

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 13th May, 2009

FILE NO. S-1309-06
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. TP2-0160

**SUBJECT: 12th May, 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 12th of May, 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 8°C
- Wind Direction: Northwest to Southwest to Northeast to North to Northeast

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
12th May, 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 375m North of Ferry St. and Railway Rd. intersection	0800	155	13	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 20m Southwest of Inglis St. and Ferry St. intersection	0800	155	22	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
3 20m Southwest of Inglis St. and Ferry St. intersection	0825	155	22	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 50m South of Ferry St. and Railway Rd. intersection	0900	155	25	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 20m South of TP2 main entrance	0900	155	16	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 20m South of TP2 main entrance	0915	155	17	Southwest	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 225m North of TP2 security trailer off Inglis St.	1000	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
8 50m Northeast of Intercolonial St. and Dorchester St. intersection	1000	155	12	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
9 50m Northeast of Intercolonial St. and Dorchester St. intersection	1015	155	10	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 225m North of TP2 security trailer off Inglis St	1100	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
11 50m Northeast of Intercolonial St. and Dorchester St. intersection	1100	155	12	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 50m Northeast of Intercolonial St. and Dorchester St. intersection	1120	155	13	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 230m Northwest of TP2 security trailer off Inglis St.	1200	155	12	North	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 50m Northeast of Acadian Lines bus terminal	1200	155	14	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 50m Northeast of Acadian Lines bus terminal	1230	155	14	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 225m North of TP2 security trailer off Inglis St.	1300	155	13	Northeast	Upwind	Background	No observations seen to affect sampling integrity
17 50m Northeast of Intercolonial St. and Dorchester St. intersection	1300	155	13	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 50m Northeast of Intercolonial St. and Dorchester St. intersection	1340	155	10	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 225m North of TP2 security trailer off Inglis St	1400	155	8	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 50m Northeast of Intercolonial St. and Dorchester St. intersection	1400	155	10	Northeast	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 50m Northeast of Intercolonial St. and Dorchester St. intersection	1420	155	9	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 225m North of TP2 security trailer off Inglis St	1500	155	8	Northeast	Upwind	Background	No observations seen to affect sampling integrity
23 50m Northeast of Intercolonial St. and Dorchester St. intersection	1500	155	10	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 50m Northeast of Intercolonial St. and Dorchester St. intersection	1525	155	7	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 225m North of TP2 security trailer off Inglis St	1600	155	8	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 50m Northeast of Intercolonial St. and Dorchester St. intersection	1600	155	7	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 50m Northeast of Intercolonial St. and Dorchester St. intersection	1640	155	7	Northeast	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 ($\mu\text{g}/\text{m}^3$)
20m Southwest of Inglis St. and Ferry St. intersection	0800 to 0859	22	990
20m South of TP2 main entrance	0900 to 0959	39	990
50m Northeast of Intercolonial St. and Dorchester St. Intersection	1000 to 1059	50	990
50m Northeast of Intercolonial St. and Dorchester St. Intersection	1100 to 1159	63	990
50m Northeast of Acadian Lines bus terminal	1200 to 1259	77	990
50m Northeast of Intercolonial St. and Dorchester St. Intersection	1300 to 1359	89	990
50m Northeast of Intercolonial St. and Dorchester St. Intersection	1400 to 1459	99	990
50m Northeast of Intercolonial St. and Dorchester St. Intersection	1500 to 1559	108	990
50m Northeast of Intercolonial St. and Dorchester St. Intersection	1600 to 1659	115	990

VOC Monitoring

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