

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1292-15
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
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DATE	23 rd April, 2009		Terry Smith, ALL-TECH
		STPA NO.	CO2-0025

**SUBJECT: 22nd April, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 22nd of April, 2009. Jennifer Andrews and Nigel MacLean, 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: 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 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
 22nd April, 2009**

Sample No. & Air Monitoring Location	Time of Day	PM₁₀ Action Level (µg/m³)	Average Result (µg/m³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 15m Southwest of Ferry St. and Railway Rd. intersection	0700	155	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 150m North of TP6D entrance gate	0700	155	18	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
3 150m North of TP6D entrance gate	0730	155	17	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
4 15m Southwest of Ferry St. and Railway Rd. intersection	0800	155	21	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 150m North of TP6D entrance gate	0800	155	15	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
6 150m North of TP6D entrance gate	0830	155	15	Southwest	Downwind	Activity not visible from sample location	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 Southwest of Ferry St. and Railway Rd. intersection	0900	155	26	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 150m North of TP6D entrance gate	0900	155	17	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
9 150m North of TP6D entrance gate	0930	155	17	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
10 15m Southwest of Ferry St. and Railway Rd. intersection	1000	155	24	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 150m North of TP6D entrance gate	1000	155	17	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
12 150m North of TP6D entrance gate	1040	155	18	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
13 15m Southwest of Ferry St. and Railway Rd. intersection	1100	155	28	Southwest	Upwind	Background	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM₁₀ Action Level (µg/m³)	Average Result (µg/m³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
14 150m North of TP6D entrance gate	1100	155	18	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
15 150m North of TP6D entrance gate	1135	155	19	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
16 15m Southwest of Ferry St. and Railway Rd. intersection	1200	155	28	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 150m North of TP6D entrance gate	1200	155	21	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
18 150m North of TP6D entrance gate	1240	155	21	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
19 15m Southwest of Ferry St. and Railway Rd. intersection	1300	155	30	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 150m North of TP6D entrance gate	1300	155	22	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM₁₀ Action Level (µg/m³)	Average Result (µg/m³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
21 150m North of TP6D entrance gate	1325	155	22	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
22 15m Southwest of Ferry St. and Railway Rd. intersection	1400	155	30	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 150m North of TP6D entrance gate	1400	155	23	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
24 150m North of TP6D entrance gate	1440	155	24	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
25 15m Southwest of Ferry St. and Railway Rd. intersection	1500	155	32	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 150m North of TP6D entrance gate	1500	155	23	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
27 150m North of TP6D entrance gate	1540	155	24	Southwest	Downwind	Activity not visible from sample location	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
28 15m Southwest of Ferry St. and Railway Rd. intersection	1600	155	28	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 150m North of TP6D entrance gate	1600	155	23	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
30 150m North of TP6D entrance gate	1645	155	23	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
31 15m Southwest of Ferry St. and Railway Rd. intersection	1700	155	29	Southwest	Upwind	Background	No observations seen to affect sampling integrity
32 150m North of TP6D entrance gate	1700	155	22	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
33 150m North of TP6D entrance gate	1745	155	20	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 ($\mu\text{g}/\text{m}^3$)
150m North of TP6D entrance gate	0700 to 0759	18	990
150m North of TP6D entrance gate	0800 to 0859	33	990
150m North of TP6D entrance gate	0900 to 0959	50	990
150m North of TP6D entrance gate	1000 to 1059	68	990
150m North of TP6D entrance gate	1100 to 1159	87	990
150m North of TP6D entrance gate	1200 to 1259	108	990
150m North of TP6D entrance gate	1300 to 1359	130	990
150m North of TP6D entrance gate	1400 to 1459	154	990
150m North of TP6D entrance gate	1500 to 1559	178	990
150m North of TP6D entrance gate	1600 to 1659	201	990
150m North of TP6D entrance gate	1700 to 1759	222	990

VOC Monitoring

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