

From: Krueger, Sarah E - DNR
Sent: Friday, March 27, 2020 11:59 AM
To: 'Skiff, Jordan'
Subject: Sanitary Sampling Results
Attachments: 200217 Lab Report.pdf; Sanitary Results Table.pdf;
20200325_43_Vapor_Results_Notification.pdf

Good Afternoon Jordan,

Attached are the sanitary sewer sampling results from the sampling that took place along South Street and Oak Street on February 17, 2020. Based on the attached results there was one manhole that had Trichloroethene detected above a Vapor Action Level, Manhole 28-75A. At this time, there does not appear to be a risk of TCE vapor entering the residences from the sanitary. DNR is not currently planning to conduct any additional sampling of the sanitary.

I have also included a summary table of detections for the sanitary, and the notification that was sent to Mr. Gross regarding the sampling in his commercial building.

Please let me know if you have any questions.

Thank you,
Sarah

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Sarah Krueger, P.G.

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ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Report Date 27-Feb-20

Project Name QUICFREZ
Project # R3000861.00

Invoice # E37506

Lab Code 5037506A
Sample ID MH-28-115
Sample Matrix Air
Sample Date 2/17/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	6.4	ug/m3	0.299	0.95	1	TO-15		2/25/2020	CJR	1
Acrolein	< 0.094	ug/m3	0.094	0.299	1	TO-15		2/25/2020	CJR	1
Benzene	0.57	ug/m3	0.136	0.433	1	TO-15		2/25/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		2/25/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		2/25/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		2/25/2020	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		2/25/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		2/25/2020	CJR	1
Carbon Disulfide	1.03	ug/m3	0.138	0.44	1	TO-15		2/25/2020	CJR	1
Carbon Tetrachloride	0.57 "J"	ug/m3	0.307	0.978	1	TO-15		2/25/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		2/25/2020	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		2/25/2020	CJR	1
Chloroform	2.24	ug/m3	0.3	0.953	1	TO-15		2/25/2020	CJR	1
Chloromethane	1.07 "J"	ug/m3	0.831	2.64	1	TO-15		2/25/2020	CJR	1
Cyclohexane	< 0.212	ug/m3	0.212	0.674	1	TO-15		2/25/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		2/25/2020	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		2/25/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		2/25/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		2/25/2020	CJR	1
Dichlorodifluoromethane	2.62	ug/m3	0.263	0.836	1	TO-15		2/25/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		2/25/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		2/25/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		2/25/2020	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		2/25/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		2/25/2020	CJR	1

Project Name QUICFREZ
Project # R3000861.00

Invoice # E37506

Lab Code 5037506A
Sample ID MH-28-115
Sample Matrix Air
Sample Date 2/17/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		2/25/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		2/25/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		2/25/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		2/25/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		2/25/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		2/25/2020	CJR	1
Ethanol	3.7	ug/m3	0.152	0.482	1	TO-15		2/25/2020	CJR	1
Ethyl Acetate	< 0.176	ug/m3	0.176	0.559	1	TO-15		2/25/2020	CJR	1
Ethylbenzene	0.26 "J"	ug/m3	0.203	0.645	1	TO-15		2/25/2020	CJR	1
4-Ethyltoluene	0.245 "J"	ug/m3	0.214	0.681	1	TO-15		2/25/2020	CJR	1
Heptane	< 0.265	ug/m3	0.265	0.845	1	TO-15		2/25/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		2/25/2020	CJR	1
Hexane	< 0.235	ug/m3	0.235	0.748	1	TO-15		2/25/2020	CJR	1
2-Hexanone	< 0.222	ug/m3	0.222	0.707	1	TO-15		2/25/2020	CJR	1
Isopropyl Alcohol	0.57	ug/m3	0.109	0.347	1	TO-15		2/25/2020	CJR	1
Methyl ethyl ketone (MEK)	2.0	ug/m3	0.178	0.567	1	TO-15		2/25/2020	CJR	1
Methyl isobutyl ketone (MIBK)	< 0.168	ug/m3	0.168	0.536	1	TO-15		2/25/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		2/25/2020	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		2/25/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		2/25/2020	CJR	1
Naphthalene	< 0.675	ug/m3	0.675	2.15	1	TO-15		2/25/2020	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		2/25/2020	CJR	1
Styrene	0.213 "J"	ug/m3	0.181	0.577	1	TO-15		2/25/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		2/25/2020	CJR	1
Tetrachloroethene	0.41 "J"	ug/m3	0.278	0.884	1	TO-15		2/25/2020	CJR	1
Tetrahydrofuran	< 0.131	ug/m3	0.131	0.417	1	TO-15		2/25/2020	CJR	1
Toluene	1.47	ug/m3	0.184	0.585	1	TO-15		2/25/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		2/25/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		2/25/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		2/25/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		2/25/2020	CJR	1
Trichlorofluoromethane	1.57	ug/m3	0.337	1.07	1	TO-15		2/25/2020	CJR	1
Trichlorotrifluoroethane	0.61 "J"	ug/m3	0.402	1.28	1	TO-15		2/25/2020	CJR	1
1,2,4-Trimethylbenzene	1.42	ug/m3	0.283	0.899	1	TO-15		2/25/2020	CJR	1
1,3,5-Trimethylbenzene	0.39 "J"	ug/m3	0.232	0.739	1	TO-15		2/25/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		2/25/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		2/25/2020	CJR	1
m&p-Xylene	1.04 "J"	ug/m3	0.377	1.2	1	TO-15		2/25/2020	CJR	1
o-Xylene	0.52 "J"	ug/m3	0.218	0.695	1	TO-15		2/25/2020	CJR	1

Project Name QUICFREZ
Project # R3000861.00
Lab Code 5037506B
Sample ID MH-28-75A
Sample Matrix Air
Sample Date 2/17/2020

Invoice # E37506

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	12.8	ug/m3	0.299	0.95	1	TO-15		2/24/2020	CJR	1
Acrolein	0.229 "J"	ug/m3	0.094	0.299	1	TO-15		2/24/2020	CJR	1
Benzene	0.77	ug/m3	0.136	0.433	1	TO-15		2/24/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		2/24/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		2/24/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		2/24/2020	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		2/24/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		2/24/2020	CJR	1
Carbon Disulfide	1.03	ug/m3	0.138	0.44	1	TO-15		2/24/2020	CJR	1
Carbon Tetrachloride	0.57 "J"	ug/m3	0.307	0.978	1	TO-15		2/24/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		2/24/2020	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		2/24/2020	CJR	1
Chloroform	< 0.3	ug/m3	0.3	0.953	1	TO-15		2/24/2020	CJR	1
Chloromethane	1.47 "J"	ug/m3	0.831	2.64	1	TO-15		2/24/2020	CJR	1
Cyclohexane	< 0.212	ug/m3	0.212	0.674	1	TO-15		2/24/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		2/24/2020	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		2/24/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		2/24/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		2/24/2020	CJR	1
Dichlorodifluoromethane	2.72	ug/m3	0.263	0.836	1	TO-15		2/24/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		2/24/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		2/24/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		2/24/2020	CJR	1
cis-1,2-Dichloroethene	0.32 "J"	ug/m3	0.197	0.626	1	TO-15		2/24/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		2/24/2020	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		2/24/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		2/24/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		2/24/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		2/24/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		2/24/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		2/24/2020	CJR	1
Ethanol	20.9	ug/m3	0.152	0.482	1	TO-15		2/24/2020	CJR	1
Ethyl Acetate	< 0.176	ug/m3	0.176	0.559	1	TO-15		2/24/2020	CJR	1
Ethylbenzene	< 0.203	ug/m3	0.203	0.645	1	TO-15		2/24/2020	CJR	1
4-Ethyltoluene	< 0.214	ug/m3	0.214	0.681	1	TO-15		2/24/2020	CJR	1
Heptane	< 0.265	ug/m3	0.265	0.845	1	TO-15		2/24/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		2/24/2020	CJR	1
Hexane	< 0.235	ug/m3	0.235	0.748	1	TO-15		2/24/2020	CJR	1
2-Hexanone	< 0.222	ug/m3	0.222	0.707	1	TO-15		2/24/2020	CJR	1
Isopropyl Alcohol	2.04	ug/m3	0.109	0.347	1	TO-15		2/24/2020	CJR	1
Methyl ethyl ketone (MEK)	1.95	ug/m3	0.178	0.567	1	TO-15		2/24/2020	CJR	1
Methyl isobutyl ketone (MIBK)	< 0.168	ug/m3	0.168	0.536	1	TO-15		2/24/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		2/24/2020	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		2/24/2020	CJR	1

Project Name QUICFREZ
Project # R3000861.00

Invoice # E37506

Lab Code 5037506B
Sample ID MH-28-75A
Sample Matrix Air
Sample Date 2/17/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		2/24/2020	CJR	1
Naphthalene	< 0.675	ug/m3	0.675	2.15	1	TO-15		2/24/2020	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		2/24/2020	CJR	1
Styrene	< 0.181	ug/m3	0.181	0.577	1	TO-15		2/24/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		2/24/2020	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		2/24/2020	CJR	1
Tetrahydrofuran	< 0.131	ug/m3	0.131	0.417	1	TO-15		2/24/2020	CJR	1
Toluene	0.79	ug/m3	0.184	0.585	1	TO-15		2/24/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		2/24/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		2/24/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		2/24/2020	CJR	1
Trichloroethene (TCE)	3.2	ug/m3	0.237	0.754	1	TO-15		2/24/2020	CJR	1
Trichlorofluoromethane	1.57	ug/m3	0.337	1.07	1	TO-15		2/24/2020	CJR	1
Trichlorotrifluoroethane	0.69 "J"	ug/m3	0.402	1.28	1	TO-15		2/24/2020	CJR	1
1,2,4-Trimethylbenzene	0.44 "J"	ug/m3	0.283	0.899	1	TO-15		2/24/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.232	ug/m3	0.232	0.739	1	TO-15		2/24/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		2/24/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		2/24/2020	CJR	1
m&p-Xylene	0.48 "J"	ug/m3	0.377	1.2	1	TO-15		2/24/2020	CJR	1
o-Xylene	< 0.218	ug/m3	0.218	0.695	1	TO-15		2/24/2020	CJR	1

