

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 12th January, 2009

FILE NO. S-1257-05
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. TP2-0083

**SUBJECT: 9th 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 9th of January, 2009. Colin MacIsaac, Darren Lawless 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 with flurries
- Temperature: approximately -3°C
- Wind Direction: West

Comments: *ALL-TECH was on-Site at 0730 hours and sampling began as soon as there was site activity, and was later put on standby from 1000 hours to 1050 hours and from 1220 hours to 1300 hours due to periods of precipitation. Air monitoring was performed during AECOM's construction activities.*

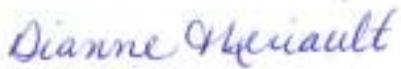
All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

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 Colin MacIsaac 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
9th 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 80m North of Inglis Street, Spar Road intersection	0800	155	10	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
2 25m North of corner of Ferry Street and Walker Street	0815	155	12	West	Upwind	Background	No observations seen to affect sampling integrity
3 80m North of Inglis Street, Spar Road intersection	0835	155	8	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
4 25m North of corner of Ferry Street and Walker Street	0900	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
5 80m North of Inglis Street, Spar Road intersection	0935	155	6	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
6 25m North of corner of Ferry Street and Walker Street	1050	155	13	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
7 80m North of Inglis Street, Spar Road intersection	1100	155	2	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
8 25m North of corner of Ferry Street and Walker Street	1105	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
9 80m North of Inglis Street, Spar Road intersection	1140	155	6	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
10 25m North of corner of Ferry Street and Walker Street	1200	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
11 80m North of Inglis Street, Spar Road intersection	1200	155	7	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 25m North of corner of Ferry Street and Walker Street	1300	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
13 80m North of Inglis Street, Spar Road intersection	1300	155	9	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
14 80m North of Inglis Street, Spar Road intersection	1330	155	7	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
15 25m North of corner of Ferry Street and Walker Street	1400	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
16 50m North of Inglis Street, Spar Road intersection	1400	155	8	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
17 50m North of Inglis Street, Spar Road intersection	1420	155	8	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
18 25m North of corner of Ferry Street and Walker Street	1500	155	5	West	Upwind	Background	No observations seen to affect sampling integrity
19 50m North of Inglis Street, Spar Road intersection	1500	155	7	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
20 50m North of Inglis Street, Spar Road intersection	1545	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 25m North of corner of Ferry Street and Walker Street	1600	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
22 50m North of Inglis Street, Spar Road intersection	1600	155	8	West	Downwind	Machine moving material	No observations seen to affect sampling integrity
23 50m North of Inglis Street, Spar Road intersection	1645	155	9	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 ($\mu\text{g}/\text{m}^3$)
80m North of Inglis Street, Spar Road intersection	0800 to 0859	9	990
80m North of Inglis Street, Spar Road intersection	0900 to 0959	13	990
80m North of Inglis Street, Spar Road intersection	1100 to 1159	20	990
80m North of Inglis Street, Spar Road intersection	1200 to 1259	29	990
80m North of Inglis Street, Spar Road intersection	1300 to 1359	37	990
50m North of Inglis Street, Spar Road intersection	1400 to 1459	45	990
50m North of Inglis Street, Spar Road intersection	1500 to 1559	52	990
50m North of Inglis Street, Spar Road intersection	1600 to 1659	61	990

VOC Monitoring

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