

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 8th June, 2009

FILE NO. S-1329-05
SHIFT: 0730 to 1700
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP2-0173

**SUBJECT: 5th June, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Material Processing Facility
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 5th of June, 2009. Shaun Dove and Alison Giovannetti 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 20°C
- Wind Direction: Northeast to Southwest

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 Alison Giovannetti 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 – Material Processing Facility
5th June, 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 125m Northeast of TP2 main entrance (N 46° 08.981' W 060° 11.291')	0800	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 50m Northeast of Acadian Lines bus terminal (N 46° 08.523' W 060° 11.158')	0800	155	11	Northeast	Downwind	Mini excavator and man-lift operating	No observations seen to affect sampling integrity
3 50m Northeast of Acadian Lines bus terminal (N 46° 08.523' W 060° 11.158')	0825	155	14	Northeast	Downwind	Mini excavator and man-lift operating	No observations seen to affect sampling integrity
4 125m Northeast of TP2 main entrance (N 46° 08.981' W 060° 11.291')	0900	155	22	Northeast	Upwind	Background	No observations seen to affect sampling integrity
5 50m Northeast of Acadian Lines bus terminal (N 46° 08.523' W 060° 11.158')	0900	155	9	Northeast	Downwind	Mini excavator and man-lift operating	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
6 50m Northeast of Acadian Lines bus terminal (N 46° 08.523' W 060° 11.158')	0935	155	7	Northeast	Downwind	Mini excavator and man-lift operating	No observations seen to affect sampling integrity
7 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.467')	1000	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1000	155	7	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1020	155	25	Southwest	Downwind	Man-lift operating	No observations seen to affect sampling integrity
10 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.467')	1100	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1100	155	11	Southwest	Downwind	Man-lift and cement truck operating	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
12 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1115	155	10	Southwest	Downwind	Man-lift and cement truck operating	No observations seen to affect sampling integrity
13 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.467')	1200	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1200	155	16	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1215	155	8	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.467')	1300	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1300	155	14	Southwest	Downwind	Man-lift operating	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
18 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1320	155	16	Southwest	Downwind	Excavator and man-lift operating	No observations seen to affect sampling integrity
19 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.467')	1400	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1400	155	24	Southwest	Downwind	Excavator and man-lift operating	No observations seen to affect sampling integrity
21 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1415	155	34	Southwest	Downwind	Excavator and man-lift operating	No observations seen to affect sampling integrity
22 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.467')	1500	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1500	155	18	Southwest	Downwind	No activity observed on site	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
24 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1530	155	21	Southwest	Downwind	Zoom boom operating	No observations seen to affect sampling integrity
25 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.467')	1600	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1600	155	12	Southwest	Downwind	Zoom boom operating	No observations seen to affect sampling integrity
27 50m Southeast of TP2 main entrance (N 46° 08.940' W 060° 11.261')	1615	155	12	Southwest	Downwind	No activity observed from sampling location	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 Northeast of Acadian Lines bus terminal	0800 to 0859	13	990
50m Northeast of Acadian Lines bus terminal	0900 to 0959	21	990
50m Southeast of TP2 main entrance	1000 to 1059	37	990
50m Southeast of TP2 main entrance	1100 to 1159	48	990
50m Southeast of TP2 main entrance	1200 to 1259	60	990
50m Southeast of TP2 main entrance	1300 to 1359	75	990
50m Southeast of TP2 main entrance	1400 to 1459	104	990
50m Southeast of TP2 main entrance	1500 to 1559	124	990
50m Southeast of TP2 main entrance	1600 to 1659	136	990

VOC Monitoring

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