

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 2nd April, 2009

FILE NO. S-1292-01
SHIFT: 0630 to 1830
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. TP6D-0011

**SUBJECT: 1st April, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 1st of April, 2009. Jennifer Andrews and Nigel MacLean, 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 2°C
- Wind Direction: North / 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 Nigel MacLean 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
1st April, 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
1 100 M NW of Inglis St and Spar Rd Intersection	0700	155	34	North	Upwind	Background	No observations seen to affect sampling integrity
2 30m West of Acadian Lines Terminal	0700	155	23	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
3 30m West of Acadian Lines Terminal	0720	155	25	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
4 100 M NW of Inglis St and Spar Rd Intersection	0800	155	21	North	Upwind	Background	No observations seen to affect sampling integrity
5 30m West of Acadian Lines Terminal	0800	155	13	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
6 30m West of Acadian Lines Terminal	0820	155	15	North	Downwind	Activity not visible from monitoring location	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
7 100 M NW of Inglis St and Spar Rd Intersection	0900	155	17	North	Upwind	Background	No observations seen to affect sampling integrity
8 30m West of Acadian Lines Terminal	0900	155	16	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
9 30m West of Acadian Lines Terminal	0930	155	13	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
10 100 M NW of Inglis St and Spar Rd Intersection	1000	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
11 30m West of Acadian Lines Terminal	1000	155	9	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
12 30m West of Acadian Lines Terminal	1015	155	11	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
13 100 M NW of Inglis St and Spar Rd Intersection	1100	155	14	North	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
14 30m West of Acadian Lines Terminal	1100	155	12	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
15 30m West of Acadian Lines Terminal	1135	155	10	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
16 100 M NW of Inglis St and Spar Rd Intersection	1200	155	15	North	Upwind	Background	No observations seen to affect sampling integrity
17 30m West of Acadian Lines Terminal	1200	155	14	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
18 30m West of Acadian Lines Terminal	1230	155	15	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
19 100 M NW of Inglis St and Spar Rd Intersection	1300	155	19	North	Upwind	Background	No observations seen to affect sampling integrity
20 30m West of Acadian Lines Terminal	1300	155	16	North	Downwind	Activity not visible from monitoring location	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 30m West of Acadian Lines Terminal	1315	155	17	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
22 100 M NW of Inglis St and Spar Rd Intersection	1400	155	23	North	Upwind	Background	No observations seen to affect sampling integrity
23 30m West of Acadian Lines Terminal	1400	155	18	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
24 30m West of Acadian Lines Terminal	1425	155	16	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
25 100 M NW of Inglis St and Spar Rd Intersection	1500	155	15	North	Upwind	Background	No observations seen to affect sampling integrity
26 30m West of Acadian Lines Terminal	1500	155	17	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
27 30m West of Acadian Lines Terminal	1525	155	15	North	Downwind	Activity not visible from monitoring location	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 50M N of Inglis St and Spar Rd Intersection	1600	155	22	East	Upwind	Background	No observations seen to affect sampling integrity
29 50 M N of Ferry St and Railway Rd Intersection	1600	155	15	East	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
30 50 M N of Ferry St and Railway Rd Intersection	16	155	13	East	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
31 50 M N of Inglis St and Spar Rd Intersection	1700	155	26	East	Upwind	Background	No observations seen to affect sampling integrity
32 50 M N of Ferry St and Railway Rd Intersection	1700	155	11	East	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
33 50 M N of Ferry St and Railway Rd Intersection	17	155	12	East	Downwind	Activity not visible from monitoring location	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 West of Acadian Lines Terminal	0700 to 0759	24	990
30m West of Acadian Lines Terminal	0800 to 0859	38	990
30m West of Acadian Lines Terminal	0900 to 0959	53	990
30m West of Acadian Lines Terminal	1000 to 1059	63	990
30m West of Acadian Lines Terminal	1100 to 1159	74	990
30m West of Acadian Lines Terminal	1200 to 1259	89	990
30m West of Acadian Lines Terminal	1300 to 1359	106	990
30m West of Acadian Lines Terminal	1400 to 1459	123	990
30m West of Acadian Lines Terminal	1500 to 1559	139	990
50 M N of Ferry St and Railway Rd Intersection	1600 to 1659	153	990
50 M N of Ferry St and Railway Rd Intersection	1700 to 1759	165	990

VOC Monitoring

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