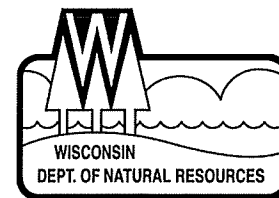


State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Plymouth Service Center
1155 Pilgrim Road
Plymouth WI 53073

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



August 29, 2019

Mr. Brian Behrens
Behrens 1106 LLC
1297 Hwy W
Grafton, WI 53024

SUBJECT: Results of Vapor Intrusion Sampling at 1102 Bridge St., Grafton, WI
Related to former Quality Cleaners, 1226 11th Avenue, Grafton, WI
BRRTS #: 02-46-560212, FID #: 246166470

Dear Mr. Behrens:

Included are the findings of a recent investigation on your property 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 former Quality Cleaners property, identified above, to migrate through soils, accumulate beneath the foundation of your property, and possibly enter the indoor air. The contaminants of concern at the former Quality Cleaners property are the dry-cleaning solvent perchloroethylene (PCE), and its daughter product trichloroethylene (TCE). The history of this site and the potential concerns to neighboring residents were described in detail in the original letter sent to you.

On July 23rd, the environmental contractor, AECOM, hired by the DNR, installed a sampling device into the floor of your foundation and collected a soil vapor sample. The sample was then submitted to Pace Analytical for TO-15 analysis, which includes the contaminants of concern listed above.

Your Test Results

Attached is a copy of the laboratory report for your sub-slab sample. The results show that a small amount of PCE was detected in the sample taken from beneath your foundation. Although PCE 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. 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 from the PCE vapor entering your property from beneath the foundation. Additional sampling needs to be conducted in order to confirm these results. AECOM will contact you to schedule another sampling visit in late Fall. Additionally, upon review of the initial data, the DNR plans an additional sub-slab vapor sampling point to be placed through the floor slab on the east end of the building, to be tested in the next round of sampling.

The laboratory report also shows very low levels of volatile organic compounds (VOCs) other than PCE and TCE in soil vapors from beneath your home/building. 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 Quality Cleaners in the past.

Please call me, the DNR project manager, at your earliest convenience, at 920-893-8523, or via email at johnm.feeney@wisconsin.gov if you have any questions. Please direct health related questions to Mr. Curtis Hedman at the Department of Health and Human Services at 608-266-6677, or email at Curtis.Hedman@wisconsin.gov.

Sincerely,



John Feeney, PG
Hydrogeologist
Remediation & Redevelopment Program

Cc: Ms. Lanette Altenbach, AECOM
Mr. Curtis Hedman, DHS (electronic)
SER File

Attachments: Fact Sheet
Laboratory Analytical Sheet
Sample Location Map

Understanding Chemical Vapor Intrusion Testing Results

RR-977

October 2014

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.

