

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1331-04
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
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DATE	3 rd June, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP6D-NP-0078

**SUBJECT: 2nd 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 2nd of June, 2009. Shaun Dove 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 18°C
- Wind Direction: Southwest

Comments: *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity, but was later put on standby at 0930 hours due to precipitation. Air monitoring resumed at 1015 hours when weather conditions were within instrument specifications. 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
2nd 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 150m East of railway building	0700	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 100m South of new truck scale (N 46°,09.256' W060°,11.625')	0700	155	11	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
3 100m South of new truck scale (N 46°,09.256' W060°,11.625')	0720	155	11	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 150m Northeast of railway building	0800	155	78	Southwest	Upwind	Background	Locomotive started upwind during sample
5 100m South of new truck scale (N 46°,09.256' W060°,11.625')	0800	155	48	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 100m South of new truck scale (N 46°,09.256' W060°,11.625')	0830	155	16	Southwest	Downwind	Machines 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 150m East of railway building	0900	155	31	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 100m South of new truck scale (N 46°,09.256' W060°,11.625')	0900	155	16	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
9 100m South of new truck scale (N 46°,09.256' W060°,11.625')	0920	155	10	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 150m East of railway building	1015	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1015	155	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1030	155	7	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 150m East of railway building	1100	155	13	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
14 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1100	155	9	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
15 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1120	155	10	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 150m East of railway building	1200	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1200	155	61	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1220	155	49	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 150m East of railway building	1300	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1300	155	16	Southwest	Downwind	Machines 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
21 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1315	155	13	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 150m East of railway building	1400	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1400	155	44	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1420	155	77	Southwest	Downwind	Machines moving material	Dust from site road
25 150m East of railway building	1500	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1500	155	113	Southwest	Downwind	Machines moving material	Dust from site road
27 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1515	155	87	Southwest	Downwind	Machines moving material	Dust from site road

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 150m East of railway building	1520	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1530	155	42	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
30 150m East of railway building	1535	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
31 150m Northeast of railway building	1600	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
32 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1600	155	32	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
33 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1615	155	54	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
34 150m Northeast of railway building	1700	155	6	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
35 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1700	155	67	Southwest	Downwind	Machines moving material	Dust from site road
36 100m South of new truck scale (N 46°,09.256' W060°,11.625')	1740	155	37	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 ($\mu\text{g}/\text{m}^3$)
100m South of new truck scale	0700 to 0759	11	990
100m South of new truck scale	0800 to 0859	43	990
100m South of new truck scale	0900 to 0959	56	990
100m South of new truck scale	1000 to 1059	64	990
100m South of new truck scale	1100 to 1159	74	990
100m South of new truck scale	1200 to 1259	129	990
100m South of new truck scale	1300 to 1359	144	990
100m South of new truck scale	1400 to 1459	200	990
100m South of new truck scale	1500 to 1559	281	990
100m South of new truck scale	1600 to 1659	324	990
100m South of new truck scale	1700 to 1759	375	990

VOC Monitoring

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