

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
TEL (902) 539-3012
FAX (902) 539-3381
DATE 13th August, 2008

FILE NO. S-1173-06
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. PS-0031

**SUBJECT: 12th August, 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 12th of August, 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:

- Cloudy, showers
- Temperature: approximately 18°C
- Wind Direction: Southeast / East

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. Monitoring was put on stand-by between 1115 and 1330 due to precipitation.*

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
12th August, 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 50m East of South Pond main gate	0805	155	14	Southeast	Upwind	Background	No observations seen to effect sampling integrity
2 100m North of Walker Street and Ferry Street intersection	0805	155	14	Southeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
3 100m North of Walker Street and Ferry Street intersection	0825	155	12	Southeast	Downwind	Crane operating	No observations seen to effect sampling integrity
4 50m East of South Pond main gate	0900	155	11	Southeast	Upwind	Background	No observations seen to effect sampling integrity
5 100m North of Walker Street and Ferry Street intersection	0900	155	11	Southeast	Downwind	Crane operating	No observations seen to effect sampling integrity
6 130m North of Walker Street and Ferry Street intersection	0920	155	11	Southeast	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
7 5m East of North Pond fence, 30m North of Spar Road	1000	155	11	East	Upwind	Background	No observations seen to effect sampling integrity
8 60m North of Walker Street and Ferry Street intersection	1000	155	11	East	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
9 60m North of Walker Street and Ferry Street intersection	1015	155	11	East	Downwind	Crane operating	No observations seen to effect sampling integrity
10 5m East of North Pond fence, 30m North of Spar Road	1100	155	19	East	Upwind	Background	No observations seen to effect sampling integrity
11 60m North of Walker Street and Ferry Street intersection	1100	155	20	East	Downwind	Crane operating	No observations seen to effect sampling integrity
12 5m East of North Pond fence, 30m North of Spar Road	1330	155	4	East	Upwind	Background	No observations seen to effect sampling integrity
13 60m North of Walker Street and Ferry Street intersection	1330	155	7	East	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
14 60m North of Walker Street and Ferry Street intersection	1345	155	6	East	Downwind	Crane operating	No observations seen to effect sampling integrity
15 5m East of North Pond fence, 30m North of Spar Road	1400	155	7	East	Upwind	Background	No observations seen to effect sampling integrity
16 60m North of Walker Street and Ferry Street intersection	1400	155	12	East	Downwind	Crane operating	No observations seen to effect sampling integrity
17 60m North of Walker Street and Ferry Street intersection	1445	155	16	East	Downwind	Crane operating	No observations seen to effect sampling integrity
18 5m East of North Pond fence, 30m North of Spar Road	1500	155	17	East	Upwind	Background	No observations seen to effect sampling integrity
19 60m North of Walker Street and Ferry Street intersection	1500	155	17	East	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
20 60m North of Walker Street and Ferry Street intersection	1520	155	19	East	Downwind	Crane operating	No observations seen to effect sampling integrity
21 5m East of North Pond fence, 30m North of Spar Road	1600	155	27	East	Upwind	Background	No observations seen to effect sampling integrity
22 60m North of Walker Street and Ferry Street intersection	1600	155	21	East	Downwind	Crane operating	No observations seen to effect sampling integrity
23 60m North of Walker Street and Ferry Street intersection	1645	155	20	East	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 ($\mu\text{g}/\text{m}^3$)
100m North of Walker Street and Ferry Street intersection	0800 to 0859	13	990
100m North of Walker Street and Ferry Street intersection	0900 to 0959	24	990
60m North of Walker Street and Ferry Street intersection	1000 to 1059	35	990
60m North of Walker Street and Ferry Street intersection	1100 to 1159	55	990
60m North of Walker Street and Ferry Street intersection	1300 to 1359	62	990
60m North of Walker Street and Ferry Street intersection	1400 to 1459	76	990
60m North of Walker Street and Ferry Street intersection	1500 to 1559	94	990
60m North of Walker Street and Ferry Street intersection	1600 to 1659	115	990

VOC Monitoring

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