial Street Fixed Sampling Station	1500	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 30m North of Inglis Street and Spar Road intersection	1500	155	5	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
18 30m North of Inglis Street and Spar Road intersection	1545	155	3	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
19 Intercolonial Street Fixed Sampling Station	1600	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 30m North of Inglis Street and Spar Road intersection	1600	155	3	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect 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
21 30m North of Inglis Street and Spar Road intersection	1645	155	5	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect sampling integrity
22 Intercolonial Street Fixed Sampling Station	1700	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 30m North of Inglis Street and Spar Road intersection	1700	155	7	Northwest	Downwind	Drilling on Ferry Street Bridge	No observations seen to affect 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 Inglis Street and Spar Road intersection	1000 to 1059	6	990
30m North of Inglis Street and Spar Road intersection	1100 to 1159	10	990
30m North of Inglis Street and Spar Road intersection	1200 to 1259	14	990
30m North of Inglis Street and Spar Road intersection	1300 to 1359	17	990
30m North of Inglis Street and Spar Road intersection	1400 to 1459	21	990
30m North of Inglis Street and Spar Road intersection	1500 to 1559	26	990
30m North of Inglis Street and Spar Road intersection	1600 to 1659	30	990
30m North of Inglis Street and Spar Road intersection	1700 to 1759	37	990

VOC Monitoring

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