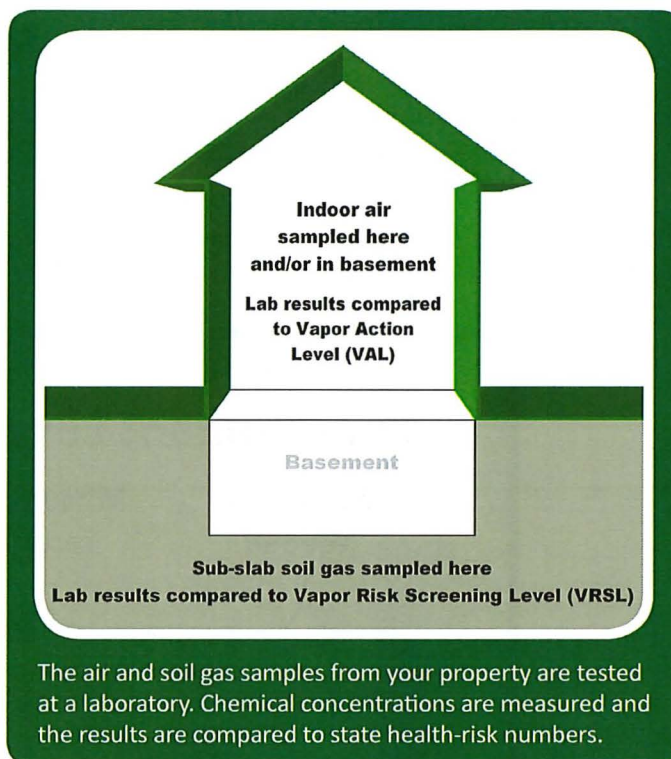
Indoor Air Testing Results

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.



The air and soil gas samples from your property are tested at a laboratory. Chemical concentrations are measured and the results are compared to state health-risk numbers.

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.



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "Brownfields"



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

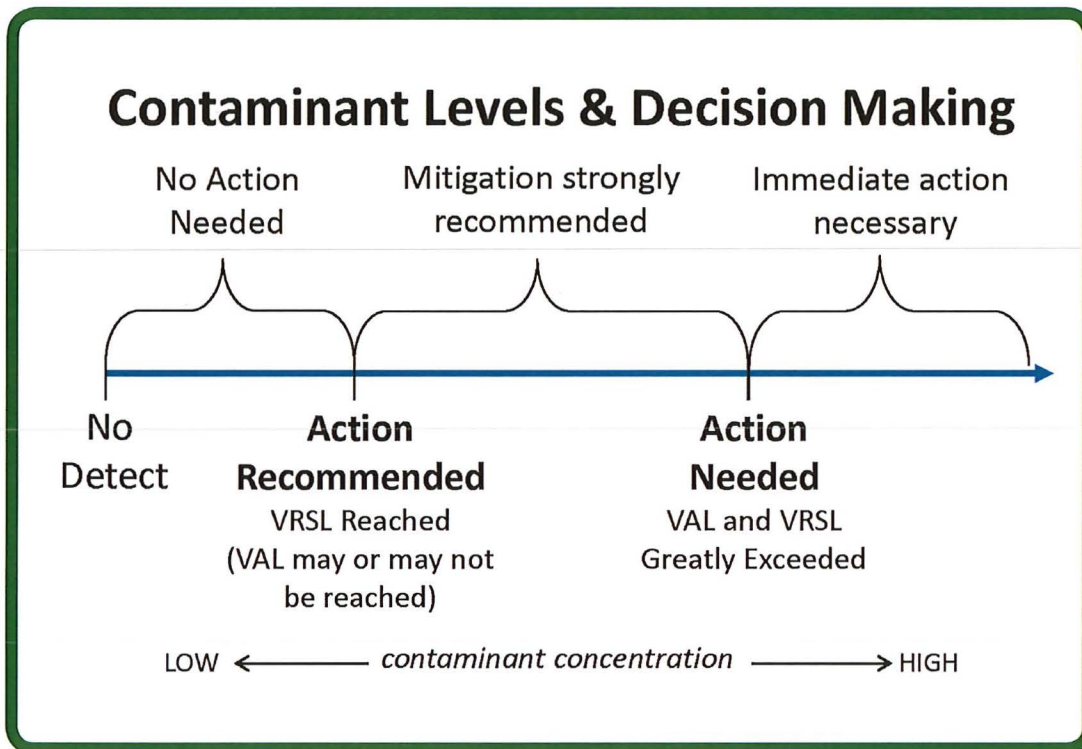
If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

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 µg/m³ 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

This document contains information about certain state statutes and administrative rules but does not necessarily include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.



