

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 16th September, 2008

FILE NO. S-1194-10
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP2-0014

**SUBJECT: 15th September, 2008, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Materials Processing Facility
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 15th of September, 2008. Colin MacIsaac and Tyler Rowe 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 20°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. Continuous monitoring was required from 0900 to 1000 as dust being blown off site by high winds was causing higher than normal readings. Earth Tech was contacted, and at 0930, watering down of the site began. Readings remained at normal levels for the remainder of the day.*

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 – Materials Processing Facility
15th September, 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 20m West of Intercolonial Street on Ferry Street	0800	155	21	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 70m North of Spar Road, Inglis Street intersection	0800	155	17	Southwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
3 70m North of Spar Road, Inglis Street intersection	0835	155	26	Southwest	Downwind	Excavator moving material	No observations seen to effect sampling integrity
4 20m West of Intercolonial Street on Ferry Street	0900	155	24	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 70m North of Spar Road, Inglis Street intersection	0900	155	106	Southwest	Downwind	Excavator filling dump trucks	High winds blowing dust off site
6 20m West of Intercolonial Street on Ferry Street	0915	155	25	Southwest	Upwind	Background	No observations seen to effect sampling integrity
7 70m North of Spar Road, Inglis Street intersection	0915	155	116	Southwest	Downwind	Excavator filling dump trucks	High winds blowing dust off site

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
8 20m West of Intercolonial Street on Ferry Street	0930	155	28	Southwest	Upwind	Background	No observations seen to effect sampling integrity
9 70m North of Spar Road, Inglis Street intersection	0930	155	81	Southwest	Downwind	Excavator filling dump trucks	High winds blowing dust off site
10 20m West of Intercolonial Street on Ferry Street	0945	155	25	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 20m East of North Pond main gate	0945	155	22	Southwest	Downwind	Excavator filling dump trucks	No observations seen to effect sampling integrity
12 20m West of Intercolonial Street on Ferry Street	1000	155	21	Southwest	Upwind	Background	No observations seen to effect sampling integrity
13 20m East of North Pond main gate	1000	155	24	Southwest	Downwind	Excavator filling dump trucks	No observations seen to affect sampling integrity
14 20m East of North Pond main gate	1035	155	17	Southwest	Downwind	Excavator filling dump trucks	No observations seen to effect sampling integrity
15 20m West of Intercolonial Street on Ferry Street	1100	155	21	Southwest	Upwind	Background	No observations seen to effect 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
16 20m East of North Pond main gate	1100	155	17	Southwest	Downwind	Excavator filling dump trucks	No observations seen to affect sampling integrity
17 20m East of North Pond main gate	1145	155	18	Southwest	Downwind	Excavator filling dump trucks	No observations seen to effect sampling integrity
18 20m West of Intercolonial Street on Ferry Street	1200	155	26	Southwest	Upwind	Background	No observations seen to effect sampling integrity
19 20m East of North Pond main gate	1200	155	17	Southwest	Downwind	Excavator filling dump trucks	No observations seen to affect sampling integrity
20 20m East of North Pond main gate	1235	155	25	Southwest	Downwind	Excavator filling dump trucks	No observations seen to affect sampling integrity
21 20m West of Intercolonial Street on Ferry Street	1300	155	25	Southwest	Upwind	Background	No observations seen to effect sampling integrity
22 20m East of North Pond main gate	1300	155	22	Southwest	Downwind	Excavator filling dump trucks	No observations seen to effect sampling integrity
23 20m East of North Pond main gate	1330	155	22	Southwest	Downwind	Excavator filling dump trucks	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
24 20m West of Intercolonial Street on Ferry Street	1400	155	29	Southwest	Upwind	Background	No observations seen to effect sampling integrity
25 20m East of North Pond main gate	1400	155	23	Southwest	Downwind	Excavator filling dump trucks	No observations seen to effect sampling integrity
26 20m East of North Pond main gate	1415	155	21	Southwest	Downwind	Excavator filling dump trucks	No observations seen to affect sampling integrity
27 20m West of Intercolonial Street on Ferry Street	1500	155	30	Southwest	Upwind	Background	No observations seen to effect sampling integrity
28 20m East of North Pond main gate	1500	155	22	Southwest	Downwind	Excavator filling dump trucks	No observations seen to effect sampling integrity
29 20m East of North Pond main gate	1520	155	21	Southwest	Downwind	Excavator filling dump trucks	No observations seen to effect sampling integrity
30 20m West of Intercolonial Street on Ferry Street	1600	155	28	Southwest	Upwind	Background	No observations seen to effect sampling integrity
31 20m East of North Pond main gate	1600	155	22	Southwest	Downwind	Excavator filling dump trucks	No observations seen to effect 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
32 20m East of North Pond main gate	1645	155	24	Southwest	Downwind	No activity observed on site	No observations seen to effect 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 (µg/m ³)	Dust Budget Exceedance Value (µg/m ³)
70m North of Spar Road, Inglis Street intersection	0800 to 0859	21	990
70m North of Spar Road, Inglis Street intersection	0900 to 0959	103	990
20m East of North Pond main gate	1000 to 1059	124	990
20m East of North Pond main gate	1100 to 1159	142	990
20m East of North Pond main gate	1200 to 1259	164	990
20m East of North Pond main gate	1300 to 1359	186	990
20m East of North Pond main gate	1400 to 1459	208	990

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
20m East of North Pond main gate	1500 to 1559	230	990
20m East of North Pond main gate	1600 to 1659	253	990

VOC Monitoring

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