

MEMORANDUM

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|-------------|----------------------------|-----------------|---|
| TO | Dawn MacNeil, STPA | FILE NO. | S-1353-02 |
| FROM | Dianne Theriault | SHIFT: | 0900 to 1830 |
| TEL | (902) 539-3012 | CC: | Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH |
| FAX | (902) 539-3381 | | |
| DATE | 6 th July, 2009 | STPA NO. | TP6D-CP-0109 |

**SUBJECT: 3rd July, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads, Cooling Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 3rd of July, 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:

- Mainly cloudy
- Temperature: approximately 19°C
- Wind Direction: Southeast

Comments: *Air monitoring was delayed until 0900 hours due to high humidity, and began at 1100 hours when weather conditions were within instrument specifications. 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 180 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, Cooling Pond
3rd July, 2009

| 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 |
|---|-------------|--|-------------------------------------|----------------|-------------------|--|---|
| 1 15m South of Inglis St. and Cape Breton St. intersection (N46°08.940' W060°11.750') | 1100 | 180 | 14 | Southeast | Upwind | Background | No observations seen to affect sampling integrity |
| 2 200m South of Ferry St. and Inglis St. intersection (N46°08.791' W060°11.086') | 1100 | 180 | 17 | Southeast | Downwind | Excavator and dump trucks in operation | No observations seen to affect sampling integrity |
| 3 200m South of Ferry St. and Inglis St. intersection (N46°08.791' W060°11.086') | 1130 | 180 | 20 | Southeast | Downwind | Excavator and dump trucks in operation | No observations seen to affect sampling integrity |
| 4 15m South of Inglis St. and Cape Breton St. intersection (N46°08.940' W060°11.750') | 1200 | 180 | 21 | Southeast | Upwind | Background | No observations seen to affect sampling integrity |
| 5 200m South of Ferry St. and Inglis St. intersection (N46°08.791' W060°11.086') | 1200 | 180 | 22 | Southeast | Downwind | Excavator and dump trucks in operation | 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 15m Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1240 | 180 | 30 | Southeast | Downwind | Excavator and dump trucks in operation | No observations seen to affect sampling integrity |
| 7 15m South of Inglis St. and Cape Breton St. intersection (N46°08.940' W060°11.750') | 1300 | 180 | 23 | Southeast | Upwind | Background | No observations seen to affect sampling integrity |
| 8 15m Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1300 | 180 | 26 | Southeast | Downwind | Excavator and dump trucks in operation | No observations seen to affect sampling integrity |
| 9 15m Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1315 | 180 | 24 | Southeast | Downwind | Excavator and dump trucks in operation | No observations seen to affect sampling integrity |
| 10 15m South of Inglis St. and Cape Breton St. intersection (N46°08.940' W060°11.750') | 1400 | 180 | 22 | Southeast | Upwind | Background | No observations seen to affect sampling integrity |
| 11 15m Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1400 | 180 | 20 | Southeast | Downwind | Excavator and dump trucks in operation | 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 15m Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1445 | 180 | 23 | Southeast | Downwind | Excavator and dump trucks in operation | No observations seen to affect sampling integrity |
| 13 15m South of Inglis St. and Cape Breton St. intersection (N46°08.940' W060°11.750') | 1500 | 180 | 22 | Southeast | Upwind | Background | No observations seen to affect sampling integrity |
| 14 15m Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1500 | 180 | 20 | Southeast | Downwind | Excavator and dump trucks in operation | No observations seen to affect sampling integrity |
| 15 15m Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1535 | 180 | 20 | Southeast | Downwind | Excavator and dump trucks in operation | No observations seen to affect sampling integrity |
| 16 15m South of Inglis St. and Cape Breton St. intersection (N46°08.940' W060°11.750') | 1600 | 180 | 22 | Southeast | Upwind | Background | No observations seen to affect sampling integrity |
| 17 15m Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1600 | 180 | 20 | Southeast | Downwind | Dump trucks in operation | 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 Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1620 | 180 | 20 | Southeast | Downwind | Dump trucks in operation | No observations seen to affect sampling integrity |
| 19 15m South of Inglis St. and Cape Breton St. intersection (N46°08.940' W060°11.750') | 1700 | 180 | 18 | Southeast | Upwind | Background | No observations seen to affect sampling integrity |
| 20 15m Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1700 | 180 | 18 | Southeast | Downwind | Excavator in operation | No observations seen to affect sampling integrity |
| 21 15m Northeast of Dodd St. and Dorchester St. intersection (N46°08.563' W060°11.401') | 1745 | 180 | 13 | Southeast | Downwind | No activity observed on site | No observations seen to affect sampling integrity |

Notes: Air sample duration for each monitoring event was 15 minutes.

Summary of Downwind PM₁₀ Action Levels

| Average PM ₁₀ Concentration (µg/m ³) | Averaging Period (Hours) | Downwind Action Level (µg/m ³) |
|---|--------------------------|--|
| 19 | 1 | 125 |
| 23 | 4 | 85 |

VOC Monitoring

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