

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1331-10
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	8 th June, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP6D-NP-0084

**SUBJECT: 5th 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 5th 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:

- Mainly sunny
- 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
5th 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 135m North of TP2 Entrance gate (N46°09.010' W060°11.370')	0700	155	21	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 435m North of Railway Rd. And Ferry St. intersection (N46°08.914' W060°11.670')	0700	155	22	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 435m North of Railway Rd. And Ferry St. intersection (N46°08.914' W060°11.670')	0720	155	15	Northeast	Downwind	Excavator in operation	No observations seen to affect sampling integrity
4 135m North of TP2 Entrance gate (N46°09.010' W060°11.370')	0800	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
5 435m North of Railway Rd. And Ferry St. intersection (N46°08.914' W060°11.670')	0800	155	9	Northeast	Downwind	Excavator 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
6 435m North of Railway Rd. And Ferry St. intersection (N46°08.914' W060°11.670')	0835	155	7	Northeast	Downwind	Excavator in operation	No observations seen to affect sampling integrity
7 135m North of TP2 Entrance gate (N46°09.010' W060°11.370')	0900	155	15	Northeast	Upwind	Background	No observations seen to affect sampling integrity
8 435m North of Railway Rd. And Ferry St. intersection (N46°08.914' W060°11.670')	0900	155	11	Northeast	Downwind	Excavator in operation	No observations seen to affect sampling integrity
9 435m North of Railway Rd. And Ferry St. intersection (N46°08.914' W060°11.670')	0925	155	24	Northeast	Downwind	Excavator in operation	No observations seen to affect sampling integrity
10 300m Northwest of Ferry St. And Railway Rd. intersection (N46°08.842' W060°11.633')	1000	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 90m South of new truck scale (N46°09.277 W060°11.641)	1000	155	12	Southwest	Downwind	Excavator 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
12 90m South of new truck scale (N46°09.277 W060°11.641)	1030	155	11	Southwest	Downwind	Excavator in operation	No observations seen to affect sampling integrity
13 300m Northwest of Ferry St. And Railway Rd. intersection (N46°08.842' W060°11.633')	1100	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 90m South of new truck scale (N46°09.277 W060°11.641)	1100	155	35	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
15 90m South of new truck scale (N46°09.277 W060°11.641)	1120	155	14	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
16 300m Northwest of Ferry St. And Railway Rd. intersection (N46°08.842' W060°11.633')	1200	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 90m South of new truck scale (N46°09.277 W060°11.641)	1200	155	14	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
18 90m South of new truck scale (N46°09.277 W060°11.641)	1245	155	18	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 300m Northwest of Ferry St. And Railway Rd. intersection (N46°08.842' W060°11.633')	1300	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 90m South of new truck scale (N46°09.277 W060°11.641)	1300	155	24	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
21 90m South of new truck scale (N46°09.277 W060°11.641)	1325	155	43	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
22 300m Northwest of Ferry St. And Railway Rd. intersection (N46°08.842' W060°11.633')	1400	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 90m South of new truck scale (N46°09.277 W060°11.641)	1400	155	73	Southwest	Downwind	Excavator and dump trucks in operation	Dust from site road traffic

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
24 90m South of new truck scale (N46°09.277' W060°11.641')	1430	155	27	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
25 300m Northwest of Ferry St. And Railway Rd. intersection (N46°08.842' W060°11.633')	1500	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 130m South of new truck scale (N46°09. 259' W060°11.629')	1500	155	22	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
27 130m South of new truck scale (N46°09. 259' W060°11.629')	1515	155	22	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
28 300m Northwest of Ferry St. And Railway Rd. intersection (N46°08.842' W060°11.633')	1600	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 130m South of new truck scale (N46°09. 259' W060°11.629')	1600	155	13	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
30 130m South of new truck scale (N46°09.259' W060°11.629')	1620	155	13	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
31 300m Northwest of Ferry St. And Railway Rd. intersection (N46°08.842' W060°11.633')	1700	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
32 130m South of new truck scale (N46°09.259' W060°11.629')	1700	155	11	Southwest	Downwind	Excavator and dump trucks in operation	No observations seen to affect sampling integrity
33 130m South of new truck scale (N46°09.259' W060°11.629')	1745	155	9	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 ($\mu\text{g}/\text{m}^3$)
435m North of Railway Rd. And Ferry St. Intersection	0700 to 0759	19	990
435m North of Railway Rd. And Ferry St. Intersection	0800 to 0859	27	990
435m North of Railway Rd. And Ferry S. Intersection	0900 to 0959	45	990
90m South of new truck scale	1000 to 1059	57	990
90m South of new truck scale	1100 to 1159	82	990
90m South of new truck scale	1200 to 1259	98	990
90m South of new truck scale	1300 to 1359	132	990
90m South of new truck scale	1400 to 1459	182	990
130m South of new truck scale	1500 to 1559	204	990
130m South of new truck scale	1600 to 1659	217	990
130m South of new truck scale	1700 to 1759	227	990

VOC Monitoring

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