

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 11th May, 2009

FILE NO. S-1313-13
SHIFT: 1000 to 1830
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH
STPA NO. TP6D-SP-0051

**SUBJECT: 8th 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 8th of May, 2009. Nigel MacLean and Donald MacIsaac 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 14°C
- Wind Direction: Southwest


Comments *Air monitoring was delayed until 1000 due to precipitation, and began at 1200 when weather conditions were within instrument specifications. Air monitoring was performed during AECOM's construction activities.*

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 Nigel MacLean 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
8th 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 20m East of Dodd St. and Pitt St. intersection	1200	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 15m Southwest of Inglis St. and Spar Rd. intersection	1200	155	6	Southwest	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
3 15m Southwest of Inglis St. and Spar Rd. intersection	1230	155	9	Southwest	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
4 20m East of Dodd St. and Pitt St. intersection	1300	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 15m Southwest of Inglis St. and Spar Rd. intersection	1300	155	10	Southwest	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
6 15m Southwest of Inglis St. and Spar Rd. intersection	1315	155	9	Southwest	Downwind	Excavators and dump trucks in operation	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 20m East of Dodd St. and Pitt St. intersection	1400	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 15m Southwest of Inglis St. and Spar Rd. intersection	1400	155	9	Southwest	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
9 15m Southwest of Inglis St. and Spar Rd. intersection	1445	155	13	Southwest	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
10 20m East of Dodd St. and Pitt St. intersection	1500	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 15m Southwest of Inglis St. and Spar Rd. intersection	1500	155	11	Southwest	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
12 15m Southwest of Inglis St. and Spar Rd. intersection	1530	155	10	Southwest	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
13 20m East of Dodd St. and Pitt St. intersection	1600	155	10	Southwest	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 80m Northeast of Plaza Ford	1600	155	12	Southwest	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
15 80m Northeast of Plaza Ford	1625	155	13	Southwest	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
16 20m East of Dodd St. and Pitt St. intersection	1700	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 80m Northeast of Plaza Ford	1700	155	14	Southwest	Downwind	Excavators and dump trucks in operation	No observations seen to affect sampling integrity
18 80m Northeast of Plaza Ford	1745	155	15	Southwest	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 ($\mu\text{g}/\text{m}^3$)
15m Southwest of Inglis St. and Spar Rd. intersection	1200 to 1259	8	990
15m Southwest of Inglis St. and Spar Rd. intersection	1300 to 1359	18	990
15m Southwest of Inglis St. and Spar Rd. intersection	1400 to 1459	29	990
15m Southwest of Inglis St. and Spar Rd. intersection	1500 to 1559	40	990
80m Northeast of Plaza Ford	1600 to 1659	53	990
80m Northeast of Plaza Ford	1700 to 1700	68	990

VOC Monitoring

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