

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 7th October, 2008

FILE NO. S-1207-04
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. PS-0075

**SUBJECT: 6th October, 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – South Pond Pilot Study
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 6th of October, 2008. Reg Peters and Tyler Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:
- Mainly cloudy, sunny periods, showers
- Temperature: approximately 12°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 – South Pond Pilot Study
6th 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 Railway property, 20m South of Ferry Street	0800	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
2 120m Southeast of Inglis Street and Spar Road intersection	0800	155	8	West	Downwind	No activity observed on site	No observations seen to effect sampling integrity
3 120m Southeast of Inglis Street and Spar Road intersection	0835	155	4	West	Downwind	Crane operating	No observations seen to effect sampling integrity
4 Railway property, 20m South of Ferry Street	0900	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
5 120m Southeast of Inglis Street and Spar Road intersection	0900	155	3	West	Downwind	Crane operating	No observations seen to effect sampling integrity
6 120m Southeast of Inglis Street and Spar Road intersection	0940	155	5	West	Downwind	Crane operating	No observations seen to effect 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 Railway property, 100m North of Ferry Street	1000	155	2	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 180m Southeast of Inglis Street and Spar Road intersection	1000	155	3	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
9 180m Southeast of Inglis Street and Spar Road intersection	1025	155	3	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
10 Railway property, 100m North of Ferry Street	1100	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 180m Southeast of Inglis Street and Spar Road intersection	1100	155	5	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
12 180m Southeast of Inglis Street and Spar Road intersection	1130	155	4	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
13 Railway property, 100m North of Ferry Street	1200	155	4	Northwest	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 180m Southeast of Inglis Street and Spar Road intersection	1200	155	5	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
15 180m Southeast of Inglis Street and Spar Road intersection	1245	155	4	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
16 Railway property, 100m North of Ferry Street	1300	155	2	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 180m Southeast of Inglis Street and Spar Road intersection	1300	155	4	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
18 180m Southeast of Inglis Street and Spar Road intersection	1340	155	4	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
19 Railway property, 100m North of Ferry Street	1400	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 180m Southeast of Inglis Street and Spar Road intersection	1400	155	5	Northwest	Downwind	Crane operating	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
21 180m Southeast of Inglis Street and Spar Road intersection	1420	155	7	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
22 Railway property, 100m North of Ferry Street	1500	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 180m Southeast of Inglis Street and Spar Road intersection	1500	155	6	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
24 180m Southeast of Inglis Street and Spar Road intersection	1515	155	11	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
25 Railway property, 100m North of Ferry Street	1600	155	2	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 180m Southeast of Inglis Street and Spar Road intersection	1600	155	4	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
27 180m Southeast of Inglis Street and Spar Road intersection	1645	155	4	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 ($\mu\text{g}/\text{m}^3$)
120m Southeast of Inglis Street and Spar Road intersection	0800 to 0859	6	990
120m Southeast of Inglis Street and Spar Road intersection	0900 to 0959	11	990
180m Southeast of Inglis Street and Spar Road intersection	1000 to 1059	14	990
180m Southeast of Inglis Street and Spar Road intersection	1100 to 1159	19	990
180m Southeast of Inglis Street and Spar Road intersection	1200 to 1259	24	990
180m Southeast of Inglis Street and Spar Road intersection	1300 to 1359	28	990
180m Southeast of Inglis Street and Spar Road intersection	1400 to 1459	34	990
180m Southeast of Inglis Street and Spar Road intersection	1500 to 1559	43	990
180m Southeast of Inglis Street and Spar Road intersection	1600 to 1659	47	990

VOC Monitoring

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