

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 6th May, 2009

FILE NO. S-1313-08
SHIFT: 0630 to 1800
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP6D-NP-0046

**SUBJECT: 5th May, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads, North Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 5th of May, 2009. Shaun Dove and Dwayne Timmons 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 8°C
- Wind Direction: North to East

Comments: *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity. Air monitoring was performed during AECOM'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 Dwayne Timmons 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 – Access Roads, North Pond
5th May, 2009

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 200m Northwest of Millcreek Environmental Services	0700	155	6	North	Upwind	Background	No observations seen to affect sampling integrity
2 100m Southwest of Ferry St. bridge	0700	155	12	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 100m Southwest of Ferry St. bridge	0735	155	9	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
4 200m Northwest of Millcreek Environmental Services	0800	155	5	North	Upwind	Background	No observations seen to affect sampling integrity
5 100m Southwest of Ferry St. bridge	0800	155	19	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
6 100m Southwest of Ferry St. bridge	0815	155	11	North	Downwind	No activity observed on site	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
7 200m Northwest of Millcreek Environmental Services	0900	155	4	North	Upwind	Background	No observations seen to affect sampling integrity
8 100m Southwest of Ferry St. bridge	0900	155	14	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 100m Southwest of Ferry St. bridge	0925	155	10	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
10 200m Northwest of Millcreek Environmental Services	1000	155	4	North	Upwind	Background	No observations seen to affect sampling integrity
11 100m Southwest of Ferry St. bridge	1000	155	8	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 100m Southwest of Ferry St. bridge	1015	155	8	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
13 200m Northwest of Millcreek Environmental Services	1100	155	5	North	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 Southwest of Ferry St. bridge	1100	155	5	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 100m Southwest of Ferry St. bridge	1120	155	6	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 200m Northwest of Millcreek Environmental Services	1200	155	6	North	Upwind	Background	No observations seen to affect sampling integrity
17 100m Southwest of Ferry St. bridge	1200	155	6	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 100m Southwest of Ferry St. bridge	1220	155	7	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 200m Northwest of Millcreek Environmental Services	1300	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
20 100m Southwest of Ferry St. bridge	1300	155	6	North	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
21 100m Southwest of Ferry St. bridge	1315	155	7	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
22 100m West of Millcreek Environmental Services	1400	155	6	East	Upwind	Background	No observations seen to affect sampling integrity
23 300m Southeast of railway building	1400	155	7	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 300m Southeast of railway building	1435	155	6	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
25 100m West of Millcreek Environmental Services	1500	155	5	East	Upwind	Background	No observations seen to affect sampling integrity
26 300m Southeast of railway building	1500	155	6	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 300m Southeast of railway building	1540	155	11	East	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
28 100m West of Millcreek Environmental Services	1600	155	9	East	Upwind	Background	No observations seen to affect sampling integrity
29 300m Southeast of railway building	1600	155	6	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
30 300m Southeast of railway building	1620	155	6	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
31 100m West of Millcreek Environmental Services	1700	155	6	East	Upwind	Background	No observations seen to affect sampling integrity
32 300m Southeast of railway building	1700	155	6	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
33 300m Southeast of railway building	1715	155	6	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 ($\mu\text{g}/\text{m}^3$)
100m Southwest of Ferry St. bridge	0700 to 0759	11	990
100m Southwest of Ferry St. bridge	0800 to 0859	26	990
100m Southwest of Ferry St. bridge	0900 to 0959	38	990
100m Southwest of Ferry St. bridge	1000 to 1059	46	990
100m Southwest of Ferry St. bridge	1100 to 1159	51	990
100m Southwest of Ferry St. bridge	1200 to 1259	58	990
100m Southwest of Ferry St. bridge	1300 to 1359	65	990
300m Southeast of railway building	1400 to 1459	72	990
300m Southeast of railway building	1500 to 1559	81	990
300m Southeast of railway building	1600 to 1659	87	990
300m Southeast of railway building	1700 to 1759	93	990

VOC Monitoring

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