From: Hedman, Curtis J - DHS
Sent: Friday, January 20, 2023 7:33 PM
To: Martinez, Joseph J - DNR; Michalets, Linda M - DNR
Cc: Schmidt, Lindor
Subject: FW: TEC Air Sampling, 1422 N. Vel R. Phillips Ave., Milwaukee
Attachments: 2022120593 Assay Tech-CCM 12-29-22.pdf; CCM Air Sampling March - December 2022.pdf

Hi All -

Please see attached for some updated church led sampling results. The December 10-day OVM results show TCE concentrations are above the commercial VAL again within the church building. George Beyer attributes this concentration bump to cost saving HVAC adjustments recently made for the winter months. I plan to perform a short-term sampling event (4-hour active charcoal tube samples) at the church next Sunday, January 29th, while the HVAC is in 'occupied mode' to ensure TCE concentrations are indeed lower when the church is occupied. In the meantime, the January sampling results are due late next week. I'll share those as soon as received. Reach out with any follow up comments or questions.

Thanks,

Curtis

Curtis Hedman, Ph.D.
Research Scientist-Toxicologist
Bureau of Environmental and Occupational Health
Division of Public Health, Wisconsin Department of Health Services
1 W Wilson St, Rm 150
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Phone: 608-266-6677
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From: George Beyer <george@christchurchmke.org>
Sent: Thursday, January 19, 2023 11:29 AM
To: Hedman, Curtis J - DHS <Curtis.Hedman@dhs.wisconsin.gov>
Subject: Re: TEC Air Sampling, 1422 N. Vel R. Phillips Ave., Milwaukee

Hi Curtis,

Attached is the latest Assay Technology Lab Report and summary of testing results March through December 2022.

Bad news -- our indoor TCE levels increased markedly during the December testing period. Outdoor levels measured at the alley and rooftop increased as well.

Average TCE quantity in occupied areas was 18.0 ug/m3, above the 8.8 ug/m3 Wisconsin DNR Indoor Air VAL for small commercial buildings. Basement TCE levels and outdoor air TCE also increased from the November testing period.

I attribute the increase in TCE to reduced hours of occupied mode operation of the HVAC system which was implemented November 30th in an effort to reduce energy consumption and operating expenses. We experimented with limiting the hours the building operated in occupied mode to periods events were scheduled, cutting the total hours of occupied operation from about 84 hours per week to about 20 hours.

When the HVAC system is in occupied mode, outside air introduced for ventilation pressurizes the inside of the building relative to the outside air pressure, inhibiting infiltration of TCE from the alley. Providing fresh air from the rooftop also dilutes TCE concentration inside the building.

Upon receiving these results, the HVAC systems serving the first and second floors were reset to operate in occupied mode from 8:00 AM to 8:00 PM daily, as they were before December.

Unfortunately, more than one variable in our TCE experiment was changed in December -- in addition to the modified operating hours of the HVAC system, the carbon filters in the rooftop units (which were due to be changed) were replaced with no-carbon filters November 22nd when the systems were serviced. I don't think the carbon filters had a significant effect in TCE mitigation, but if changing HVAC operating hours alone doesn't reduce TCE sufficiently, the filters can be changed back to carbon at a future date.

TCE sampling was again conducted 1/3 --1/13; the Assay Technology lab report is due January 25tth. I hope we will see a return to lower TCE quantities in January as a result of increasing the hours of HVAC operation.

George
(262) 271-6040

On Wed, Jan 18, 2023 at 5:34 PM Hedman, Curtis J - DHS <Curtis.Hedman@dhs.wisconsin.gov> wrote:

> Hi George,

Hope all is well with you. I'm checking in to see if there are any indoor air results to share since the November timepoint.

Thanks and best,

Curtis

Curtis Hedman, Ph.D.

Research Scientist-Toxicologist

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Division of Public Health, Wisconsin Department of Health Services

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From: George Beyer <george@christchurchmke.org>
Sent: Tuesday, November 29, 2022 10:01 AM
To: Hedman, Curtis J - DHS <Curtis.Hedman@dhs.wisconsin.gov>; Michalets, Linda M - DNR <Linda.Michalets@wisconsin.gov>
Subject: TEC Air Sampling, 1422 N. Vel R. Phillips Ave., Milwaukee

Hello Curtis and Linda,

Attached is the Assay Technology lab report from our November round of testing, and my summary of the sampling done from April through November.

Interior TCE levels have decreased slightly from October -- average is 4.35 ug/cm3 in all of the occupied areas.

The basement level is trending downward, but remains at 10.9 ug/cm3. The outside air at the alley also has less TCE, but is still at 46.5 ug/cm3.

Slow improvement, but still a positive trend. We are continuing to look for ways to tighten up the building envelope and operate the building systems to prevent TCE vapor infiltration.

Our testing results will continue to be shared with Kevin Hedinger at GZA.

