

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Grant Harrigan
TEL (902) 539-3012
FAX (902) 539-3381
DATE 17th March, 2008

FILE NO. S-1100-16
SHIFT: 0630 to 1830
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. CP-0101

**SUBJECT: 14th March 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 March, 2008. Colin MacIsaac and Tyler Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities for the asphalt pad North of the Cooling Pond.

Weather conditions on the day of sampling:

- Clear Skies
- Temperature: approximately -5°C (data unavailable from Environment Canada)
- Wind Direction: Northwest

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 on the asphalt pad.*


All downwind and upwind measurements of PM₁₀ were well 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 well 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), TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Colin MacIsaac 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:

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 pjlow@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 – Cooling Pond
14th March, 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 40m North of Walker Street, Ferry Street intersection	0700	155	5	Northwest	Upwind	Background	No observations seen to effect sampling integrity
2 50m Northwest of STPA building	0700	155	3	Northwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
3 50m Northwest of STPA building	0715	155	1	Northwest	Downwind	Excavator loading dumptrucks	No observations seen to effect sampling integrity
4 40m North of Walker Street, Ferry Street intersection	0800	155	84	Northwest	Upwind	Background	No observations seen to effect sampling integrity
5 50m Northwest of STPA building	0800	155	4	Northwest	Downwind	Excavator loading dumptrucks	No observations seen to effect sampling integrity
6 50m Northwest of STPA building	0820	155	1	Northwest	Downwind	Excavator loading dumptrucks	No observations seen to effect sampling integrity
7 40m North of Walker Street, Ferry Street intersection	0900	155	6	Northwest	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 50m Northwest of STPA building	0900	155	0	Northwest	Downwind	Excavator loading dumptrucks	No observations seen to effect sampling integrity
9 50m Northwest of STPA building	0945	155	1	Northwest	Downwind	Payloaders moving material	No observations seen to effect sampling integrity
10 40m North of Walker Street, Ferry Street intersection	1000	155	5	Northwest	Upwind	Background	No observations seen to effect sampling integrity
11 50m Northwest of STPA building	1000	155	1	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
12 50m Northwest of STPA building	1030	155	0	Northwest	Downwind	Payloaders moving material	No observations seen to effect sampling integrity
13 40m North of Walker Street, Ferry Street intersection	1100	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
14 50m Northwest of STPA building	1100	155	1	Northwest	Downwind	Payloaders moving material	No observations seen to effect sampling integrity
15 50m Northwest of STPA building	1140	155	1	Northwest	Downwind	No activity observed on-site	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 40m North of Walker Street, Ferry Street intersection	1200	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 50m Northwest of STPA building	1200	155	1	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
18 50m Northwest of STPA building	1225	155	1	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
19 40m North of Walker Street, Ferry Street intersection	1300	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 60m Northwest of STPA building	1300	155	10	Northwest	Downwind	Trucks being sprayed	No observations seen to effect sampling integrity
21 60m Northwest of STPA building	1335	155	5	Northwest	Downwind	Trucks being sprayed	No observations seen to effect sampling integrity
22 40m North of Walker Street, Ferry Street intersection	1400	155	3	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 60m Northwest of STPA building	1400	155	5	Northwest	Downwind	Payloaders moving material	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
24 60m Northwest of STPA building	1415	155	5	Northwest	Downwind	Asphalt pad being sprayed	No observations seen to effect sampling integrity
25 40m North of Walker Street, Ferry Street intersection	1500	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 60m Northwest of STPA building	1500	155	5	Northwest	Downwind	Asphalt pad being sprayed	No observations seen to effect sampling integrity
27 60m Northwest of STPA building	1530	155	7	Northwest	Downwind	Trucks being sprayed	No observations seen to effect sampling integrity
28 40m North of Walker Street, Ferry Street intersection	1600	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
29 60m Northwest of STPA building	1600	155	5	Northwest	Downwind	Trucks being sprayed	No observations seen to effect sampling integrity
30 60m Northwest of STPA building	1640	155	4	Northwest	Downwind	Payloader moving material	No observations seen to effect sampling integrity
31 40m North of Walker Street, Ferry Street intersection	1700	155	5	Northwest	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
32 60m Northwest of STPA building	1700	155	3	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
33 60m Northwest of STPA building	1745	155	4	Northwest	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 ($\mu\text{g}/\text{m}^3$)
50m Northwest of STPA building	0700 to 0759	2	990
50m Northwest of STPA building	0800 to 0859	5	990
50m Northwest of STPA building	0900 to 0959	6	990
50m Northwest of STPA building	1000 to 1059	7	990
50m Northwest of STPA building	1100 to 1159	8	990
50m Northwest of STPA building	1200 to 1259	9	990
60m Northwest of STPA building	1300 to 1359	17	990
60m Northwest of STPA building	1400 to 1459	22	990
60m Northwest of STPA building	1500 to 1559	28	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
60m Northwest of STPA building	1600 to 1659	33	990
60m Northwest of STPA building	1700 to 1759	37	990

VOC Monitoring

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