

MEMORANDUM

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|-------------|--------------------------------|-----------------|---|
| TO | Dawn MacNeil, STPA | FILE NO. | S-1258-04 |
| FROM | Dianne Theriault | SHIFT: | 0930 to 1330 |
| TEL | (902) 539-3012 | CC: | Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH |
| FAX | (902) 539-3381 | | |
| DATE | 23 rd January, 2009 | STPA NO. | COCW-0035 |

**SUBJECT: 22nd January, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Coke Ovens Vertical Cutoff Walls
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 22nd of January, 2009. Colin MacIsaac 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 -5°C
- Wind Direction: West

Comments: *ALL-TECH was on-Site at 0930 hours and sampling began as soon as there was site activity, but was later put on standby at 1200 hours, due to no visible activity on site, and was cancelled for the day at 1330 hours. 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 Colin MacIsaac 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 – Coke Ovens Vertical Cutoff Walls
22nd 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 70m South of Spar Extension, Spar Road intersection | 1000 | 155 | 14 | West | Upwind | Background | No observations seen to affect sampling integrity |
| 2 3m North of Coke Oven's Security Trailer | 1000 | 155 | 7 | West | Downwind | Activity not visible from sampling location | No observations seen to affect sampling integrity |
| 3 3m North of Coke Oven's Security Trailer | 1020 | 155 | 8 | West | Downwind | Activity not visible from sampling location | No observations seen to affect sampling integrity |
| 4 70m South of Spar Extension, Spar Road intersection | 1100 | 155 | 10 | West | Upwind | Background | No observations seen to affect sampling integrity |
| 5 3m North of Coke Oven's Security Trailer | 1100 | 155 | 7 | West | Downwind | Excavator operating | No observations seen to affect sampling integrity |
| 6 3m North of Coke Oven's Security Trailer | 1125 | 155 | 7 | West | Downwind | Activity not visible from sampling location | No observations seen to affect sampling integrity |

Sydney Tar Ponds Agency - Ambient Air Monitoring Program
 Real-time Air Monitoring Daily Report

| 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 70m South of Spar Extension, Spar Road intersection | 1200 | 155 | 12 | West | Upwind | Background | No observations seen to affect sampling integrity |
| 8 3m North of Coke Oven's Security Trailer | 1200 | 155 | 10 | West | Downwind | No activity observed on site | No observations seen to affect sampling integrity |

Comparison of Downwind Daily Results for Dust Budget

| Location | Duration | Dust Budget Value ($\mu\text{g}/\text{m}^3$) | Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$) |
|--|--------------|--|---|
| 3m North of Coke Oven's Security Trailer | 1000 to 1059 | 8 | 990 |
| 3m North of Coke Oven's Security Trailer | 1100 to 1159 | 15 | 990 |
| 3m North of Coke Oven's Security Trailer | 1200 to 1259 | 25 | 990 |

VOC Monitoring

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