

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 5th June, 2009

FILE NO. S-1331-09
SHIFT: 1000 to 1830
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP6D-SP-0083

**SUBJECT: 4th June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads, South Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 4th of June, 2009. Jennifer Andrews 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:

- Partly cloudy
- Temperature: approximately 20°C
- Wind Direction: Southwest

Comments: *ALL-TECH was on-Site at 1000 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 Jennifer Andrews 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, South Pond
4th June, 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 60m Northeast of Dodd St. and Prince St. intersection (N46°08.389' W060°11.347')	1000	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 150m Northeast of Terminal Rd. and Prince St. intersection (N46°08.416' W060°11.279')	1000	155	14	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
3 150m Northeast of Terminal Rd. and Prince St. intersection (N46°08.416' W060°11.279')	1025	155	10	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
4 60m Northeast of Dodd St. and Prince St. intersection (N46°08.389' W060°11.347')	1100	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 150m Northeast of Terminal Rd. and Prince St. intersection (N46°08.416' W060°11.279')	1100	155	9	Southwest	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
6 190m Northeast of Terminal Rd. and Prince St. intersection (N46°08.439' W060°11.279')	1145	155	12	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
7 60m Northeast of Dodd St. and Prince St. intersection (N46°08.389' W060°11.347')	1200	155	18	West	Upwind	Background	No observations seen to affect sampling integrity
8 190m Northeast of Terminal Rd. and Prince St. intersection (N46°08.439' W060°11.279')	1200	155	11	West	Downwind	Dump trucks operating	No observations seen to affect sampling integrity
9 190m Northeast of Terminal Rd. and Prince St. intersection (N46°08.439' W060°11.279')	1220	155	11	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
10 60m Northeast of Dodd St. and Prince St. intersection (N46°08.389' W060°11.347')	1300	155	15	West	Upwind	Background	No observations seen to affect sampling integrity
11 190m Northeast of Terminal Rd. and Prince St. intersection (N46°08.439' W060°11.279')	1300	155	17	West	Downwind	Excavator moving material	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
12 190m Northeast of Terminal Rd. and Prince St. intersection (N46°08.439' W060°11.279')	1345	155	20	West	Downwind	Excavator moving material	No observations seen to affect sampling integrity
13 60m Northeast of Dodd St. and Prince St. intersection (N46°08.389' W060°11.347')	1400	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 15m West of Ferry St. and Inglis St. intersection (N46°08.862' W060°11.205')	1400	155	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 15m West of Ferry St. and Inglis St. intersection (N46°08.862' W060°11.205')	1430	155	14	Southwest	Downwind	Excavator, dump truck operating	No observations seen to affect sampling integrity
16 120m Northeast of Dodd St. and Prince St. intersection (N46°08.397' W060°11.352')	1500	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 15m West of Ferry St. and Inglis St. intersection (N46°08.862' W060°11.205')	1500	155	26	Southwest	Downwind	Excavator, dump truck 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
18 15m West of Ferry St. and Inglis St. intersection (N46°08.862' W060°11.205')	1540	155	25	Southwest	Downwind	Excavator, dump truck operating	No observations seen to affect sampling integrity
19 120m Northeast of Dodd St. and Prince St. intersection (N46°08.397' W060°11.352')	1600	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 15m West of Ferry St. and Inglis St. intersection (N46°08.862' W060°11.205')	1600	155	16	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
21 15m West of Ferry St. and Inglis St. intersection (N46°09.144' W060°09.791')	1620	155	13	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
22 120m Northeast of Dodd St. and Prince St. intersection (N46°08.397' W060°11.352')	1700	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 60m Southwest of Cape Breton St. and Inglis St. intersection (N46°08.620' W060°11.004')	1700	155	7	Southwest	Downwind	Excavator 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
24 60m Southwest of Cape Breton St. and Inglis St. intersection (N46°08.620' W060°11.004')	1745	155	10	Southwest	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 ($\mu\text{g}/\text{m}^3$)
150m Northeast of Terminal Rd. and Prince St. intersection	1000 to 1059	12	990
150m / 190m Northeast of Terminal Rd. and Prince St. intersection	1100 to 1159	23	990
190m Northeast of Terminal Rd. and Prince St. intersection	1200 to 1259	34	990
190m Northeast of Terminal Rd. and Prince St. intersection	1300 to 1359	53	990
190m Northeast of Terminal Rd. and Prince St. intersection / 15m West of Ferry St. and Inglis St. intersection	1400 to 1459	65	990
15m West of Ferry St. and Inglis St. intersection	1500 to 1559	91	990
15m West of Ferry St. and Inglis St. intersection	1600 to 1659	106	990
60m Southwest of Cape Breton St. and Inglis St. intersection	1700 to 1759	115	990

VOC Monitoring

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