Project Name QUICFREZ
Project # R3000861.00
Lab Code 5037506C
Sample ID MH-28-73A
Sample Matrix Air
Sample Date 2/17/2020

Invoice # E37506

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	7	ug/m3	0.299	0.95	1	TO-15		2/24/2020	CJR	1
Acrolein	< 0.094	ug/m3	0.094	0.299	1	TO-15		2/24/2020	CJR	1
Benzene	0.61	ug/m3	0.136	0.433	1	TO-15		2/24/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		2/24/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		2/24/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		2/24/2020	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		2/24/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		2/24/2020	CJR	1
Carbon Disulfide	< 0.138	ug/m3	0.138	0.44	1	TO-15		2/24/2020	CJR	1
Carbon Tetrachloride	0.63 "J"	ug/m3	0.307	0.978	1	TO-15		2/24/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		2/24/2020	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		2/24/2020	CJR	1
Chloroform	< 0.3	ug/m3	0.3	0.953	1	TO-15		2/24/2020	CJR	1
Chloromethane	1.05 "J"	ug/m3	0.831	2.64	1	TO-15		2/24/2020	CJR	1
Cyclohexane	< 0.212	ug/m3	0.212	0.674	1	TO-15		2/24/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		2/24/2020	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		2/24/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		2/24/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		2/24/2020	CJR	1
Dichlorodifluoromethane	2.82	ug/m3	0.263	0.836	1	TO-15		2/24/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		2/24/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		2/24/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		2/24/2020	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		2/24/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		2/24/2020	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		2/24/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		2/24/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		2/24/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		2/24/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		2/24/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		2/24/2020	CJR	1
Ethanol	2.49	ug/m3	0.152	0.482	1	TO-15		2/24/2020	CJR	1
Ethyl Acetate	< 0.176	ug/m3	0.176	0.559	1	TO-15		2/24/2020	CJR	1
Ethylbenzene	< 0.203	ug/m3	0.203	0.645	1	TO-15		2/24/2020	CJR	1
4-Ethyltoluene	< 0.214	ug/m3	0.214	0.681	1	TO-15		2/24/2020	CJR	1
Heptane	< 0.265	ug/m3	0.265	0.845	1	TO-15		2/24/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		2/24/2020	CJR	1
Hexane	< 0.235	ug/m3	0.235	0.748	1	TO-15		2/24/2020	CJR	1
2-Hexanone	< 0.222	ug/m3	0.222	0.707	1	TO-15		2/24/2020	CJR	1
Isopropyl Alcohol	0.91	ug/m3	0.109	0.347	1	TO-15		2/24/2020	CJR	1
Methyl ethyl ketone (MEK)	0.94	ug/m3	0.178	0.567	1	TO-15		2/24/2020	CJR	1
Methyl isobutyl ketone (MIBK)	< 0.168	ug/m3	0.168	0.536	1	TO-15		2/24/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		2/24/2020	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		2/24/2020	CJR	1

Project Name QUICFREZ
Project # R3000861.00

Invoice # E37506

Lab Code 5037506C
Sample ID MH-28-73A
Sample Matrix Air
Sample Date 2/17/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		2/24/2020	CJR	1
Naphthalene	< 0.675	ug/m3	0.675	2.15	1	TO-15		2/24/2020	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		2/24/2020	CJR	1
Styrene	< 0.181	ug/m3	0.181	0.577	1	TO-15		2/24/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		2/24/2020	CJR	1
Tetrachloroethene	0.34 "J"	ug/m3	0.278	0.884	1	TO-15		2/24/2020	CJR	1
Tetrahydrofuran	< 0.131	ug/m3	0.131	0.417	1	TO-15		2/24/2020	CJR	1
Toluene	0.98	ug/m3	0.184	0.585	1	TO-15		2/24/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		2/24/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		2/24/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		2/24/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		2/24/2020	CJR	1
Trichlorofluoromethane	1.63	ug/m3	0.337	1.07	1	TO-15		2/24/2020	CJR	1
Trichlorotrifluoroethane	0.69 "J"	ug/m3	0.402	1.28	1	TO-15		2/24/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.283	ug/m3	0.283	0.899	1	TO-15		2/24/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.232	ug/m3	0.232	0.739	1	TO-15		2/24/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		2/24/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		2/24/2020	CJR	1
m&p-Xylene	0.43 "J"	ug/m3	0.377	1.2	1	TO-15		2/24/2020	CJR	1
o-Xylene	< 0.218	ug/m3	0.218	0.695	1	TO-15		2/24/2020	CJR	1

Project Name QUICFREZ
 Project # R3000861.00

Invoice # E37506

Lab Code 5037506D
 Sample ID MH-28-34
 Sample Matrix Air
 Sample Date 2/17/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	6.2	ug/m3	0.299	0.95	1	TO-15		2/24/2020	CJR	1
Acrolein	< 0.094	ug/m3	0.094	0.299	1	TO-15		2/24/2020	CJR	1
Benzene	0.57	ug/m3	0.136	0.433	1	TO-15		2/24/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		2/24/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		2/24/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		2/24/2020	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		2/24/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		2/24/2020	CJR	1
Carbon Disulfide	0.5	ug/m3	0.138	0.44	1	TO-15		2/24/2020	CJR	1
Carbon Tetrachloride	0.63 "J"	ug/m3	0.307	0.978	1	TO-15		2/24/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		2/24/2020	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		2/24/2020	CJR	1
Chloroform	< 0.3	ug/m3	0.3	0.953	1	TO-15		2/24/2020	CJR	1
Chloromethane	1.07 "J"	ug/m3	0.831	2.64	1	TO-15		2/24/2020	CJR	1
Cyclohexane	< 0.212	ug/m3	0.212	0.674	1	TO-15		2/24/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		2/24/2020	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		2/24/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		2/24/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		2/24/2020	CJR	1
Dichlorodifluoromethane	2.82	ug/m3	0.263	0.836	1	TO-15		2/24/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		2/24/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		2/24/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		2/24/2020	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		2/24/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		2/24/2020	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		2/24/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		2/24/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		2/24/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		2/24/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		2/24/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		2/24/2020	CJR	1
Ethanol	3.6	ug/m3	0.152	0.482	1	TO-15		2/24/2020	CJR	1
Ethyl Acetate	< 0.176	ug/m3	0.176	0.559	1	TO-15		2/24/2020	CJR	1
Ethylbenzene	0.26 "J"	ug/m3	0.203	0.645	1	TO-15		2/24/2020	CJR	1
4-Ethyltoluene	0.34 "J"	ug/m3	0.214	0.681	1	TO-15		2/24/2020	CJR	1
Heptane	< 0.265	ug/m3	0.265	0.845	1	TO-15		2/24/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		2/24/2020	CJR	1
Hexane	< 0.235	ug/m3	0.235	0.748	1	TO-15		2/24/2020	CJR	1
2-Hexanone	0.286 "J"	ug/m3	0.222	0.707	1	TO-15		2/24/2020	CJR	1
Isopropyl Alcohol	0.76	ug/m3	0.109	0.347	1	TO-15		2/24/2020	CJR	1
Methyl ethyl ketone (MEK)	2.03	ug/m3	0.178	0.567	1	TO-15		2/24/2020	CJR	1
Methyl isobutyl ketone (MIBK)	< 0.168	ug/m3	0.168	0.536	1	TO-15		2/24/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		2/24/2020	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		2/24/2020	CJR	1

Project Name QUICFREZ
Project # R3000861.00

Invoice # E37506

Lab Code 5037506D
Sample ID MH-28-34
Sample Matrix Air
Sample Date 2/17/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		2/24/2020	CJR	1
Naphthalene	0.68 "J"	ug/m3	0.675	2.15	1	TO-15		2/24/2020	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		2/24/2020	CJR	1
Styrene	0.255 "J"	ug/m3	0.181	0.577	1	TO-15		2/24/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		2/24/2020	CJR	1
Tetrachloroethene	1.09	ug/m3	0.278	0.884	1	TO-15		2/24/2020	CJR	1
Tetrahydrofuran	< 0.131	ug/m3	0.131	0.417	1	TO-15		2/24/2020	CJR	1
Toluene	1.17	ug/m3	0.184	0.585	1	TO-15		2/24/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		2/24/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		2/24/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		2/24/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		2/24/2020	CJR	1
Trichlorofluoromethane	1.63	ug/m3	0.337	1.07	1	TO-15		2/24/2020	CJR	1
Trichlorotrifluoroethane	0.69 "J"	ug/m3	0.402	1.28	1	TO-15		2/24/2020	CJR	1
1,2,4-Trimethylbenzene	1.67	ug/m3	0.283	0.899	1	TO-15		2/24/2020	CJR	1
1,3,5-Trimethylbenzene	0.44 "J"	ug/m3	0.232	0.739	1	TO-15		2/24/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		2/24/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		2/24/2020	CJR	1
m&p-Xylene	1.08 "J"	ug/m3	0.377	1.2	1	TO-15		2/24/2020	CJR	1
o-Xylene	0.52 "J"	ug/m3	0.218	0.695	1	TO-15		2/24/2020	CJR	1

