

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1331-08
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	5 th June, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP6D-NP-0082

**SUBJECT: 4th June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads, North Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 4th of June, 2009. Nigel MacLean and Jeff King of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Partly cloudy
- Temperature: approximately 20°C
- Wind Direction: Northeast to Southwest

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 Jeff King 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, North Pond
4th 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 25m West of Millcreek building (N46°08.979' W060°11.255')	0700	155	17	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 120m North of railway building N46°08.969' W060°11.827')	0700	155	13	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 120m North of railway building N46°08.969' W060°11.827')	0720	155	10	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
4 125m East of railway building (N46°08.954' W060°11.735')	0800	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 135m South of new truck scale (N46°09.253' W060°11.627')	0800	155	10	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
6 135m South of new truck scale (N46°09.253' W060°11.627')	0840	155	11	Southwest	Downwind	Excavator and dump truck in operation	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 190m Northwest of Ferry St. And Railway Rd. Intersection (N46°08792' W060°11.587')	0900	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 135m South of new truck scale (N46°09.253' W060°11.627')	0900	155	10	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
9 135m South of new truck scale (N46°09.253' W060°11.627')	0925	155	10	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
10 190m Northwest of Ferry St. And Railway Rd. Intersection (N46°08792' W060°11.587')	1000	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 135m South of new truck scale (N46°09.253' W060°11.627')	1000	155	9	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
12 135m South of new truck scale (N46°09.253' W060°11.627')	1035	155	9	Southwest	Downwind	Excavator and dump trucks in operation	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 190m Northwest of Ferry St. And Railway Rd. Intersection (N46°08792' W060°11.587')	1100	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 135m South of new truck scale (N46°09.253' W060°11.627')	1100	155	11	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
15 135m South of new truck scale (N46°09.253' W060°11.627')	1125	155	10	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
16 190m Northwest of Ferry St. And Railway Rd. Intersection (N46°08792' W060°11.587')	1200	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 135m South of new truck scale (N46°09.253' W060°11.627')	1200	155	11	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 135m South of new truck scale (N46°09.253' W060°11.627')	1230	155	13	Southwest	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 190m Northwest of Ferry St. And Railway Rd. Intersection (N46°08792' W060°11.587')	1300	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 135m South of new truck scale (N46°09.253' W060°11.627')	1300	155	13	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
21 135m South of new truck scale (N46°09.253' W060°11.627')	1320	155	11	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
22 190m Northwest of Ferry St. And Railway Rd. Intersection (N46°08792' W060°11.587')	1400	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 135m South of new truck scale (N46°09.253' W060°11.627')	1400	155	16	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
24 135m South of new truck scale (N46°09.253' W060°11.627')	1425	155	16	Southwest	Downwind	Excavator and dump trucks in operation	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 190m Northwest of Ferry St. And Railway Rd. Intersection (N46°08792' W060°11.587')	1500	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 135m South of new truck scale (N46°09.253' W060°11.627')	1500	155	20	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
27 135m South of new truck scale (N46°09.253' W060°11.627')	1515	155	20	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
28 190m Northwest of Ferry St. And Railway Rd. Intersection (N46°08792' W060°11.587')	1600	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 135m South of new truck scale (N46°09.253' W060°11.627')	1600	155	28	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
30 135m South of new truck scale (N46°09.253' W060°11.627')	1635	155	95	Southwest	Downwind	Loader moving pipe outside fence line	No observations seen to affect sampling integrity
31 190m Northwest of Ferry St. And Railway Rd. Intersection (N46°08792' W060°11.587')	1700	155	9	Southwest	Upwind	Background	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
32 135m South of new truck scale (N46°09.253' W060°11.627')	1700	155	50	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
33 135m South of new truck scale (N46°09.253' W060°11.627')	1745	155	16	Southwest	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 ($\mu\text{g}/\text{m}^3$)
120m North of railway building	0700 to 0759	12	990
135m South of new truck scale	0800 to 0859	23	990
135m South of new truck scale	0900 to 0959	33	990
135m South of new truck scale	1000 to 1059	42	990
135m South of new truck scale	1100 to 1159	53	990
135m South of new truck scale	1200 to 1259	65	990
135m South of new truck scale	1300 to 1359	77	990
135m South of new truck scale	1400 to 1459	93	990
135m South of new truck scale	1500 to 1559	113	990
135m South of new truck scale	1600 to 1659	175	990
135m South of new truck scale	1700 to 1759	208	990

VOC Monitoring

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