

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 20th August, 2008

FILE NO. S-1173-11
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. PS-0036

**SUBJECT: 19th 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 19th 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:
- Mainly sunny
- Temperature: approximately 24°C
- Wind Direction: South

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. An average of 124 µg/m³ was measured at the downwind location at 0835 for a 15 minute sample (see sample number 3 in table below). Dust was being blown off the road by truck traffic and so this result was not attributed to site activities. Earth Tech should have been contacted and informed of this high reading, they were not. ALL-TECH will introduce additional training and procedures with current personnel to ensure that this will not re-occur.*

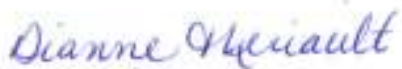
All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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
19th 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 10m North of Intercolonial Fixed Monitoring Station	0800	155	59	South	Upwind	Background	No observations seen to affect sampling integrity
2 30m North of North Pond Main Gate	0800	155	72	South	Downwind	No activity observed on-site	Dust blown off road from truck traffic
3 30m North of North Pond Main Gate	0835	155	124	South	Downwind	Crane operating	Dust blown off road from truck traffic
4 10m North of Intercolonial Fixed Monitoring Station	0900	155	50	South	Upwind	Background	No observations seen to affect sampling integrity
5 20m Southeast of North Pond Main Gate	0900	155	57	South	Downwind	Crane operating	Dust blown off road from truck traffic
6 20m Southeast of North Pond Main Gate	0925	155	55	South	Downwind	Crane operating	Dust blown off road from truck traffic
7 10m North of Intercolonial Fixed Monitoring Station	1000	155	42	South	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 30m Southeast of North Pond Main Gate	1000	155	48	South	Downwind	Crane operating	Dust blown off road from truck traffic
9 30m Southeast of North Pond Main Gate	1045	155	55	South	Downwind	Crane operating	Dust blown off road from truck traffic
10 10m North of Intercolonial Fixed Monitoring Station	1100	155	44	South	Upwind	Background	No observations seen to affect sampling integrity
11 30m Southeast of North Pond Main Gate	1100	155	53	South	Downwind	Crane operating	Dust blown off road from truck traffic
12 30m Southeast of North Pond Main Gate	1140	155	71	South	Downwind	Crane operating	Dust blown off road from truck traffic
13 10m North of Intercolonial Fixed Monitoring Station	1200	155	37	South	Upwind	Background	No observations seen to affect sampling integrity
14 30m Southeast of North Pond Main Gate	1200	155	41	South	Downwind	No activity observed on-site	Dust blown off road from truck traffic

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 Southeast of North Pond Main Gate	1240	155	45	South	Downwind	Crane operating	Dust blown off road from truck traffic
16 10m North of Intercolonial Fixed Monitoring Station	1300	155	41	South	Upwind	Background	No observations seen to affect sampling integrity
17 30m Southeast of North Pond Main Gate	1300	155	49	South	Downwind	Crane operating	Dust blown off road from truck traffic
18 30m Southeast of North Pond Main Gate	1320	155	60	South	Downwind	Crane operating	Dust blown off road from truck traffic
19 10m North of Intercolonial Fixed Monitoring Station	1400	155	37	South	Upwind	Background	No observations seen to affect sampling integrity
20 30m Southeast of North Pond Main Gate	1400	155	42	South	Downwind	Crane operating	Dust blown off road from truck traffic
21 30m Southeast of North Pond Main Gate	1430	155	47	South	Downwind	Crane operating	Dust blown off road from truck traffic

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 10m North of Intercolonial Fixed Monitoring Station	1500	155	28	South	Upwind	Background	No observations seen to affect sampling integrity
23 30m Southeast of North Pond Main Gate	1500	155	38	South	Downwind	Crane operating	Dust blown off road from truck traffic
24 30m Southeast of North Pond Main Gate	1540	155	42	South	Downwind	Crane operating	Dust blown off road from truck traffic
25 10m North of Intercolonial Fixed Monitoring Station	1600	155	24	South	Upwind	Background	No observations seen to affect sampling integrity
26 30m Southeast of North Pond Main Gate	1600	155	61	South	Downwind	Crane operating	Dust blown off road from truck traffic
27 30m Southeast of North Pond Main Gate	1645	155	37	South	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 ($\mu\text{g}/\text{m}^3$)
30m North of North Pond main gate	0800 to 0859	98	990
20m Southeast of North Pond main gate	0900 to 0959	154	990
20m Southeast of North Pond main gate	1000 to 1059	206	990
20m Southeast of North Pond main gate	1100 to 1159	268	990
30m Southeast of North Pond main gate	1200 to 1259	311	990
30m Southeast of North Pond main gate	1300 to 1359	366	990
30m Southeast of North Pond main gate	1400 to 1459	411	990
30m Southeast of North Pond main gate	1500 to 1559	454	990
30m Southeast of North Pond main gate	1600 to 1659	503	990

VOC Monitoring

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