Project Name QUICFREZ
 Project # R3000861.00

Invoice # E37506

Lab Code 5037506E
 Sample ID MH-28-33A
 Sample Matrix Air
 Sample Date 2/17/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	8.5	ug/m3	0.299	0.95	1	TO-15		2/24/2020	CJR	1
Acrolein	< 0.094	ug/m3	0.094	0.299	1	TO-15		2/24/2020	CJR	1
Benzene	0.67	ug/m3	0.136	0.433	1	TO-15		2/24/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		2/24/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		2/24/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		2/24/2020	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		2/24/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		2/24/2020	CJR	1
Carbon Disulfide	0.53	ug/m3	0.138	0.44	1	TO-15		2/24/2020	CJR	1
Carbon Tetrachloride	0.63 "J"	ug/m3	0.307	0.978	1	TO-15		2/24/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		2/24/2020	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		2/24/2020	CJR	1
Chloroform	< 0.3	ug/m3	0.3	0.953	1	TO-15		2/24/2020	CJR	1
Chloromethane	1.07 "J"	ug/m3	0.831	2.64	1	TO-15		2/24/2020	CJR	1
Cyclohexane	< 0.212	ug/m3	0.212	0.674	1	TO-15		2/24/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		2/24/2020	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		2/24/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		2/24/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		2/24/2020	CJR	1
Dichlorodifluoromethane	2.82	ug/m3	0.263	0.836	1	TO-15		2/24/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		2/24/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		2/24/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		2/24/2020	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		2/24/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		2/24/2020	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		2/24/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		2/24/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		2/24/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		2/24/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		2/24/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		2/24/2020	CJR	1
Ethanol	4.3	ug/m3	0.152	0.482	1	TO-15		2/24/2020	CJR	1
Ethyl Acetate	< 0.176	ug/m3	0.176	0.559	1	TO-15		2/24/2020	CJR	1
Ethylbenzene	0.303 "J"	ug/m3	0.203	0.645	1	TO-15		2/24/2020	CJR	1
4-Ethyltoluene	0.245 "J"	ug/m3	0.214	0.681	1	TO-15		2/24/2020	CJR	1
Heptane	< 0.265	ug/m3	0.265	0.845	1	TO-15		2/24/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		2/24/2020	CJR	1
Hexane	< 0.235	ug/m3	0.235	0.748	1	TO-15		2/24/2020	CJR	1
2-Hexanone	0.246 "J"	ug/m3	0.222	0.707	1	TO-15		2/24/2020	CJR	1
Isopropyl Alcohol	0.91	ug/m3	0.109	0.347	1	TO-15		2/24/2020	CJR	1
Methyl ethyl ketone (MEK)	2.48	ug/m3	0.178	0.567	1	TO-15		2/24/2020	CJR	1
Methyl isobutyl ketone (MIBK)	< 0.168	ug/m3	0.168	0.536	1	TO-15		2/24/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		2/24/2020	CJR	1
Methylene chloride	15.1	ug/m3	0.159	0.506	1	TO-15		2/24/2020	CJR	1

Project Name QUICFREZ
Project # R3000861.00
Lab Code 5037506E
Sample ID MH-28-33A
Sample Matrix Air
Sample Date 2/17/2020

Invoice # E37506

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		2/24/2020	CJR	1
Naphthalene	0.73 "J"	ug/m3	0.675	2.15	1	TO-15		2/24/2020	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		2/24/2020	CJR	1
Styrene	0.213 "J"	ug/m3	0.181	0.577	1	TO-15		2/24/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		2/24/2020	CJR	1
Tetrachloroethene	0.75 "J"	ug/m3	0.278	0.884	1	TO-15		2/24/2020	CJR	1
Tetrahydrofuran	< 0.131	ug/m3	0.131	0.417	1	TO-15		2/24/2020	CJR	1
Toluene	1.28	ug/m3	0.184	0.585	1	TO-15		2/24/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		2/24/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		2/24/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		2/24/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		2/24/2020	CJR	1
Trichlorofluoromethane	1.63	ug/m3	0.337	1.07	1	TO-15		2/24/2020	CJR	1
Trichlorotrifluoroethane	0.69 "J"	ug/m3	0.402	1.28	1	TO-15		2/24/2020	CJR	1
1,2,4-Trimethylbenzene	1.42	ug/m3	0.283	0.899	1	TO-15		2/24/2020	CJR	1
1,3,5-Trimethylbenzene	0.39 "J"	ug/m3	0.232	0.739	1	TO-15		2/24/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		2/24/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		2/24/2020	CJR	1
m&p-Xylene	1 "J"	ug/m3	0.377	1.2	1	TO-15		2/24/2020	CJR	1
o-Xylene	0.48 "J"	ug/m3	0.218	0.695	1	TO-15		2/24/2020	CJR	1

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

Code **Comment**

1 Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature





March 25, 2020

ROBERT J GROSS
420 CEDAR CREEK DR APT #3
FOND DU LAC WI 54935

SUBJECT: Vapor Sampling Results - Contaminant Detection Below DNR Screening Level
PROPERTY: QuicFrez - LGU SL, 105 Oak Place, Fond du Lac, WI; BRRTS #: 02-20-118383

Dear Mr. Gross,

Included are the findings of a recent investigation on your property at 224 Oak Street by the Wisconsin Department of Natural Resources (DNR).

As you are aware, this investigation was conducted because of the potential for contaminant vapors from the nearby QuicFrez property, identified above, to migrate through soils, accumulate beneath the foundation of your business, and possibly enter your indoor air. The contaminant of concern at the QuicFrez property is trichloroethene, or TCE. The history of this site and the potential concerns to neighboring residents were described in detail in the original letter sent to your business.

On March 4, 2020, an environmental consultant hired by DNR installed three sampling devices into the floor of your foundation and collected a soil vapor sample from each location. The samples were then submitted to the Synergy Environmental Lab, where they underwent laboratory analysis for sixty-four volatile organic compounds (VOCs), including perchloroethylene (PCE), trichloroethylene (TCE), cis-1,2-dichloroethylene, trans-1,2-dichloroethylene and vinyl chloride (VC).

Your Test Results

Attached is a copy of the laboratory report for your sub-slab and indoor air samples. The results show that a small amount of trichloroethylene was detected in two of the samples taken from beneath your foundation, and one of the indoor air samples. Although TCE was detected in soil vapors beneath your foundation floor, the level at which it was detected is such that it does not pose a threat to you or your business. This is called “a detection below screening level” and is explained in the enclosed fact sheet.

At this time, there does not appear to be a risk of TCE vapor entering your business from beneath the foundation. Additional sampling needs to be conducted in order to confirm these results. Dan O’Connell with OMNNI Associates or I will contact you to schedule another sampling visit.

The laboratory report also shows very low levels of volatile organic compounds (VOCs) other than TCE in soil vapor from beneath your building and the indoor air. This is likely due to trace amounts of VOCs from products such as paints, adhesives, fragrances, etc. that are commonly found in the typical home or office, and unrelated to the activities that took place at QuicFrez in the past. The level at which they were detected is such that they do not pose a threat to you or your business.

Please feel free to contact me at (920) 662-5443 or by email to Sarah.Krueger@wisconsin.gov if you have any questions about these results.

March 25, 2020
Robert J Gross
Vapor Sampling Results
QuicFrez – LGU SL, BRRTS #02-20-118383

Page 2 of 2

Sincerely,

A handwritten signature in black ink that reads "Sarah Krueger". The signature is written in a cursive style with a large, prominent 'S' and 'K'.

Sarah Krueger
Project Manager
Remediation & Redevelopment Program

cc: Jordan Skiff, City of Fond du Lac, jskiff@fdl.wi.gov

Encl. Understanding Chemical Vapor Testing Results, [RR977](#)

Att. Laboratory Analytical Report
Sample Location Figure



Understanding Chemical Vapor Intrusion Testing Results

From the Lab to You

Chemical vapor samples were taken from underneath your house or building and possibly indoors as well. These samples have been tested by a certified laboratory and a report was issued. The Wisconsin Department of Natural Resources (DNR) uses these test results to determine if people in the building are being exposed to chemical vapors coming from nearby contaminated soil or groundwater, and to decide what, if any, action is needed to prevent this exposure.

