

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 22nd May, 2009

FILE NO. S-1309-11
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. TP2-0165

**SUBJECT: 21st 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 21st 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 20°C
- Wind Direction: South 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
21st 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 275m East of Acadian Lines bus terminal	0800	155	9	South	Upwind	Background	No observations seen to affect sampling integrity
2 100m Northwest of TP2 main entrance	0800	155	14	South	Downwind	Machines moving material	No observations seen to affect sampling integrity
3 100m Northwest of TP2 main entrance	0820	155	15	South	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 275m East of Acadian Lines bus terminal	0900	155	10	South	Upwind	Background	No observations seen to affect sampling integrity
5 100m Northwest of TP2 main entrance	0900	155	23	South	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 100m Northwest of TP2 main entrance	0915	155	32	South	Downwind	Machines 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 275m East of Acadian Lines bus terminal	1000	155	13	South	Upwind	Background	No observations seen to affect sampling integrity
8 100m Northwest of TP2 main entrance	1000	155	18	South	Downwind	No activity visible on site	No observations seen to affect sampling integrity
9 100m Northwest of TP2 main entrance	1025	155	33	South	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 275m East of Acadian Lines bus terminal	1100	155	14	South	Upwind	Background	No observations seen to affect sampling integrity
11 100m Northwest of TP2 main entrance	1100	155	17	South	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 100m Northwest of TP2 main entrance	1115	155	34	South	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 250m South of Ferry St. and Railway Rd. intersection	1200	155	11	Southwest	Upwind	Background	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
14 50m Southeast of TP2 main entrance	1200	155	46	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 50m Southeast of TP2 main entrance	1220	155	24	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 250m South of Ferry St. and Railway Rd. intersection	1300	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 50m Southeast of TP2 main entrance	1300	155	47	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 50m Southeast of TP2 main entrance	1335	155	35	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 250m South of Ferry St. and Railway Rd. intersection	1400	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 50m Southeast of TP2 main entrance	1400	155	53	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
21 50m Southeast of TP2 main entrance	1420	155	41	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 250m South of Ferry St. and Railway Rd. intersection	1500	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 50m Southeast of TP2 main entrance	1500	155	23	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 50m Southeast of TP2 main entrance	1520	155	42	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 250m South of Ferry St. and Railway Rd. intersection	1600	155	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 50m Southeast of TP2 main entrance	1600	155	45	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 50m Southeast of TP2 main entrance	1640	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 ($\mu\text{g}/\text{m}^3$)
100m Northwest of TP2 main entrance	0800 to 0859	15	990
100m Northwest of TP2 main entrance	0900 to 0959	43	990
100m Northwest of TP2 main entrance	1000 to 1059	69	990
100m Northwest of TP2 main entrance	1100 to 1159	95	990
50m Southeast of TP2 main entrance	1200 to 1259	130	990
50m Southeast of TP2 main entrance	1300 to 1359	171	990
50m Southeast of TP2 main entrance	1400 to 1459	218	990
50m Southeast of TP2 main entrance	1500 to 1559	251	990
50m Southeast of TP2 main entrance	1600 to 1659	287	990

VOC Monitoring

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