George

(262) 271-6040

assay technology

Lab Report

The Innovation & Value Leader in Occupational Hygiene Analysis

Lab Work Order: 2022120593

Customer: CHRIST CHURCH MILWAUKEE
Attention: GEORGE BEYER
Address: 1422 N VEL R PHILLIPS AVE
MILWAUKEE, WI 53212
USA

Phone No.: (262) 271-6040
Fax No.:

Customer No.: 64133
Received Date: December 19, 2022
Date Reported: December 29, 2022

Project ID: 1422 VEL PHILLIPS
PO No.:

Exposure results are the average concentration for the period of time monitored. '< ' means the result is 'less than the RptLmt'. RptLmt = Reporting Limit. The results relate only to the items tested. Unless noted below, samples were received in acceptable condition, all applicable quality control were within method specifications, lab blanks were subtracted before a result was reported, and any customer supplied field blanks were not subtracted from sample results. The molar volume at 25 C (24.45 L/mole) was used to calculate parts per million, ppm. Air concentrations reported are based upon field sampling information provided by the customer. For assistance with the content of this report, please visit the Customer Support section of our web site at http://www.assaytech.com or contact Technical Support at 1-800-833-1258. For details of significant method modifications go to www.assaytech.com/methmod.

Lab Sample ID	Lab Code	Date Sampled	Client Sample ID	Media	Media Lot / Serial #	Analytes Requested	Quantity Found			Sample		Concentration	
							Total	RptLmt	Units	Vol. (L)	Time (min)	Found	Units
22053371	ATOH	12/05/2022	OUTDOOR- ALLEY	525	9A22 - PZ02082								
						TRICHLOROETHYLENE	57.9	2.0	UG	1050	14358	**0.010**	**PPM**
Analyzed By: MWAGNER			Analyzed On: 12/22/2022		Approved By: KTAYLOR	Approved On: 12/29/2022							
22053372	ATOH	12/05/2022	FIRST FLOOR- NE REAR CAGE	525	9A22 - PZ03739								
						TRICHLOROETHYLENE	19.6	2.0	UG	1040	14310	**0.0035**	**PPM**
Analyzed By: MWAGNER			Analyzed On: 12/22/2022		Approved By: KTAYLOR	Approved On: 12/29/2022							
22053374	ATOH	12/05/2022	FIRST FLOOR- WEST EXIT STAIR DOOR	525	9A22 - PZ02770								
						TRICHLOROETHYLENE	93.9	2.0	UG	1050	14360	**0.017**	**PPM**
Analyzed By: MWAGNER			Analyzed On: 12/22/2022		Approved By: KTAYLOR	Approved On: 12/29/2022							
22053376	ATOH	12/05/2022	SECOND FLOOR- NE CONFERENCE ROOM	525	9A22 - PZ03872								
						TRICHLOROETHYLENE	11.5	2.0	UG	1040	14316	**0.0021**	**PPM**
Analyzed By: MWAGNER			Analyzed On: 12/22/2022		Approved By: KTAYLOR	Approved On: 12/29/2022							
22053379	ATOH	12/05/2022	FIRST FLOOR- GALLERY SOUTH SIDE CENTER	525	9A22 - PZ03796								
						TRICHLOROETHYLENE	20.1	2.0	UG	1040	14321	**0.0036**	**PPM**
Analyzed By: MWAGNER			Analyzed On: 12/22/2022		Approved By: KTAYLOR	Approved On: 12/29/2022							
22053381	ATOH	12/05/2022	BASEMENT- PRINTING WORK ROOM CAGE	525	9A22 - PZ03864								

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6003 Chapel Hill Road, Suite 117 • Raleigh, NC 27607 • (800) 833-1258 • FAX: (919) 854-4348

Lab Work Order: 2022120593

Customer: CHRIST CHURCH MILWAUKEE
Attention: GEORGE BEYER
Address: 1422 N VEL R PHILLIPS AVE
MILWAUKEE, WI 53212
USA

Phone No.: (262) 271-6040
Fax No.:

Customer No.: 64133
Received Date: December 19, 2022
Date Reported: December 29, 2022

Project ID: 1422 VEL PHILLIPS
PO No.:

