

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1053-14
<b>FROM</b>	Grant Harrigan	<b>SHIFT:</b>	0630 to 1845
<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> January, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>CP-0047</b>

**SUBJECT: 17<sup>th</sup> January, 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 17<sup>th</sup> of January, 2008. Ryan Butts and Reg Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities for the Cooling Pond.

Weather conditions on the day of sampling:

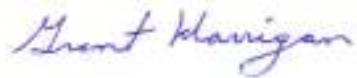
- Overcast, light precipitation
- Temperature: -7.5°C
- Wind Direction: Northeast to North to Northwest

**Comments:** *ALL-TECH was on-Site at 0630 and sampling began as soon as there was Site activity. Air monitoring was performed during EarthTech construction activities.*

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

This report has been prepared by Grant Harrigan 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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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**  
**17<sup>th</sup> January, 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 20m North of Inglis Street & Spar Road intersection	0708	155	3	Northeast	Upwind	Background	Winds blowing snow around on ground
2 100m Northeast of Acadian Lines bus terminal	0715	155	5	Northeast	Downwind	No visible activity	No observations seen to effect sampling integrity
3 100m Northeast of Acadian Lines bus terminal	0740	155	6	Northeast	Downwind	Excavators digging material	No observations seen to effect sampling integrity
4 25m North of Inglis Street & Spar Road intersection	0804	155	6	Northeast	Upwind	Background	Winds blowing snow around on ground
5 100m Northeast of Acadian Lines bus terminal	0819	155	6	Northeast	Downwind	Excavators digging material	No observations seen to effect sampling integrity
6 100m Northeast of Acadian Lines bus terminal	0835	155	10	Northeast	Downwind	Excavators digging material	No observations seen to effect sampling integrity
7 25m North of Inglis Street & Spar Road intersection	0906	155	5	Northeast	Upwind	Background	Winds blowing snow around on ground

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 130m Northeast of Acadian Lines bus terminal	0920	155	6	Northeast	Downwind	Excavators digging material	No observations seen to effect sampling integrity
9 130m Northeast of Acadian Lines bus terminal	0940	155	5	Northeast	Downwind	Excavators digging material	No observations seen to effect sampling integrity
10 25m North of Inglis Street & Spar Road intersection	1005	155	5	Northeast	Upwind	Background	Dump Trucks passing by and high winds
11 130m Northeast of Acadian Lines bus terminal	1016	155	6	Northeast	Downwind	Excavators digging material	No observations seen to effect sampling integrity
12 130m Northeast of Acadian Lines bus terminal	1035	155	5	Northeast	Downwind	Excavators digging material	No observations seen to effect sampling integrity
13 20m North of Inglis Street & Spar Road intersection	1101	155	4	Northeast	Upwind	Background	Dump Trucks passing by and high winds
14 130m Northeast of Acadian Lines bus terminal	1116	155	4	Northeast	Downwind	Excavators digging material	No observations seen to effect sampling integrity
15 160m Northeast of Acadian Lines bus terminal	1134	155	4	Northeast	Downwind	Excavators digging material	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 25m North of Inglis Street & Spar Road intersection	1204	155	3	Northeast	Upwind	Background	Dump Trucks passing by and high winds
17 160m Northeast of Acadian Lines bus terminal	1217	155	3	Northeast	Downwind	Excavators digging material	No observations seen to effect sampling integrity
18 40m Northwest of Inglis Street & Terminal Road	1243	155	3	North	Downwind	Excavators digging material	No observations seen to effect sampling integrity
19 20m North of Inglis Street & Spar Road intersection	1304	155	3	North	Upwind	Background	Dump Trucks passing by and high winds
20 40m Northwest of Inglis Street & Terminal Road	1313	155	6	North	Downwind	Excavators digging material	No observations seen to effect sampling integrity
21 40m Northwest of Inglis Street & Terminal Road	1338	155	4	North	Downwind	Excavators digging material	No observations seen to effect sampling integrity
22 20m North of Inglis Street & Spar Road intersection	1402	155	4	North	Upwind	Background	Dump Trucks passing by and high winds
23 30m Northwest of Inglis Street & Terminal Road	1414	155	5	North	Downwind	Excavators digging material	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 Northwest of Inglis Street & Terminal Road	1431	155	7	North	Downwind	Excavators digging material	No observations seen to effect sampling integrity
25 20m North of Inglis Street & Spar Road intersection	1507	155	3	North	Upwind	Background	Dump Trucks passing by and high winds
26 30m Northwest of Inglis Street & Terminal Road	1515	155	30	North	Downwind	Excavators digging material	No observations seen to effect sampling integrity
27 30m Northwest of Inglis Street & Terminal Road	1540	155	3	North	Downwind	Excavators digging material	No observations seen to effect sampling integrity
28 20m North of Inglis Street & Spar Road intersection	1604	155	2	Northeast	Upwind	Background	Dump Trucks passing by and high winds
29 60m North of Inglis Street & Terminal Road	1615	155	22	Northwest	Downwind	Excavators digging material	No observations seen to effect sampling integrity
30 60m North of Inglis Street & Terminal Road	1638	155	13	Northwest	Downwind	Excavators digging material	No observations seen to effect sampling integrity
31 100m East of Ferry Street Bridge	1702	155	1	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 60m North of Inglis Street & Terminal Road	1710	155	6	Northwest	Downwind	Excavators digging material	No observations seen to effect sampling integrity
33 60m North of Inglis Street & Terminal Road	1730	155	5	Northwest	Downwind	Excavators digging material	No observations seen to effect sampling integrity
34 100m East of Ferry Street Bridge	1800	155	1	Northwest	Upwind	Background	No observations seen to effect sampling integrity
35 60m North of Inglis Street & Terminal Road	1800	155	6	Northwest	Downwind	No visible 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 ( $\mu\text{g}/\text{m}^3$ )
100m Northeast of Acadian Lines bus terminal	0715 to 0755	6	990
100m Northeast of Acadian Lines bus terminal	0819 to 0850	14	990
130m Northeast of Acadian Lines bus terminal	0920 to 0955	20	990
100m Northeast of Acadian Lines bus terminal	1016 to 1050	26	990
100m Northeast of Acadian Lines bus terminal/ 160m Northeast of Acadian Lines bus terminal	1116 to 1149	30	990
40m Northwest of Inglis Street & Terminal Road	1217 to 1258	33	990
40m Northwest of Inglis Street & Terminal Road	1313 to 1353	38	990
30m Northwest of Inglis Street & Terminal Road	1414 to 1446	44	990
30m Northwest of Inglis Street & Terminal Road	1515 to 1555	61	990

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
60m Northwest of Inglis Street & Terminal Road	1615 to 1653	79	990
60m Northwest of Inglis Street & Terminal Road	1710 to 1745	85	990
60m Northwest of Inglis Street & Terminal Road	1800 to 1815	91	990

### VOC Monitoring

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

\*P.I.D. was used for samples and was below detection level.