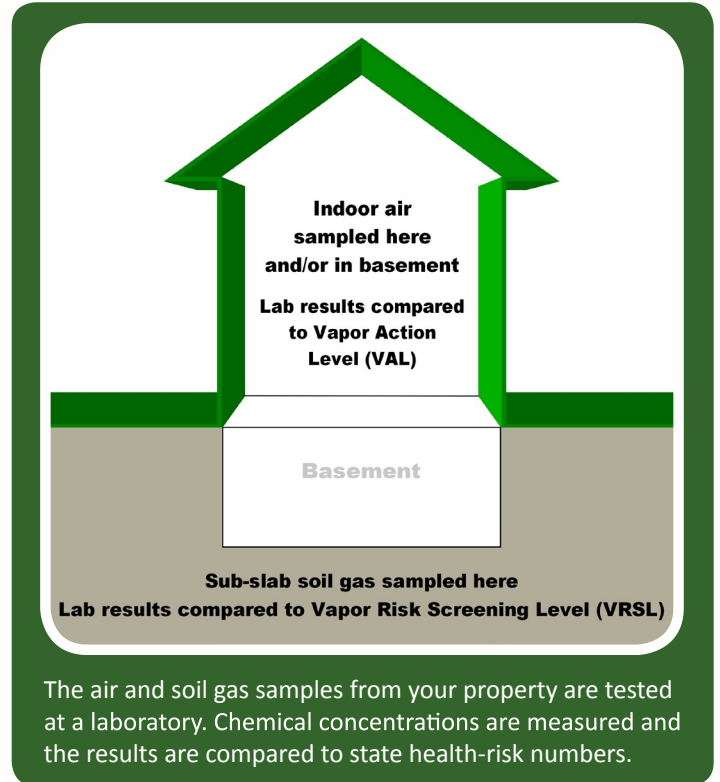
Indoor Air Testing Results

If indoor air samples were collected in your house or building, test results from the lab will be compared to the state Vapor Action Level (VAL) for chemicals of concern. The VAL is a chemical compound's numerical value that represents a health hazard risk to no more than 1 in 100,000 people during a lifetime of exposure. If test results show chemical concentrations in your air below the VAL then adverse health effects are extremely rare, even if you were to breathe the chemical at this concentration for your entire life.

Test results showing chemical concentrations in the air at or above the VAL prompt DNR to recommend that exposure to these chemical vapors be reduced. If test results show concentrations significantly above the VAL, or more than one type of chemical vapor is identified in your indoor air, the risk from exposure increases. If the concentration of any indoor chemical vapor greatly exceeds the VAL, DNR is concerned about even short-term exposure and will typically require immediate action to address the problem.

The VAL for each chemical is set by scientific research. It is protective of all people, including those who are most susceptible to adverse health effects.

If test results identify chemicals in your air that are not present in nearby soil or groundwater contamination, it is likely that these vapors are coming from some product or activity in or near your house or building. Many everyday consumer products (e.g., cleaners, solvents, polish, adhesives, lubricants, aerosols, insect repellants, etc.); combustion processes (e.g., smoking, home heating); fuels in attached garages; dry cleaned clothing or draperies; and occupant activities (e.g., craft hobbies), also release chemical vapors into the air.



Sub-slab Soil Gas Testing Results

Soil gas samples were collected from the ground beneath the concrete slab of your building foundation or basement. The lab measured the concentrations of various chemicals in these samples. DNR compares these measurements to the state Vapor Risk Screening Level (VRSL), which identifies the concentration of a chemical in soil gas that scientific research suggests can be a health risk if vapor enters a building. If soil gas measurements exceed the VRSL for a chemical of concern, action to reduce exposure is strongly recommended.

The VRSL is a higher number (higher chemical concentration) than the VAL because it is presumed that concrete building foundations and basement walls will prevent most soil gas from entering a building. Further, any soil gas that does enter a building through cracks, holes, sump pumps, drains, etc., will be diluted to some extent by the indoor air. So, people inside will not be breathing air that includes the full concentration of chemical vapors that exist in the ground.



DNR generally relies on the test results of the sub-slab soil gas samples when determining what, if any, action should be taken related to chemical vapors coming from nearby soil or groundwater contamination. Indoor air quality is highly variable, and it is difficult to make a definitive decision about vapor intrusion based on indoor air sampling alone.

Follow-Up Actions

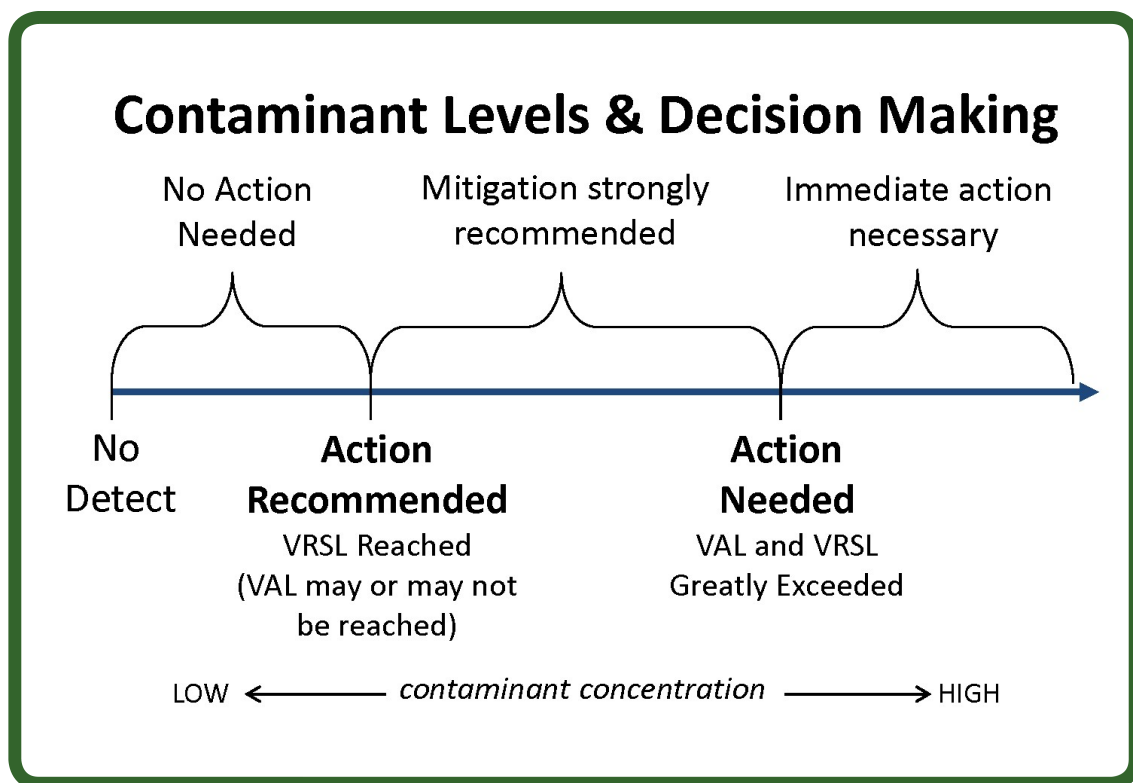
If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

When test results show soil gas chemical concentrations above a VRSL, both DNR and the Wisconsin Department of

Health Services recommend that owners take action to reduce potential exposure. This typically involves installing a vapor mitigation system that vents chemical vapors from beneath your home or building to the outdoors, similar to a radon mitigation system.

If indoor air concentrations exceed a VAL, but sub-slab concentrations are less than a VRSL, then the chemical vapors are most likely coming from indoor sources. Steps should be taken by the house or building owner to identify the products and practices causing the problem and implement appropriate remedies.

If soil gas mitigation is recommended, a representative of the party who is responsible for the soil or groundwater contamination will contact you to discuss your options.



A Note about Measurement Units: The lab report may include some unfamiliar technical language. The most important point to note is whether or not the test result for a specific chemical exceeds a VAL or VRSL, which are also sometimes referred to, generically, as “screening levels.”

The concentration of gaseous pollutants in air is typically described in two different ways: 1) as units of mass per volume, where $\mu\text{g}/\text{m}^3$ represents micrograms of gaseous pollutant per cubic meter of ambient air; and 2) as parts per billion by volume (ppbv), where the volume of a gaseous pollutant is compared to a set volume of ambient air. These are the numbers that are compared to the VAL and VRSL.

For more information, visit dnr.wi.gov/topic/Brownfields/Vapor.html

Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAN O'CONNELL
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Report Date 10-Mar-20

Project Name QUIC FREZ
Project # R3000861

Invoice # E37587

Lab Code 5037587A
Sample ID OUTDOOR-1
Sample Matrix Air
Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	10.8	ug/m3	0.299	0.95	1	TO-15		3/5/2020	CJR	1
Acrolein	< 0.094	ug/m3	0.094	0.299	1	TO-15		3/5/2020	CJR	1
Benzene	0.45	ug/m3	0.136	0.433	1	TO-15		3/5/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		3/5/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		3/5/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		3/5/2020	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		3/5/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		3/5/2020	CJR	1
Carbon Disulfide	0.62	ug/m3	0.138	0.44	1	TO-15		3/5/2020	CJR	1
Carbon Tetrachloride	0.57 "J"	ug/m3	0.307	0.978	1	TO-15		3/5/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		3/5/2020	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		3/5/2020	CJR	1
Chloroform	< 0.3	ug/m3	0.3	0.953	1	TO-15		3/5/2020	CJR	1
Chloromethane	1.09 "J"	ug/m3	0.831	2.64	1	TO-15		3/5/2020	CJR	1
Cyclohexane	< 0.212	ug/m3	0.212	0.674	1	TO-15		3/5/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		3/5/2020	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/5/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/5/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		3/5/2020	CJR	1
Dichlorodifluoromethane	2.67	ug/m3	0.263	0.836	1	TO-15		3/5/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		3/5/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		3/5/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		3/5/2020	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		3/5/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		3/5/2020	CJR	1