ANALYTICAL RESULTS

Project: 60602996 Grafton VI
 Pace Project No.: 10484981

Sample: SS-1 Lab ID: 10484981003 Collected: 07/24/19 09:57 Received: 07/26/19 10:45 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Acetone	196	ug/m3	3.9	1.9	1.61		08/01/19 19:16	67-64-1	
Benzene	<0.25	ug/m3	0.52	0.25	1.61		08/01/19 19:16	71-43-2	
Benzyl chloride	<1.9	ug/m3	4.2	1.9	1.61		08/01/19 19:16	100-44-7	
Bromodichloromethane	<0.59	ug/m3	2.2	0.59	1.61		08/01/19 19:16	75-27-4	
Bromoform	<2.3	ug/m3	8.5	2.3	1.61		08/01/19 19:16	75-25-2	
Bromomethane	<0.37	ug/m3	1.3	0.37	1.61		08/01/19 19:16	74-83-9	
1,3-Butadiene	<0.21	ug/m3	0.72	0.21	1.61		08/01/19 19:16	106-99-0	
2-Butanone (MEK)	9.4	ug/m3	4.8	0.59	1.61		08/01/19 19:16	78-93-3	
Carbon disulfide	1.3	ug/m3	1.0	0.35	1.61		08/01/19 19:16	75-15-0	
Carbon tetrachloride	<0.69	ug/m3	2.1	0.69	1.61		08/01/19 19:16	56-23-5	
Chlorobenzene	<0.44	ug/m3	1.5	0.44	1.61		08/01/19 19:16	108-90-7	
Chloroethane	<0.42	ug/m3	0.86	0.42	1.61		08/01/19 19:16	75-00-3	
Chloroform	<0.32	ug/m3	0.80	0.32	1.61		08/01/19 19:16	67-66-3	
Chloromethane	<0.25	ug/m3	0.68	0.25	1.61		08/01/19 19:16	74-87-3	
Cyclohexane	1.7J	ug/m3	2.8	0.57	1.61		08/01/19 19:16	110-82-7	
Dibromochloromethane	<1.2	ug/m3	2.8	1.2	1.61		08/01/19 19:16	124-48-1	
1,2-Dibromoethane (EDB)	<0.59	ug/m3	1.3	0.59	1.61		08/01/19 19:16	106-93-4	
1,2-Dichlorobenzene	<0.80	ug/m3	2.0	0.80	1.61		08/01/19 19:16	95-50-1	
1,3-Dichlorobenzene	<0.94	ug/m3	2.0	0.94	1.61		08/01/19 19:16	541-73-1	
1,4-Dichlorobenzene	2.1J	ug/m3	4.9	1.6	1.61		08/01/19 19:16	106-46-7	
Dichlorodifluoromethane	1.8	ug/m3	1.6	0.47	1.61		08/01/19 19:16	75-71-8	
1,1-Dichloroethane	<0.36	ug/m3	1.3	0.36	1.61		08/01/19 19:16	75-34-3	
1,2-Dichloroethane	<0.24	ug/m3	0.66	0.24	1.61		08/01/19 19:16	107-06-2	
1,1-Dichloroethene	<0.44	ug/m3	1.3	0.44	1.61		08/01/19 19:16	75-35-4	
cis-1,2-Dichloroethene	<0.35	ug/m3	1.3	0.35	1.61		08/01/19 19:16	156-59-2	
trans-1,2-Dichloroethene	<0.46	ug/m3	1.3	0.46	1.61		08/01/19 19:16	156-60-5	
1,2-Dichloropropane	<0.37	ug/m3	1.5	0.37	1.61		08/01/19 19:16	78-87-5	
cis-1,3-Dichloropropene	<0.49	ug/m3	1.5	0.49	1.61		08/01/19 19:16	10061-01-5	
trans-1,3-Dichloropropene	<0.71	ug/m3	1.5	0.71	1.61		08/01/19 19:16	10061-02-6	
Dichlorotetrafluoroethane	<0.70	ug/m3	2.3	0.70	1.61		08/01/19 19:16	76-14-2	
Ethanol	63.3	ug/m3	3.1	1.3	1.61		08/01/19 19:16	64-17-5	
Ethyl acetate	<0.31	ug/m3	1.2	0.31	1.61		08/01/19 19:16	141-78-6	
Ethylbenzene	<0.49	ug/m3	1.4	0.49	1.61		08/01/19 19:16	100-41-4	
4-Ethyltoluene	<0.92	ug/m3	4.0	0.92	1.61		08/01/19 19:16	622-96-8	
n-Heptane	0.85J	ug/m3	1.3	0.61	1.61		08/01/19 19:16	142-82-5	
Hexachloro-1,3-butadiene	<3.2	ug/m3	8.7	3.2	1.61		08/01/19 19:16	87-68-3	
n-Hexane	0.80J	ug/m3	1.2	0.50	1.61		08/01/19 19:16	110-54-3	
2-Hexanone	<1.2	ug/m3	6.7	1.2	1.61		08/01/19 19:16	591-78-6	
Methylene Chloride	2.2J	ug/m3	5.7	1.5	1.61		08/01/19 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	2.1J	ug/m3	6.7	0.83	1.61		08/01/19 19:16	108-10-1	
Methyl-tert-butyl ether	<1.1	ug/m3	5.9	1.1	1.61		08/01/19 19:16	1634-04-4	
Naphthalene	<2.1	ug/m3	4.3	2.1	1.61		08/01/19 19:16	91-20-3	
2-Propanol	11.2	ug/m3	4.0	1.1	1.61		08/01/19 19:16	67-63-0	
Propylene	3.7	ug/m3	0.56	0.23	1.61		08/01/19 19:16	115-07-1	
Styrene	<0.55	ug/m3	1.4	0.55	1.61		08/01/19 19:16	100-42-5	
1,1,1,2,2-Tetrachloroethane	<0.47	ug/m3	1.1	0.47	1.61		08/01/19 19:16	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 60602996 Grafton VI
 Pace Project No.: 10484981

