

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 28th August, 2008

FILE NO. S-1173-17
SHIFT: 1130 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. PS-0042

**SUBJECT: 27th 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 27th 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:

- Overcast, drizzle
- Temperature: approximately 18°C
- Wind Direction: East

Comments: *ALL-TECH was on-site at 1130 and sampling began as soon as weather conditions were within instrument specifications. 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
27th 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 60m North of Walker & Ferry Street Intersection	1200	155	7	East	Downwind	No activity observed on-site	No observations seen to affect sampling integrity
2 75m North of Inglis Street & Spar Road Intersection	1215	155	18	East	Upwind	Background	No observations seen to affect sampling integrity
3 60m North of Walker & Ferry Street Intersection	1240	155	10	East	Downwind	Crane operating	No observations seen to affect sampling integrity
4 75m North of Inglis Street & Spar Road Intersection	1300	155	16	East	Upwind	Background	No observations seen to affect sampling integrity
5 60m North of Walker & Ferry Street Intersection	1300	155	10	East	Downwind	Crane operating	No observations seen to affect sampling integrity
6 60m North of Walker & Ferry Street Intersection	1330	155	13	East	Downwind	Crane operating	No observations seen to affect sampling integrity
7 75m North of Inglis Street & Spar Road Intersection	1400	155	28	East	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 60m North of Walker & Ferry Street Intersection	1400	155	19	East	Downwind	Crane operating	No observations seen to affect sampling integrity
9 60m North of Walker & Ferry Street Intersection	1430	155	19	East	Downwind	Crane operating	No observations seen to affect sampling integrity
10 75m North of Inglis Street & Spar Road Intersection	1500	155	25	East	Upwind	Background	No observations seen to affect sampling integrity
11 60m North of Walker & Ferry Street Intersection	1500	155	17	East	Downwind	Crane operating	No observations seen to affect sampling integrity
12 60m North of Walker & Ferry Street Intersection	1520	155	18	East	Downwind	Crane operating	No observations seen to affect sampling integrity
13 75m North of Inglis Street & Spar Road Intersection	1600	155	26	East	Upwind	Background	No observations seen to affect sampling integrity
14 60m North of Walker & Ferry Street Intersection	1600	155	18	East	Downwind	Crane operating	No observations seen to affect 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
15 60m North of Walker & Ferry Street Intersection	1645	155	19	East	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 ($\mu\text{g}/\text{m}^3$)
60m North of Walker & Ferry Street Intersection	1200 to 1259	9	990
60m North of Walker & Ferry Street Intersection	1300 to 1359	21	990
60m North of Walker & Ferry Street Intersection	1400 to 1459	40	990
60m North of Walker & Ferry Street Intersection	1500 to 1559	58	990
60m North of Walker & Ferry Street Intersection	1600 to 1659	77	990

VOC Monitoring

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