Project Name QUIC FREZ
Project # R3000861

Invoice # E37587

Lab Code 5037587A
Sample ID OUTDOOR-1
Sample Matrix Air
Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		3/5/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		3/5/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		3/5/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		3/5/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		3/5/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		3/5/2020	CJR	1
Ethanol	4.9	ug/m3	0.152	0.482	1	TO-15		3/5/2020	CJR	1
Ethyl Acetate	< 0.176	ug/m3	0.176	0.559	1	TO-15		3/5/2020	CJR	1
Ethylbenzene	< 0.203	ug/m3	0.203	0.645	1	TO-15		3/5/2020	CJR	1
4-Ethyltoluene	< 0.214	ug/m3	0.214	0.681	1	TO-15		3/5/2020	CJR	1
Heptane	< 0.265	ug/m3	0.265	0.845	1	TO-15		3/5/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		3/5/2020	CJR	1
Hexane	0.60 "J"	ug/m3	0.235	0.748	1	TO-15		3/5/2020	CJR	1
2-Hexanone	< 0.222	ug/m3	0.222	0.707	1	TO-15		3/5/2020	CJR	1
Isopropyl Alcohol	1.23	ug/m3	0.109	0.347	1	TO-15		3/5/2020	CJR	1
Methyl ethyl ketone (MEK)	1.5	ug/m3	0.178	0.567	1	TO-15		3/5/2020	CJR	1
Methyl isobutyl ketone (MIBK)	< 0.168	ug/m3	0.168	0.536	1	TO-15		3/5/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		3/5/2020	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		3/5/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		3/5/2020	CJR	1
Naphthalene	< 0.675	ug/m3	0.675	2.15	1	TO-15		3/5/2020	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		3/5/2020	CJR	1
Styrene	< 0.181	ug/m3	0.181	0.577	1	TO-15		3/5/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		3/5/2020	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		3/5/2020	CJR	1
Tetrahydrofuran	< 0.131	ug/m3	0.131	0.417	1	TO-15		3/5/2020	CJR	1
Toluene	0.64	ug/m3	0.184	0.585	1	TO-15		3/5/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		3/5/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		3/5/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		3/5/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		3/5/2020	CJR	1
Trichlorofluoromethane	1.57	ug/m3	0.337	1.07	1	TO-15		3/5/2020	CJR	1
Trichlorotrifluoroethane	0.69 "J"	ug/m3	0.402	1.28	1	TO-15		3/5/2020	CJR	1
1,2,4-Trimethylbenzene	0.44 "J"	ug/m3	0.283	0.899	1	TO-15		3/5/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.232	ug/m3	0.232	0.739	1	TO-15		3/5/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		3/5/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		3/5/2020	CJR	1
m&p-Xylene	0.65 "J"	ug/m3	0.377	1.2	1	TO-15		3/5/2020	CJR	1
o-Xylene	0.303 "J"	ug/m3	0.218	0.695	1	TO-15		3/5/2020	CJR	1

Project Name QUIC FREZ
Project # R3000861

Invoice # E37587

Lab Code 5037587B
Sample ID INDOOR-A1
Sample Matrix Air
Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	26.9	ug/m3	0.299	0.95	1	TO-15		3/6/2020	CJR	1
Acrolein	< 0.094	ug/m3	0.094	0.299	1	TO-15		3/6/2020	CJR	1
Benzene	1.76	ug/m3	0.136	0.433	1	TO-15		3/6/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		3/6/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		3/6/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		3/6/2020	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		3/6/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		3/6/2020	CJR	1
Carbon Disulfide	0.50	ug/m3	0.138	0.44	1	TO-15		3/6/2020	CJR	1
Carbon Tetrachloride	0.63 "J"	ug/m3	0.307	0.978	1	TO-15		3/6/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		3/6/2020	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		3/6/2020	CJR	1
Chloroform	< 0.3	ug/m3	0.3	0.953	1	TO-15		3/6/2020	CJR	1
Chloromethane	1.03 "J"	ug/m3	0.831	2.64	1	TO-15		3/6/2020	CJR	1
Cyclohexane	0.34 "J"	ug/m3	0.212	0.674	1	TO-15		3/6/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		3/6/2020	CJR	1
1,4-Dichlorobenzene	1.56	ug/m3	0.302	0.96	1	TO-15		3/6/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/6/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		3/6/2020	CJR	1
Dichlorodifluoromethane	2.92	ug/m3	0.263	0.836	1	TO-15		3/6/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		3/6/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		3/6/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		3/6/2020	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		3/6/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		3/6/2020	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		3/6/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		3/6/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		3/6/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		3/6/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		3/6/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		3/6/2020	CJR	1
Ethanol	14.6	ug/m3	0.152	0.482	1	TO-15		3/6/2020	CJR	1
Ethyl Acetate	1.69	ug/m3	0.176	0.559	1	TO-15		3/6/2020	CJR	1
Ethylbenzene	0.82	ug/m3	0.203	0.645	1	TO-15		3/6/2020	CJR	1
4-Ethyltoluene	0.294 "J"	ug/m3	0.214	0.681	1	TO-15		3/6/2020	CJR	1
Heptane	0.86	ug/m3	0.265	0.845	1	TO-15		3/6/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		3/6/2020	CJR	1
Hexane	2.33	ug/m3	0.235	0.748	1	TO-15		3/6/2020	CJR	1
2-Hexanone	0.82	ug/m3	0.222	0.707	1	TO-15		3/6/2020	CJR	1
Isopropyl Alcohol	13.4	ug/m3	0.109	0.347	1	TO-15		3/6/2020	CJR	1
Methyl ethyl ketone (MEK)	6.2	ug/m3	0.178	0.567	1	TO-15		3/6/2020	CJR	1
Methyl isobutyl ketone (MIBK)	0.61	ug/m3	0.168	0.536	1	TO-15		3/6/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		3/6/2020	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		3/6/2020	CJR	1

Project Name QUIC FREZ
Project # R3000861

Invoice # E37587

Lab Code 5037587B
Sample ID INDOOR-A1
Sample Matrix Air
Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		3/6/2020	CJR	1
Naphthalene	< 0.675	ug/m3	0.675	2.15	1	TO-15		3/6/2020	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		3/6/2020	CJR	1
Styrene	< 0.181	ug/m3	0.181	0.577	1	TO-15		3/6/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		3/6/2020	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		3/6/2020	CJR	1
Tetrahydrofuran	0.97	ug/m3	0.131	0.417	1	TO-15		3/6/2020	CJR	1
Toluene	5.2	ug/m3	0.184	0.585	1	TO-15		3/6/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		3/6/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		3/6/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		3/6/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		3/6/2020	CJR	1
Trichlorofluoromethane	1.52	ug/m3	0.337	1.07	1	TO-15		3/6/2020	CJR	1
Trichlorotrifluoroethane	0.69 "J"	ug/m3	0.402	1.28	1	TO-15		3/6/2020	CJR	1
1,2,4-Trimethylbenzene	1.23	ug/m3	0.283	0.899	1	TO-15		3/6/2020	CJR	1
1,3,5-Trimethylbenzene	0.294 "J"	ug/m3	0.232	0.739	1	TO-15		3/6/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		3/6/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		3/6/2020	CJR	1
m&p-Xylene	2.64	ug/m3	0.377	1.2	1	TO-15		3/6/2020	CJR	1
o-Xylene	1.0	ug/m3	0.218	0.695	1	TO-15		3/6/2020	CJR	1

Project Name QUIC FREZ
Project # R3000861

Invoice # E37587

Lab Code 5037587C
Sample ID INDOOR-A2
Sample Matrix Air
Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	26.7	ug/m3	0.299	0.95	1	TO-15		3/6/2020	CJR	1
Acrolein	< 0.094	ug/m3	0.094	0.299	1	TO-15		3/6/2020	CJR	1
Benzene	1.98	ug/m3	0.136	0.433	1	TO-15		3/6/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		3/6/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		3/6/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		3/6/2020	CJR	1
Bromomethane	0.39 "J"	ug/m3	0.2	0.637	1	TO-15		3/6/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		3/6/2020	CJR	1
Carbon Disulfide	1.56	ug/m3	0.138	0.44	1	TO-15		3/6/2020	CJR	1
Carbon Tetrachloride	0.88 "J"	ug/m3	0.307	0.978	1	TO-15		3/6/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		3/6/2020	CJR	1
Chloroethane	1.4	ug/m3	0.159	0.507	1	TO-15		3/6/2020	CJR	1
Chloroform	1.07	ug/m3	0.3	0.953	1	TO-15		3/6/2020	CJR	1
Chloromethane	3.5	ug/m3	0.831	2.64	1	TO-15		3/6/2020	CJR	1
Cyclohexane	0.34 "J"	ug/m3	0.212	0.674	1	TO-15		3/6/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		3/6/2020	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/6/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/6/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		3/6/2020	CJR	1
Dichlorodifluoromethane	2.97	ug/m3	0.263	0.836	1	TO-15		3/6/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		3/6/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		3/6/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		3/6/2020	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		3/6/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		3/6/2020	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		3/6/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		3/6/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		3/6/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		3/6/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		3/6/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		3/6/2020	CJR	1
Ethanol	13	ug/m3	0.152	0.482	1	TO-15		3/6/2020	CJR	1
Ethyl Acetate	< 0.176	ug/m3	0.176	0.559	1	TO-15		3/6/2020	CJR	1
Ethylbenzene	0.78	ug/m3	0.203	0.645	1	TO-15		3/6/2020	CJR	1
4-Ethyltoluene	0.294 "J"	ug/m3	0.214	0.681	1	TO-15		3/6/2020	CJR	1
Heptane	0.78 "J"	ug/m3	0.265	0.845	1	TO-15		3/6/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		3/6/2020	CJR	1
Hexane	2.64	ug/m3	0.235	0.748	1	TO-15		3/6/2020	CJR	1
2-Hexanone	0.286 "J"	ug/m3	0.222	0.707	1	TO-15		3/6/2020	CJR	1
Isopropyl Alcohol	2.19	ug/m3	0.109	0.347	1	TO-15		3/6/2020	CJR	1
Methyl ethyl ketone (MEK)	3.6	ug/m3	0.178	0.567	1	TO-15		3/6/2020	CJR	1
Methyl isobutyl ketone (MIBK)	0.41 "J"	ug/m3	0.168	0.536	1	TO-15		3/6/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		3/6/2020	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		3/6/2020	CJR	1

