

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
TEL (902) 539-3012
FAX (902) 539-3381
DATE 27th April, 2009

FILE NO. S-1291-17
SHIFT: 0730 to 1700
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. TP2-0151

**SUBJECT: 24th April, 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 24th of April, 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 8°C
- Wind Direction: Southwest to West

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
24th April, 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 25m Northwest of fixed station on Intercolonial St.	0800	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 100m Northwest of Inglis St. and Spar Rd. intersection	0800	155	17	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
3 100m Northwest of Inglis St. and Spar Rd. intersection	0840	155	15	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
4 25m Northwest of fixed station on Intercolonial St.	0900	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 100m Northwest of Inglis St. and Spar Rd. intersection	0900	155	15	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
6 100m Northwest of Inglis St. and Spar Rd. intersection	0940	155	15	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity

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
7 25m Northwest of fixed station on Intercolonial St.	1000	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 100m Northwest of Inglis St. and Spar Rd. intersection	1000	155	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 100m Northwest of Inglis St. and Spar Rd. intersection	1025	155	9	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
10 25m Northwest of fixed station on Intercolonial St.	1100	155	2	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 100m Northwest of Inglis St. and Spar Rd. intersection	1100	155	7	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
12 100m Northwest of Inglis St. and Spar Rd. intersection	1125	155	6	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
13 30m North of Railway Rd. and Ferry St. intersection	1200	155	5	West	Upwind	Background	No observations seen to affect sampling integrity

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
14 50m Northwest of Inglis St. and Spar Rd. intersection	1200	155	5	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 50m Northwest of Inglis St. and Spar Rd. intersection	1220	155	4	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 30m North of Railway Rd. and Ferry St. intersection	1300	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
17 50m Northwest of Inglis St. and Spar Rd. intersection	1300	155	5	West	Downwind	Excavator moving material	No observations seen to affect sampling integrity
18 50m Northwest of Inglis St. and Spar Rd. intersection	1340	155	7	West	Downwind	Excavator moving material	No observations seen to affect sampling integrity
19 30m North of Railway Rd. and Ferry St. intersection	1400	155	1	West	Upwind	Background	No observations seen to affect sampling integrity
20 50m Northwest of Inglis St. and Spar Rd. intersection	1400	155	4	West	Downwind	Excavator 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 50m Northwest of Inglis St. and Spar Rd. intersection	1440	155	13	West	Downwind	Excavator moving material	No observations seen to affect sampling integrity
22 30m North of Railway Rd. and Ferry St. intersection	1500	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
23 50m Northwest of Inglis St. and Spar Rd. intersection	1500	155	8	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 50m Northwest of Inglis St. and Spar Rd. intersection	1515	155	11	West	Downwind	Excavator moving material	No observations seen to affect sampling integrity
25 30m North of Railway Rd. and Ferry St. intersection	1600	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
26 50m Northwest of Inglis St. and Spar Rd. intersection	1600	155	27	West	Downwind	Excavator moving material	No observations seen to affect sampling integrity
27 50m Northwest of Inglis St. and Spar Rd. intersection	1615	155	20	West	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 ($\mu\text{g}/\text{m}^3$)
100m Northwest of Inglis St. and Spar Rd. intersection	0800 to 0859	16	990
100m Northwest of Inglis St. and Spar Rd. intersection	0900 to 0959	31	990
100m Northwest of Inglis St. and Spar Rd. intersection	1000 to 1059	41	990
100m Northwest of Inglis St. and Spar Rd. intersection	1100 to 1159	48	990
50m Northwest of Inglis St. and Spar Rd. intersection	1200 to 1259	53	990
50m Northwest of Inglis St. and Spar Rd. intersection	1300 to 1359	59	990
50m Northwest of Inglis St. and Spar Rd. intersection	1400 to 1459	68	990
50m Northwest of Inglis St. and Spar Rd. intersection	1500 to 1559	78	990
50m Northwest of Inglis St. and Spar Rd. intersection	1600 to 1659	102	990

VOC Monitoring

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