

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 3rd October, 2008

FILE NO. S-1207-02
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. PS-0073

**SUBJECT: 2nd 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 2nd of October, 2008. Alison Giovannetti and Reg Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:
- Mainly overcast
- Temperature: approximately 10°C
- Wind Direction: East to Southeast

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.*

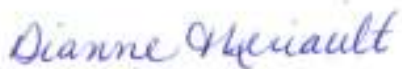
All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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 Alison Giovanetti 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
2nd 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 30m SE of Inglis and Spar Intersection	0800	155	13	East	Upwind	Background	No observations seen to affect sampling integrity
2 30m E of Ferry St. and Walker St. Intersection	0800	155	13	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 30m E of Ferry St. and Walker St. Intersection	0830	155	13	East	Downwind	Crane Operating	No observations seen to affect sampling integrity
4 30m SE of Inglis and Spar Intersection	0900	155	22	East	Upwind	Background	No observations seen to affect sampling integrity
5 30m E of Ferry St. and Walker St. Intersection	0900	155	16	East	Downwind	Crane Operating	No observations seen to affect sampling integrity
6 30m E of Ferry St. and Walker St. Intersection	0915	155	20	East	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
7 20m N of STPA Building	1000	155	15	Southeast	Upwind	Background	No observations seen to affect sampling integrity
8 100m NW of Railway and Ferry St. Intersection	1000	155	12	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 100m NW of Railway and Ferry St. Intersection	1035	155	9	Southeast	Downwind	Crane Operating	No observations seen to affect sampling integrity
10 20m N of STPA Building	1100	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
11 100m NW of Railway and Ferry St. Intersection	1100	155	4	Southeast	Downwind	Crane Operating	No observations seen to affect sampling integrity
12 100m NW of Railway and Ferry St. Intersection	1115	155	6	Southeast	Downwind	Crane Operating	No observations seen to affect sampling integrity
13 20m N of STPA Building	1200	155	9	Southeast	Upwind	Background	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
14 100m NW of Railway and Ferry St. Intersection	1200	155	7	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 100m NW of Railway and Ferry St. Intersection	1215	155	7	Southeast	Downwind	Crane Operating	No observations seen to affect sampling integrity
16 20m N of STPA Building	1300	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
17 100m NW of Railway and Ferry St. Intersection	1300	155	4	Southeast	Downwind	Crane Operating	No observations seen to affect sampling integrity
18 100m NW of Railway and Ferry St. Intersection	1320	155	6	Southeast	Downwind	Crane Operating	No observations seen to affect sampling integrity
19 20m N of STPA Building	1400	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
20 100m NW of Railway and Ferry St. Intersection	1400	155	5	Southeast	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
21 100m NW of Railway and Ferry St. Intersection	1425	155	5	Southeast	Downwind	Crane Operating	No observations seen to affect sampling integrity
22 20m N of STPA Building	1500	155	10	Southeast	Upwind	Background	No observations seen to affect sampling integrity
23 100m NW of Railway and Ferry St. Intersection	1500	155	9	Southeast	Downwind	Crane Operating	No observations seen to affect sampling integrity
24 100m NW of Railway and Ferry St. Intersection	1520	155	7	Southeast	Downwind	Crane Operating	No observations seen to affect sampling integrity
25 20m N of STPA Building	1600	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
26 100m NW of Railway and Ferry St. Intersection	1600	155	5	Southeast	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
27 100m NW of Railway and Ferry St. Intersection	1645	155	8	Southeast	Downwind	Crane Operating	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 E of Ferry St. and Walker St. Intersection	0800 to 0859	13	990
30m E of Ferry St. and Walker St. Intersection	0900 to 0959	31	990
100m NW of Railway and Ferry St. Intersection	1000 to 1059	42	990
100m NW of Railway and Ferry St. Intersection	1100 to 1159	47	990
100m NW of Railway and Ferry St. Intersection	1200 to 1259	54	990
100m NW of Railway and Ferry St. Intersection	1300 to 1359	59	990
100m NW of Railway and Ferry St. Intersection	1400 to 1459	64	990
100m NW of Railway and Ferry St. Intersection	1500 to 1559	72	990
100m NW of Railway and Ferry St. Intersection	1600 to 1659	79	990

VOC Monitoring

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