

MEMORANDUM

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|-------------|-----------------------------|-----------------|-----------------------|
| TO | Dawn MacNeil, STPA | FILE NO. | S-1330-18 |
| FROM | Dianne Theriault | SHIFT: | 0630 to 1830 |
| TEL | (902) 539-3012 | CC: | Shawn Bernon, STPA |
| FAX | (902) 539-3381 | | Wilfred Kaiser, STPA |
| DATE | 26 th June, 2009 | | Terry Smith, ALL-TECH |
| | | STPA NO. | CO2-NSL-0082 |

**SUBJECT: 25th June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Tar Cell, Sysco Site
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 25th of June, 2009. Jennifer Andrews 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 sunny
- Temperature: approximately 26°C
- Wind Direction: Southwest

Comments: *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity. Air monitoring was performed during SLR'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 – Tar Cell, Sysco Site
25th 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 40m Northwest of railway maintenance building (N46°08.958' W060°11.821') | 0700 | 180 | 7 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 2 15m East of new truck scale (N46°09.326' W060°11.642') | 0700 | 180 | 7 | Southwest | Downwind | No activity observed on site | No observations seen to affect sampling integrity |
| 3 15m East of new truck scale (N46°09.326' W060°11.642') | 0740 | 180 | 4 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 4 120m Northwest of Railway Rd. and Ferry St. intersection (N46°08.961' W060°11.819') | 0800 | 180 | 5 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 5 15m East of new truck scale (N46°09.326' W060°11.642') | 0800 | 180 | 5 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 6 15m East of new truck scale (N46°09.326' W060°11.642') | 0835 | 180 | 7 | Southwest | Downwind | Equipment 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 |
|---|-------------|--|-------------------------------------|----------------|-------------------|------------------------------|---|
| 7 120m Northwest of Railway Rd. and Ferry St. intersection (N46°08.961' W060°11.819') | 0900 | 180 | 7 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 8 15m East of new truck scale (N46°09.326' W060°11.642') | 0900 | 180 | 5 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 9 15m East of new truck scale (N46°09.326' W060°11.642') | 0925 | 180 | 4 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 10 120m Northwest of Railway Rd. and Ferry St. intersection (N46°08.961' W060°11.819') | 1000 | 180 | 9 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 11 15m East of new truck scale (N46°09.326' W060°11.642') | 1000 | 180 | 4 | Southwest | Downwind | No activity observed on site | No observations seen to affect sampling integrity |
| 12 15m East of new truck scale (N46°09.326' W060°11.642') | 1030 | 180 | 16 | Southwest | Downwind | Equipment in operation | 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 |
|---|--------------------|--|--|-----------------------|--------------------------|--------------------------------|---|
| 13 120m Northwest of Railway Rd. and Ferry St. intersection (N46°08.961' W060°11.819') | 1100 | 180 | 9 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 14 15m East of new truck scale (N46°09.326' W060°11.642') | 1100 | 180 | 7 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 15 15m East of new truck scale (N46°09.326' W060°11.642') | 1125 | 180 | 9 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 16 120m Northwest of Railway Rd. and Ferry St. intersection (N46°08.961' W060°11.819') | 1200 | 180 | 11 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 17 15m East of new truck scale (N46°09.326' W060°11.642') | 1200 | 180 | 7 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 18 15m East of new truck scale (N46°09.326' W060°11.642') | 1215 | 180 | 6 | Southwest | Downwind | Equipment 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 |
|---|-------------|--|-------------------------------------|----------------|-------------------|------------------------------|---|
| 19 120m Northwest of Railway Rd. and Ferry St. intersection (N46°08.961' W060°11.819') | 1300 | 180 | 9 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 20 15m East of new truck scale (N46°09.326' W060°11.642') | 1300 | 180 | 7 | Southwest | Downwind | No activity observed on site | No observations seen to affect sampling integrity |
| 21 15m East of new truck scale (N46°09.326' W060°11.642') | 1320 | 180 | 8 | Southwest | Downwind | No activity observed on site | No observations seen to affect sampling integrity |
| 22 120m Northwest of Railway Rd. and Ferry St. intersection (N46°08.961' W060°11.819') | 1400 | 180 | 11 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 23 15m Northeast of new truck scale (N46°09.324' W060°11.636') | 1400 | 180 | 8 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 24 15m Northeast of new truck scale (N46°09.324' W060°11.636') | 1420 | 180 | 9 | Southwest | Downwind | Equipment 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 |
|---|-------------|--|-------------------------------------|----------------|-------------------|-------------------------|---|
| 25 120m Northwest of Railway Rd. and Ferry St. intersection (N46°08.961' W060°11.819') | 1500 | 180 | 10 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 26 15m Northeast of new truck scale (N46°09.324' W060°11.636') | 1500 | 180 | 11 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 27 15m Northeast of new truck scale (N46°09.324' W060°11.636') | 1535 | 180 | 12 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 28 120m Northwest of Railway Rd. and Ferry St. intersection (N46°08.961' W060°11.819') | 1600 | 180 | 10 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 29 15m Northeast of new truck scale (N46°09.324' W060°11.636') | 1600 | 180 | 13 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 30 15m Northeast of new truck scale (N46°09.324' W060°11.636') | 1615 | 180 | 14 | Southwest | Downwind | Equipment 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 |
|---|-------------|--|-------------------------------------|----------------|-------------------|------------------------------|---|
| 31 120m Northwest of Railway Rd. and Ferry St. intersection (N46°08.961' W060°11.819') | 1700 | 180 | 9 | Southwest | Upwind | Background | No observations seen to affect sampling integrity |
| 32 15m Northeast of new truck scale (N46°09.324' W060°11.636') | 1700 | 180 | 5 | Southwest | Downwind | Equipment in operation | No observations seen to affect sampling integrity |
| 33 15m Northeast of new truck scale (N46°09.324' W060°11.636') | 1745 | 180 | 5 | 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.

Summary of Downwind PM₁₀ Action Levels

| Average PM ₁₀ Concentration (µg/m ³) | Averaging Period (Hours) | Downwind Action Level (µg/m ³) |
|---|--------------------------|--|
| 6 | 1 | 125 |
| 7 | 4 | 85 |
| 7 | 8 | 70 |

VOC Monitoring

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