

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1331-15
FROM	Dianne Theriault	SHIFT:	0630 to 1800
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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DATE	10 th June, 2009	STPA NO.	TP6D-SP-0089

**SUBJECT: 9th June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads, South Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 9th of June, 2009. Jennifer Andrews and Dwayne Timmons 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 hours 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 PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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 Jennifer Andrews and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



Dianne Theriault, B.Tech
Environmental Technologist
ALL-TECH Environmental Services Cape Breton Ltd.

Copied via e-mail:

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Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Access Roads, South Pond
9th June, 2009

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	0700	155	6	North	Upwind	Background	No observations seen to affect sampling integrity
2 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	0700	155	52	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity
3 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	0725	155	29	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity
4 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	0800	155	6	North	Upwind	Background	No observations seen to affect sampling integrity
5 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	0800	155	8	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity
6 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	0840	155	27	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
7 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	0900	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
8 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	0900	155	22	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity
9 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	0920	155	27	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity
10 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	1000	155	3	North	Upwind	Background	No observations seen to affect sampling integrity
11 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	1000	155	13	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	1045	155	7	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
13 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	1100	155	3	North	Upwind	Background	No observations seen to affect sampling integrity
14 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	1100	155	9	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	1145	155	36	North	Downwind	Truck moving material	No observations seen to affect sampling integrity
16 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	1200	155	5	North	Upwind	Background	No observations seen to affect sampling integrity
17 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	1200	155	27	North	Downwind	Excavator and truck moving material	No observations seen to affect sampling integrity
18 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	1220	155	12	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
19 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	1300	155	6	North	Upwind	Background	No observations seen to affect sampling integrity
20 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	1300	155	12	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity
21 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	1335	155	24	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity
22 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	1400	155	5	North	Upwind	Background	No observations seen to affect sampling integrity
23 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	1400	155	26	North	Downwind	Excavator and truck moving material	No observations seen to affect sampling integrity
24 30m East of Dodd St. and Pitt St. intersection (N46°08.408' W060°11.358')	1445	155	18	North	Downwind	Excavator and truck moving material	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
25 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	1500	155	9	North	Upwind	Background	No observations seen to affect sampling integrity
26 100m Southeast of Dorchester St. and Intercolonial St. intersection (N46°08.507' W060°11.378')	1500	155	9	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity
27 100m Southeast of Dorchester St. and Intercolonial St. intersection (N46°08.507' W060°11.378')	1535	155	12	North	Downwind	Excavator moving material	No observations seen to affect sampling integrity
28 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	1600	155	12	North	Upwind	Background	No observations seen to affect sampling integrity
29 100m Southeast of Dorchester St. and Intercolonial St. intersection (N46°08.507' W060°11.378')	1600	155	13	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
30 100m Southeast of Dorchester St. and Intercolonial St. intersection (N46°08.507' W060°11.378')	1630	155	9	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
31 15m West of Ferry St. and Inglis St. intersection (N46°08.533' W060°11.397')	1700	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
32 100m Southeast of Dorchester St. and Intercolonial St. intersection (N46°08.507' W060°11.378')	1700	155	7	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
33 100m Southeast of Dorchester St. and Intercolonial St. intersection (N46°08.507' W060°11.378')	1715	155	6	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 ($\mu\text{g}/\text{m}^3$)
30m East of Dodd St. and Pitt St. intersection	0700 to 0759	41	990
30m East of Dodd St. and Pitt St. intersection	0800 to 0859	59	990
30m East of Dodd St. and Pitt St. intersection	0900 to 0959	84	990
30m East of Dodd St. and Pitt St. intersection	1000 to 1059	94	990
30m East of Dodd St. and Pitt St. intersection	1100 to 1159	117	990
30m East of Dodd St. and Pitt St. intersection	1200 to 1259	137	990
30m East of Dodd St. and Pitt St. intersection	1300 to 1359	155	990
30m East of Dodd St. and Pitt St. intersection	1400 to 1459	177	990
100m Southeast of Dorchester St. and Intercolonial St. intersection	1500 to 1559	188	990
100m Southeast of Dorchester St. and Intercolonial St. intersection	1600 to 1659	199	990
100m Southeast of Dorchester St. and Intercolonial St. intersection	1700 to 1759	206	990

VOC Monitoring

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