

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 15th August, 2008

FILE NO. S-1173-09
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. PS-0034

**SUBJECT: 15th August, 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – North Pond Pilot Study
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 15th of August, 2008. Reg Peters and Donald MacIsaac of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:
- Sunny with some cloudy periods
- Temperature: approximately 17°C
- Wind Direction: 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 Donald 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:

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Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – North Pond Pilot Study
15th August, 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 40m South of Cape Breton Street & Inglis Street Intersection	0800	155	7	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
2 30m East of Railroad Building Doors	0805	155	7	Northwest	Upwind	Background	No observations seen to effect sampling integrity
3 40m South of Cape Breton Street & Inglis Street Intersection	0830	155	8	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
4 30m East of Railroad Building Doors	0900	155	9	Northwest	Upwind	Background	No observations seen to effect sampling integrity
5 40m South of Cape Breton Street & Inglis Street Intersection	0900	155	8	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
6 40m South of Cape Breton Street & Inglis Street Intersection	0945	155	12	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
7 30m East of Railroad Building Doors	1000	155	12	Northwest	Upwind	Background	No observations seen to effect sampling integrity
8 30m South of Southwest corner of STPA Building	1000	155	14	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
9 30m South of Southwest corner of STPA Building Main Gate	1025	155	18	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
10 30m East of Railroad Building Doors	1100	155	23	Northwest	Upwind	Background	No observations seen to effect sampling integrity
11 40m North East of Ferry Street Bridge	1100	155	26	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
12 40m North East of Ferry Street Bridge	1120	155	26	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
13 30m East of Railroad Building Doors	1200	155	20	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
14 40m North East of Ferry Street Bridge	1200	155	24	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
15 40m North East of Ferry Street Bridge	1215	155	21	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
16 30m East of Railroad Building Doors	1300	155	5	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 40m North East of Ferry Street Bridge	1300	155	10	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
18 40m North East of Ferry Street Bridge	1330	155	9	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
19 30m East of Railroad Building Doors	1400	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 40m North East of Ferry Street Bridge	1400	155	10	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 40m North East of Ferry Street Bridge	1415	155	10	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
22 30m East of Railroad Building Doors	1500	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 40m North East of Ferry Street Bridge	1500	155	9	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
24 40m North East of Ferry Street Bridge	1515	155	8	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
25 30m East of Railroad Building Doors	1600	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 40m North East of Ferry Street Bridge	1600	155	8	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
27 40m North East of Ferry Street Bridge	1645	155	8	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 ($\mu\text{g}/\text{m}^3$)
40m South of Cape Breton Street & Inglis Street Intersection	0800 to 0859	8	990
40m South of Cape Breton Street & Inglis Street Intersection	0900 to 0959	19	990
30m South of Southwest corner of STPA Building Main Gate	1000 to 1059	35	990
40m North East of Ferry Street Bridge	1100 to 1159	61	990
40m North East of Ferry Street Bridge	1200 to 1259	86	990
40m North East of Ferry Street Bridge	1300 to 1359	96	990
40m North East of Ferry Street Bridge	1400 to 1459	107	990
40m North East of Ferry Street Bridge	1500 to 1559	116	990
40m North East of Ferry Street Bridge	1600 to 1659	124	990

VOC Monitoring

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