

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Peter Ibrahim  
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**DATE** 11<sup>th</sup> June, 2008

**FILE NO.** S-1153-07  
**SHIFT:** 0630 to 1700  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH

**STPA NO.** CP-0146

**SUBJECT: 10<sup>th</sup> June, 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 10<sup>th</sup> of June, 2008. Colin MacIsaac 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:

- Overcast giving way to clear skies
- Temperature: approximately 15°C
- Wind Direction: East / Northeast / North

**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 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 – Cooling Pond**  
**10<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 5m East of Intercolonial Street fixed station	0700	155	13	East	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
2 20m North STPA building	0715	155	15	East	Upwind	Background	No observations seen to effect sampling integrity
3 5m East of Intercolonial Street fixed station	0715	155	12	East	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
4 50m North of STPA building	0800	155	11	East	Upwind	Background	No observations seen to effect sampling integrity
5 30m Northeast of Acadian Lines Terminal	0800	155	9	East	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
6 30m Northeast of Acadian Lines Terminal	0845	155	13	Northeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
7 20m Southeast of Inglis Street, Spar Road intersection	0900	155	10	Northeast	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 30m Northeast of Acadian Lines Terminal	0900	155	12	Northeast	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
9 15m North of Inglis Street, Terminal Road intersection	0930	155	11	North	Downwind	Truck dumping material	No observations seen to effect sampling integrity
10 80m North of Spar Road, East of North Pond fence line	1000	155	12	North	Upwind	Background	No observations seen to effect sampling integrity
11 15m North of Inglis Street, Terminal Road intersection	1000	155	10	North	Downwind	Truck dumping material	No observations seen to effect sampling integrity
12 15m North of Inglis Street, Terminal Road intersection	1015	155	11	North	Downwind	Bulldozer moving material	No observations seen to effect sampling integrity
13 80m North of Spar Road, East of North Pond fence line	1100	155	15	North	Upwind	Background	No observations seen to effect sampling integrity
14 15m North of Inglis Street, Terminal Road intersection	1100	155	12	North	Downwind	Bulldozer moving material	No observations seen to effect sampling integrity
15 15m North of Inglis Street, Terminal Road intersection	1130	155	15	North	Downwind	Bulldozer moving 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 80m North of Spar Road, East of North Pond fence line	1200	155	15	North	Upwind	Background	No observations seen to effect sampling integrity
17 15m North of Inglis Street, Terminal Road intersection	1200	155	19	North	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
18 15m North of Inglis Street, Terminal Road intersection	1245	155	15	North	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
19 80m North of Spar Road, East of North Pond fence line	1300	155	23	North	Upwind	Background	No observations seen to effect sampling integrity
20 15m North of Inglis Street, Terminal Road intersection	1300	155	22	North	Downwind	Bulldozer moving material	No observations seen to effect sampling integrity
21 35m Northeast of Acadian Lines terminal	1330	155	6	Northeast	Downwind	Bulldozer moving material	No observations seen to effect sampling integrity
22 80m North of Spar Road, East of North Pond fence line	1400	155	7	North	Upwind	Background	No observations seen to effect sampling integrity
23 35m Northeast of Acadian Lines terminal	1400	155	5	Northeast	Downwind	Bulldozer moving 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 35m Northeast of Acadian Lines terminal	1445	155	5	Northeast	Downwind	Bulldozer moving material	No observations seen to effect sampling integrity
25 30m Northeast of Cooling Pond main gate	1500	155	7	East	Upwind	Background	No observations seen to effect sampling integrity
26 5m East of Intercolonial Street fixed station	1505	155	5	East	Downwind	Truck dumping material	No observations seen to effect sampling integrity
27 5m East of Intercolonial Street fixed station	1530	155	7	East	Downwind	Bulldozer moving material	No observations seen to effect sampling integrity
28 30m Northeast of Cooling Pond main gate	1600	155	8	East	Upwind	Background	No observations seen to effect sampling integrity
29 5m East of Intercolonial Street fixed station	1600	155	7	East	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
30 5m East of Intercolonial Street fixed station	1615	155	8	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 ( $\mu\text{g}/\text{m}^3$ )
5m East of Intercolonial fixed station	0700 to 0759	13	990
5m East of Intercolonial fixed station	0800 to 0859	24	990
30m Northeast of Acadian Lines terminal	0900 to 0959	36	990
15m North of Inglis Street, Terminal Road intersection	1000 to 1059	46	990
15m North of Inglis Street, Terminal Road intersection	1100 to 1159	60	990
15m North of Inglis Street, Terminal Road intersection	1200 to 1259	78	990
15m North of Inglis Street, Terminal Road intersection	1300 to 1359	92	990
35m Northeast of Acadian Lines terminal	1400 to 1459	97	990
5m East of Intercolonial Street fixed station	1500 to 1559	103	990
5m East of Intercolonial Street fixed station	1600 to 1659	111	990

### VOC Monitoring

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