

MEMORANDUM

TO Dawn MacNeil, STPA
FROM Dianne Theriault
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DATE 30th April, 2009

FILE NO. S-1293-25
SHIFT: 0630 to 1830
CC: Shawn Bernon, STPA
Wilfred Kaiser, STPA
Terry Smith, ALL-TECH

STPA NO. CO2-STPA-0028

**SUBJECT: 29th April, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Tar Cell
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 29th of April, 2009. Alison Giovannetti 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 sunny
- Temperature: approximately 3°C
- Wind Direction: 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 Alison Giovannetti 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
29th 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 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	0700	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 300m Southwest of coke ovens security trailer	0700	155	13	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
3 300m Southwest of coke ovens security trailer	0740	155	7	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
4 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	0800	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 300m Southwest of coke ovens security trailer	0800	155	6	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
6 300m Southwest of coke ovens security trailer	0815	155	4	Northwest	Downwind	No activity visible from sampling location	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
7 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	0900	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 300m Southwest of coke ovens security trailer	0900	155	1	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
9 300m Southwest of coke ovens security trailer	0920	155	1	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
10 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1000	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 300m Southwest of coke ovens security trailer	1000	155	2	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
12 300m Southwest of coke ovens security trailer	1045	155	1	Northwest	Downwind	No activity visible from sampling location	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 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1100	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
14 300m Southwest of coke ovens security trailer	1100	155	1	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
15 300m Southwest of coke ovens security trailer	1145	155	2	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
16 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1200	155	12	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 300m Southwest of coke ovens security trailer	1200	155	3	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
18 300m Southwest of coke ovens security trailer	1215	155	2	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
19 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1300	155	8	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 300m Southwest of coke ovens security trailer	1300	155	0	Northwest	Downwind	No activity visible from sampling location	Recalibration required
21 300m Southwest of coke ovens security trailer	1320	155	29	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
22 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1400	155	41	Northwest	Upwind	Background	Visible dust from trucks on Spar Rd.
23 300m Southwest of coke ovens security trailer	1400	155	20	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
24 300m Southwest of coke ovens security trailer	1435	155	17	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
25 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1500	155	17	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 300m Southwest of coke ovens security trailer	1500	155	15	Northwest	Downwind	No activity visible from sampling location	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 300m Southwest of coke ovens security trailer	1530	155	29	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
28 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1600	155	15	Northwest	Upwind	Background	No observations seen to affect sampling integrity
29 300m Southwest of coke ovens security trailer	1600	155	13	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
30 300m Southwest of coke ovens security trailer	1615	155	14	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
31 30m Northwest of Spar Rd. and Spar Rd. Ext. intersection	1700	155	11	Northwest	Upwind	Background	No observations seen to affect sampling integrity
32 300m Southwest of coke ovens security trailer	1700	155	11	Northwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
33 300m Southwest of coke ovens security trailer	1745	155	12	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 ($\mu\text{g}/\text{m}^3$)
300m Southwest of coke ovens security trailer	0700 to 0759	10	990
300m Southwest of coke ovens security trailer	0800 to 0859	15	990
300m Southwest of coke ovens security trailer	0900 to 0959	16	990
300m Southwest of coke ovens security trailer	1000 to 1059	18	990
300m Southwest of coke ovens security trailer	1100 to 1159	20	990
300m Southwest of coke ovens security trailer	1200 to 1259	23	990
300m Southwest of coke ovens security trailer	1300 to 1359	37	990
300m Southwest of coke ovens security trailer	1400 to 1459	56	990
300m Southwest of coke ovens security trailer	1500 to 1559	78	990
300m Southwest of coke ovens security trailer	1600 to 1659	91	990
300m Southwest of coke ovens security trailer	1700 to 1759	103	990

VOC Monitoring

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