

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 27th February, 2009

FILE NO. S-1269-18
SHIFT: 0730 to 1730
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP2-0116

**SUBJECT: 27th February, 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 27th of February, 2009. Tyler Rowe 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 sunny
- Temperature: approximately 6°C
- Wind Direction: Southwest

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 Tyler Rowe 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
27th February, 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 Railway property, 40m North of Ferry Street	0800	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis Street, 100m North of Spar Road	0800	155	8	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 Inglis Street, 100m North of Spar Road	0830	155	5	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
4 Railway property, 40m North of Ferry Street	0900	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis Street, 100m North of Spar Road	0900	155	5	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
6 Inglis Street, 100m North of Spar Road	0925	155	12	Southwest	Downwind	Machines moving	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 Railway property, 40m North of Ferry Street	1000	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 Inglis Street, 100m North of Spar Road	1000	155	3	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 Inglis Street, 100m North of Spar Road	1040	155	3	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
10 Railway property, 40m North of Ferry Street	1100	155	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 Inglis Street, 100m North of Spar Road	1100	155	3	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
12 Inglis Street, 100m North of Spar Road	1125	155	3	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
13 Railway property, 40m North of Ferry Street	1200	155	2	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 Inglis Street, 100m North of Spar Road	1200	155	3	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 Inglis Street, 100m North of Spar Road	1240	155	3	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
16 Railway property, 40m North of Ferry Street	1300	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 Inglis Street, 100m North of Spar Road	1300	155	5	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
18 Inglis Street, 100m North of Spar Road	1325	155	4	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
19 Railway property, 40m North of Ferry Street	1400	155	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 Inglis Street, 100m North of Spar Road	1400	155	5	Southwest	Downwind	Machines moving	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 Inglis Street, 100m North of Spar Road	1440	155	4	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
22 Railway property, 40m North of Ferry Street	1500	155	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 Inglis Street, 100m North of Spar Road	1500	155	8	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 Inglis Street, 100m North of Spar Road	1520	155	4	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
25 Railway property, 40m North of Ferry Street	1600	155	3	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 Inglis Street, 100m North of Spar Road	1600	155	2	Southwest	Downwind	Machines moving	No observations seen to affect sampling integrity
27 Inglis Street, 100m North of Spar Road	1645	155	2	Southwest	Downwind	Machines moving	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 ($\mu\text{g}/\text{m}^3$)
Inglis Street, 100m North of Spar Road	0800 to 0859	7	990
Inglis Street, 100m North of Spar Road	0900 to 0959	15	990
Inglis Street, 100m North of Spar Road	1000 to 1059	18	990
Inglis Street, 100m North of Spar Road	1100 to 1159	21	990
Inglis Street, 100m North of Spar Road	1200 to 1259	24	990
Inglis Street, 100m North of Spar Road	1300 to 1359	29	990
Inglis Street, 100m North of Spar Road	1400 to 1459	33	990
Inglis Street, 100m North of Spar Road	1500 to 1559	39	990
Inglis Street, 100m North of Spar Road	1600 to 1659	41	990

VOC Monitoring

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