

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1173-14
<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>	22 <sup>nd</sup> August, 2008	<b>STPA NO.</b>	<b>PS-0039</b>

**SUBJECT: 22<sup>nd</sup> August, 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 22<sup>nd</sup> of August, 2008. Reg Peters and Donald MacIsaac of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Clear
- Temperature: approximately 24°C
- Wind Direction: 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 Donald 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**  
**22<sup>nd</sup> August, 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 25m South of Walker and Ferry Street Intersection	0800	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 15m North of North Pond Main Gate	0800	155	18	Southwest	Downwind	No activity observed on-site	No observations seen to affect sampling integrity
3 15m North of North Pond Main Gate	0830	155	20	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
4 25m South of Walker and Ferry Street Intersection	0900	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 15m North of North Pond Main Gate	0900	155	39	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
6 15m North of North Pond Main Gate	0945	155	14	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
7 15m North of North Pond Main Gate	1000	155	24	Southwest	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
8 25m South of Walker and Ferry Street Intersection	1005	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
9 15m North of North Pond Main Gate	1035	155	24	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
10 25m South of Walker and Ferry Street Intersection	1100	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 30m East of North Pond Main Gate	1100	155	17	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
12 30m East of North Pond Main Gate	1145	155	27	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
13 25m South of Walker and Ferry Street Intersection	1200	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 30m East of North Pond Main Gate	1200	155	19	Southwest	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 30m Northeast of Ferry Street Bridge	1220	155	27	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
16 25m South of Walker and Ferry Street Intersection	1300	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 30m East of North Pond Main Gate	1300	155	51	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
18 30m East of North Pond Main Gate	1340	155	22	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
19 25m South of Walker and Ferry Street Intersection	1400	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 30m East of North Pond Main Gate	1400	155	25	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
21 30m East of North Pond Main Gate	1445	155	22	Southwest	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
22 25m South of Walker and Ferry Street Intersection	1500	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 30m East of North Pond Main Gate	1500	155	43	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
24 30m East of North Pond Main Gate	1520	155	30	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
25 25m South of Walker and Ferry Street Intersection	1600	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 30m East of North Pond Main Gate	1600	155	36	Southwest	Downwind	Crane operating	No observations seen to affect sampling integrity
27 30m East of North Pond Main Gate	1645	155	26	Southwest	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

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
15m North of North Pond Main Gate	0800 to 0859	20	990
15m North of North Pond Main Gate	0900 to 0959	47	990
15m North of North Pond Main Gate	1000 to 1059	72	990
30m East of North Pond Main Gate	1100 to 1159	94	990
30m East of North Pond Main Gate	1200 to 1259	117	990
30m East of North Pond Main Gate	1300 to 1359	154	990
30m East of North Pond Main Gate	1400 to 1459	178	990
30m East of North Pond Main Gate	1500 to 1559	215	990
30m East of North Pond Main Gate	1600 to 1659	246	990

### VOC Monitoring

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