

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1331-14
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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<b>DATE</b>	10 <sup>th</sup> June, 2009	<b>STPA NO.</b>	TP6D-NP-0088

**SUBJECT: 9<sup>th</sup> June, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, North 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 9<sup>th</sup> of June, 2009. 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:

- Mainly cloudy
- Temperature: approximately 9°C
- Wind Direction: North

**Comments:** *ALL-TECH was on-Site at 0630 and sampling began as soon as there was site activity. Air monitoring was performed during AECOM'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 Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



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Dianne Theriault, 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 – Access Roads, North Pond**  
**9<sup>th</sup> June, 2009**

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 30m North of new truck scale (N 46°09.355' W 060°11.674')	0700	155	8	North	Upwind	Background	No observations seen to affect sampling integrity
2 100m Northeast of railway building (N 46°08.946' W 060°11.705')	0700	155	9	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 100m Northeast of railway building (N 46°08.946' W 060°11.705')	0730	155	16	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 30m North of new truck scale (N 46°09.355' W 060°11.674')	0800	155	22	North	Upwind	Background	No observations seen to affect sampling integrity
5 100m Northeast of railway building (N 46°08.946' W 060°11.705')	0800	155	15	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
6 100m Northeast of railway building (N 46°08.946' W 060°11.705')	0825	155	18	North	Downwind	Equipment operating	No observations seen to affect 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 North of new truck scale (N 46°09.355' W 060°11.674')	0900	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
8 100m Northeast of railway building (N 46°08.946' W 060°11.705')	0900	155	9	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
9 100m Northeast of railway building (N 46°08.946' W 060°11.705')	0930	155	10	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
10 30m North of new truck scale (N 46°09.355' W 060°11.674')	1000	155	2	North	Upwind	Background	No observations seen to affect sampling integrity
11 100m Northeast of railway building (N 46°08.946' W 060°11.705')	1000	155	6	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 100m Northeast of railway building (N 46°08.946' W 060°11.705')	1030	155	8	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
13 30m North of new truck scale (N 46°09.355' W 060°11.674')	1100	155	28	North	Upwind	Background	No observations seen to affect 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
14 100m Northeast of railway building (N 46°08.946' W 060°11.705')	1100	155	10	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
15 100m Northeast of railway building (N 46°08.946' W 060°11.705')	1120	155	4	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
16 30m North of new truck scale (N 46°09.355' W 060°11.674')	1200	155	9	North	Upwind	Background	No observations seen to affect sampling integrity
17 100m East of railway building (N 46°08.927' W 060°11.685')	1200	155	6	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 100m East of railway building (N 46°08.927' W 060°11.685')	1245	155	17	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
19 30m North of new truck scale (N 46°09.355' W 060°11.674')	1300	155	28	North	Upwind	Background	No observations seen to affect sampling integrity
20 100m East of railway building (N 46°08.927' W 060°11.685')	1300	155	12	North	Downwind	Equipment operating	No observations seen to affect 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
21 100m East of railway building (N 46°08.927' W 060°11.685')	1325	155	13	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
22 30m North of new truck scale (N 46°09.355' W 060°11.674')	1400	155	30	North	Upwind	Background	No observations seen to affect sampling integrity
23 100m North of railway building (N 46°08.927' W 060°11.685')	1400	155	11	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
24 100m North of railway building (N 46°08.927' W 060°11.685')	1415	155	15	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
25 30m Northeast of new truck scale (N 46°09.297' W 060°11.658')	1500	155	11	North	Upwind	Background	No observations seen to affect sampling integrity
26 110m East of railway building (N 46°08.910' W 060°11.667')	1500	155	12	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
27 110m East of railway building (N 46°08.910' W 060°11.667')	1520	155	12	North	Downwind	Equipment operating	No observations seen to affect 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
28 30m Northeast of new truck scale (N 46°09.297' W 060°11.658')	1600	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
29 110m East of railway building (N 46°08.910' W 060°11.667')	1600	155	10	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
30 110m East of railway building (N 46°08.910' W 060°11.667')	1645	155	9	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
31 30m Northeast of new truck scale (N 46°09.297' W 060°11.658')	1700	155	8	North	Upwind	Background	No observations seen to affect sampling integrity
32 110m East of railway building (N 46°08.910' W 060°11.667')	1700	155	14	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
33 110m East of railway building (N 46°08.910' W 060°11.667')	1745	155	11	North	Downwind	No activity observed on site	No observations seen to affect 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 railway building	0700 to 0759	13	990
100m Northeast of railway building	0800 to 0859	30	990
100m Northeast of railway building	0900 to 0959	40	990
100m Northeast of railway building	1000 to 1059	47	990
100m Northeast of railway building	1100 to 1159	54	990
100m East of railway building	1200 to 1259	66	990
100m East of railway building	1300 to 1359	79	990
100m East of railway building	1400 to 1459	92	990
110m East of railway building	1500 to 1559	104	990
110m East of railway building	1600 to 1659	114	990
110m East of railway building	1700 to 1759	126	990



### VOC Monitoring

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