

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1173-12
<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>	20 <sup>th</sup> August, 2008	<b>STPA NO.</b>	<b>PS-0037</b>

**SUBJECT: 20<sup>th</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 20<sup>th</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:

- Partly cloudy
- Temperature: approximately 19°C
- Wind Direction: West

**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.*

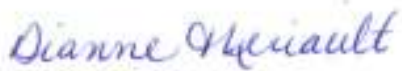
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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**  
**20<sup>th</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 Walker Street, 20m North of Ferry Street	0800	155	12	West	Upwind	Background	No observations seen to affect sampling integrity
2 60m West of Inglis Street & Spar Road Intersection	0800	155	24	West	Downwind	No activity observed on-site	No observations seen to affect sampling integrity
3 60m West of Inglis Street & Spar Road Intersection	0830	155	9	West	Downwind	Crane operating	No observations seen to affect sampling integrity
4 Walker Street, 20m North of Ferry Street	0900	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
5 60m West of Inglis Street & Spar Road Intersection	0900	155	18	West	Downwind	Crane operating	No observations seen to affect sampling integrity
6 60m West of Inglis Street & Spar Road Intersection	0945	155	13	West	Downwind	Crane operating	No observations seen to affect sampling integrity
7 1 Walker Street, 20m North of Ferry Street	1000	155	5	West	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 60m West of Inglis Street & Spar Road Intersection	1000	155	21	West	Downwind	Crane operating	No observations seen to affect sampling integrity
9 60m West of Inglis Street & Spar Road Intersection	1045	155	14	West	Downwind	Crane operating	No observations seen to affect sampling integrity
10 Walker Street, 20m North of Ferry Street	1100	155	13	West	Upwind	Background	No observations seen to affect sampling integrity
11 60m West of Inglis Street & Spar Road Intersection	1100	155	12	West	Downwind	Crane operating	No observations seen to affect sampling integrity
12 60m West of Inglis Street & Spar Road Intersection	1145	155	52	West	Downwind	Crane operating	Windblown dust from road
13 Walker Street, 20m North of Ferry Street	1200	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
14 60m West of Inglis Street & Spar Road Intersection	1200	155	24	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 60m West of Inglis Street & Spar Road Intersection	1230	155	28	West	Downwind	Crane operating	No observations seen to affect sampling integrity
16 Walker Street, 20m North of Ferry Street	1300	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
17 60m West of Inglis Street & Spar Road Intersection	1300	155	22	West	Downwind	Crane operating	No observations seen to affect sampling integrity
18 60m West of Inglis Street & Spar Road Intersection	1325	155	32	West	Downwind	Crane operating	No observations seen to affect sampling integrity
19 Walker Street, 20m North of Ferry Street	1400	155	13	West	Upwind	Background	No observations seen to affect sampling integrity
20 60m West of Inglis Street & Spar Road Intersection	1400	155	33	West	Downwind	Crane operating	No observations seen to affect sampling integrity
21 60m West of Inglis Street & Spar Road Intersection	1430	155	10	West	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 Walker Street, 20m North of Ferry Street	1500	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
23 50m West of Inglis Street & Spar Road Intersection	1500	155	63	West	Downwind	Crane operating	Windblown dust from road
24 50m West of Inglis Street & Spar Road Intersection	1520	155	25	West	Downwind	Crane operating	No observations seen to affect sampling integrity
25 Walker Street, 20m North of Ferry Street	1600	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
26 50m West of Inglis Street & Spar Road Intersection	1600	155	22	West	Downwind	Crane operating	No observations seen to affect sampling integrity
27 50m West of Inglis Street & Spar Road Intersection	1645	155	12	West	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 ( $\mu\text{g}/\text{m}^3$ )
60m West of Inglis Street & Spar Road Intersection	0800 to 0859	17	990
60m West of Inglis Street & Spar Road Intersection	0900 to 0959	33	990
60m West of Inglis Street & Spar Road Intersection	1000 to 1059	51	990
60m West of Inglis Street & Spar Road Intersection	1100 to 1159	83	990
60m West of Inglis Street & Spar Road Intersection	1200 to 1259	109	990
60m West of Inglis Street & Spar Road Intersection	1300 to 1359	136	990
60m West of Inglis Street & Spar Road Intersection	1400 to 1459	158	990
50m West of Inglis Street & Spar Road Intersection	1500 to 1559	202	990
50m West of Inglis Street & Spar Road Intersection	1600 to 1659	219	990

### VOC Monitoring

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