Sample: SS-1 Lab ID: 10484981003 Collected: 07/24/19 09:57 Received: 07/26/19 10:45 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Tetrachloroethene	3.9	ug/m3	1.1	0.51	1.61		08/01/19 19:16	127-18-4	
Tetrahydrofuran	1.1	ug/m3	0.97	0.42	1.61		08/01/19 19:16	109-99-9	
Toluene	0.66J	ug/m3	1.2	0.57	1.61		08/01/19 19:16	108-88-3	
1,2,4-Trichlorobenzene	<6.0	ug/m3	12.1	6.0	1.61		08/01/19 19:16	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/m3	1.8	0.50	1.61		08/01/19 19:16	71-55-6	
1,1,2-Trichloroethane	<0.40	ug/m3	0.89	0.40	1.61		08/01/19 19:16	79-00-5	
Trichloroethene	<0.41	ug/m3	0.88	0.41	1.61		08/01/19 19:16	79-01-6	
Trichlorofluoromethane	1.2J	ug/m3	1.8	0.59	1.61		08/01/19 19:16	75-69-4	
1,1,2-Trichlorotrifluoroethane	<0.91	ug/m3	2.5	0.91	1.61		08/01/19 19:16	76-13-1	
1,2,4-Trimethylbenzene	1.0J	ug/m3	1.6	0.73	1.61		08/01/19 19:16	95-63-6	
1,3,5-Trimethylbenzene	<0.64	ug/m3	1.6	0.64	1.61		08/01/19 19:16	108-67-8	
Vinyl acetate	<0.43	ug/m3	1.2	0.43	1.61		08/01/19 19:16	108-05-4	
Vinyl chloride	<0.20	ug/m3	0.42	0.20	1.61		08/01/19 19:16	75-01-4	
m&p-Xylene	1.3J	ug/m3	2.8	1.1	1.61		08/01/19 19:16	179601-23-1	
o-Xylene	2.3	ug/m3	1.4	0.55	1.61		08/01/19 19:16	95-47-6	

