

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
TEL (902) 539-3012
FAX (902) 539-3381
DATE 2nd October, 2008

FILE NO. S-1208-1
SHIFT: 0730 to 1645
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. TP2-0026

**SUBJECT: 1st October, 2008, 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 1st of October, 2008. Colin MacIsaac and Grant Harrigan of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Sunny with cloudy periods
- Temperature: approximately 16°C
- Wind Direction: Southwest to Northwest

Comments: *ALL-TECH was on-Site at 0730 and sampling began as soon as there was site activity. Air monitoring was performed during EarthTech'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
1st October, 2008

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 30m South of Ferry Street, Walker Street intersection	0800	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 150m North of Inglis Street and Ferry Street intersection	0800	155	9	Southwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
3 150m North of Inglis Street, Ferry Street intersection	0818	155	8	Southwest	Downwind	Excavation of materials	No observations seen to effect sampling integrity
4 50m East of Midland building	0900	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 20m North of Inglis Street, Ferry Street intersection	0900	155	7	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
6 20m North of Inglis Street, Ferry Street intersection	0945	155	8	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
7 50m East of Midland building	1000	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
8 20m North of Inglis Street, Ferry Street intersection	1000	155	9	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
9 20m North of Inglis Street, Ferry Street intersection	1016	155	3	Northwest	Downwind	Excavation of materials	No observations seen to effect sampling integrity
10 50m East of Midland building	1100	155	21	Northwest	Upwind	Background	No observations seen to effect sampling integrity
11 10m North of Inglis Street, Ferry Street intersection	1115	155	11	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
12 10m North of Inglis Street, Ferry Street intersection	1145	155	15	Northwest	Downwind	Excavation of materials	No observations seen to effect sampling integrity
13 50m East of Midland building	1200	155	3	Northwest	Upwind	Background	No observations seen to effect sampling integrity
14 10m North of Inglis Street, Ferry Street intersection	1212	155	3	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
15 10m North of Inglis Street, Ferry Street intersection	1230	155	5	Northwest	Downwind	Excavation of materials	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
16 50m East of Midland building	1300	155	2	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 10m North of Inglis Street, Ferry Street intersection	1307	155	59	Northwest	Downwind	Excavation of materials	Dust from trucks driving by
18 10m North of Inglis Street, Ferry Street intersection	1326	155	5	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
19 50m East of Midland building	1400	155	3	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 15m North of Inglis Street, Ferry Street intersection	1404	155	6	Northwest	Downwind	Excavation of materials	No observations seen to effect sampling integrity
21 15m North of Inglis Street, Ferry Street intersection	1418	155	5	Northwest	Downwind	Excavation of materials	No observations seen to affect sampling integrity
22 50m East of Midland building	1500	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 15m North of Inglis Street, Ferry Street intersection	1500	155	6	Northwest	Downwind	Excavation of materials	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 15m North of Inglis Street, Ferry Street intersection	1530	155	11	Northwest	Downwind	Excavation of materials	No observations seen to effect sampling integrity
25 50m East of Midland building	1600	155	3	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 15m North of Inglis Street, Ferry Street intersection	1600	155	10	Northwest	Downwind	Excavation of materials	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 ($\mu\text{g}/\text{m}^3$)
150m North of Inglis Street and Ferry Street intersection	0800 to 0859	9	990
20m North of Inglis Street and Ferry Street intersection	0900 to 0959	17	990
20m North of Inglis Street and Ferry Street intersection	1000 to 1059	23	990
10m North of Inglis Street and Ferry Street intersection	1100 to 1159	36	990
10m North of Inglis Street and Ferry Street intersection	1200 to 1259	40	990
10m North of Inglis Street and Ferry Street intersection	1300 to 1359	73	990
15m North of Inglis Street and Ferry Street intersection	1400 to 1459	79	990
15m North of Inglis Street and Ferry Street intersection	1500 to 1559	88	990
15m North of Inglis Street and Ferry Street intersection	1600 to 1659	98	990

VOC Monitoring

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