

MEMORANDUM

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

FILE NO. S-1257-20
SHIFT: 0730 to 1230
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. TP2-0098

**SUBJECT: 31st January, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Material Processing Facility
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 31st of January, 2009. Tyler Rowe and Jennifer Andrews 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 4°C
- Wind Direction: East

Comments: *ALL-TECH was on-Site at 0730 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 Tyler Rowe 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 – Material Processing Facility
31st January, 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 Inglis Street, 60m North of Spar Road | 0800 | 155 | 18 | East | Upwind | Background | No observations seen to affect sampling integrity |
| 2 Railway property, 70m North of Ferry Street | 0800 | 155 | 20 | East | Downwind | No activity visible from sampling location | No observations seen to affect sampling integrity |
| 3 Railway property, 70m North of Ferry Street | 0825 | 155 | 23 | East | Downwind | No activity visible from sampling location | No observations seen to affect sampling integrity |
| 4 Inglis Street, 60m North of Spar Road | 0900 | 155 | 26 | East | Upwind | Background | No observations seen to affect sampling integrity |
| 5 Railway property, 70m North of Ferry Street | 0900 | 155 | 89 | East | Downwind | No activity visible from sampling location | Sampler malfunction |
| 6 Railway property, 70m North of Ferry Street | 0920 | 155 | 70 | East | Downwind | No activity visible from sampling location | Sampler malfunction |

| 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 Inglis Street, 60m North of Spar Road | 1000 | 155 | 31 | East | Upwind | Background | No observations seen to affect sampling integrity |
| 8 Railway property, 70m North of Ferry Street | 1000 | 155 | 26 | East | Downwind | No activity visible from sampling location | No observations seen to affect sampling integrity |
| 9 Railway property, 70m North of Ferry Street | 1035 | 155 | 26 | East | Downwind | No activity visible from sampling location | No observations seen to affect sampling integrity |
| 10 Inglis Street, 60m North of Spar Road | 1100 | 155 | 34 | East | Upwind | Background | No observations seen to affect sampling integrity |
| 11 Railway property, 70m North of Ferry Street | 1100 | 155 | 33 | East | Downwind | No activity visible from sampling location | No observations seen to affect sampling integrity |
| 12 Railway property, 70m North of Ferry Street | 1145 | 155 | 37 | East | Downwind | No activity visible from sampling 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 ($\mu\text{g}/\text{m}^3$) |
|---------------------------------------|--------------|--|---|
| Inglis Street, 70m North of Spar Road | 0800 to 0859 | 22 | 990 |
| Inglis Street, 70m North of Spar Road | 0900 to 0959 | 101 | 990 |
| Inglis Street, 70m North of Spar Road | 1000 to 1059 | 127 | 990 |
| Inglis Street, 70m North of Spar Road | 1100 to 1159 | 162 | 990 |

VOC Monitoring

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