Lab Sample ID	Lab Code	Date Sampled	Client Sample ID	Media	Media Lot / Serial #	Analytes Requested	Quantity Found Total	RptLmt	Units	Sample Vol. (L)	Sample Time (min)	Concentration Found	Concentration Units
22053381	ATOH	12/05/2022	BASEMENT- PRINTING WORK ROOM CAGE	525	9A22 - PZ03864	TRICHLOROETHYLENE	39.1	2.0	UG	1050	14346	**0.0069**	**PPM**
Analyzed By: MWAGNER			Analyzed On: 12/22/2022		Approved By: KTAYLOR	Approved On: 12/29/2022							
22053382	ATOH	12/05/2022	SECOND FLOOR- NURSERY	525	9A22 - PZ02975	TRICHLOROETHYLENE	13.1	2.0	UG	1040	14287	**0.0023**	**PPM**
Analyzed By: MWAGNER			Analyzed On: 12/22/2022		Approved By: KTAYLOR	Approved On: 12/29/2022							
22053383	ATOH	12/05/2022	OUTDOOR- ROOFTOP UNIT #1	525	9A22 - PZ02041	TRICHLOROETHYLENE	8.08	2.0	UG	1040	14292	**0.0014**	**PPM**
Analyzed By: MWAGNER			Analyzed On: 12/22/2022		Approved By: KTAYLOR	Approved On: 12/29/2022							
22053384	ATOH	12/05/2022	SECOND FLOOR- MOTHERS ROOM	525	9A22 - PZ01876	TRICHLOROETHYLENE	17.0	2.0	UG	1040	14301	**0.0030**	**PPM**
Analyzed By: MWAGNER			Analyzed On: 12/22/2022		Approved By: KTAYLOR	Approved On: 12/29/2022							
22053385	ATOH	12/05/2022	FIRST FLOOR- NW CORNER OFFICE	525	9A22 - PZ03607	TRICHLOROETHYLENE	26.5	2.0	UG	1040	14332	**0.0047**	**PPM**
Analyzed By: MWAGNER			Analyzed On: 12/22/2022		Approved By: KTAYLOR	Approved On: 12/29/2022							

Method References:

TestCode	Analytes Requested	Method Reference	Regulatory Agency	TWA Limit	STEL Limit	Exposure Units
79016A	TRICHLOROETHYLENE	AT L-OV (GC/FID)	OSHA PEL/CEILING	100	200	PPM

Applicable OSHA PELs or NIOSH RELS have been included in this lab report for guidance, but may not be sufficient for regulatory compliance. Clients should be aware that more stringent international, state, local, or organizational exposure limits may supersede the limits included with this report. Visit www.OSHA.gov/dsg/annotated-pels for detailed information on exposure limits and OSHA policies.

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Trichlorethylene (TCE) Air Vapor Levels
1422 N. Vel R. Phillips Avenue

Sampling Dates	3/3 - 3/15	3/18 - 4/1	3/18 - 4/1	4/19 - 4/30	6/6 - 6/16	7/9 - 7/19	7/27	7/20 - 7/27	7/20 - 8/3	8/26 - 9/5	9/27 - 10/7	11/1 - 11/11	12/5 - 12/15
Sampling Duration	10 Days	14 Days	14 Days	10 Days	10 Days	10 Days	8 Hours	7 Days	14 Days	10 Days	10 Days	10 Days	10 Days
Testing Laboratory	AT	WOH	Beacon	AT	AT	AT	WOH	WOH	WOH	AT	AT	AT	AT
Outside - Alley	---	67.0	57.5	89.2	104.0	91.4	302.0	380.0	210.0	124.0	68.8	46.5	57.9
Outside - (Back or SE Corner of Bldg)	---	2.0	2.0	---	---	---	---	---	6.2	---	---	---	---
Basement - Center Corridor (Further Back)	17.5	17.0	---	---	---	---	4.4	12.0	11.0	---	---	---	---
Basement - Print Cage (Slot Vents)	---	27.0	39.9	42.6	15.4	16.6	9.0	12.0	16.0	16.9	12.6	10.9	39.1
1st Flr - NW Office (Near Entrance)	6.1	15.0	20.5	23.9	8.0	9.0	4.3	7.0	6.3	5.0	5.5	4.3	26.5
1st Flr - Gallery (Near Keyboard)	9.1	16.0	22.5	20.5	7.5	8.0	2.1	7.2	6.7	5.7	5.8	4.6	20.1
1st Flr - Rear Cage	10.6	---	---	17.1	9.0	8.8	---	---	---	6.8	5.4	4.7	19.6
1st Flr - West Stair Exit Door	---	---	---	190.0	31.6	32.1	---	---	---	20.9	12.6	20.7	93.9
2nd Flr - Mother's Room (Near Stairs)	6.3	15.0	19.2	20.3	7.2	8.0	5.0	6.1	4.8	6.2	5.1	3.8	17.0
2nd Flr - Nursery	7.2	---	---	15.6	6.7	7.8	---	---	---	6.7	5.3	4.7	13.1
2nd Flr - East Conf Room (Further Back)	7.7	15.0	18.5	16.6	6.0	6.6	4.5	6.1	4.6	8.0	4.8	4.0	11.5
Rooftop - 1st Flr Rooftop HVAC	---	8.25	---	2.9	3.1	6.5	---	---	---	<2.0	10.7	<2.0	8.1

Notes:
TCE Quantity reported in Micrograms per Cubic Meter (ug/m3)
Wisconsin DNR Indoor Air Vapor Action Level (VAL) for small commercial buildings is 8.8 ug/m3. Immediate Action Criteria for Indoor Air = 3 x VAL
Sample locations in parantheses are Wisconsin Department of Health Services (WDHS) descriptions
AT = Assay Technology Laboratory
WOH = State of Wisconsin Occupational Health Laboratory
Beacon = Beacon Environmental Laboratory