

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Grant Harrigan
TEL (902) 539-3012
FAX (902) 539-3381
DATE 29th January, 2008

FILE NO. S-1054-13
SHIFT: 0630 to 1445
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. COB-0025

**SUBJECT: 25th January, 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Coke Ovens Brook
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 25th of January, 2008. Colin MacIsaac and Trevor Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Overcast with periodic flurries
- Temperature: -8°C
- Wind Direction: North to Northwest

Comments: *ALL-TECH was on-Site at 0630 and sampling began as soon as there was Site activity. Air monitoring was performed during CBRM construction activities. ALL-TECH remained on standby from 1330 to 1415 until they received confirmation from CBRM that Site activities were concluded for the day.*

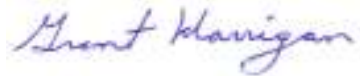
All downwind and upwind measurements of PM₁₀ were well below the established Site Action Level for this parameter of 155 µg/m³.

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 was halted and resumed after the precipitation had 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 – Coke Ovens Brook
25th January, 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 170m South of Spar Road, 70m West of Landfill	0700	155	31	North	Downwind	Excavation of material	Within 5 m of worksite
2 70m South of Spar Road, West of Landfill	0703	155	21	North	Upwind	Background	No observations seen to effect sampling integrity
3 170m South of Spar Road, 70m West of Landfill	0715	155	80	North	Downwind	Excavators moving material	Within 5 m of worksite
4 70m South of Spar Road, West of Landfill	0800	155	14	North	Upwind	Background	No observations seen to effect sampling integrity
5 170m South of Spar Road, 90m West of Landfill	0800	155	9	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
6 170m South of Spar Road, 90m West of Landfill	0815	155	1	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
7 70m South of Spar Road, West of Landfill	0900	155	5	North	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 170m South of Spar Road, 90m West of Landfill	0900	155	4	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
9 170m South of Spar Road, 90m West of Landfill	0915	155	1	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
10 70m South of Spar Road, West of Landfill	1000	155	3	North	Upwind	Background	No observations seen to effect sampling integrity
11 170m South of Spar Road, 90m West of Landfill	1000	155	1	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
12 170m South of Spar Road, 90m West of Landfill	1015	155	1	North	Downwind	Excavators moving material	No observations seen to effect sampling integrity
13 70m South of Spar Road, West of Landfill	1100	155	4	North	Upwind	Background	Varying winds from North to Northwest
14 170m South of Spar Road, 50m West of Landfill	1100	155	5	Northwest	Downwind	Excavators moving material	No observations seen to effect sampling integrity
15 170m South of Spar Road, 50m West of Landfill	1115	155	3	Northwest	Downwind	No activity observed	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 5m South of Coke Ovens Brook walking bridge	1200	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 170m South of Spar Road, 50m West of Landfill	1200	155	2	Northwest	Downwind	No activity observed	No observations seen to effect sampling integrity
18 170m South of Spar Road, 50m West of Landfill	1215	155	2	Northwest	Downwind	No activity observed	No observations seen to effect sampling integrity
19 5m South of Spar Road, 50m West of Landfill	1300	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 170m South of Spar Road, 50m West of Landfill	1300	155	13	North	Downwind	Excavator and payloader moving material	No observations seen to effect sampling integrity
21 170m South of Spar Road, 50m West of Landfill	1315	155	16	North	Downwind	Excavator and payloader moving material	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 ($\mu\text{g}/\text{m}^3$)
170m South of Spar Road, 70m West of Landfill	0700 to 0730	55	990
170m South of Spar Road, 90m West of Landfill	0800 to 0830	60	990
170m South of Spar Road, 90m West of Landfill	0900 to 0930	63	990
170m South of Spar Road, 90m West of Landfill	1000 to 1030	64	990
170m South of Spar Road, 50m West of Landfill	1100 to 1130	68	990
170m South of Spar Road, 50m West of Landfill	1200 to 1230	70	990
170m South of Spar Road, 50m West of Landfill	1300 to 1330	85	990

VOC Monitoring

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

*P.I.D. was used for all samples and was below detection level.