

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 26th March, 2009

FILE NO. S-1279-15
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP2-0131

**SUBJECT: 25th March, 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 25th of March, 2009. Nigel MacLean and Tyler Rowe, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:
- Mainly cloudy
- Temperature: approximately -1°C
- Wind Direction: 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 Nigel MacLean 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
25th March, 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 100m North of workers entrance of TP2 site.	0800	155	7	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 40m West of Acadian Lines Terminal	0800	155	8	Northeast	Downwind	Machine moving materials.	No observations seen to affect sampling integrity
3 40m West of Acadian Lines Terminal	0830	155	7	Northeast	Downwind	Machine moving materials.	No observations seen to affect sampling integrity
4 15m East of workers entrance of TP2 site.	0900	155	9	Northeast	Upwind	Background	No observations seen to affect sampling integrity
5 40m West of Acadian Lines Terminal	0900	155	6	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
6 40m West of Acadian Lines Terminal	0935	155	6	Northeast	Downwind	Machine 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 15m East of workers entrance of TP2 site.	1000	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
8 40m West of Acadian Lines Terminal	1000	155	4	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 40m West of Acadian Lines Terminal	1025	155	2	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
10 15m East of workers entrance of TP2 site.	1100	155	12	Northeast	Upwind	Background	No observations seen to affect sampling integrity
11 40m West of Acadian Lines Terminal	1100	155	2	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
12 40m West of Acadian Lines Terminal	1115	155	2	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
13 15m East of workers entrance of TP2 site.	1200	155	10	Northeast	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 40m West of Acadian Lines Terminal	1200	155	2	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 40m West of Acadian Lines Terminal	1220	155	2	Northeast	Downwind	Machine moving materials.	No observations seen to affect sampling integrity
16 15m East of workers entrance of TP2 site.	1300	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
17 40m West of Acadian Lines Terminal	1300	155	2	Northeast	Downwind	Machines moving material.	No observations seen to affect sampling integrity
18 40m West of Acadian Lines Terminal	1345	155	1	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 15m East of workers entrance of TP2 site.	1400	155	9	Northeast	Upwind	Background	No observations seen to affect sampling integrity
20 40m West of Acadian Lines Terminal	1400	155	1	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 40m West of Acadian Lines Terminal	1420	155	1	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 15m East of workers entrance of TP2 site.	1500	155	11	Northeast	Upwind	Background	No observations seen to affect sampling integrity
23 40m West of Acadian Lines Terminal	1500	155	3	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 40m West of Acadian Lines Terminal	1545	155	2	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 15m East of workers entrance of TP2 site.	1600	155	10	Northeast	Upwind	Background	No observations seen to affect sampling integrity
26 40m West of Acadian Lines Terminal	1600	155	3	Northeast	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 40m West of Acadian Lines Terminal	1645	155	3	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 ($\mu\text{g}/\text{m}^3$)
40m West of Acadian Lines Terminal	0800 to 0859	8	990
40m West of Acadian Lines Terminal	0900 to 0959	14	990
40m West of Acadian Lines Terminal	1000 to 1059	17	990
40m West of Acadian Lines Terminal	1100 to 1159	19	990
40m West of Acadian Lines Terminal	1200 to 1259	21	990
40m West of Acadian Lines Terminal	1300 to 1359	22	990
40m West of Acadian Lines Terminal	1400 to 1459	23	990
40m West of Acadian Lines Terminal	1500 to 1559	26	990
40m West of Acadian Lines Terminal	1600 to 1659	29	990

VOC Monitoring

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