

## MEMORANDUM

|             |                              |                 |                       |
|-------------|------------------------------|-----------------|-----------------------|
| <b>TO</b>   | Dawn MacNeil, STPA           | <b>FILE NO.</b> | S-1053-03             |
| <b>FROM</b> | Grant Harrigan               | <b>SHIFT:</b>   | 1300 to 1800          |
| <b>TEL</b>  | (902) 539-3012               | <b>CC:</b>      | Shawn Bernon, STPA    |
| <b>FAX</b>  | (902) 539-3381               |                 | Wilfred Kaiser, STPA  |
| <b>DATE</b> | 9 <sup>th</sup> January 2008 |                 | Terry Smith, ALL-TECH |
|             |                              | <b>STPA NO.</b> | <b>CP-0036</b>        |

**SUBJECT: 4<sup>th</sup> January 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Cooling Pond  
FINAL REPORT**

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Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 4<sup>th</sup> of January, 2008. Reg Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Overcast
- Temperature: -8°C
- Wind Direction: Southwest

**Comments:** ALL-TECH monitored additional construction activity which began at approximately 1300. Air monitoring was performed during EarthTech's additional construction activities.

All downwind and upwind measurements of PM<sub>10</sub> were well below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

This report has been prepared by Reg Peters 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,



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

Copied via e-mail:

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**Real-Time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Cooling Pond**  
**4<sup>th</sup> January, 2008**

| <b>Sample No. &amp; Air Monitoring Location</b>                  | <b>Time of Day</b> | <b>PM<sub>10</sub> Action Level (µg/m<sup>3</sup>)</b> | <b>Average Result (µg/m<sup>3</sup>)</b> | <b>Wind Direction</b> | <b>Relative Position</b> | <b>Activity Description</b> | <b>Observations that may affect sample</b>        |
|--|--------------------|--|--|-----------------------|--------------------------|-----------------------------|---|
| 1<br>10m Southeast of intersection of Spar Road and Wabana Court | 1315               | 155  | 6  | Southwest             | Downwind                 | Trucks dumping material     | No observations seen to effect sampling integrity |
| 2<br>10m Southeast of intersection of Spar Road and Wabana Court | 1331               | 155  | 6  | Southwest             | Downwind                 | Trucks dumping material     | No observations seen to effect sampling integrity |
| 3<br>30m Northeast of Ferry Street bridge                        | 0730               | 155  | 6  | Southwest             | Upwind                   | Background                  | No observations seen to effect sampling integrity |
| 4<br>10m Southeast of intersection of Spar Road and Wabana Court | 1415               | 155  | 5  | Southwest             | Downwind                 | Trucks dumping material     | No observations seen to effect sampling integrity |
| 5<br>10m Southeast of intersection of Spar Road and Wabana Court | 1431               | 155  | 5  | Southwest             | Downwind                 | Trucks dumping material     | No observations seen to effect sampling integrity |
| 18<br>30m Northeast of Ferry Street bridge                       | 1453               | 155  | 5  | Southwest             | Upwind                   | Background                  | No observations seen to effect sampling integrity |

| Sample No. & Air Monitoring Location                              | Time of Day | PM <sub>10</sub> Action Level (µg/m <sup>3</sup> ) | Average Result (µg/m <sup>3</sup> ) | Wind Direction | Relative Position | Activity Description    | Observations that may affect sample               |
|---|-------------|--|-------------------------------------|----------------|-------------------|-------------------------|---|
| 19<br>10m Southeast of intersection of Spar Road and Wabana Court | 1517        | 155  | 4                                   | Southwest      | Downwind          | Trucks dumping material | No observations seen to effect sampling integrity |
| 20<br>10m Southeast of intersection of Spar Road and Wabana Court | 1533        | 155  | 5                                   | Southwest      | Downwind          | Trucks dumping material | No observations seen to effect sampling integrity |
| 21<br>30m Northeast of Ferry Street bridge                        | 1555        | 155  | 5                                   | Southwest      | Upwind            | Background              | No observations seen to effect sampling integrity |
| 22<br>30m Southeast of intersection of Spar Road and Wabana Court | 1618        | 155  | 4                                   | Southwest      | Downwind          | Trucks dumping material | No observations seen to effect sampling integrity |
| 23<br>30m Southeast of intersection of Spar Road and Wabana Court | 1635        | 155  | 4                                   | Southwest      | Downwind          | Trucks dumping material | No observations seen to effect sampling integrity |
| 24<br>30m Northeast of Ferry Street bridge                        | 1700        | 155  | 5                                   | Southwest      | Upwind            | Background              | 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 ( $\mu\text{g}/\text{m}^3$ ) |
|---|--------------|--|---|
| 10m Southeast of intersection of Spar Road and Wabana Court | 1315 to 1346 | 6  | 990   |
| 10m Southeast of intersection of Spar Road an Wabana Court  | 1415 to 1446 | 11   | 990   |
| 10m Southeast of intersection of Spar Road an Wabana Court  | 1517 to 1548 | 16   | 990   |
| 30m Southeast of intersection of Spar Road an Wabana Court  | 1618 to 1650 | 20   | 990   |

### VOC Monitoring

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

\*P.I.D. was used for all samples and was below detection level.