

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
**TEL** (902) 539-3012  
**FAX** (902) 539-3381  
**DATE** 18<sup>th</sup> September, 2008

**FILE NO.** S-1193-17  
**SHIFT:** 0730 to 1730  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH

**STPA NO.** PS-0061

**SUBJECT: 17<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 17<sup>th</sup> of September, 2008. Reg Peters and Tyler Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Sunny with cloudy periods
- Temperature: approximately 20°C
- Wind Direction: Northwest to Southwest

**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 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:

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

**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – North Pond Pilot Study**  
**17<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 40m Northeast of Ferry Street bridge	0800	155	6	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
2 Railroad property, 200m North of Ferry Street	0810	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
3 40m Northeast of Ferry Street bridge	0835	155	7	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
4 Railroad property, 200m North of Ferry Street	0900	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 40m Northeast of Ferry Street bridge	0900	155	10	Northwest	Downwind	Crane operating	No observations seen to effect sampling integrity
6 15m North of North Pond main gate	0945	155	16	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
7 10m East of Intercolonial Street fixed station	1000	155	11	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 15m North of North Pond main gate	1000	155	30	Southwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
9 15m North of North Pond main gate	1045	155	41	Southwest	Downwind	Crane operating	Dust from site road traffic
10 10m East of Intercolonial Street fixed station	1100	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 15m North of North Pond main gate	1100	155	33	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
12 15m North of North Pond main gate	1120	155	41	Southwest	Downwind	Crane operating	Dust from site road traffic
13 10m East of Intercolonial Street fixed station	1200	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 15m North of North Pond main gate	1200	155	64	Southwest	Downwind	No activity observed on site	Dust from site road traffic
15 15m North of North Pond main gate	1245	155	18	Southwest	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
16 10m East of Intercolonial Street fixed station	1300	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 15m North of North Pond main gate	1300	155	14	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
18 15m North of North Pond main gate	1315	155	19	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
19 10m East of Intercolonial Street fixed station	1400	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 15m North of North Pond main gate	1400	155	18	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
21 15m North of North Pond main gate	1430	155	19	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
22 10m East of Intercolonial Street fixed station	1500	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 15m North of North Pond main gate	1500	155	18	Southwest	Downwind	Crane operating	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
24 15m North of North Pond main gate	1530	155	38	Southwest	Downwind	Crane operating	Dust from site road traffic
25 10m East of Intercolonial Street fixed station	1600	155	22	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 15m North of North Pond main gate	1600	155	19	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
27 15m North of North Pond main gate	1645	155	25	Southwest	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 ( $\mu\text{g}/\text{m}^3$ )
40m Northeast of Ferry Street bridge	0800 to 0859	7	990
40m Northeast of Ferry Street bridge / 15m North of North Pond main gate	0900 to 0959	20	990
15m North of North Pond main gate	1000 to 1059	56	990
15m North of North Pond main gate	1100 to 1159	93	990
15m North of North Pond main gate	1200 to 1259	134	990
15m North of North Pond main gate	1300 to 1359	151	990
15m North of North Pond main gate	1400 to 1459	170	990
15m North of North Pond main gate	1500 to 1559	198	990
15m North of North Pond main gate	1600 to 1659	220	990

### VOC Monitoring

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