

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1292-18
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
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DATE	28 th April, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP6D-NP-0028

**SUBJECT: 27th April, 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 27th of April, 2009. Nigel MacLean 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 sunny
- Temperature: approximately 10°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 Dwayne Timmons 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
27th April, 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 Northeast of railway building	0700	155	13	North	Upwind	Background	No observations seen to affect sampling integrity
2 50m East of Acadian Lines	0700	155	19	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
3 50m East of Acadian Lines	0720	155	18	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
4 150m Northeast of railway building	0800	155	17	North	Upwind	Background	No observations seen to affect sampling integrity
5 50m East of Acadian Lines	0800	155	20	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
6 50m East of Acadian Lines	0835	155	18	North	Downwind	Activity not visible from monitoring 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 150m Northeast of railway building	0900	155	15	North	Upwind	Background	No observations seen to affect sampling integrity
8 50m East of Acadian Lines	0900	155	20	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
9 50m East of Acadian Lines	0920	155	25	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
10 150m Northeast of railway building	1000	155	10	North	Upwind	Background	No observations seen to affect sampling integrity
11 50m East of Acadian Lines	1015	155	21	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
12 50m East of Acadian Lines	1030	155	17	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
13 150m Northeast of railway building	1100	155	11	North	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 50m East of Acadian Lines	1125	155	14	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
15 50m East of Acadian Lines	1140	155	14	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
16 150m Northeast of railway building	1200	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
17 50m East of Acadian Lines	1225	155	15	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
18 50m East of Acadian Lines	1245	155	18	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
19 150m Northeast of railway building	1300	155	9	North	Upwind	Background	No observations seen to affect sampling integrity
20 50m East of Acadian Lines	1300	155	16	North	Downwind	Activity not visible from monitoring 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
21 50m East of Acadian Lines	1345	155	18	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
22 150m Northeast of railway building	1400	155	13	North	Upwind	Background	No observations seen to affect sampling integrity
23 50m East of Acadian Lines	1400	155	17	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
24 50m East of Acadian Lines	1430	155	19	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
25 150m Northeast of railway building	1500	155	13	North	Upwind	Background	No observations seen to affect sampling integrity
26 50m East of Acadian Lines	1500	155	18	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
27 50m East of Acadian Lines	1535	155	17	North	Downwind	Activity not visible from monitoring 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 150m Northeast of railway building	1600	155	19	North	Upwind	Background	No observations seen to affect sampling integrity
29 50m East of Acadian Lines	1600	155	18	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
30 50m East of Acadian Lines	1640	155	22	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
31 150m Northeast of railway building	1700	155	13	North	Upwind	Background	No observations seen to affect sampling integrity
32 50m East of Acadian Lines	1700	155	21	North	Downwind	Activity not visible from monitoring location	No observations seen to affect sampling integrity
33 50m East of Acadian Lines	1745	155	23	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 ($\mu\text{g}/\text{m}^3$)
50m East of Acadian Lines	0700 to 0759	19	990
50m East of Acadian Lines	0800 to 0859	38	990
50m East of Acadian Lines	0900 to 0959	61	990
50m East of Acadian Lines	1000 to 1059	80	990
50m East of Acadian Lines	1100 to 1159	94	990
50m East of Acadian Lines	1200 to 1259	111	990
50m East of Acadian Lines	1300 to 1359	128	990
50m East of Acadian Lines	1400 to 1459	146	990
50m East of Acadian Lines	1500 to 1559	164	990
50m East of Acadian Lines	1600 to 1659	184	990
50m East of Acadian Lines	1700 to 1759	206	990

VOC Monitoring

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