

MEMORANDUM

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|-------------|-----------------------------|-----------------|-----------------------|
| TO | Dawn MacNeil, STPA | FILE NO. | S-1100-05 |
| FROM | Grant Harrigan | SHIFT: | 0830 to 1330 |
| TEL | (902) 539-3012 | CC: | Shawn Bernon, STPA |
| FAX | (902) 539-3381 | | Wilfred Kaiser, STPA |
| DATE | 6 th March, 2008 | | Terry Smith, ALL-TECH |
| | | STPA NO. | CP-0090 |

**SUBJECT: 5th March 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Cooling Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 5th of March, 2008. Colin MacIsaac and Trevor Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities on the asphalt pad North of the Cooling Pond.

Weather conditions on the day of sampling:

- Overcast in the early morning giving way to snowy periods, heavy at times.
- Temperature: approximately -6°C (data unavailable from Environment Canada)
- Wind Direction: Northeast to Southeast

Comments: *ALL-TECH was on-Site at 0830 and sampling began as soon as there was Site activity. Air monitoring was performed during EarthTech's construction activities. Activity was observed on the asphalt pad at 0800. ALL-TECH went into stand-by mode between 1015 and 1100 due to weather conditions. Monitoring resumed at 1115 and ALL-TECH finished sampling for the day at 1300 due to lack of activity on the asphalt pad.*

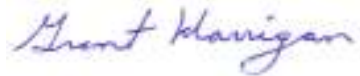
All downwind and upwind measurements of PM₁₀ were well below the established Site Action Level for this parameter of 155 µg/m³.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were well 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), TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Trevor Rowe and reviewed by Grant Harrigan and Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



Grant Harrigan, B.Tech
Environmental Technologist
ALL-TECH Environmental Services Cape Breton Ltd.

Copied via e-mail:

Shawn Bernon shawn@tarpondscleanup.ca, Wilfred Kaiser wilfred@tarpondscleanup.ca, Nancy LeDrew nancy@tarpondscleanup.ca, Trish Magliaro trish@tarpondscleanup.ca, Terry Smith tsmith@toalltech.com, Phyllis Low pjlow@toalltech.com, Dianne Theriault dtheriault@toalltech.com, Darren Gardiner dgardiner@croworld.com, Darren Lawless dlawless@toalltech.com, Kevin Mac Pherson kevinmacp@cbcl.ca, Kathy Harquail kharquail@toalltech.com

Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Cooling Pond
5th March, 2008

| 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 30M Southeast of Cooling Pond Security Trailer | 0900 | 155 | 5 | Northeast | Upwind | Background | No observations seen to effect sampling integrity |
| 2 70M South of Terminal Road Fixed Station | 0900 | 155 | 8 | Northeast | Downwind | No activity observed on-Site | No observations seen to effect sampling integrity |
| 3 70M South of Terminal Road Fixed Station | 0940 | 155 | 8 | Northeast | Downwind | No activity observed on-Site | No observations seen to effect sampling integrity |
| 4 30M Southeast of Cooling Pond Security Trailer | 1000 | 155 | 6 | Northeast | Upwind | Background | No observations seen to affect sampling integrity |
| 5 70M South of Terminal Road Fixed Station | 1000 | 155 | 9 | Southeast | Downwind | No activity observed on-Site | No observations seen to effect sampling integrity |
| 6 30M East of Ferry Street Bridge | 1115 | 155 | 11 | Southeast | Downwind | No activity observed on-Site | No observations seen to effect sampling integrity |
| 7 50M Southwest of Southwest corner of STPA building | 1115 | 155 | 11 | Southeast | Upwind | Background | 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 |
|--|-------------|--|-------------------------------------|----------------|-------------------|------------------------------|---|
| 8 30M East of Ferry Street Bridge | 1140 | 155 | 10 | Southeast | Downwind | No activity observed on-Site | No observations seen to effect sampling integrity |
| 9 30M East of Ferry Street Bridge | 1200 | 155 | 10 | Southeast | Downwind | No activity observed on-Site | No observations seen to effect sampling integrity |
| 10 50M Southwest of Southwest corner of STPA building | 1200 | 155 | 8 | Southeast | Upwind | Background | No observations seen to effect sampling integrity |
| 11 30M East of Ferry Street Bridge | 1245 | 155 | 12 | Southeast | Downwind | No activity observed on-Site | No observations seen to effect 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 ($\mu\text{g}/\text{m}^3$) |
|---|--------------|--|---|
| 70M South of Terminal Road Fixed Station | 0900 to 0959 | 8 | 990 |
| 70M South of Terminal Road Fixed Station/ 30M East of Ferry Street Bridge | 1000 to 1059 | 18 | 990 |
| 30M East of Ferry Street Bridge | 1100 to 1159 | 28 | 990 |
| 30M East of Ferry Street Bridge | 1200 to 1259 | 40 | 990 |

VOC Monitoring

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