Project Name QUIC FREZ
Project # R3000861

Invoice # E37587

Lab Code 5037587C
Sample ID INDOOR-A2
Sample Matrix Air
Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		3/6/2020	CJR	1
Naphthalene	< 0.675	ug/m3	0.675	2.15	1	TO-15		3/6/2020	CJR	1
Propene	6.0	ug/m3	0.079	0.251	1	TO-15		3/6/2020	CJR	1
Styrene	< 0.181	ug/m3	0.181	0.577	1	TO-15		3/6/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		3/6/2020	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		3/6/2020	CJR	1
Tetrahydrofuran	< 0.131	ug/m3	0.131	0.417	1	TO-15		3/6/2020	CJR	1
Toluene	4.9	ug/m3	0.184	0.585	1	TO-15		3/6/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		3/6/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		3/6/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		3/6/2020	CJR	1
Trichloroethene (TCE)	0.59 "J"	ug/m3	0.237	0.754	1	TO-15		3/6/2020	CJR	1
Trichlorofluoromethane	1.52	ug/m3	0.337	1.07	1	TO-15		3/6/2020	CJR	1
Trichlorotrifluoroethane	0.69 "J"	ug/m3	0.402	1.28	1	TO-15		3/6/2020	CJR	1
1,2,4-Trimethylbenzene	1.37	ug/m3	0.283	0.899	1	TO-15		3/6/2020	CJR	1
1,3,5-Trimethylbenzene	0.294 "J"	ug/m3	0.232	0.739	1	TO-15		3/6/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		3/6/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		3/6/2020	CJR	1
m&p-Xylene	2.47	ug/m3	0.377	1.2	1	TO-15		3/6/2020	CJR	1
o-Xylene	0.95	ug/m3	0.218	0.695	1	TO-15		3/6/2020	CJR	1

Project Name QUIC FREZ
Project # R3000861

Invoice # E37587

Lab Code 5037587D
Sample ID VP-5
Sample Matrix Air
Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	70	ug/m3	0.299	0.95	1	TO-15		3/6/2020	CJR	1
Acrolein	< 0.094	ug/m3	0.094	0.299	1	TO-15		3/6/2020	CJR	1
Benzene	1.56	ug/m3	0.136	0.433	1	TO-15		3/6/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		3/6/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		3/6/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		3/6/2020	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		3/6/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		3/6/2020	CJR	1
Carbon Disulfide	0.311 "J"	ug/m3	0.138	0.44	1	TO-15		3/6/2020	CJR	1
Carbon Tetrachloride	91	ug/m3	0.307	0.978	1	TO-15		3/6/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		3/6/2020	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		3/6/2020	CJR	1
Chloroform	6.4	ug/m3	0.3	0.953	1	TO-15		3/6/2020	CJR	1
Chloromethane	< 0.831	ug/m3	0.831	2.64	1	TO-15		3/6/2020	CJR	1
Cyclohexane	5.0	ug/m3	0.212	0.674	1	TO-15		3/6/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		3/6/2020	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/6/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/6/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		3/6/2020	CJR	1
Dichlorodifluoromethane	2.97	ug/m3	0.263	0.836	1	TO-15		3/6/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		3/6/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		3/6/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		3/6/2020	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		3/6/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		3/6/2020	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		3/6/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		3/6/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		3/6/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		3/6/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		3/6/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		3/6/2020	CJR	1
Ethanol	26.5	ug/m3	0.152	0.482	1	TO-15		3/6/2020	CJR	1
Ethyl Acetate	< 0.176	ug/m3	0.176	0.559	1	TO-15		3/6/2020	CJR	1
Ethylbenzene	1.34	ug/m3	0.203	0.645	1	TO-15		3/6/2020	CJR	1
4-Ethyltoluene	0.294 "J"	ug/m3	0.214	0.681	1	TO-15		3/6/2020	CJR	1
Heptane	9.2	ug/m3	0.265	0.845	1	TO-15		3/6/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		3/6/2020	CJR	1
Hexane	14.4	ug/m3	0.235	0.748	1	TO-15		3/6/2020	CJR	1
2-Hexanone	< 0.222	ug/m3	0.222	0.707	1	TO-15		3/6/2020	CJR	1
Isopropyl Alcohol	3.6	ug/m3	0.109	0.347	1	TO-15		3/6/2020	CJR	1
Methyl ethyl ketone (MEK)	4.8	ug/m3	0.178	0.567	1	TO-15		3/6/2020	CJR	1
Methyl isobutyl ketone (MIBK)	0.49 "J"	ug/m3	0.168	0.536	1	TO-15		3/6/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		3/6/2020	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		3/6/2020	CJR	1

Project Name QUIC FREZ
Project # R3000861

Invoice # E37587

Lab Code 5037587D
Sample ID VP-5
Sample Matrix Air
Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		3/6/2020	CJR	1
Naphthalene	< 0.675	ug/m3	0.675	2.15	1	TO-15		3/6/2020	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		3/6/2020	CJR	1
Styrene	< 0.181	ug/m3	0.181	0.577	1	TO-15		3/6/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		3/6/2020	CJR	1
Tetrachloroethene	1.29	ug/m3	0.278	0.884	1	TO-15		3/6/2020	CJR	1
Tetrahydrofuran	1.59	ug/m3	0.131	0.417	1	TO-15		3/6/2020	CJR	1
Toluene	4.9	ug/m3	0.184	0.585	1	TO-15		3/6/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		3/6/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		3/6/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		3/6/2020	CJR	1
Trichloroethene (TCE)	18.2	ug/m3	0.237	0.754	1	TO-15		3/6/2020	CJR	1
Trichlorofluoromethane	1.4	ug/m3	0.337	1.07	1	TO-15		3/6/2020	CJR	1
Trichlorotrifluoroethane	0.61 "J"	ug/m3	0.402	1.28	1	TO-15		3/6/2020	CJR	1
1,2,4-Trimethylbenzene	1.32	ug/m3	0.283	0.899	1	TO-15		3/6/2020	CJR	1
1,3,5-Trimethylbenzene	0.34 "J"	ug/m3	0.232	0.739	1	TO-15		3/6/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		3/6/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		3/6/2020	CJR	1
m&p-Xylene	2.77	ug/m3	0.377	1.2	1	TO-15		3/6/2020	CJR	1
o-Xylene	1.13	ug/m3	0.218	0.695	1	TO-15		3/6/2020	CJR	1

Project Name QUIC FREZ
 Project # R3000861

Invoice # E37587

Lab Code 5037587E
 Sample ID VP-6
 Sample Matrix Air
 Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	350	ug/m3	0.299	0.95	1	TO-15		3/6/2020	CJR	1
Acrolein	< 0.094	ug/m3	0.094	0.299	1	TO-15		3/6/2020	CJR	1
Benzene	1.15	ug/m3	0.136	0.433	1	TO-15		3/6/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		3/6/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		3/6/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		3/6/2020	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		3/6/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		3/6/2020	CJR	1
Carbon Disulfide	20.5	ug/m3	0.138	0.44	1	TO-15		3/6/2020	CJR	1
Carbon Tetrachloride	81	ug/m3	0.307	0.978	1	TO-15		3/6/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		3/6/2020	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		3/6/2020	CJR	1
Chloroform	8.0	ug/m3	0.3	0.953	1	TO-15		3/6/2020	CJR	1
Chloromethane	< 0.831	ug/m3	0.831	2.64	1	TO-15		3/6/2020	CJR	1
Cyclohexane	5.2	ug/m3	0.212	0.674	1	TO-15		3/6/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		3/6/2020	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/6/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/6/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		3/6/2020	CJR	1
Dichlorodifluoromethane	2.62	ug/m3	0.263	0.836	1	TO-15		3/6/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		3/6/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		3/6/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		3/6/2020	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		3/6/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		3/6/2020	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		3/6/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		3/6/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		3/6/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		3/6/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		3/6/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		3/6/2020	CJR	1
Ethanol	56	ug/m3	0.152	0.482	1	TO-15		3/6/2020	CJR	1
Ethyl Acetate	< 0.176	ug/m3	0.176	0.559	1	TO-15		3/6/2020	CJR	1
Ethylbenzene	0.78	ug/m3	0.203	0.645	1	TO-15		3/6/2020	CJR	1
4-Ethyltoluene	< 0.214	ug/m3	0.214	0.681	1	TO-15		3/6/2020	CJR	1
Heptane	5.2	ug/m3	0.265	0.845	1	TO-15		3/6/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		3/6/2020	CJR	1
Hexane	10.3	ug/m3	0.235	0.748	1	TO-15		3/6/2020	CJR	1
2-Hexanone	< 0.222	ug/m3	0.222	0.707	1	TO-15		3/6/2020	CJR	1
Isopropyl Alcohol	4.8	ug/m3	0.109	0.347	1	TO-15		3/6/2020	CJR	1
Methyl ethyl ketone (MEK)	8.4	ug/m3	0.178	0.567	1	TO-15		3/6/2020	CJR	1
Methyl isobutyl ketone (MIBK)	3.2	ug/m3	0.168	0.536	1	TO-15		3/6/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		3/6/2020	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		3/6/2020	CJR	1

