

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 18th March, 2009

FILE NO. S-1288-03
SHIFT: 0630 to 1830
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP6D-0003

**SUBJECT: 18th 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 18th 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 5°C
- Wind Direction: South

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 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
 18th 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 200m Southwest of Ferry Street Bridge	0700	155	10	South	Upwind	Background	No observations seen to affect sampling integrity
2 30m North of North Pond main gate	0700	155	43	South	Downwind	No activity observed on site	Dust from traffic near site
3 30m North of North Pond main gate	0735	155	15	South	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 200m Southwest of Ferry Street Bridge	0800	155	12	South	Upwind	Background	No observations seen to affect sampling integrity
5 30m North of North Pond main gate	0800	155	48	South	Downwind	Machines moving material	Dust from traffic near site
6 30m North of North Pond main gate	0845	155	32	South	Downwind	Machines moving material	Dust from traffic near site

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
7 200m Southwest of Ferry Street Bridge	0900	155	9	South	Upwind	Background	No observations seen to affect sampling integrity
8 60m North of North Pond main gate	0900	155	44	South	Downwind	Machines moving material	Dust from traffic near site
9 60m North of North Pond main gate	0925	155	65	South	Downwind	Machines moving material	Dust from traffic near site
10 200m Southwest of Ferry Street Bridge	1000	155	9	South	Upwind	Background	No observations seen to affect sampling integrity
11 60m North of North Pond main gate	1000	155	29	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 60m North of North Pond main gate	1030	155	16	South	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 200m Southwest of Ferry Street Bridge	1100	155	8	South	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 60m North of North Pond main gate	1100	155	15	South	Downwind	Machines moving material	No observations seen to affect sampling integrity
15 60m North of North Pond main gate	1145	155	24	South	Downwind	Machines moving materials.	No observations seen to affect sampling integrity
16 200m Southwest of Ferry Street Bridge	1200	155	8	South	Upwind	Background	No observations seen to affect sampling integrity
17 60m North of North Pond main gate	1200	155	16	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 60m North of North Pond main gate	1235	155	44	South	Downwind	Machines moving material	Dust from traffic near site
19 200m Southwest of Ferry Street Bridge	1300	155	7	South	Upwind	Background	No observations seen to affect sampling integrity
20 60m North of North Pond main gate	1300	155	20	South	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 60m North of North Pond main gate	1335	155	39	South	Downwind	Machines moving material	Dust from traffic near site
22 200m Southwest of Ferry Street Bridge	1400	155	11	South	Upwind	Background	No observations seen to affect sampling integrity
23 60m North of North Pond main gate	1400	155	18	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 60m North of North Pond main gate	1445	155	41	South	Downwind	Machines moving material	Dust from traffic near site
25 200m Southwest of Ferry Street Bridge	1500	155	8	South	Upwind	Background	No observations seen to affect sampling integrity
26 60m North of North Pond main gate	1500	155	30	South	Downwind	Machines moving material	Dust from traffic near site
27 60m North of North Pond main gate	1520	155	60	South	Downwind	Machines moving material	Dust from traffic near site

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 200m Southwest of Ferry Street Bridge	1600	155	9	South	Upwind	Background	No observations seen to affect sampling integrity
29 60m North of North Pond main gate	1600	155	45	South	Downwind	Machines moving material	Dust from traffic near site
30 60m North of North Pond main gate	1635	155	41	South	Downwind	Machines moving material	Dust from traffic near site
31 200m Southwest of Ferry Street Bridge	1700	155	9	South	Upwind	Background	No observations seen to affect sampling integrity
32 60m North of North Pond main gate	1700	155	22	South	Downwind	Machines moving material	No observations seen to affect sampling integrity
33 60m North of North Pond main gate	1745	155	19	South	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 ($\mu\text{g}/\text{m}^3$)
30m North of North Pond main gate	0700 to 0759	29	990
30m North of North Pond main gate	0800 to 0859	69	990
60m North of North Pond main gate	0900 to 0959	124	990
60m North of North Pond main gate	1000 to 1059	147	990
60m North of North Pond main gate	1100 to 1159	167	990
60m North of North Pond main gate	1200 to 1259	197	990
60m North of North Pond main gate	1300 to 1359	227	990
60m North of North Pond main gate	1400 to 1459	257	990
60m North of North Pond main gate	1500 to 1559	302	990
60m North of North Pond main gate	1600 to 1659	345	990
60m North of North Pond main gate	1700 to 1759	367	990

VOC Monitoring

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