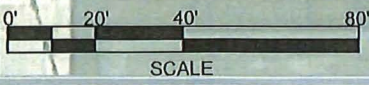
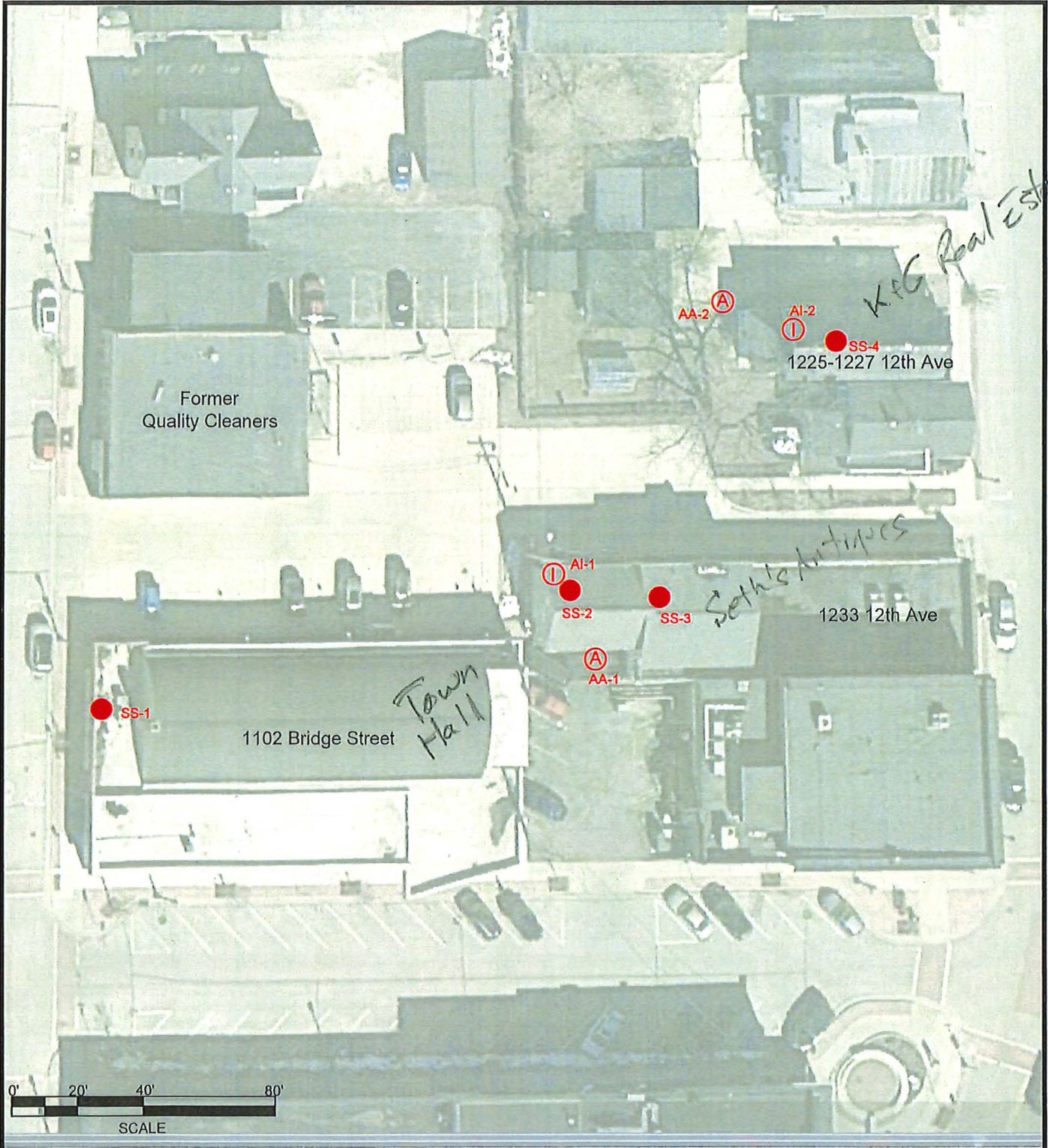
Sample: SS-2 Lab ID: 10484981004 Collected: 07/24/19 11:09 Received: 07/26/19 10:45 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Acetone	17.2	ug/m3	3.6	1.8	1.49		08/01/19 19:43	67-64-1	
Benzene	2.9	ug/m3	0.48	0.23	1.49		08/01/19 19:43	71-43-2	
Benzyl chloride	<1.8	ug/m3	3.9	1.8	1.49		08/01/19 19:43	100-44-7	
Bromodichloromethane	<0.55	ug/m3	2.0	0.55	1.49		08/01/19 19:43	75-27-4	
Bromoform	<2.1	ug/m3	7.8	2.1	1.49		08/01/19 19:43	75-25-2	
Bromomethane	<0.34	ug/m3	1.2	0.34	1.49		08/01/19 19:43	74-83-9	
1,3-Butadiene	<0.19	ug/m3	0.67	0.19	1.49		08/01/19 19:43	106-99-0	
2-Butanone (MEK)	<0.55	ug/m3	4.5	0.55	1.49		08/01/19 19:43	78-93-3	
Carbon disulfide	0.58J	ug/m3	0.94	0.33	1.49		08/01/19 19:43	75-15-0	
Carbon tetrachloride	<0.64	ug/m3	1.9	0.64	1.49		08/01/19 19:43	56-23-5	
Chlorobenzene	<0.41	ug/m3	1.4	0.41	1.49		08/01/19 19:43	108-90-7	
Chloroethane	<0.39	ug/m3	0.80	0.39	1.49		08/01/19 19:43	75-00-3	
Chloroform	<0.29	ug/m3	0.74	0.29	1.49		08/01/19 19:43	67-66-3	
Chloromethane	<0.23	ug/m3	0.63	0.23	1.49		08/01/19 19:43	74-87-3	
