

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 3rd June, 2009

FILE NO. S-1329-02
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP2-0170

**SUBJECT: 2nd 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 2nd of June, 2009. Colin MacIsaac 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 18°C
- Wind Direction: Southwest

Comments: *ALL-TECH was on-Site at 0730 hours and sampling began as soon as there was site activity, but was later put on standby at 0930 hours due to precipitation. Air monitoring resumed at 1015 hours when weather conditions were within instrument specifications. 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
2nd June, 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 3m North of fixed station on Intercolonial St.	0800	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 90m North of Inglis St. and Ferry St. intersection (N46°08.948', W060°11.277')	0800	155	19	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 90m North of Inglis St. and Ferry St. intersection (N46°08.948', W060°11.277')	0815	155	26	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
4 3m North of fixed station on Intercolonial St.	0900	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 90m North of Inglis St. and Ferry St. intersection (N46°08.948', W060°11.277')	0900	155	53	Southwest	Downwind	Excavators 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
6 3m North of fixed station on Intercolonial St.	1015	155	21	Southwest	Upwind	Background	No observations seen to affect sampling integrity
7 70m North of Inglis St. and Ferry St. intersection (N46°08.945', W060°11.271')	1015	155	22	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
8 70m North of Inglis St. and Ferry St. intersection (N46°08.945', W060°11.271')	1040	155	32	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
9 3m North of fixed station on Intercolonial St.	1100	155	53	Southwest	Upwind	Background	No observations seen to affect sampling integrity
10 70m North of Inglis St. and Ferry St. intersection (N46°08.945', W060°11.271')	1100	155	32	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
11 70m North of Inglis St. and Ferry St. intersection (N46°08.945', W060°11.271')	1120	155	50	Southwest	Downwind	Excavators 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
12 15m Northeast of fixed station on Intercolonial St.	1200	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
13 70m North of Inglis St. and Ferry St. intersection (N46°08.945', W060°11.271')	1200	155	65	Southwest	Downwind	No activity observed on site	Visible dust blowing from site
14 70m North of Inglis St. and Ferry St. intersection (N46°08.945', W060°11.271')	1245	155	54	Southwest	Downwind	Water truck operating	No observations seen to affect sampling integrity
15 75m South of Ferry St. and Railway Rd. intersection	1300	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
16 60m North of Inglis St. and Ferry St. intersection (N46°08.925', W060°11.250')	1300	155	30	Southwest	Downwind	Cement truck on site	No observations seen to affect sampling integrity
17 60m North of Inglis St. and Ferry St. intersection (N46°08.925', W060°11.250')	1315	155	46	Southwest	Downwind	Machines 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 75m South of Ferry St. and Railway Rd. intersection	1400	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
19 60m North of Inglis St. and Ferry St. intersection (N46°08.925', W060°11.250')	1400	155	70	Southwest	Downwind	Machines operating	Visible dust blowing from site
20 60m North of Inglis St. and Ferry St. intersection (N46°08.925', W060°11.250')	1415	155	50	Southwest	Downwind	Machines operating	No observations seen to affect sampling integrity
21 75m South of Ferry St. and Railway Rd. intersection	1500	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
22 60m North of Inglis St. and Ferry St. intersection (N46°08.925', W060°11.250')	1500	155	37	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
23 60m North of Inglis St. and Ferry St. intersection (N46°08.925', W060°11.250')	1515	155	80	Southwest	Downwind	Machines 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
24 75m South of Ferry St. and Railway Rd. intersection	1600	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
25 60m North of Inglis St. and Ferry St. intersection (N46°08.925', W060°11.250')	1600	155	39	Southwest	Downwind	Machines operating	No observations seen to affect sampling integrity
26 60m North of Inglis St. and Ferry St. intersection (N46°08.925', W060°11.250')	1645	155	26	Southwest	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 ($\mu\text{g}/\text{m}^3$)
90m North of Inglis St. and Spar Rd. intersection	0800 to 0859	23	990
90m North of Inglis St. and Spar Rd. intersection	0900 to 0959	66	990
70m North of Inglis St. and Spar Rd. intersection	1000 to 1059	93	990
70m North of Inglis St. and Spar Rd. intersection	1100 to 1159	134	990
70m North of Inglis St. and Spar Rd. intersection	1200 to 1259	194	990
60m North of Inglis St. and Spar Rd. intersection	1300 to 1359	232	990
60m North of Inglis St. and Spar Rd. intersection	1400 to 1459	292	990
60m North of Inglis St. and Spar Rd. intersection	1500 to 1559	351	990
60m North of Inglis St. and Spar Rd. intersection	1600 to 1659	384	990

VOC Monitoring

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