

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1332-04
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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DATE	5 th June, 2009	STPA NO.	COCW-0047

**SUBJECT: 4th June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Vertical Cut-off Walls
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 4th of June, 2009. Keith Neville and Dave Reeves of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Partly cloudy
- Temperature: approximately 20°C
- Wind Direction: Northeast to Southwest

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 David Reeves 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 – Vertical Cut-off Walls
4th June, 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 25m Northeast of coke ovens security trailer (N46°08.921') (W060°10.123')	0700	155	9	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 90m Northeast of Salvation Army (N46°08.765') (W060°10.533')	0700	155	13	Northeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
3 90m Northeast of Salvation Army (N46°08.765') (W060°10.533')	0725	155	13	Northeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
4 55m Northeast of Salvation Army (N46°08.736') (W060°10.527')	0800	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	0800	155	10	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
6 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	0825	155	12	Southwest	Downwind	Excavators and 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
7 55m Northeast of Salvation Army (N46°08.736') (W060°10.527')	0900	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	0900	155	15	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
9 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	0940	155	12	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
10 55m Northeast of Salvation Army (N46°08.736') (W060°10.527')	1000	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1000	155	11	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1020	155	10	Southwest	Downwind	Excavators and 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
13 55m Northeast of Salvation Army (N46°08.736') (W060°10.527')	1100	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
14 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1100	155	10	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
15 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1145	155	12	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
16 55m Northeast of Salvation Army (N46°08.736') (W060°10.527')	1200	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1200	155	10	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
18 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1225	155	11	Southwest	Downwind	Excavators and 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
19 55m Northeast of Salvation Army (N46°08.736') (W060°10.527')	1300	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 350m Southwest of coke ovens security trailer (N46°08.770') (W060°10.378')	1300	155	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
21 350m Southwest of coke ovens security trailer (N46°08.770') (W060°10.378')	1315	155	7	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
22 55m Northeast of Salvation Army (N46°08.736') (W060°10.527')	1400	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 350m Southwest of coke ovens security trailer (N46°08.770') (W060°10.378')	1400	155	19	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
24 350m Southwest of coke ovens security trailer (N46°08.770') (W060°10.378')	1430	155	16	Southwest	Downwind	Excavators and 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
25 55m Northeast of Salvation Army (N46°08.736') (W060°10.527')	1500	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 350m Southwest of coke ovens security trailer (N46°08.770') (W060°10.378')	1500	155	10	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
27 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1540	155	8	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
28 55m Northeast of Salvation Army (N46°08.736') (W060°10.527')	1600	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1600	155	9	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
30 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1615	155	6	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
31 55m Northeast of Salvation Army (N46°08.736') (W060°10.527')	1700	155	7	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
32 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1700	155	7	Southwest	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
33 300m Southwest of coke ovens security trailer (N46°08.793') (W060°10.405')	1745	155	5	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 ($\mu\text{g}/\text{m}^3$)
90m Northeast of Salvation Army	0700 to 0759	13	990
300m Southwest of coke ovens security trailer	0800 to 0859	24	990
300m Southwest of coke ovens security trailer	0900 to 0959	38	990
300m Southwest of coke ovens security trailer	1000 to 1059	49	990
300m Southwest of coke ovens security trailer	1100 to 1159	60	990
300m Southwest of coke ovens security trailer	1200 to 1259	71	990
350m Southwest of coke ovens security trailer	1300 to 1359	79	990
350m Southwest of coke ovens security trailer	1400 to 1459	97	990
300m Southwest of coke ovens security trailer	1500 to 1600	106	990
300m Southwest of coke ovens security trailer	1600 to 1659	114	990
300m Southwest of coke ovens security trailer	1700 to 1759	120	990

VOC Monitoring

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