

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 4th December, 2008

FILE NO. S-1243-02
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP2-0064

**SUBJECT: 3rd December, 2008, 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 3rd of December, 2008. Colin MacIsaac 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 cloudy, midday showers
- Temperature: approximately 5°C
- Wind Direction: Southwest

Comments: *ALL-TECH was on-Site at 0730 and sampling began as soon as there was site activity. Air monitoring was performed during EarthTech'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
3rd December, 2008

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 30m Southeast of Ferry Street, Walker Street intersection	0800	155	30	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 70m North of Inglis Street, Spar Road intersection	0800	155	22	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 70m North of Inglis Street, Spar Road intersection	0830	155	51	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 30m Southeast of Ferry Street, Walker Street intersection	0900	155	28	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 110m North of Inglis Street and Spar Road intersection	0900	155	32	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
6 110m North of Inglis Street and Spar Road intersection	0935	155	81	Southwest	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 30m Southeast of Ferry Street, Walker Street intersection	1000	155	28	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 110m North of Inglis Street and Spar Road intersection	1000	155	28	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 110m North of Inglis Street and Spar Road intersection	1020	155	29	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 30m Southeast of Ferry Street, Walker Street intersection	1100	155	33	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 110m North of Inglis Street and Spar Road intersection	1100	155	28	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
12 110m North of Inglis Street and Spar Road intersection	1140	155	43	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
13 30m Southeast of Ferry Street, Walker Street intersection	1200	155	21	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 110m North of Inglis Street and Spar Road intersection	1200	155	14	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 110m North of Inglis Street and Spar Road intersection	1220	155	13	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 30m Southeast of Ferry Street, Walker Street intersection	1300	155	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 110m North of Inglis Street and Spar Road intersection	1300	155	17	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 110m North of Inglis Street and Spar Road intersection	1345	155	25	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 30m Southeast of Ferry Street, Walker Street intersection	1400	155	24	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 110m North of Inglis Street and Spar Road intersection	1400	155	16	Southwest	Downwind	Machines 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 110m North of Inglis Street and Spar Road intersection	1445	155	30	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 30m Southeast of Ferry Street, Walker Street intersection	1500	155	33	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 110m North of Inglis Street and Spar Road intersection	1500	155	15	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 110m North of Inglis Street and Spar Road intersection	1530	155	14	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
25 30m Southeast of Ferry Street, Walker Street intersection	1600	155	26	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 110m North of Inglis Street and Spar Road intersection	1600	155	23	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
27 110m North of Inglis Street and Spar Road intersection	1645	155	30	Southwest	Downwind	Machines moving material	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 ($\mu\text{g}/\text{m}^3$)
70m North of Inglis Street and Spar Road intersection	0800 to 0859	37	990
110m North of Inglis Street and Spar Road intersection	0900 to 0959	93	990
110m North of Inglis Street and Spar Road intersection	1000 to 1059	121	990
110m North of Inglis Street and Spar Road intersection	1100 to 1159	156	990
110m North of Inglis Street and Spar Road intersection	1200 to 1259	169	990
110m North of Inglis Street and Spar Road intersection	1300 to 1359	190	990
110m North of Inglis Street and Spar Road intersection	1400 to 1459	213	990
110m North of Inglis Street and Spar Road intersection	1500 to 1559	228	990
110m North of Inglis Street and Spar Road intersection	1600 to 1659	254	990

VOC Monitoring

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