

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
TEL (902) 539-3012
FAX (902) 539-3381
DATE 14th January, 2009

FILE NO. S-1257-07
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP2-0085

**SUBJECT: 13th January, 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 13th of January, 2009. Colin MacIsaac and Reg Peters, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:
- Mainly sunny
- Temperature: approximately -3°C
- Wind Direction: Southwest

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 Colin MacIsaac 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
13th January, 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 10m Northwest of Ferry Street, Walker Street intersection	0800	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 140m North of Spar Road, Inglis Street intersection	0800	155	12	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 140m North of Spar Road, Inglis Street intersection	0835	155	8	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 10m Northwest of Ferry Street, Walker Street intersection	0900	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 140m North of Spar Road, Inglis Street intersection	0900	155	8	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 140m North of Spar Road, Inglis Street intersection	0945	155	3	Southwest	Downwind	Machines 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 10m Northwest of Ferry Street, Walker Street intersection	1000	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 140m North of Spar Road, Inglis Street intersection	1000	155	3	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 140m North of Spar Road, Inglis Street intersection	1040	155	6	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 10m Northwest of Ferry Street, Walker Street intersection	1100	155	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 140m North of Spar Road, Inglis Street intersection	1100	155	6	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 140m North of Spar Road, Inglis Street intersection	1115	155	7	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 10m Northwest of Ferry Street, Walker Street intersection	1200	155	3	Southwest	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 140m North of Spar Road, Inglis Street intersection	1200	155	4	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 140m North of Spar Road, Inglis Street intersection	1220	155	4	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 10m Northwest of Ferry Street, Walker Street intersection	1300	155	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 140m North of Spar Road, Inglis Street intersection	1300	155	5	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 140m North of Spar Road, Inglis Street intersection	1335	155	5	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 10m Northwest of Ferry Street, Walker Street intersection	1400	155	2	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 140m North of Spar Road, Inglis Street intersection	1400	155	4	Southwest	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 140m North of Spar Road, Inglis Street intersection	1415	155	5	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 10m Northwest of Ferry Street, Walker Street intersection	1500	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 140m North of Spar Road, Inglis Street intersection	1500	155	6	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 140m North of Spar Road, Inglis Street intersection	1525	155	6	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 10m Northwest of Ferry Street, Walker Street intersection	1600	155	1	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 140m North of Spar Road, Inglis Street intersection	1600	155	4	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 140m North of Spar Road, Inglis Street intersection	1645	155	4	Southwest	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 ($\mu\text{g}/\text{m}^3$)
140m North of Spar Road, Inglis Street intersection	0800 to 0859	10	990
140m North of Spar Road, Inglis Street intersection	0900 to 0959	16	990
140m North of Spar Road, Inglis Street intersection	1000 to 1059	21	990
140m North of Spar Road, Inglis Street intersection	1100 to 1159	28	990
140m North of Spar Road, Inglis Street intersection	1200 to 1259	32	990
140m North of Spar Road, Inglis Street intersection	1300 to 1359	37	990
140m North of Spar Road, Inglis Street intersection	1400 to 1459	42	990
140m North of Spar Road, Inglis Street intersection	1500 to 1559	48	990
140m North of Spar Road, Inglis Street intersection	1600 to 1659	52	990

VOC Monitoring

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