

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1138-06
<b>FROM</b>	Grant Harrigan	<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>	2 <sup>nd</sup> June, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CP-0138</b>

**SUBJECT: 30<sup>th</sup> May 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Cooling Pond  
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 30<sup>th</sup> of May, 2008. Tyler Rowe 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:

- Sunny
- Temperature: approximately 18°C
- Wind Direction: West to 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 Tyler Rowe 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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Grant Harrigan, 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 – Cooling Pond**  
**30<sup>th</sup> May, 2008**

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
1 5m East of Intercolonial Street fixed station	0700	155	4	West	Upwind	Background	No observations seen to effect sampling integrity
2 15m West of STPA building	0700	155	3	West	Downwind	No activity	No observations seen to effect sampling integrity
3 15m West of STPA building	0730	155	3	West	Downwind	No activity	No observations seen to effect sampling integrity
4 5m East of Intercolonial Street fixed station	0800	155	9	West	Upwind	Background	No observations seen to effect sampling integrity
5 15m West of STPA building	0800	155	2	West	Downwind	No activity	No observations seen to effect sampling integrity
6 15m West of STPA building	0830	155	4	West	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
7 5m East of Intercolonial Street fixed station	0900	155	3	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 15m West of STPA building	0900	155	3	West	Downwind	No activity	No observations seen to effect sampling integrity
9 15m West of STPA building	0945	155	5	West	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
10 5m East of Intercolonial Street fixed station	1000	155	3	West	Upwind	Background	No observations seen to effect sampling integrity
11 15m West of STPA building	1000	155	6	West	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
12 15m West of STPA building	1015	155	4	West	Downwind	No activity	No observations seen to effect sampling integrity
13 Corner of Ferry Street and Walker Street	1100	155	8	Northwest	Upwind	Background	No observations seen to effect sampling integrity
14 10m South of corner of Inglis Street and Cape Breton Street	1100	155	6	Northwest	Downwind	Bulldozer 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
15 10m South of corner of Inglis Street and Cape Breton Street	1130	155	11	Northwest	Downwind	No activity	No observations seen to effect sampling integrity
16 Corner of Ferry Street and Walker Street	1200	155	5	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 10m South of corner of Inglis Street and Cape Breton Street	1200	155	5	Northwest	Downwind	No activity	No observations seen to effect sampling integrity
18 10m South of corner of Inglis Street and Cape Breton Street	1215	155	4	Northwest	Downwind	No activity	No observations seen to effect sampling integrity
19 Corner of Ferry Street and Walker Street	1300	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 10m South of corner of Inglis Street and Cape Breton Street	1300	155	13	Northwest	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
21 10m South of corner of Inglis Street and Cape Breton Street	1345	155	5	Northwest	Downwind	Bulldozer 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
22 Corner of Ferry Street and Walker Stret	1400	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 10m South of corner of Inglis Street and Cape Breton Street	1400	155	9	Northwest	Downwind	Trucks operating	No observations seen to effect sampling integrity
24 10m South of corner of Inglis Street and Cape Breton Street	1430	155	4	Northwest	Downwind	Trucks operating	No observations seen to effect sampling integrity
25 Corner of Ferry Street and Walker Stret	1500	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 10m South of corner of Inglis Street and Cape Breton Street	1500	155	5	Northwest	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
27 10m South of corner of Inglis Street and Cape Breton Street	1530	155	4	Northwest	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
28 Corner of Ferry Street and Walker Stret	1600	155	9	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
29 10m South of corner of Inglis Street and Cape Breton Street	1600	155	4	Northwest	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
30 10m South of corner of Inglis Street and Cape Breton Street	1645	155	4	Northwest	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
31 Corner of Ferry Street and Walker Stret	1700	155	7	Northwest	Upwind	Background	No observations seen to effect sampling integrity
32 10m South of corner of Inglis Street and Cape Breton Street	1700	155	3	Northwest	Downwind	Bulldozer operating	No observations seen to effect sampling integrity
33 10m South of corner of Inglis Street and Cape Breton Street	1715	155	3	Northwest	Downwind	No activity	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 ( $\mu\text{g}/\text{m}^3$ )
15m West of STPA building	0700 to 0759	3	990
15m West of STPA building	0800 to 0859	6	990
15m West of STPA building	0900 to 0959	10	990
15m West of STPA building	1000 to 1059	15	990
10m South of corner of Inglis Street and Cape Breton Street	1100 to 1159	24	990
10m South of corner of Inglis Street and Cape Breton Street	1200 to 1259	29	990
10m South of corner of Inglis Street and Cape Breton Street	1300 to 1359	38	990
10m South of corner of Inglis Street and Cape Breton Street	1400 to 1459	45	990
10m South of corner of Inglis Street and Cape Breton Street	1500 to 1559	50	990
10m South of corner of Inglis Street and Cape Breton Street	1600 to 1659	54	990
10m South of corner of Inglis Street and Cape Breton Street	1700 to 1759	57	990



### VOC Monitoring

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