

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 10th December, 2008

FILE NO. S-1243-06
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP2-0068

**SUBJECT: 9th December, 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 9th of December, 2008. Tyler Rowe 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 with sunny periods, flurries
- Temperature: approximately -4°C
- Wind Direction: West 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 Tyler Rowe 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:

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Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Material Processing Facility
9th December, 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 Railway property, 80m North of Ferry Street	0800	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis Street, 150m North of Spar Road	0800	155	8	West	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
3 Inglis Street, 150m North of Spar Road	0820	155	8	West	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
4 Railway property, 80m North of Ferry Street	0900	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis Street, 150m North of Spar Road	0900	155	8	West	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
6 Inglis Street, 150m North of Spar Road	0945	155	17	West	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
7 Railway property, 80m North of Ferry Street	1000	155	5	West	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
8 Inglis Street, 150m North of Spar Road	1000	155	13	West	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
9 Inglis Street, 150m North of Spar Road	1035	155	9	West	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
10 Railway property, 150m North of Ferry Street	1100	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 Inglis Street, 15m North of Spar Road	1100	155	15	Northwest	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
12 Inglis Street, 15m North of Spar Road	1140	155	16	Northwest	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
13 Railway property, 150m North of Ferry Street	1200	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
14 Inglis Street, 15m North of Spar Road	1200	155	5	Northwest	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
15 Inglis Street, 15m North of Spar Road	1230	155	5	Northwest	Downwind	Crane, excavator in operation	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 Railway property, 150m North of Ferry Street	1300	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 Inglis Street, 15m North of Spar Road	1300	155	6	Northwest	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
18 Inglis Street, 15m North of Spar Road	1345	155	5	Northwest	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
19 Railway property, 150m North of Ferry Street	1400	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 Inglis Street, 15m North of Spar Road	1400	155	6	Northwest	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
21 Inglis Street, 15m North of Spar Road	1415	155	5	Northwest	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
22 Railway property, 150m North of Ferry Street	1500	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 Inglis Street, 15m North of Spar Road	1500	155	7	Northwest	Downwind	Crane, excavator in operation	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 Inglis Street, 15m North of Spar Road	1540	155	5	Northwest	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
25 Railway property, 150m North of Ferry Street	1600	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 Inglis Street, 15m North of Spar Road	1600	155	8	Northwest	Downwind	Crane, excavator in operation	No observations seen to effect sampling integrity
27 Inglis Street, 15m North of Spar Road	1645	155	9	Northwest	Downwind	No activity observed on site	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 ($\mu\text{g}/\text{m}^3$)
Inglis Street, 150m North of Spar Road	0800 to 0859	8	990
Inglis Street, 150m North of Spar Road	0900 to 0959	21	990
Inglis Street, 150m North of Spar Road	1000 to 1059	32	990
Inglis Street, 15m North of Spar Road	1100 to 1159	48	990
Inglis Street, 15m North of Spar Road	1200 to 1259	53	990
Inglis Street, 15m North of Spar Road	1300 to 1359	59	990
Inglis Street, 15m North of Spar Road	1400 to 1459	65	990
Inglis Street, 15m North of Spar Road	1500 to 1559	71	990
Inglis Street, 15m North of Spar Road	1600 to 1659	80	990

VOC Monitoring

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