

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 31st March, 2009

FILE NO. S-1288-10
SHIFT: 0630 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP6D-0010

**SUBJECT: 30th 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 30th of March, 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 with snow
- Temperature: approximately 0°C
- Wind Direction: South East

Comments: *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity. Sampling was put on standby at 1600 hours due to precipitation, and was later cancelled for the day at 1730 hours. Air monitoring was performed during AECOM's construction activities.*

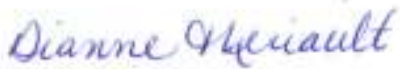
All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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
30th 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 SE of Inglis St and Spar Rd Intersection	0700	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
2 90 M NE of Railway Office	0700	155	13	Southeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
3 90 M NE of Railway Office	0730	155	11	Southeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
4 100 M SE of Inglis St and Spar Rd Intersection	0800	155	8	Southeast	Upwind	Background	No observations seen to affect sampling integrity
5 90 M NE of Railway Office	0800	155	12	Southeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
6 90 M NE of Railway Office	0830	155	13	Southeast	Downwind	Machine 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
7 100M SE of Inglis St and Spar Rd Intersection	0900	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
8 90 M NE of Railway Office	0900	155	13	Southeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
9 90 M NE of Railway Office	0920	155	14	Southeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 100 M SE of Inglis St and Spar Rd Intersection	1000	155	4	Southeast	Upwind	Background	No observations seen to affect sampling integrity
11 90 M NE of Railway Office	1000	155	11	Southeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 90 M NE of Railway Office	1035	155	15	Southeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 100 M SE of Inglis St and Spar Rd Intersection	1100	155	6	Southeast	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 90 M NE of Railway Office	1100	155	15	Southeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
15 90 M NE of Railway Office	1120	155	15	Southeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 100 M SE of Inglis St and Spar Rd Intersection	1200	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
17 90 M NE of Railway Office	1200	155	14	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 90 M NE of Railway Office	1215	155	13	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 100M SE of Inglis St and Spar Rd Intersection	1300	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
20 90 M NE of Railway Office	1300	155	16	Southeast	Downwind	Machines moving materials	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 90 M NE of Railway Office	1320	155	17	Southeast	Downwind	Machines moving materials	No observations seen to affect sampling integrity
22 100 M SE of Inglis St and Spar Rd Intersection	1400	155	10	Southeast	Upwind	Background	No observations seen to affect sampling integrity
23 90 M NE of Railway Office	1400	155	18	Southeast	Downwind	Machines moving materials	No observations seen to affect sampling integrity
24 90 M NE of Railway Office	1425	155	20	Southeast	Downwind	Machines moving materials	No observations seen to affect sampling integrity
25 100 M SE of Inglis St and Spar Rd Intersection	1500	155	13	Southeast	Upwind	Background	No observations seen to affect sampling integrity
26 90 M NE of Railway Office	1500	155	20	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 90 M NE of Railway Office	1540	155	24	Southeast	Downwind	Machines moving materials	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 ($\mu\text{g}/\text{m}^3$)
90 M NE of Railway Office	0700 to 0759	12	990
90 M NE of Railway Office	0800 to 0859	25	990
90 M NE of Railway Office	0900 to 0959	39	990
90 M NE of Railway Office	1000 to 1059	52	990
90 M NE of Railway Office	1100 to 1159	67	990
90 M NE of Railway Office	1200 to 1259	81	990
90 M NE of Railway Office	1300 to 1359	98	990
90 M NE of Railway Office	1400 to 1459	117	990
90 M NE of Railway Office	1500 to 1559	139	990

VOC Monitoring

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