

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 21st May, 2009

FILE NO. S-1313-20
SHIFT: 0630 to 1830
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP6D-SP-0058

**SUBJECT: 20th May, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Access Roads, South Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 20th of May, 2009. Jennifer Andrews and Nigel MacLean 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 11°C
- Wind Direction: Southwest to West to Northwest

Comments: *ALL-TECH was on-Site at 0630 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 Jennifer Andrews 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 – Access Roads, South Pond
20th 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 15m Northeast of old train station on Dodd St.	0700	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 30m Southwest of Inglis St. and Ferry St. intersection	0700	155	11	Southwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
3 30m Southwest of Inglis St. and Ferry St. intersection	0720	155	10	Southwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
4 15m Northeast of old train station on Dodd St.	0800	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 30m Southwest of Inglis St. and Ferry St. intersection	0800	155	6	Southwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
6 30m Southwest of Inglis St. and Ferry St. intersection	0840	155	10	Southwest	Downwind	Excavators, dump trucks operating	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 15m Northeast of old train station on Dodd St.	0900	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 30m Southwest of Inglis St. and Ferry St. intersection	0900	155	13	Southwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
9 30m Southwest of Inglis St. and Ferry St. intersection	0930	155	14	Southwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
10 15m Northeast of old train station on Dodd St.	1000	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 30m Southwest of Inglis St. and Ferry St. intersection	1000	155	9	Southwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
12 100m Northeast of Plaza Ford	1030	155	8	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
13 90m North of old train station on Dodd St.	1100	155	7	West	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
14 100m Northeast of Plaza Ford	1100	155	10	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
15 100m Northeast of Plaza Ford	1125	155	12	West	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
16 90m North of old train station on Dodd St.	1200	155	9	West	Upwind	Background	No observations seen to affect sampling integrity
17 100m Northeast of Plaza Ford	1200	155	13	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 100m Northeast of Plaza Ford	1215	155	13	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 5m Northwest of Railway Rd. and Ferry St. intersection	1300	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 80m North of Plaza Ford	1300	155	14	Northwest	Downwind	Excavators, dump trucks operating	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 80m North of Plaza Ford	1320	155	13	Northwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
22 5m Northwest of Railway Rd. and Ferry St. intersection	1400	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 80m North of Plaza Ford	1400	155	13	Northwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
24 70m North of Plaza Ford	1440	155	15	Northwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
25 5m Northwest of Railway Rd. and Ferry St. intersection	1500	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 70m North of Plaza Ford	1500	155	16	Northwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
27 70m North of Plaza Ford	1515	155	13	Northwest	Downwind	Excavators, dump trucks operating	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
28 5m Northwest of Railway Rd. and Ferry St. intersection	1600	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
29 70m North of Plaza Ford	1600	155	12	Northwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
30 70m North of Plaza Ford	1615	155	12	Northwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
31 5m Northwest of Railway Rd. and Ferry St. intersection	1700	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
32 70m North of Plaza Ford	1700	155	12	Northwest	Downwind	Excavators, dump trucks operating	No observations seen to affect sampling integrity
33 70m North of Plaza Ford	1745	155	10	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 ($\mu\text{g}/\text{m}^3$)
30m Southwest of Inglis St. and Ferry St.	0700 to 0759	11	990
30m Southwest of Inglis St. and Ferry St.	0800 to 0859	19	990
30m Southwest of Inglis St. and Ferry St.	0900 to 0959	33	990
30m Southwest of Inglis St. and Ferry St. / 100m Northeast of Plaza Ford	1000 to 1059	42	990
100m Northeast of Plaza Ford	1100 to 1159	53	990
80m North of Plaza Ford	1200 to 1259	66	990
80m North of Plaza Ford	1300 to 1359	80	990
80m North of Plaza Ford / 70m North of Plaza Ford	1400 to 1459	94	990
70m North of Plaza Ford	1500 to 1559	109	990
70m North of Plaza Ford	1600 to 1659	121	990
70m North of Plaza Ford	1700 to 1759	132	990

VOC Monitoring

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