

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
TEL (902) 539-3012
FAX (902) 539-3381
DATE 20th April, 2009

FILE NO. S-1292-12
SHIFT: 0630 to 1800
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP6D-0022

**SUBJECT: 17th April, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 17th of April, 2009. Alison Giovannetti and Shaun Dove, 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 4°C
- Wind Direction: South to West to Northwest

Comments: *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity. Air monitoring was performed during AECOM'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 Alison Giovannetti 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:

Shawn Bernon shawn@tarpondscleanup.ca, Wilfred Kaiser wilfred@tarpondscleanup.ca, Nancy LeDrew nancy@tarpondscleanup.ca, Trish Magliaro trish@tarpondscleanup.ca, Terry Smith tsmith@toalltech.com, Phyllis Low pilow@toalltech.com, Dianne Theriault dtheriault@toalltech.com, Darren Gardiner dgardiner@croworld.com, Darren Lawless dlawless@toalltech.com, Kevin Mac Pherson kevinmacp@cbcl.ca, Kathy Harquail kharquail@toalltech.com

Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Access Roads
17th April, 2009

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
1 75m Northwest of 111 Terminal Rd.	0700	155	11	South	Upwind	Background	No observations seen to affect sampling integrity
2 300m Northwest of Inglis St. and Spar Rd. Intersection	0700	155	12	South	Downwind	Excavators and trucks moving material	No observations seen to affect sampling integrity
3 300m Northwest of Inglis St. and Spar Rd. intersection	0735	155	69	South	Downwind	Excavators and trucks moving material	Trucks driving up dirt road close to equipment
4 120m Southeast of railway building	0800	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
5 300m Northwest of Inglis St. and Spar Rd. intersection	0800	155	35	West	Downwind	Excavators and trucks moving material	No observations seen to affect sampling integrity
6 300m Northwest of Inglis St. and Spar Rd. intersection	0826	155	13	West	Downwind	Excavators and trucks moving material	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
7 95m Northwest of railway building	0900	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 200m Northwest of Inglis St. and Spar Rd. intersection	0900	155	16	Northwest	Downwind	Excavators and trucks moving material	No observations seen to affect sampling integrity
9 200m Northwest of Inglis St. and Spar Rd. intersection	0918	155	51	Northwest	Downwind	Excavators and trucks moving material	Trucks driving up dirt road close to equipment
10 95m Northwest of railway building	1000	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 200m Northwest of Inglis St. and Spar Rd. Intersection	1000	155	17	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 200m Northwest of Inglis St. and Spar Rd. Intersection	1015	155	44	Northwest	Downwind	Excavators and trucks moving material	Trucks driving up dirt road close to equipment
13 95m Northwest of railway building	1100	155	5	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 200m Northwest of Inglis St. and Spar Rd. Intersection	1100	155	69	Northwest	Downwind	Excavators and trucks moving material	Trucks driving up dirt road close to equipment
15 200m Northwest of Inglis St. and Spar Rd. Intersection	1136	155	39	Northwest	Downwind	Excavators and trucks moving material	No observations seen to affect sampling integrity
16 95m Northwest of railway building	1200	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 200m Northwest of Inglis St. and Spar Rd. intersection	1200	155	18	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 200m Northwest of Inglis St. and Spar Rd. intersection	1215	155	17	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 95m Northwest of railway building	1300	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 200m Northwest of Inglis St. and Spar Rd. intersection	1320	155	18	Northwest	Downwind	Excavators and trucks moving material	Did not press sample on machine at 1300, had to retake sample

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
21 200m Northwest of Inglis St. and Spar Rd. intersection	1340	155	27	Northwest	Downwind	Excavators and trucks moving material	No observations seen to affect sampling integrity
22 95m Northwest of railway building	1400	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 200m Northwest of Inglis St. and Spar Rd. intersection	1400	155	15	Northwest	Downwind	Excavators and trucks moving material	No observations seen to affect sampling integrity
24 200m Northwest of Inglis St. and Spar Rd. intersection	1430	155	44	Northwest	Downwind	Excavators and trucks moving material	Trucks driving up dirt road close to equipment
25 95m Northwest of railway building	1500	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 200m Northwest of Inglis St. and Spar Rd. intersection	1500	155	22	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 200m Northwest of Inglis St. and Spar Rd. Intersection	1523	155	84	Northwest	Downwind	Excavators and trucks moving material	Trucks driving up dirt road close to equipment

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
28 95m Northwest of railway building	1600	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
29 200m Northwest of Inglis St. and Spar Rd. intersection	1600	155	21	Northwest	Downwind	Excavators and trucks moving material	No observations seen to affect sampling integrity
30 200m Northwest of Inglis St. and Spar Rd. intersection	1622	155	22	Northwest	Downwind	Excavators and trucks moving material	No observations seen to affect sampling integrity
31 95m Northwest of railway building	1700	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
32 200m Northwest of Inglis St. and Spar Rd. intersection	1700	155	13	Northwest	Downwind	Excavators and trucks moving material	No observations seen to affect sampling integrity
33 200m Northwest of Inglis St. and Spar Rd. intersection	1715	155	6	Northwest	Downwind	No activity observed on site	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 ($\mu\text{g}/\text{m}^3$)
300m Northwest of Inglis St. and Spar Rd. intersection	0700 to 0759	41	990
300m Northwest of Inglis St. and Spar Rd. intersection	0800 to 0859	65	990
200m Northwest of Inglis St. and Spar Rd. intersection	0900 to 0959	99	990
200m Northwest of Inglis St. and Spar Rd. intersection	1000 to 1059	130	990
200m Northwest of Inglis St. and Spar Rd. intersection	1100 to 1159	184	990
200m Northwest of Inglis St. and Spar Rd. intersection	1200 to 1259	202	990
200m Northwest of Inglis St. and Spar Rd. intersection	1300 to 1359	225	990
200m Northwest of Inglis St. and Spar Rd. intersection	1400 to 1459	255	990
200m Northwest of Inglis St. and Spar Rd. intersection	1500 to 1559	308	990
200m Northwest of Inglis St. and Spar Rd. intersection	1600 to 1659	330	990
200m Northwest of Inglis St. and Spar Rd. intersection	1700 to 1759	340	990

VOC Monitoring

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