

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 16th April, 2009

FILE NO. S-1291-10
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. TP2-0144

**SUBJECT: 15th 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 15th of April, 2009. Alison Giovannetti and Jennifer Andrews 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 3°C
- Wind Direction: Northwest

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
15th 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 300m North of Ferry St. and Railway Rd. intersection	0800	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 5m West of Spar Rd. and Inglis St. intersection	0800	155	14	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
3 5m West of Spar Rd. and Inglis St. intersection	0820	155	13	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
4 300m North of Ferry St. and Railway Rd. intersection	0900	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 5m West of Spar Rd. and Inglis St. intersection	0900	155	15	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
6 3m West of Spar Rd. and Inglis St. intersection	0920	155	17	Northwest	Downwind	Machines 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 300m North of Ferry St. and Railway Rd. intersection	1000	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 4m West of Spar Rd. and Inglis St. intersection	1000	155	14	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
9 4m West of Spar Rd. and Inglis St. intersection	1030	155	16	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
10 300m North of Ferry St. and Railway Rd. intersection	1100	155	14	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 4m West of Spar Rd. and Inglis St. intersection	1100	155	16	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
12 4m West of Spar Rd. and Inglis St. intersection	1140	155	19	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
13 300m North of Ferry St. and Railway Rd. intersection	1200	155	10	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 4m West of Spar Rd. and Inglis St. intersection	1200	155	12	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 4m West of Spar Rd. and Inglis St. intersection	1215	155	12	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 300m North of Ferry St. and Railway Rd. intersection	1300	155	12	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 5m Southwest of Spar Rd. and Inglis St. intersection	1300	155	21	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
18 5m Southwest of Spar Rd. and Inglis St. intersection	1325	155	22	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
19 300m North of Ferry St. and Railway Rd. intersection	1400	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 5m Southwest of Spar Rd. and Inglis St. intersection	1400	155	27	Northwest	Downwind	Machines 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 5m Southwest of Spar Rd. and Inglis St. intersection	1445	155	19	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
22 300m North of Ferry St. and Railway Rd. intersection	1500	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 5m Southwest of Spar Rd. and Inglis St. intersection	1500	155	13	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
24 5m Southwest of Spar Rd. and Inglis St. intersection	1535	155	18	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
25 300m North of Ferry St. and Railway Rd. intersection	1600	155	13	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 5m Southwest of Spar Rd. and Inglis St. intersection	1600	155	24	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
27 5m Southwest of Spar Rd. and Inglis St. intersection	1645	155	28	Northwest	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 ($\mu\text{g}/\text{m}^3$)
5m West of Spar Rd. and Inglis St. intersection	0800 to 0859	14	990
5m West of Spar Rd. and Inglis St. intersection / 3m West of Spar Rd. and Inglis St. intersection	0900 to 0959	30	990
4m West of Spar Rd. and Inglis St. intersection	1000 to 1059	45	990
4m West of Spar Rd. and Inglis St. intersection	1100 to 1159	63	990
4m West of Spar Rd. and Inglis St. intersection	1200 to 1259	75	990
5m Southwest of Spar Rd. and Inglis St. intersection	1300 to 1359	97	990
5m Southwest of Spar Rd. and Inglis St. intersection	1400 to 1459	120	990
5m Southwest of Spar Rd. and Inglis St. intersection	1500 to 1559	136	990
5m Southwest of Spar Rd. and Inglis St. intersection	1600 to 1659	162	990

VOC Monitoring

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