Project Name QUIC FREZ
Project # R3000861

Invoice # E37587

Lab Code 5037587E
Sample ID VP-6
Sample Matrix Air
Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		3/6/2020	CJR	1
Naphthalene	< 0.675	ug/m3	0.675	2.15	1	TO-15		3/6/2020	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		3/6/2020	CJR	1
Styrene	< 0.181	ug/m3	0.181	0.577	1	TO-15		3/6/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		3/6/2020	CJR	1
Tetrachloroethene	0.75 "J"	ug/m3	0.278	0.884	1	TO-15		3/6/2020	CJR	1
Tetrahydrofuran	0.59	ug/m3	0.131	0.417	1	TO-15		3/6/2020	CJR	1
Toluene	3.09	ug/m3	0.184	0.585	1	TO-15		3/6/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		3/6/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		3/6/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		3/6/2020	CJR	1
Trichloroethene (TCE)	7.0	ug/m3	0.237	0.754	1	TO-15		3/6/2020	CJR	1
Trichlorofluoromethane	1.29	ug/m3	0.337	1.07	1	TO-15		3/6/2020	CJR	1
Trichlorotrifluoroethane	0.61 "J"	ug/m3	0.402	1.28	1	TO-15		3/6/2020	CJR	1
1,2,4-Trimethylbenzene	0.69 "J"	ug/m3	0.283	0.899	1	TO-15		3/6/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.232	ug/m3	0.232	0.739	1	TO-15		3/6/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		3/6/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		3/6/2020	CJR	1
m&p-Xylene	1.47	ug/m3	0.377	1.2	1	TO-15		3/6/2020	CJR	1
o-Xylene	0.65 "J"	ug/m3	0.218	0.695	1	TO-15		3/6/2020	CJR	1

Project Name QUIC FREZ
 Project # R3000861

Invoice # E37587

Lab Code 5037587F
 Sample ID VP-7
 Sample Matrix Air
 Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	12.5	ug/m3	0.299	0.95	1	TO-15		3/6/2020	CJR	1
Acrolein	< 0.094	ug/m3	0.094	0.299	1	TO-15		3/6/2020	CJR	1
Benzene	1.53	ug/m3	0.136	0.433	1	TO-15		3/6/2020	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		3/6/2020	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		3/6/2020	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		3/6/2020	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		3/6/2020	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		3/6/2020	CJR	1
Carbon Disulfide	0.87	ug/m3	0.138	0.44	1	TO-15		3/6/2020	CJR	1
Carbon Tetrachloride	0.50 "J"	ug/m3	0.307	0.978	1	TO-15		3/6/2020	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		3/6/2020	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		3/6/2020	CJR	1
Chloroform	< 0.3	ug/m3	0.3	0.953	1	TO-15		3/6/2020	CJR	1
Chloromethane	< 0.831	ug/m3	0.831	2.64	1	TO-15		3/6/2020	CJR	1
Cyclohexane	0.93	ug/m3	0.212	0.674	1	TO-15		3/6/2020	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		3/6/2020	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/6/2020	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		3/6/2020	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		3/6/2020	CJR	1
Dichlorodifluoromethane	2.72	ug/m3	0.263	0.836	1	TO-15		3/6/2020	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		3/6/2020	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		3/6/2020	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		3/6/2020	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		3/6/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		3/6/2020	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		3/6/2020	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		3/6/2020	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		3/6/2020	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		3/6/2020	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		3/6/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		3/6/2020	CJR	1
Ethanol	65	ug/m3	0.152	0.482	1	TO-15		3/6/2020	CJR	1
Ethyl Acetate	< 0.176	ug/m3	0.176	0.559	1	TO-15		3/6/2020	CJR	1
Ethylbenzene	1.78	ug/m3	0.203	0.645	1	TO-15		3/6/2020	CJR	1
4-Ethyltoluene	< 0.214	ug/m3	0.214	0.681	1	TO-15		3/6/2020	CJR	1
Heptane	2.98	ug/m3	0.265	0.845	1	TO-15		3/6/2020	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		3/6/2020	CJR	1
Hexane	4.3	ug/m3	0.235	0.748	1	TO-15		3/6/2020	CJR	1
2-Hexanone	< 0.222	ug/m3	0.222	0.707	1	TO-15		3/6/2020	CJR	1
Isopropyl Alcohol	3.2	ug/m3	0.109	0.347	1	TO-15		3/6/2020	CJR	1
Methyl ethyl ketone (MEK)	2.03	ug/m3	0.178	0.567	1	TO-15		3/6/2020	CJR	1
Methyl isobutyl ketone (MIBK)	0.33 "J"	ug/m3	0.168	0.536	1	TO-15		3/6/2020	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		3/6/2020	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		3/6/2020	CJR	1

Project Name QUIC FREZ
Project # R3000861

Invoice # E37587

Lab Code 5037587F
Sample ID VP-7
Sample Matrix Air
Sample Date 3/4/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		3/6/2020	CJR	1
Naphthalene	< 0.675	ug/m3	0.675	2.15	1	TO-15		3/6/2020	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		3/6/2020	CJR	1
Styrene	< 0.181	ug/m3	0.181	0.577	1	TO-15		3/6/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		3/6/2020	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		3/6/2020	CJR	1
Tetrahydrofuran	< 0.131	ug/m3	0.131	0.417	1	TO-15		3/6/2020	CJR	1
Toluene	3.7	ug/m3	0.184	0.585	1	TO-15		3/6/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		3/6/2020	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		3/6/2020	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		3/6/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		3/6/2020	CJR	1
Trichlorofluoromethane	1.46	ug/m3	0.337	1.07	1	TO-15		3/6/2020	CJR	1
Trichlorotrifluoroethane	0.61 "J"	ug/m3	0.402	1.28	1	TO-15		3/6/2020	CJR	1
1,2,4-Trimethylbenzene	0.78 "J"	ug/m3	0.283	0.899	1	TO-15		3/6/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.232	ug/m3	0.232	0.739	1	TO-15		3/6/2020	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		3/6/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		3/6/2020	CJR	1
m&p-Xylene	2.47	ug/m3	0.377	1.2	1	TO-15		3/6/2020	CJR	1
o-Xylene	1.04	ug/m3	0.218	0.695	1	TO-15		3/6/2020	CJR	1

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

Code **Comment**

1 Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



Quic Frez
Table 1 - Vapor Investigation Results Summary - Gross Building
TO-15 (ug/m3)
BRRTS #02-20-118383

	WI Residential VRSL based on U.S. EPA RSL (ug/m3) AF=0.03		WI Small Commercial VRSL based on U.S. EPA RSL (ug/m3) AF=0.03		WI Industrial VRSL based on U.S. EPA RSL (ug/m3) AF=0.01		Sample ID/Type	Sample Date	Outdoor-1	Indoor-A-1	Indoor-A2	VP-5 Area A	VP-6 Area C	VP-7 Area B
	Indoor Air VAL	Sub-Slab Vapor VRSL	Indoor Air VAL	Sub-Slab Vapor VRSL	Indoor Air VAL	Sub-Slab Vapor VRSL			Outdoor Air	Area A 1st floor	Area A Basement	Sub-Slab	Sub-Slab	Sub-Slab
							U.S. EPA RSL Basis		3/4/2020	3/4/2020	3/4/2020	3/4/2020	3/4/2020	3/4/2020
Acetone	33000	1100000	140000	4600000	140000	4600000	nc		10.8	26.9	26.7	70	350	12.5
Acrolein	0.021	0.70	0.088	3	0.088	3	nc		<0.094	<0.094	<0.094	<0.094	<0.094	<0.094
Benzene	3.6	120	16	530	16	1600	c		0.45	1.76	1.98	1.56	1.15	1.53
Bromomethane	5.2	180	22	730	22	730	nc		<0.2	<0.2	0.39J	<0.2	<0.2	<0.2
Carbon Disulfide	730	24000	3100	110000	3100	110000	nc		0.62	0.50	1.56	0.311J	20.5	0.87
Carbon Tetrachloride	4.7	160	20	670	20	2000	c		0.57J	0.63J	0.88J	91	81	0.50J
Chloroethane	11000	350000	44000	1500000	44000	4400000	nc		<0.159	<0.159	1.4	<0.159	<0.159	<0.159
chloroform	1.2	10	5.3	180	5.3	530	c		<0.3	<0.3	1.07	6.4	8.0	<0.3
Chloromethane	94	3100	390	13000	390	39000	n		1.09J	1.03J	3.5	<0.831	<0.831	<0.831
Cyclohexane	6300	210000	27000	880000	27000	880000	nc		<0.212	0.34J	0.34J	5.0	5.2	0.93
Dichlorodifluoromethane	100	3300	440	15000	440	44000	n		2.67	2.92	2.97	2.97	2.62	2.72
cis-1,2-Dichloroethene	---	---	---	---	---	---	---		<0.197	<0.197	<0.197	<0.197	<0.24	<0.197
Ethanol	---	---	---	---	---	---	---		4.9	14.6	13	26.5	56	65
Ethyl Acetate	73	2500	310	11000	310	11000	nc		<0.176	1.69	<0.176	<0.176	<0.176	<0.176
Ethylbenzene	11	370	49	1600	49	4900	c		<0.203	0.82	0.78	1.34	0.78	1.78
4-Ethyloluene	---	---	---	---	---	---	---		<0.214	0.294J	0.294J	0.294J	<0.214	<0.214
Heptane	420	14000	1800	59000	1800	59000	nc		<0.265	0.86	0.78J	9.2	5.2	2.98
Hexane	730	25000	3100	110000	3100	110000	nc		0.60J	2.33	2.64	14.4	10.3	4.3
2-Hexanone	32	1100	140	4400	140	4400	nc		<0.222	0.82	0.286J	<0.222	<0.222	<0.222
Isopropyl Alcohol	210	70000	880	30000	880	30000	nc		1.23	13.4	2.19	3.6	4.8	3.2
Methyl ethyl ketone (MEK)	5300	180000	22000	730000	22000	730000	nc		1.5	6.2	3.6	4.8	8.4	2.03
Methyl isobutyl ketone (MIBK)	3200	110000	14000	440000	14000	440000	nc		<0.168	0.61	0.41J	0.49J	3.2	0.33J
Methylene chloride	630	21000	2600	87000	2600	260000	n		<15	<15	<15	<15	<15	<15
Naphthalene	0.83	28	3.6	120	3.6	360	c		<0.675	<0.675	<0.675	<0.675	<0.675	<0.675
Propene	3200	110000	14000	440000	14000	440000	nc		<0.079	<0.079	6.0	<0.079	<0.079	<0.079
Styrene	1100	35000	4400	150000	4400	150000	nc		<0.181	<0.181	<0.181	<0.181	<0.181	<0.181
Tetrachloroethene	42	1400	180	6000	180	18000	nc		<0.278	<0.278	<0.278	1.29	0.75J	<0.278
Tetrahydrofuran	---	---	---	---	---	---	---		<0.131	0.97	<0.131	1.59	0.59	<0.131
Toluene	5200	170000	22000	730000	22000	2200000	n		0.64	5.2	4.9	4.9	3.09	3.7
Trichloroethene (TCE)	2.1	70	8.8	290	8.8	880	n		<0.237	<0.237	0.59J	18.2	7.0	<0.237
Trichlorofluoromethane	---	---	---	---	---	---	---		1.57	1.52	1.52	1.4	1.29	1.46
Trichlorotrifluoroethane	5300	180000	22000	730000	22000	730000	nc		0.69J	0.69J	0.69J	0.61J	0.61J	0.61J
1,2,4-Trimethylbenzene	63	2100	260	8700	260	26000	n		0.44J	1.23	1.37	1.32	0.69J	0.78J
1,3,5-Trimethylbenzene	63	2100	260	8700	260	26000	n		<0.232	0.294J	0.294J	0.34J	<0.232	<0.232
m&p-Xylene	100	3300	440	15000	440	44000	n		0.65J	2.64	2.47	2.77	1.47	2.47
o-Xylene	100	3300	440	15000	440	44000	n		0.303J	1	0.95	1.13	0.65J	1.04

