

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 21st August, 2008

FILE NO. S-1173-13
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. PS-0038

**SUBJECT: 21st 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 21st 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
- Temperature: approximately 21°C
- Wind Direction: West / 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
21st August, 2008

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
1 Walker Street, 20m North of Ferry Street	0800	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
2 70m Southeast of North Pond Main Gate	0800	155	6	West	Downwind	No activity observed on-site	No observations seen to affect sampling integrity
3 70m Southeast of North Pond Main Gate	0830	155	8	West	Downwind	Crane operating	No observations seen to affect sampling integrity
4 Walker Street, 20m North of Ferry Street	0900	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
5 70m Southeast of North Pond Main Gate	0900	155	5	West	Downwind	Crane operating	No observations seen to affect sampling integrity
6 70m Southeast of North Pond Main Gate	0945	155	9	West	Downwind	Crane operating	No observations seen to affect sampling integrity
7 Walker Street, 20m North of Ferry Street	1000	155	6	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 70m Southeast of North Pond Main Gate	1000	155	16	West	Downwind	Crane operating	No observations seen to affect sampling integrity
9 70m Southeast of North Pond Main Gate	1020	155	11	West	Downwind	No activity observed on-site	No observations seen to affect sampling integrity
10 80m Northeast of Ferry Street and Walker Street intersection	1100	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 30m Northeast of Ferry Street Bridge	1100	155	22	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
12 30m Northeast of Ferry Street Bridge	1130	155	11	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
13 80m Northeast of Ferry Street and Walker Street intersection	1200	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
14 30m Northeast of Ferry Street Bridge	1200	155	7	Northwest	Downwind	No activity observed on-site	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
15 30m Northeast of Ferry Street Bridge	1240	155	33	Northwest	Downwind	Crane operating	Windblown dust from road
16 80m Northeast of Ferry Street and Walker Street intersection	1300	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 30m Northeast of Ferry Street Bridge	1300	155	12	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
18 30m Northeast of Ferry Street Bridge	1340	155	10	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
19 80m Northeast of Ferry Street and Walker Street intersection	1400	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 30m Northeast of Ferry Street Bridge	1400	155	15	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
21 30m Northeast of Ferry Street Bridge	1440	155	20	Northwest	Downwind	Crane operating	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
22 80m Northeast of Ferry Street and Walker Street intersection	1500	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 30m Northeast of Ferry Street Bridge	1500	155	15	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
24 30m Northeast of Ferry Street Bridge	1545	155	9	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
25 Walker Street, 20m North of Ferry Street	1600	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 30m Northeast of Ferry Street Bridge	1600	155	10	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
27 30m Northeast of Ferry Street Bridge	1645	155	10	Northwest	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 ($\mu\text{g}/\text{m}^3$)
70m Southeast of North Pond Main Gate	0800 to 0859	7	990
70m Southeast of North Pond Main Gate	0900 to 0959	14	990
70m Southeast of North Pond Main Gate	1000 to 1059	28	990
30m Northeast of Ferry Street Bridge	1100 to 1159	45	990
30m Northeast of Ferry Street Bridge	1200 to 1259	65	990
30m Northeast of Ferry Street Bridge	1300 to 1359	76	990
30m Northeast of Ferry Street Bridge	1400 to 1459	94	990
30m Northeast of Ferry Street Bridge	1500 to 1559	106	990
30m Northeast of Ferry Street Bridge	1600 to 1659	116	990

VOC Monitoring

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