Cyclohexane	2.2J	ug/m3	2.6	0.53	1.49		08/01/19 19:43	110-82-7	
Dibromochloromethane	<1.1	ug/m3	2.6	1.1	1.49		08/01/19 19:43	124-48-1	
1,2-Dibromoethane (EDB)	<0.55	ug/m3	1.2	0.55	1.49		08/01/19 19:43	106-93-4	
1,2-Dichlorobenzene	<0.74	ug/m3	1.8	0.74	1.49		08/01/19 19:43	95-50-1	
1,3-Dichlorobenzene	<0.87	ug/m3	1.8	0.87	1.49		08/01/19 19:43	541-73-1	
1,4-Dichlorobenzene	<1.5	ug/m3	4.6	1.5	1.49		08/01/19 19:43	106-46-7	
Dichlorodifluoromethane	1.9	ug/m3	1.5	0.44	1.49		08/01/19 19:43	75-71-8	
1,1-Dichloroethane	<0.34	ug/m3	1.2	0.34	1.49		08/01/19 19:43	75-34-3	
1,2-Dichloroethane	<0.22	ug/m3	0.61	0.22	1.49		08/01/19 19:43	107-06-2	

REPORT OF LABORATORY ANALYSIS

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Legend:

- Subslab Vapor Probe and Identification Number
- Ⓜ Indoor Air Sample Location and Identification Number
- Ⓐ Ambient Air Sample Location and Identification Number

Notes:

1. Aerial photograph from Google Earth Pro dated 10/10/2013.



AECOM
 Milwaukee Office
 1555 RiverCenter Dr
 Milwaukee, WI
 414.944.6080

AECOM

GRAFTON VI ASSESSMENT	
VAPOR INTRUSION ASSESSMENT SAMPLE LOCATIONS	
Project Number: 60602996	Drawn By: CAS
Date: 8/13/2019	Figure No. 1