

MEMORANDUM

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

FILE NO. S-1279-09
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP2-0125

**SUBJECT: 16th 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 16th of March, 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 -5°C
- Wind Direction: West to 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.*

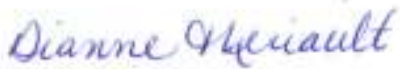
All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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
16th March, 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 50m North of Ferry St. and Railway Intersection	0800	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
2 30m North of Inglis St. and Spar Rd. Intersection	0800	155	11	West	Downwind	Machines in operation	No observations seen to affect sampling integrity
3 30m North of Inglis St. and Spar Rd. Intersection	0830	155	15	West	Downwind	Machines in operation	No observations seen to affect sampling integrity
4 100m North of Ferry St. and Railway Intersection	0900	155	4	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 5m North of Inglis St. and Spar Rd. Intersection	0900	155	11	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
6 5m North of Inglis St. and Spar Rd. 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 100m North of Ferry St. and Railway Intersection	1000	155	35	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 5m North of Inglis St. and Spar Rd. Intersection	1000	155	16	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
9 5m North of Inglis St. and Spar Rd. Intersection	1045	155	13	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
10 100m North of Ferry St. and Railway Intersection	1100	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 5m North of Inglis St. and Spar Rd. Intersection	1100	155	8	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
12 5m North of Inglis St. and Spar Rd. Intersection	1125	155	13	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
13 100m North of Ferry St. and Railway Intersection	1200	155	5	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 5m North of Inglis St. and Spar Rd. Intersection	1200	155	10	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 5m North of Inglis St. and Spar Rd. Intersection	1235	155	9	Northwest	Downwind	No activity visible	No observations seen to affect sampling integrity
16 100m North of Ferry St. and Railway Intersection	1300	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 5m North of Inglis St. and Spar Rd. Intersection	1300	155	7	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
18 5m North of Inglis St. and Spar Rd. Intersection	1320	155	9	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
19 100m North of Ferry St. and Railway Intersection	1400	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 5m North of Inglis St. and Spar Rd. Intersection	1400	155	22	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 North of Inglis St. and Spar Rd. Intersection	1430	155	7	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
22 100m North of Ferry St. and Railway Intersection	1500	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 5m North of Inglis St. and Spar Rd. Intersection	1500	155	5	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
24 5m North of Inglis St. and Spar Rd. Intersection	1535	155	8	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
25 100m North of Ferry St. and Railway Intersection	1600	155	3	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 5m North of Inglis St. and Spar Rd. Intersection	1600	155	8	Northwest	Downwind	Machines in operation	No observations seen to affect sampling integrity
27 5m North of Inglis St. and Spar Rd. Intersection	1645	155	10	Northwest	Downwind	Machines in operation	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 ($\mu\text{g}/\text{m}^3$)
30m North of Inglis St. and Spar Rd. Intersection	0800 to 0859	13	990
5m North of Inglis St. and Spar Rd. Intersection	0900 to 0959	27	990
5m North of Inglis St. and Spar Rd. Intersection	1000 to 1059	42	990
5m North of Inglis St. and Spar Rd. Intersection	1100 to 1159	53	990
5m North of Inglis St. and Spar Rd. Intersection	1200 to 1259	73	990
5m North of Inglis St. and Spar Rd. Intersection	1300 to 1359	81	990
5m North of Inglis St. and Spar Rd. Intersection	1400 to 1459	96	990
5m North of Inglis St. and Spar Rd. Intersection	1500 to 1559	103	990
5m North of Inglis St. and Spar Rd. Intersection	1600 to 1659	112	990

VOC Monitoring

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