

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1152-09
<b>FROM</b>	Peter Ibrahim	<b>SHIFT:</b>	0630 to 1700
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	18 <sup>th</sup> June, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>PS-0018</b>

**SUBJECT: 17<sup>th</sup> June, 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 June, 2008. Donald 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:

- Periods of sun and clouds
- Temperature: approximately 18°C
- Wind Direction: Southwest to Northwest to East

**Comments:** *ALL-TECH was on-Site at 0630 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 Peter Ibrahim and Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



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Peter Ibrahim

**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**  
**17<sup>th</sup> June, 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 80m West of Ferry St. Bridge	0715	155	5	Southwest	Upwind	Background	No observations seen to effect sampling integrity
2 150m Northwest of intersection of Inglis St and Spar Rd	0715	155	3	Southwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
3 150m Northwest of intersection of Inglis St and Spar Rd	0745	155	4	Southwest	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
4 80m West of Ferry St. Bridge	0800	155	8	Southwest	Upwind	Background	No observations seen to effect sampling integrity
5 150m Northwest of intersection of Inglis St and Spar Rd	0800	155	4	Southwest	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
6 150m Northwest of intersection of Inglis St and Spar Rd	0840	155	4	Southwest	Downwind	Trucks Dumping/ Machines moving materials	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 Northeast of North Pond Gate	0900	155	10	Southwest	Upwind	Background	No observations seen to effect sampling integrity
8 150m Northwest of intersection of Inglis St and Spar Rd	0900	155	4	Southwest	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
9 150m Northwest of intersection of Inglis St and Spar Rd	0930	155	6	Southwest	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
10 30m Northeast of North Pond Gate	1000	155	6	Southwest	Upwind	Background	No observations seen to effect sampling integrity
11 150m Northwest of intersection of Inglis St and Spar Rd	1000	155	6	Southwest	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
12 40m Northeast of intersection of Walker St and Ferry St	1045	155	6	Northwest	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
13 25m Northeast of North Pond Gate	1100	155	6	Northwest	Upwind	Background	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
14 40m Northeast of intersection of Walker St and Ferry St	1100	155	7	Northwest	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
15 40m Northeast of intersection of Walker St and Ferry St	1145	155	9	Northwest	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
16 25m Northeast of North Pond gate	1200	155	10	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 40m Northeast of intersection of Walker St and Ferry St	1200	155	8	Northwest	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
18 40m Northeast of intersection of Walker St and Ferry St	1230	155	9	Northwest	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
19 25m Southeast of North Pond gate	1300	155	9	East	Upwind	Background	No observations seen to effect sampling integrity
20 100m Northwest of intersection of Walker St and Ferry St	1300	155	9	East	Downwind	Trucks Dumping/ Machines moving materials	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
21 100m Northwest of intersection of Walker St and Ferry St	1330	155	10	East	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
22 25m Southeast of North Pond gate	1400	155	8	East	Upwind	Background	No observations seen to effect sampling integrity
23 100m Northwest of intersection of Walker St and Ferry St	1400	155	7	East	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
24 100m Northwest of intersection of Walker St and Ferry St	1415	155	7	East	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
25 25m Northeast of North Pond gate	1500	155	6	East	Upwind	Background	No observations seen to effect sampling integrity
26 100m Northwest of intersection of Walker St and Ferry St	1500	155	6	East	Downwind	Trucks Dumping/ Machines moving materials	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 100m Northwest of intersection of Walker St and Ferry St	1530	155	9	East	Downwind	Trucks Dumping/ Machines moving materials	No observations seen to effect sampling integrity
28 30m Northeast of North Pond gate	1600	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
29 100m Northwest of intersection of Walker St and Ferry St	1600	155	8	East	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
30 100m Northwest of intersection of Walker St and Ferry St	1615	155	10	East	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 ( $\mu\text{g}/\text{m}^3$ )
150m Northwest of intersection of Inglis St. and Spar Rd.	0700 to 0759	4	990
150m Northwest of intersection of Inglis St. and Spar Rd.	0800 to 0859	8	990
150m Northwest of intersection of Inglis St. and Spar Rd.	0900 to 0959	13	990
150m Northwest of intersection of Inglis St. and Spar Rd./ 40m Northeast of intersection of Walker St and Ferry St.	1000 to 1059	19	990
40m Northeast of intersection of Walker St. and Ferry St.	1100 to 1159	27	990
40m Northeast of intersection of Walker St. and Ferry St.	1200 to 1259	36	990
100m Northwest of intersection of Walker St. and Ferry St.	1300 to 1359	46	990
100m Northwest of intersection of Walker St. and Ferry St.	1400 to 1459	53	990
100m Northwest of intersection of Walker St. and Ferry St.	1500 to 1559	61	990



Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
100m Northwest of intersection of Walker St. and Ferry St.	1600 to 1659	80	990

### VOC Monitoring

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