

MEMORANDUM

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

FILE NO. S-1291-14
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP2-0148

**SUBJECT: 21st April, 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 April, 2009. Nigel MacLean 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 10°C
- Wind Direction: 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 April, 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 25m Northwest of fixed station on Intercolonial St.	0800	155	25	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 60m North of Spar Rd. and Inglis St. intersection	0800	155	26	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 60m North of Spar Rd. and Inglis St. intersection	0815	155	24	Southwest	Downwind	Excavators in operation	No observations seen to affect sampling integrity
4 25m Northwest of fixed station on Intercolonial St.	0900	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 60m North of Spar Rd. and Inglis St. intersection	0900	155	21	Southwest	Downwind	Excavators in operation	No observations seen to affect sampling integrity
6 60m North of Spar Rd. and Inglis St. intersection	0925	155	20	Southwest	Downwind	Excavators in operation	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 25m Northwest of fixed station on Intercolonial St.	1000	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 60m North of Spar Rd. and Inglis St. intersection	1000	155	22	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 60m North of Spar Rd. and Inglis St. intersection	1030	155	12	Southwest	Downwind	Excavators in operation	No observations seen to affect sampling integrity
10 25m Northwest of fixed station on Intercolonial St.	1100	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 60m North of Spar Rd. and Inglis St. intersection	1100	155	10	Southwest	Downwind	Excavators in operation	No observations seen to affect sampling integrity
12 60m North of Spar Rd. and Inglis St. intersection	1125	155	12	Southwest	Downwind	Excavators in operation	No observations seen to affect sampling integrity
13 25m Northwest of fixed station on Intercolonial St.	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 160m North of Spar Rd. and Inglis St. intersection	1200	155	61	Southwest	Downwind	No activity observed on site	Dust from traffic on Inglis St., swirling winds
15 160m North of Spar Rd. ext and Inglis St. intersection	1220	155	16	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 25m Northwest of fixed station on Intercolonial St.	1300	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 50m North of TP2 main entrance	1300	155	37	Southwest	Downwind	Excavators and water truck in operation	No observations seen to affect sampling integrity
18 50m North of TP2 main entrance	1320	155	28	Southwest	Downwind	Excavators and water truck in operation	No observations seen to affect sampling integrity
19 25m Northwest of fixed station on Intercolonial St.	1400	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 50m North of TP2 main entrance	1400	155	20	Southwest	Downwind	Excavators and water truck in operation	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 North of TP2 main entrance	1440	155	27	Southwest	Downwind	Excavators and water truck in operation	No observations seen to affect sampling integrity
22 25m Northwest of fixed station on Intercolonial St.	1500	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 50m North of TP2 main entrance	1500	155	30	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 50m North of TP2 main entrance	1530	155	35	Southwest	Downwind	Excavators in operation	No observations seen to affect sampling integrity
25 25m Northwest of fixed station on Intercolonial St.	1600	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 50m North of TP2 main entrance	1600	155	23	Southwest	Downwind	Excavators in operation	No observations seen to affect sampling integrity
27 50m North of TP2 main entrance	1645	155	44	Southwest	Downwind	No activity observed on site	Grass fire upwind

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 ($\mu\text{g}/\text{m}^3$)
60m North of Spar Rd. and Inglis St. intersection	0800 to 0859	25	990
60m North of Spar Rd. and Inglis St. intersection	0900 to 0959	46	990
60m North of Spar Rd. and Inglis St. intersection	1000 to 1059	63	990
60m North of Spar Rd. and Inglis St. intersection	1100 to 1159	74	990
160m North of Spar Rd. and Inglis St. intersection	1200 to 1259	113	990
50m North of TP2 main entrance	1300 to 1359	146	990
50m North of TP2 main entrance	1400 to 1459	170	990
50m North of TP2 main entrance	1500 to 1559	203	990
50m North of TP2 main entrance	1600 to 1659	237	990

VOC Monitoring

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