

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1309-12
FROM	Dianne Theriault	SHIFT:	0730 to 1700
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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DATE	25 th May, 2009	STPA NO.	TP2-0166

**SUBJECT: 22nd 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 22nd 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 23°C
- Wind Direction: Southwest to Northwest to Northeast to North

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
22nd May, 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 250m South of Railway Rd. and Ferry St. intersection	0800	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 50m Southeast of TP2 main entrance	0800	155	95	Southwest	Downwind	Machines moving material	Dust from site road
3 50m Southeast of TP2 main entrance	0825	155	43	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 375m North of Railway Rd. and Ferry St. intersection	0900	155	35	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 20m West of Inglis St. and Ferry St. intersection	0900	155	45	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 20m West of Inglis St. and Ferry St. intersection	0915	155	91	Northwest	Downwind	Machines moving material	Dust from site road

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 375m North of Railway Rd. and Ferry St. intersection	1000	155	21	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 20m Northwest of Inglis St. and Terminal Rd. intersection	1000	155	21	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 20m Northwest of Inglis St. and Terminal Rd. intersection	1025	155	21	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 375m North of Railway Rd. and Ferry St. intersection	1100	155	17	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 20m Northwest of Inglis St. and Terminal Rd. intersection	1100	155	18	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 20m Northwest of Inglis St. and Terminal Rd. intersection	1115	155	24	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 375m North of Railway Rd. and Ferry St. intersection	1200	155	23	Northwest	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 20m Northwest of Inglis St. and Terminal Rd. intersection	1200	155	25	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 20m Northwest of Inglis St. and Terminal Rd. intersection	1220	155	25	Northwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 175m Northeast of TP2 main entrance	1300	155	20	Northeast	Upwind	Background	No observations seen to affect sampling integrity
17 20m North of Acadian Lines bus terminal	1300	155	21	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 20m North of Acadian Lines bus terminal	1325	155	20	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 175m Northeast of TP2 main entrance	1400	155	27	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 20m North of Acadian Lines bus terminal	1400	155	21	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 20m North of Acadian Lines bus terminal	1420	155	23	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 175m North of TP2 main entrance	1500	155	8	North	Upwind	Background	No observations seen to affect sampling integrity
23 50m Northeast of Acadian Lines bus terminal	1500	155	8	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 50m Northeast of Acadian Lines bus terminal	1525	155	8	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 175m North of TP2 main entrance	1600	155	10	North	Upwind	Background	No observations seen to affect sampling integrity
26 50m Northeast of Acadian Lines bus terminal	1600	155	10	North	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 50m Northeast of Acadian Lines bus terminal	1615	155	10	North	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 ($\mu\text{g}/\text{m}^3$)
50m Southeast of TP2 main entrance	0800 to 0859	69	990
20m West of Inglis St. and Ferry St. intersection	0900 to 0959	137	990
20m North of Acadian Lines bus terminal	1000 to 1059	158	990
20m North of Acadian Lines bus terminal	1100 to 1159	179	990
20m North of Acadian Lines bus terminal	1200 to 1259	204	990
20m North of Acadian Lines bus terminal	1300 to 1359	225	990
20m North of Acadian Lines bus terminal	1400 to 1459	247	990
50m Northeast of Acadian Lines bus terminal	1500 to 1559	255	990
50m Northeast of Acadian Lines bus terminal	1600 to 1659	265	990

VOC Monitoring

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