

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 4th May, 2009

FILE NO. S-1312-02
SHIFT: 0630 to 1530
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. CO2-NSL-0033

**SUBJECT: 1st May, 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 1st of May, 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 cloudy, rain
- Temperature: approximately 13°C
- Wind Direction: South

Comments: ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity, but was later put on standby at 1330 hours and cancelled for the day at 1530 due to ongoing precipitation. Air monitoring was performed during SLR's construction activities.

An exceedance of the Site Action Level of 155 µg/m³ was measured at the downwind location at 1300 hours (see sample 20) with a value of 182 µg/m³. On site personnel and STPA were notified. Continuous monitoring was initiated and continued until monitoring was put on standby at 1330 hours.

All 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
1st May, 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 50m North of Ferry Street on railway property	0700	155	15	South	Upwind	Background	No observations seen to affect sampling integrity
2 90m South of former incinerator	0700	155	18	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 90m South of former incinerator	0725	155	16	South	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
4 50m North of Ferry Street on railway property	0800	155	18	South	Upwind	Background	No observations seen to affect sampling integrity
5 90m South of former incinerator	0800	155	15	South	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
6 90m South of former incinerator	0845	155	20	South	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 50m North of Ferry Street on railway property	0900	155	21	South	Upwind	Background	No observations seen to affect sampling integrity
8 90m South of former incinerator	0900	155	28	South	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
9 90m South of former incinerator	0915	155	25	South	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
10 50m North of Ferry Street on railway property	1000	155	19	South	Upwind	Background	No observations seen to affect sampling integrity
11 90m South of former incinerator	1000	155	19	South	Downwind	Trucks dumping material	No observations seen to affect sampling integrity
12 90m South of former incinerator	1045	155	32	South	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 100m North of Ferry Street on railway property	1100	155	18	South	Upwind	Background	No observations seen to affect sampling integrity
14 90m South of former incinerator	1100	155	69	South	Downwind	Trucks dumping material	Dust from site road traffic
15 90m South of former incinerator	1145	155	89	South	Downwind	Trucks dumping material	Dust from site road traffic
16 100m North of Ferry Street on railway property	1200	155	25	South	Upwind	Background	No observations seen to affect sampling integrity
17 90m South of former incinerator	1200	155	92	South	Downwind	Trucks dumping material	Heavy dust from site
18 90m South of former incinerator	1245	155	89	South	Downwind	No activity observed on site	Heavy dust from site
19 100m North of Ferry Street on railway property	1300	155	18	South	Upwind	Background	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
20 90m South of former incinerator	1300	155	182	South	Downwind	No activity observed on site	Heavy dust from site
21 90m South of former incinerator	1315	155	79	South	Upwind	No activity observed on site	Heavy dust from site
22 100m North of Ferry Street on railway property	1320	155	13	South	Upwind	Background	No observations seen to affect sampling integrity
23 90m South of former incinerator	1330	155	55	South	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 100m North of Ferry Street on railway property	1340	155	16	South	Upwind	Background	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 ($\mu\text{g}/\text{m}^3$)
90m South of former incinerator	0700 to 0759	17	990
90m South of former incinerator	0800 to 0859	35	990
90m South of former incinerator	0900 to 0959	62	990
90m South of former incinerator	1000 to 1059	88	990
90m South of former incinerator	1100 to 1159	167	990
90m South of former incinerator	1200 to 1259	258	990
90m South of former incinerator	1300 to 1359	363	990

VOC Monitoring

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