

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1152-06
<b>FROM</b>	Peter Ibrahim	<b>SHIFT:</b>	0630 to 1800
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	13 <sup>th</sup> June, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>PS-0015</b>

**SUBJECT: 12<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 12<sup>th</sup> of June, 2008. Colin 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:

- Overcast giving way to sunny periods
- Temperature: approximately 18°C
- Wind Direction: Southwest / West / North / Northwest

**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 Colin MacIsaac and reviewed by Peter Ibrahim. 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**  
**12<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 35m Northeast of Acadian Lines terminal	0710	155	10	Southwest	Upwind	Background	No observations seen to effect sampling integrity
2 100m Northwest of Spar Road, Inglis Street intersection	0710	155	14	Southwest	Downwind	No activity observed	No observations seen to effect sampling integrity
3 70m Northwest of Spar Road, Inglis Street intersection	0740	155	18	West	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
4 10m North of Ferry Street, Walker Street intersection	0800	155	19	West	Upwind	Background	No observations seen to effect sampling integrity
5 70m Northwest of Spar Road, Inglis Street intersection	0800	155	31	West	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
6 70m Northwest of Spar Road, Inglis Street intersection	0845	155	48	West	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
7 10m North of Ferry Street, Walker Street intersection	0900	155	13	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
8 70m Northwest of Spar Road, Inglis Street intersection	0900	155	20	West	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
9 70m Northwest of Spar Road, Inglis Street intersection	0940	155	14	West	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
10 10m North of Ferry Street, Walker Street intersection	1000	155	8	West	Upwind	Background	No observations seen to effect sampling integrity
11 70m Northwest of Spar Road, Inglis Street intersection	1000	155	10	West	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
12 70m Northwest of Spar Road, Inglis Street intersection	1030	155	31	West	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
13 40m North of Ferry Street, Walker Street intersection	1100	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
14 70m Northwest of Spar Road, Inglis Street intersection	1100	155	7	West	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
15 70m Northwest of Spar Road, Inglis Street intersection	1130	155	3	West	Downwind	Excavators, trucks 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
16 30m Northeast of North Pond main gate	1200	155	1	North	Upwind	Background	No observations seen to effect sampling integrity
17 50m Southeast of Ferry Street, Walker Street intersection	1200	155	4	North	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
18 50m Southeast of Ferry Street, Walker Street intersection	1230	155	7	North	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
19 30m Northeast of North Pond main gate	1300	155	2	North	Upwind	Background	No observations seen to effect sampling integrity
20 50m Southeast of Ferry Street, Walker Street intersection	1300	155	5	North	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
21 30m Northeast of Ferry Street Bridge	1345	155	15	Northwest	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
22 40m North of Ferry Street, Walker Street intersection	1400	155	16	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 30m Northeast of Ferry Street Bridge	1400	155	21	Northwest	Downwind	Excavators, trucks 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
24 30m Northeast of Ferry Street Bridge	1430	155	19	Northwest	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
25 40m North of Ferry Street, Walker Street intersection	1500	155	16	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 30m Northeast of Ferry Street Bridge	1500	155	54	Northwest	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
27 30m Northeast of Ferry Street Bridge	1530	155	28	Northwest	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
28 40m North of Ferry Street, Walker Street intersection	1600	155	20	Northwest	Upwind	Background	No observations seen to effect sampling integrity
29 30m Northeast of Ferry Street Bridge	1600	155	57	Northwest	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
30 30m Northeast of Ferry Street Bridge	1615	155	75	Northwest	Downwind	Excavators, trucks moving materials	No observations seen to effect sampling integrity
31 40m North of Ferry Street, Walker Street intersection	1700	155	2	Northwest	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
32 30m Northeast of Ferry Street Bridge	1700	155	8	Northwest	Downwind	No activity observed	No observations seen to effect sampling integrity
33 30m Northeast of Ferry Street Bridge	1715	155	13	Northwest	Downwind	No activity observed	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 (µg/m <sup>3</sup> )	Dust Budget Exceedance Value (µg/m <sup>3</sup> )
100m Northwest of Spar Road, Inglis Street intersection	0700 to 0759	16	990
70m Northwest of Spar Road, Inglis Street intersection	0800 to 0859	56	990
70m Northwest of Spar Road, Inglis Street intersection	0900 to 0959	73	990
70m Northwest of Spar Road, Inglis Street intersection	1000 to 1059	94	990
70m Northwest of Spar Road, Inglis Street intersection	1100 to 1159	99	990

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
50m Southeast of Ferry Street, Walker Street intersection	1200 to 1259	105	990
50m Southeast of Ferry Street, Walker Street intersection	1300 to 1359	115	990
30m Northeast of Ferry Street Bridge	1400 to 1459	135	990
30m Northeast of Ferry Street Bridge	1500 to 1559	176	990
30m Northeast of Ferry Street Bridge	1600 to 1659	242	990
30m Northeast of Ferry Street Bridge	1700 to 1759	253	990

### VOC Monitoring

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