

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1193-18
<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
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<b>DATE</b>	19 <sup>th</sup> September, 2008	<b>STPA NO.</b>	<b>PS-0062</b>

**SUBJECT: 18<sup>th</sup> September, 2008, Real-time Air Monitoring Results  
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 18<sup>th</sup> of September, 2008. Colin MacIsaac and Reg Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly cloudy
- Temperature: approximately 17°C
- Wind Direction: West to Southwest to West to Northwest to Northeast

**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 Colin MacIsaac 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**  
**18<sup>th</sup> September, 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>Description of Activity</b>	<b>Observations that may affect sample</b>
1 35m North of Ferry Street, Walker Street intersection	0800	155	11	West	Upwind	Background	No observations seen to affect sampling integrity
2 20m North of Inglis Street and Spar Road intersection	0800	155	10	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 20m North of Inglis Street and Spar Road intersection	0820	155	12	West	Downwind	Crane operating	No observations seen to affect sampling integrity
4 35m North of Ferry Street, Walker Street intersection	0900	155	13	West	Upwind	Background	No observations seen to affect sampling integrity
5 20m North of Inglis Street and Spar Road intersection	0900	155	14	West	Downwind	Crane operating	No observations seen to affect sampling integrity
6 20m North of Inglis Street and Spar Road intersection	0925	155	13	West	Downwind	Crane operating	No observations seen to affect sampling integrity
7 10m North of Intercolonial fixed station	1000	155	16	Southwest	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
8 100m North of Inglis Street, Spar Road intersection	1000	155	13	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
9 100m North of Inglis Street, Spar Road intersection	1040	155	19	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
10 35m North of Ferry Street, Walker Street intersection	1100	155	30	West	Upwind	Background	No observations seen to affect sampling integrity
11 20m North of Inglis Street and Spar Road intersection	1100	155	25	West	Downwind	Crane operating	No observations seen to affect sampling integrity
12 20m North of Inglis Street and Spar Road intersection	1120	155	36	West	Downwind	Crane operating	No observations seen to affect sampling integrity
13 35m North of Ferry Street, Walker Street intersection	1200	155	26	West	Upwind	Background	No observations seen to affect sampling integrity
14 20m North of Inglis Street and Spar Road intersection	1200	155	25	West	Downwind	No activity observed on site	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
15 20m North of Inglis Street and Spar Road intersection	1245	155	43	West	Downwind	Crane operating	No observations seen to affect sampling integrity
16 50m East of Midland building	1300	155	17	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 40m East of Ferry Street Bridge	1300	155	28	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
18 40m East of Ferry Street Bridge	1325	155	26	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
19 40m East of Ferry Street Bridge	1400	155	19	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
20 40m East of Ferry Street Bridge	1420	155	22	Northwest	Downwind	Crane operating	No observations seen to affect sampling integrity
21 50m East of Midland building	1430	155	19	Northwest	Upwind	Background	No observations seen to affect sampling integrity
22 40m East of Ferry Street Bridge	1500	155	26	Northeast	Downwind	Crane operating	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 50m East of North Pond main to gate	1510	155	2	Northeast	Upwind	Background	No observations seen to affect sampling integrity
24 40m East of Ferry Street Bridge	1530	155	27	Northeast	Downwind	Crane operating	No observations seen to affect sampling integrity
25 50m East of North Pond main to gate	1600	155	6	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 40m South of railway and Ferry Street intersection	1600	155	22	Northeast	Downwind	Crane operating	No observations seen to affect sampling integrity
27 40m South of railway and Ferry Street intersection	1645	155	6	Northeast	Downwind	No activity observed on site	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

<b>Location</b>	<b>Duration</b>	<b>Dust Budget Value (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Dust Budget Exceedance Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
20m North of Inglis Street and Spar Road intersection	0800 to 0859	11	990
20m North of Inglis Street and Spar Road intersection	0900 to 0959	25	990
100m North of Inglis Street and Spar Road intersection	1000 to 1059	41	990
20m North of Inglis Street and Spar Road intersection	1100 to 1159	72	990
20m North of Inglis Street and Spar Road intersection	1200 to 1259	106	990
40m East of Ferry Street bridge	1300 to 1359	133	990
40m East of Ferry Street bridge	1400 to 1459	154	990
40m South of railway and Ferry Street intersection	1500 to 1559	186	990
40m South of railway and Ferry Street intersection	1600 to 1659	200	990

### VOC Monitoring

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