

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
TEL (902) 539-3012
FAX (902) 539-3381
DATE 12th May, 2009

FILE NO. S-1309-05
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. TP2-0159

**SUBJECT: 11th May, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Material Processing Facility
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 11th of May, 2009. Shaun Dove and Alison Giovannetti of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:
- Mainly cloudy
- Temperature: approximately 6°C
- Wind Direction: North to Northeast

Comments: *ALL-TECH was on-Site at 0730 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 – Material Processing Facility
11th May, 2009

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
1 225m North of TP2 security trailer	0800	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
2 50m North of Acadian Lines terminal	0800	155	13	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
3 50m North of Acadian Lines terminal	0825	155	13	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
4 225m North of TP2 security trailer	0900	155	13	North	Upwind	Background	No observations seen to affect sampling integrity
5 50m North of Acadian Lines terminal	0900	155	11	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
6 50m North of Acadian Lines terminal	0920	155	11	North	Downwind	Activity not visible from sample location	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 225m North of TP2 security trailer	1000	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
8 50m North of Acadian Lines terminal	1000	155	9	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
9 50m North of Acadian Lines terminal	1035	155	8	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
10 225m North of TP2 security trailer	1100	155	9	North	Upwind	Background	No observations seen to affect sampling integrity
11 50m North of Acadian Lines terminal	1100	155	8	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
12 50m North of Acadian Lines terminal	1125	155	8	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
13 225m North of TP2 security trailer	1200	155	10	North	Upwind	Background	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
14 50m North of Acadian Lines terminal	1200	155	8	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
15 50m North of Acadian Lines terminal	1215	155	10	North	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
16 200m Northeast of TP2 security trailer	1300	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
17 150m Southwest of Ferry St. bridge	1300	155	9	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 150m Southwest of Ferry St. bridge	1340	155	16	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 200m Northeast of TP2 security trailer	1400	155	12	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 150m Southwest of Ferry St. bridge	1400	155	19	Northeast	Downwind	Machines 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
21 150m Southwest of Ferry St. bridge	1440	155	10	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 200m Northeast of TP2 security trailer	1500	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
23 150m Southwest of Ferry St. bridge	1500	155	13	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 150m Southwest of Ferry St. bridge	1545	155	20	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 200m Northeast of TP2 security trailer	1600	155	12	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 150m Southwest of Ferry St. bridge	1600	155	25	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 150m Southwest of Ferry St. bridge	1645	155	13	Northeast	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 ($\mu\text{g}/\text{m}^3$)
50m North of Acadian Lines terminal	0800 to 0859	13	990
50m North of Acadian Lines terminal	0900 to 0959	24	990
50m North of Acadian Lines terminal	1000 to 1059	33	990
50m North of Acadian Lines terminal	1100 to 1159	41	990
50m North of Acadian Lines terminal	1200 to 1259	50	990
150m Southwest of Ferry St. bridge	1300 to 1359	63	990
150m Southwest of Ferry St. bridge	1400 to 1459	78	990
150m Southwest of Ferry St. bridge	1500 to 1559	95	990
150m Southwest of Ferry St. bridge	1600 to 1659	114	990

VOC Monitoring

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