

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
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**DATE** 15<sup>th</sup> January, 2009

**FILE NO.** S-1260-02  
**SHIFT:** 1300 to 1745  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH  
**STPA NO.** TP6C-0002

**SUBJECT: 14<sup>th</sup> January, 2009, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Geotechnical Drilling on Ferry Street  
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 14<sup>th</sup> of January, 2009. Tyler Rowe and Alison Giovannetti of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:  
- Mainly cloudy with flurries  
- Temperature: approximately 1°C  
- Wind Direction: West

**Comments:** Air monitoring was delayed until 1300 hours due to precipitation, and began at 1500 hours when weather conditions were within instrument specifications. *Air monitoring was performed during Jacques Whitford's construction activities.*

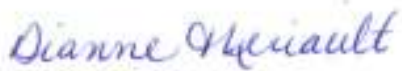
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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,



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Dianne Theriault, 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 – Geotechnical Drilling on Ferry Street**  
**14<sup>th</sup> January, 2009**

<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>Description of Activity</b>	<b>Observations that may affect sample</b>
1 Walker Street, 15m North of Ferry Street	1510	155	2	West	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis Street, 5m North of Spar Road	1510	155	2	West	Downwind	Drilling on Ferry Street	No observations seen to affect sampling integrity
3 Inglis Street, 5m North of Spar Road	1530	155	1	West	Downwind	Drilling on Ferry Street	No observations seen to affect sampling integrity
4 Walker Street, 15m North of Ferry Street	1600	155	1	West	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis Street, 5m North of Spar Road	1600	155	2	West	Downwind	Drilling on Ferry Street	No observations seen to affect sampling integrity
6 Inglis Street, 5m North of Spar Road	1645	155	6	West	Downwind	Drilling on Ferry Street	No observations seen to affect 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	Description of Activity	Observations that may affect sample
7 Walker Street, 15m North of Ferry Street	1700	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
8 Inglis Street, 5m North of Spar Road	1700	155	8	West	Downwind	Drilling on Ferry Street	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, 5m North of Spar Road	1500 to 1559	2	990
Inglis Street, 5m North of Spar Road	1600 to 1659	6	990
Inglis Street, 5m North of Spar Road	1700 to 1759	14	990

### VOC Monitoring

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