

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 17th March, 2009

FILE NO. S-1288-02
SHIFT: 0730 to 1830
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP6D-0002

**SUBJECT: 17th March, 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 17th of March, 2009. Reg Peters and Shaun Dove, 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 -3°C
- Wind Direction: Northwest to North

Comments: *ALL-TECH was on-Site at 0730 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 Reg Peters 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
 17th March, 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 100m Northwest of Ferry Street-Railroad intersection	0800	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 70m East of Ferry Street Bridge	0800	155	24	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 70m East of Ferry Street Bridge	0830	155	27	Northwest	Downwind	Machines moving	No observations seen to affect sampling integrity
4 100m Northwest of Ferry Street-Railroad intersection	0900	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 70m East of Ferry Street Bridge	0900	155	6	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 70m East of Ferry Street Bridge	0940	155	9	Northwest	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 100m Northwest of Ferry Street-Railroad intersection	1000	155	13	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 70m East of Ferry Street Bridge	1000	155	6	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 70m East of Ferry Street Bridge	1025	155	5	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 100m Northwest of Ferry Street-Railroad intersection	1100	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 70m East of Ferry Street Bridge	1100	155	3	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 70m East of Ferry Street Bridge	1125	155	7	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 50m East of Railroad Office	1200	155	5	North	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 5m East of Ferry Street Bridge	1200	155	3	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 5m East of Ferry Street Bridge	1230	155	3	North	Downwind	Machines moving materials.	No observations seen to affect sampling integrity
16 50m East of Railroad Office	1300	155	6	North	Upwind	Background	No observations seen to affect sampling integrity
17 5m East of Ferry Street Bridge	1300	155	3	North	Downwind	Machines moving material.	No observations seen to affect sampling integrity
18 5m East of Ferry Street Bridge	1345	155	5	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 50m East of Railroad Office	1400	155	8	North	Upwind	Background	No observations seen to affect sampling integrity
20 5m East of Ferry Street Bridge	1400	155	6	North	Downwind	Machines moving material	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 5m East of Ferry Street Bridge	1425	155	3	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 50m East of Railroad Office	1500	155	6	North	Upwind	Background	No observations seen to affect sampling integrity
23 5m East of Ferry Street Bridge	1500	155	2	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 5m East of Ferry Street Bridge	1545	155	7	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 50m East of Railroad Office	1600	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
26 5m East of Ferry Street Bridge	1600	155	7	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 5m East of Ferry Street Bridge	1625	155	4	North	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
28 50m East of Railroad Office	1700	155	6	North	Upwind	Background	No observations seen to affect sampling integrity
29 5m East of Ferry Street Bridge	1700	155	8	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
30 5m East of Ferry Street Bridge	1745	155	12	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 ($\mu\text{g}/\text{m}^3$)
70m East of Ferry Street Bridge	0800 to 0859	26	990
70m East of Ferry Street Bridge	0900 to 0959	34	990
70m East of Ferry Street Bridge	1000 to 1059	40	990
70m East of Ferry Street Bridge	1100 to 1159	45	990
5m East of Ferry Street Bridge	1200 to 1259	48	990
5m East of Ferry Street Bridge	1300 to 1359	52	990
5m East of Ferry Street Bridge	1400 to 1459	57	990
5m East of Ferry Street Bridge	1500 to 1559	62	990
5m East of Ferry Street Bridge	1600 to 1659	68	990
5m East of Ferry Street Bridge	1700 to 1759	78	990

VOC Monitoring

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