

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 8th January, 2009

FILE NO. S-1257-03
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. TP2-0081

**SUBJECT: 7th January, 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 7th of January, 2009. Darren Lawless, Colin MacIsaac and Reg Peters, 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 -8°C
- Wind Direction: West

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 Reg Peters 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
7th January, 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 20m North of Ferry Street, Walker Street intersection	0800	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
2 90m North of Inglis Street, Spar Road Intersection	0800	155	7	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 90m North of Inglis Street, Spar Road Intersection	0830	155	4	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 20m North of Ferry Street, Walker Street intersection	0900	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
5 90m North of Inglis Street, Spar Road Intersection	0900	155	4	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 90m North of Inglis Street, Spar Road Intersection	0940	155	2	West	Downwind	Machines 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 20m North of Ferry Street, Walker Street intersection	1000	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
8 90m North of Inglis Street, Spar Road Intersection	1000	155	7	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 90m North of Inglis Street, Spar Road Intersection	1020	155	8	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 20m North of Ferry Street, Walker Street intersection	1100	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
11 90m North of Inglis Street, Spar Road Intersection	1100	155	11	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 90m North of Inglis Street, Spar Road Intersection	1145	155	12	West	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 20m North of Ferry Street, Walker Street intersection	1200	155	4	West	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 90m North of Inglis Street, Spar Road Intersection	1200	155	12	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 90m North of Inglis Street, Spar Road Intersection	1225	155	11	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
16 20m North of Ferry Street, Walker Street intersection	1300	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
17 90m North of Inglis Street, Spar Road Intersection	1300	155	15	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
18 90m North of Inglis Street, Spar Road Intersection	1345	155	7	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
19 20m North of Ferry Street, Walker Street intersection	1400	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
20 90m North of Inglis Street, Spar Road Intersection	1400	155	7	West	Downwind	Machine 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 90m North of Inglis Street, Spar Road Intersection	1430	155	9	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
22 20m North of Ferry Street, Walker Street intersection	1500	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
23 90m North of Inglis Street, Spar Road Intersection	1500	155	6	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
24 90m North of Inglis Street, Spar Road Intersection	1530	155	9	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
25 20m North of Ferry Street, Walker Street intersection	1600	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
26 90m North of Inglis Street, Spar Road Intersection	1600	155	10	West	Downwind	Workers using hand tools	No observations seen to affect sampling integrity
27 90m North of Inglis Street, Spar Road Intersection	1645	155	8	West	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 ($\mu\text{g}/\text{m}^3$)
90m North of Inglis Street, Spar Road Intersection	0800 to 0859	6	990
90m North of Inglis Street, Spar Road Intersection	0900 to 0959	9	990
90m North of Inglis Street, Spar Road Intersection	1000 to 1059	17	990
90m North of Inglis Street, Spar Road Intersection	1100 to 1159	29	990
90m North of Inglis Street, Spar Road Intersection	1200 to 1259	41	990
90m North of Inglis Street, Spar Road Intersection	1300 to 1359	52	990
90m North of Inglis Street, Spar Road Intersection	1400 to 1459	60	990
90m North of Inglis Street, Spar Road Intersection	1500 to 1559	68	990
90m North of Inglis Street, Spar Road Intersection	1600 to 1659	77	990

VOC Monitoring

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