Notes:
WI Vapor Quick Look-Up Table Indoor Air Vapor Action Levels and Vapor Risk Screening Levels Based on November 2017 U.S. EPA Regional Screening Levels
U.S. EPA Regional Screening Levels used 3/17/2020
AF = Attenuation Factor
VAL = Vapor Action Level
VRSL = Vapor Risk Screening Level
--- = Inhalation toxicity values are *not* available from U.S. EPA
U.S. EPA RSL = Regional Screening Level
n = noncancer
c = carcinogenic
Bold = Exceeds WI residential VRSL Indoor Air VAL, Sub-Slab VRSL; WI Small Commercial VRSL Indoor Air VAL, Sub-Slab VRSL; and WI Industrial VRSL Indoor Air VAL, Sub-Slab VRSL



Figure 1 Site Detail Map

Note: Sub-Slab, Indoor, and Outdoor vapor samples locations are approximate

Quic Frez
Table 2 - Vapor Investigation Results Summary - Sanitary
TO-15 (ug/m3)
BRRTS #02-20-118383

	WI Residential VRSL based on U.S. EPA RSL (ug/m3) AF=0.03		WI Small Commercial VRSL based on U.S. EPA RSL (ug/m3) AF=0.03		WI Industrial VRSL based on U.S. EPA RSL (ug/m3) AF=0.01		Sample ID/Type Sample Date	MH-28-115 Sanitary 2/17/2020	MH-28-75A Sanitary 2/17/2020	MH-28-73A Sanitary 2/17/2020	MH-28-34 Sanitary 2/17/2020	MH-28-33A Sanitary 2/17/2020
	Indoor Air VAL	Sub-Slab Vapor VRSL	Indoor Air VAL	Sub-Slab Vapor VRSL	Indoor Air VAL	Sub-Slab Vapor VRSL						
Acetone	33000	1100000	140000	4600000	140000	4600000	nc	6.4	12.8	7	6.2	8.5
Acrolein	0.021	0.70	0.088	3	0.088	3	nc	<0.094	0.229J	<0.094	<0.094	<0.094
Benzene	3.6	120	16	530	16	1600	c	0.57	0.77	0.61	0.57	0.67
Bromomethane	5.2	180	22	730	22	730	nc	<0.2	<0.2	<0.2	<0.2	<0.2
Carbon Disulfide	730	24000	3100	110000	3100	110000	nc	1.03	1.03	<0.138	0.5	0.53
Carbon Tetrachloride	4.7	160	20	670	20	2000	c	0.57J	0.57J	0.63J	0.63J	0.63J
Chloroethane	11000	350000	44000	1500000	44000	4400000	nc	<0.159	<0.159	<0.159	<0.159	<0.159
chloroform	1.2	10	5.3	180	5.3	530	c	2.24	<0.3	<0.3	<0.3	<0.3
Chloromethane	94	3100	390	13000	390	39000	n	1.07J	1.47J	1.05J	1.07J	1.07J
Cyclohexane	6300	210000	27000	880000	27000	880000	nc	<0.212	<0.212	<0.212	<0.212	<0.212
Dichlorodifluoromethane	100	3300	440	15000	440	44000	n	2.62	2.72	2.82	2.82	2.82
cis-1,2-Dichloroethene	---	---	---	---	---	---	---	<0.197	0.32J	<0.197	<0.197	<0.197
Ethanol	---	---	---	---	---	---	---	3.7	20.9	2.49	3.6	4.3
Ethyl Acetate	73	2500	310	11000	310	11000	nc	<0.176	<0.176	<0.176	<0.176	<0.176
Ethylbenzene	11	370	49	1600	49	4900	c	0.26J	<0.203	<0.203	0.26J	0.303J
4-Ethyloluene	---	---	---	---	---	---	---	0.245J	<0.214	<0.214	0.34J	0.245J
Heptane	420	14000	1800	59000	1800	59000	nc	<0.265	<0.265	<0.265	<0.265	<0.265
Hexane	730	25000	3100	110000	3100	110000	nc	<0.235	<0.235	<0.235	<0.235	<0.235
2-Hexanone	32	1100	140	4400	140	4400	nc	<0.222	<0.222	<0.222	0.286J	0.246J
Isopropyl Alcohol	210	70000	880	30000	880	30000	nc	0.57J	2.04	0.91	0.76	0.91
Methyl ethyl ketone (MEK)	5300	180000	22000	730000	22000	730000	nc	2.0	1.95	0.94	2.03	2.48
Methyl isobutyl ketone (MIBK)	3200	110000	14000	440000	14000	440000	nc	<0.168	<0.168	<0.168	<0.168	<0.168
Methylene chloride	630	21000	2600	87000	2600	260000	n	<15	<15	<15	<15	15.1
Naphthalene	0.83	28	3.6	120	3.6	360	c	<0.675	<0.675	<0.675	0.68J	0.73J
Propene	3200	110000	14000	440000	14000	440000	nc	<0.079	<0.079	<0.079	<0.079	<0.079
Styrene	1100	35000	4400	150000	4400	150000	nc	2.13J	<0.181	<0.181	0.255J	0.213J
Tetrachloroethene	42	1400	180	6000	180	18000	nc	0.41J	<0.278	0.34J	1.09	0.75J
Tetrahydrofuran	---	---	---	---	---	---	---	<0.131	<0.131	<0.131	<0.131	<0.131
Toluene	5200	170000	22000	730000	22000	2200000	n	1.47	0.79	0.98	1.17	1.28
Trichloroethene (TCE)	2.1	70	8.8	290	8.8	880	n	<0.237	3.2	<0.237	<0.237	<0.237
Trichlorofluoromethane	---	---	---	---	---	---	---	1.57	1.57	1.63	1.63	1.63
Trichlorotrifluoroethane	5300	180000	22000	730000	22000	730000	nc	0.61J	0.69J	0.69J	0.69J	0.69J
1,2,4-Trimethylbenzene	63	2100	260	8700	260	26000	n	1.42	0.44J	<0.283	1.67	1.42
1,3,5-Trimethylbenzene	63	2100	260	8700	260	26000	n	0.39J	<0.232	<0.232	0.44J	0.39J
m&p-Xylene	100	3300	440	15000	440	44000	n	1.04J	0.48J	0.43J	1.08J	1J
o-Xylene	100	3300	440	15000	440	44000	n	0.52J	<2.18	<0.218	0.52J	0.48J

Notes:

WI Vapor Quick Look-Up Table Indoor Air Vapor Action Levels and Vapor Risk Screening Levels Based on November 2017 U.S. EPA Regional Screening Levels

U.S. EPA Regional Screening Levels used 3/17/2020

AF = Attenuation Factor

VAL = Vapor Action Level

VRSL = Vapor Risk Screening Level

--- = Inhalation toxicity values are *not* available from U.S. EPA

U.S. EPA RSL = Regional Screening Level

n = noncancer

c = carcinogenic

Bold = Exceeds WI residential VRSL Indoor Air VAL, Sub-Slab VRSL; WI Small Commercial VRSL Indoor Air VAL, Sub-Slab VRSL; and WI Industrial VRSL Indoor Air VAL, Sub-Slab VRSL