

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
TEL (902) 539-3012
FAX (902) 539-3381
DATE 31st July, 2008

FILE NO. S-1166-04
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. PS-0025

**SUBJECT: 31st July, 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – North Pond Pilot Study
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 31st of July, 2008. Reg Peters and Tyler Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mix of sun and cloud
- Temperature: approximately 23°C
- Wind Direction: West / Northeast / Southwest

Comments: *ALL-TECH was on-Site at 0730 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 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 Tyler Rowe 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 – North Pond Pilot Study
31st July, 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	Description of Activity	Observations that may affect sample
1 Walker Street, 20m North of Ferry Street	0800	155	36	West	Upwind	Background	No observations seen to effect sampling integrity
2 40m Northwest of Inglis Street and Spar Road Intersection	0800	155	35	West	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
3 40m Northwest of Inglis Street and Spar Road Intersection	0835	155	34	West	Downwind	Crane operating	No observations seen to effect sampling integrity
4 Walker Street, 20m North of Ferry Street	0900	155	36	West	Upwind	Background	No observations seen to effect sampling integrity
5 40m Northwest of Inglis Street and Spar Road Intersection	0900	155	36	West	Downwind	Crane operating	No observations seen to effect sampling integrity
6 40m Northwest of Inglis Street and Spar Road Intersection	0925	155	39	West	Downwind	Crane operating	No observations seen to effect sampling integrity
7 Walker Street, 20m North of Ferry Street	1000	155	39	West	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 40m Northwest of Inglis Street and Spar Road Intersection	1000	155	40	West	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
9 40m Northwest of Inglis Street and Spar Road Intersection	1040	155	37	West	Downwind	Crane operating	No observations seen to effect sampling integrity
10 Walker Street, 20m North of Ferry Street	1100	155	43	West	Upwind	Background	No observations seen to effect sampling integrity
11 40m Northwest of Inglis Street and Spar Road Intersection	1100	155	34	West	Downwind	Crane operating	No observations seen to effect sampling integrity
12 30m Northwest of Inglis Street and Spar Road intersection	1145	155	38	West	Downwind	Crane operating	No observations seen to effect sampling integrity
13 Walker Street, 20m North of Ferry Street	1200	155	48	West	Upwind	Background	No observations seen to effect sampling integrity
14 30m Northwest of Inglis Street and Spar Road intersection	1200	155	41	West	Downwind	Crane operating	No observations seen to effect sampling integrity
15 40m South of Walker Street and Ferry Street intersection	1245	155	35	Northeast	Downwind	Crane operating	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 15m East of North Pond main gate	1300	155	49	Northeast	Upwind	Background	No observations seen to effect sampling integrity
17 40m South of Walker Street and Ferry Street intersection	1300	155	45	Northeast	Downwind	Crane operating	No observations seen to effect sampling integrity
18 40m South of Walker Street and Ferry Street intersection	1320	155	45	Northeast	Downwind	Crane operating	No observations seen to effect sampling integrity
19 15m East of North Pond main gate	1400	155	39	Northeast	Upwind	Background	No observations seen to effect sampling integrity
20 40m South of Walker Street and Ferry Street intersection	1400	155	43	Northeast	Downwind	Crane operating	No observations seen to effect sampling integrity
21 40m South of Walker Street and Ferry Street intersection	1415	155	39	Northeast	Downwind	Crane operating	No observations seen to effect sampling integrity
22 40m South of Walker Street and Ferry Street intersection	1500	155	45	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	Description of Activity	Observations that may affect sample
23 15m East of North Pond main gate	1500	155	50	Northeast	Downwind	Crane operating	No observations seen to effect sampling integrity
24 15m East of North Pond main gate	1545	155	57	Northeast	Downwind	Crane operating	No observations seen to effect sampling integrity
25 40m South of Walker Street and Ferry Street intersection	1600	155	51	Southwest	Upwind	Background	No observations seen to effect sampling integrity
26 15m East of North Pond main gate	1600	155	55	Northeast	Downwind	Crane operating	No observations seen to effect sampling integrity
27 15m East of North Pond main gate	1645	155	56	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 ($\mu\text{g}/\text{m}^3$)
40m Northwest of Inglis Street and Spar Road intersection	0800 to 0859	35	990
40m Northwest of Inglis Street and Spar Road intersection	0900 to 0959	73	990
40m Northwest of Inglis Street and Spar Road intersection	1000 to 1059	112	990
40m/30m Northwest of Inglis Street and Spar Road intersection	1100 to 1159	148	990
30m Northwest of Inglis Street and Spar Road intersection / 40m South of Walker Street and Ferry Street intersection	1200 to 1259	186	990
40m South of Walker Street and Ferry Street intersection	1300 to 1359	231	990
40m South of Walker Street and Ferry Street intersection	1400 to 1459	272	990
15m East of North Pond main gate	1500 to 1559	326	990
15m East of North Pond main gate	1600 to 1659	382	990

VOC Monitoring

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