

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 1th May, 2009

FILE NO. S-1293-28
SHIFT: 0630 to 1830
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. CO2-NSL-0031

**SUBJECT: 30th April, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Tar Cell, Sysco Site
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 30th of April, 2009. Reg Peters and Sue Lanoe 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 8°C
- Wind Direction: Southwest to West to Northwest

Comments: *ALL-TECH was on-Site at 0630 and sampling began as soon as there was site activity. Air monitoring was performed during SLR'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 Sue Lanoe 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 – Tar Cell, Sysco Site
 30th April, 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 200m North of Ferry Street on railway property	0700	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 60m North of North end of Inglis Street	0700	155	19	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 60m North of North end of Inglis Street	0730	155	16	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
4 500m North of Ferry Street on railway property	0800	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
5 150m North of North Pond main gate	0800	155	6	West	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
6 150m North of North Pond main gate	0830	155	7	West	Downwind	Trucks dumping 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 500m North of Ferry Street on railway property	0900	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
8 150m North of North Pond main gate	0900	155	12	West	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
9 150m North of North Pond main gate	0945	155	13	West	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
10 500m North of Ferry Street on railway property	1000	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
11 150m North of North Pond main gate	1000	155	23	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 150m North of North Pond main gate	1035	155	43	West	Downwind	Trucks dumping 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
13 500m North of Ferry Street on railway property	1100	155	8	West	Upwind	Background	No observations seen to affect sampling integrity
14 150m North of North Pond main gate	1100	155	61	West	Downwind	Trucks dumping material	Dust from site road traffic
15 150m North of North Pond main gate	1125	155	65	West	Downwind	Trucks dumping material	Dust from site road traffic
16 100m West of Railway building	1200	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 100m North of North Pond main gate	1200	155	22	Northwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
18 100m North of North Pond main gate	1240	155	18	Northwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
19 100m West of Railway building	1300	155	10	Northwest	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
20 100m North of North Pond main gate	1300	155	14	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
21 100m North of North Pond main gate	1330	155	16	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
22 100m West of Railway building	1400	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 100m North of North Pond main gate	1400	155	20	Northwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
24 100m North of North Pond main gate	1420	155	24	Northwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
25 100m West of Railway building	1500	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 100m North of North Pond main gate	1500	155	29	Northwest	Downwind	Trucks dumping 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
27 100m North of North Pond main gate	1520	155	30	Northwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
28 100m West of Railway building	1600	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
29 100m North of North Pond main gate	1600	155	16	Northwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
30 100m North of North Pond main gate	1620	155	10	Northwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
31 100m West of Railway building	1700	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
32 120m North of North Pond main gate	1700	155	24	Northwest	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
33 120m North of North Pond main gate	1745	155	26	Northwest	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 ($\mu\text{g}/\text{m}^3$)
60m North of North end of Inglis Street	0700 to 0759	18	990
150m North of North Pond main gate	0800 to 0859	25	990
150m North of North Pond main gate	0900 to 0959	38	990
150m North of North Pond main gate	1000 to 1059	71	990
150m North of North Pond main gate	1100 to 1159	134	990
100m North of North Pond main gate	1200 to 1259	154	990
100m North of North Pond main gate	1300 to 1359	169	990
100m North of North Pond main gate	1400 to 1459	191	990
100m North of North Pond main gate	1500 to 1559	221	990
100m North of North Pond main gate	1600 to 1659	234	990
100m North of North Pond main gate	1700 to 1759	259	990

VOC Monitoring

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