

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1193-04
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1730
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
<b>FAX</b>	(902) 539-3381		
<b>DATE</b>	9 <sup>th</sup> September, 2008	<b>STPA NO.</b>	<b>PS-0048</b>

**SUBJECT: 5<sup>th</sup> September, 2008, Real-time Air Monitoring Results (Revised)  
Sydney Tar Ponds Agency – North Pond Pilot Study  
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 5<sup>th</sup> of September, 2008. Reg Peters and Kelly Morrison 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 20°C
- Wind Direction: Northwest

**Comments:** *ALL-TECH was on-Site at 0730 and sampling began as soon as there was site activity. Air monitoring was performed during EarthTech'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 Kelly Morrison 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 – North Pond Pilot Study**  
**5<sup>th</sup> September, 2008**

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
1 30m North of Walker Street and Ferry Street intersection	0800	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 30 m Northeast of the Ferry St. bridge	0800	155	10	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
3 30 m Northeast of the Ferry St. bridge	0830	155	12	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
4 30m North of Walker Street and Ferry Street intersection	0900	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 30 m Northeast of the Ferry St. bridge	0900	155	14	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
6 30 m Northeast of the Ferry St. bridge	0915	155	12	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
7 30m North of Walker Street and Ferry Street intersection	1000	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity

<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>
8 30 m Northeast of the Ferry St. bridge	1000	155	12	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
9 30 m Northeast of the Ferry St. bridge	1020	155	13	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
10 30m North of Walker Street and Ferry Street intersection	1100	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 30 m Northeast of the Ferry St. bridge	1100	155	12	Northwest	Downwind	Machines moving equipment	No observations seen to effect sampling integrity
12 30 m Northeast of the Ferry St. bridge	1125	155	12	Northwest	Downwind	Machines moving equipment	No observations seen to effect sampling integrity
13 30m North of Walker Street and Ferry Street intersection	1200	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
14 30 m Northeast of the Ferry St. bridge	1200	155	11	Northwest	Downwind	No activity observed on site	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	Description of Activity	Observations that may affect sample
15 30 m Northeast of the Ferry St. bridge	1220	155	11	Northwest	Downwind	Crane Moving	No observations seen to effect sampling integrity
16 Railway property, 200m North of Ferry St	1300	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 40m South of the Southwest corner of the STPA building.	1300	155	10	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
18 40m South of the Southwest corner of the STPA building.	1335	155	10	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
19 Railway property, 200m North of Ferry St	1400	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 40m South of the Southwest corner of the STPA building.	1400	155	10	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
21 40m South of the Southwest corner of the STPA building.	1425	155	11	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
22 Railway property, 200m North of Ferry St.	1500	155	7	Northwest	Upwind	Background	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
23 40m South of the Southwest corner of the STPA building.	1500	155	12	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
24 40m South of the Southwest corner of the STPA building.	1520	155	11	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
25 Railway property, 200m North of Ferry St.	1600	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 40m South of the Southwest corner of the STPA building.	1600	155	12	Northwest	Downwind	Crane operating	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 ( $\mu\text{g}/\text{m}^3$ )
30m Northeast of Ferry St. bridge	0800 to 0859	11	990
30m Northeast of Ferry St. bridge	0900 to 0959	24	990
30m Northeast of Ferry St. bridge	1000 to 1059	37	990
30m Northeast of Ferry St. bridge	1100 to 1159	49	990
30m Northeast of Ferry St. bridge	1200 to 1259	60	990
40m south of southwest corner of STPA building	1300 to 1359	70	990
40m south of southwest corner of STPA building	1400 to 1459	81	990
40m south of southwest corner of STPA building	1500 to 1559	93	990
40m south of southwest corner of STPA building	1600 to 1659	105	990

### VOC Monitoring

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