

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
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**DATE** 14<sup>th</sup> August, 2008

**FILE NO.** S-1173-07  
**SHIFT:** 0730 to 1730  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH

**STPA NO.** PS-0032

**SUBJECT: 13<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 13<sup>th</sup> of August, 2008. Reg Peters, Donald MacIsaac 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:

- Cloudy, Clear periods
- Temperature: approximately 18°C
- Wind Direction: Southwest / 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**  
**13<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 30m Southeast of Walker & Ferry Street Intersection	0800	155	14	Southwest	Upwind	Background	No observations seen to effect sampling integrity
2 10m Northeast of North Pond Main Gate	0805	155	12	Southwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
3 10m Northeast of North Pond Main Gate	0830	155	12	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
4 30m Southeast of Walker & Ferry Street Intersection	0900	155	10	Southwest	Upwind	Background	No observations seen to effect sampling integrity
5 10m Northeast of North Pond Main Gate	0900	155	15	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
6 10m Northeast of North Pond Main Gate	0930	155	8	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
7 30m Southeast of Walker & Ferry Street Intersection	1000	155	13	Southwest	Upwind	Background	No observations seen to effect sampling integrity
8 10m Northeast of North Pond Main Gate	1000	155	14	Southwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
9 10m Northeast of North Pond Main Gate	1045	155	7	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
10 30m Southeast of Walker & Ferry Street Intersection	1100	155	13	Southwest	Upwind	Background	No observations seen to effect sampling integrity
11 60m West of Inglis Street & Spar Road Intersection	1100	155	9	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
12 60m West of Inglis Street & Spar Road Intersection	1130	155	11	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
13 60m North of Walker Street and Ferry Street intersection	1200	155	15	Southwest	Upwind	Background	No observations seen to effect 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>
14 60m West of Inglis Street & Spar Road Intersection	1200	155	6	Southwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
15 60m West of Inglis Street & Spar Road Intersection	1220	155	9	Southwest	Downwind	Crane operating	No observations seen to effect sampling integrity
16 80m Northeast of Walker Street and Ferry Street intersection	1300	155	15	West	Upwind	Background	No observations seen to effect sampling integrity
17 30m West of Inglis Street & Spar Road Intersection	1300	155	11	West	Downwind	Crane operating	No observations seen to effect sampling integrity
18 30m West of Inglis Street & Spar Road Intersection	1340	155	11	West	Downwind	Crane operating	No observations seen to effect sampling integrity
19 80m Northeast of Walker Street and Ferry Street intersection	1400	155	14	West	Upwind	Background	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
20 30m West of Inglis Street & Spar Road Intersection	1400	155	10	West	Downwind	Crane operating	No observations seen to effect sampling integrity
21 30m West of Inglis Street & Spar Road Intersection	1415	155	5	West	Downwind	Crane operating	No observations seen to effect sampling integrity
22 80m Northeast of Walker Street and Ferry Street intersection	1500	155	6	West	Upwind	Background	No observations seen to effect sampling integrity
23 30m West of Inglis Street & Spar Road Intersection	1500	155	3	West	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
24 30m West of Inglis Street & Spar Road Intersection	1515	155	4	West	Downwind	Crane operating	No observations seen to effect sampling integrity
25 80m Northeast of Walker Street and Ferry Street intersection	1600	155	7	West	Upwind	Background	No observations seen to effect sampling integrity
26 30m West of Inglis Street & Spar Road Intersection	1600	155	4	West	Downwind	Crane operating	No observations seen to effect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM10 Action Level (µg/m3)	Average Result (µg/m3)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
27 30m West of Inglis Street & Spar Road Intersection	1645	155	3	West	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 ( $\mu\text{g}/\text{m}^3$ )
10m Northeast of North Pond Main Gate	0800 to 0859	12	990
10m Northeast of North Pond Main Gate	0900 to 0959	24	990
10m Northeast of North Pond Main Gate	1000 to 1059	35	990
60m West of Inglis Street & Spar Road Intersection	1100 to 1159	45	990
60m West of Inglis Street & Spar Road Intersection	1200 to 1259	53	990
30m West of Inglis Street & Spar Road Intersection	1300 to 1359	64	990
30m West of Inglis Street & Spar Road Intersection	1400 to 1459	72	990
30m West of Inglis Street & Spar Road Intersection	1500 to 1559	76	990
30m West of Inglis Street & Spar Road Intersection	1600 to 1659	80	990



### VOC Monitoring

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