

From: Stephen Meer, P.E. <smeer@thesigmagroup.com>
Sent: Thursday, May 20, 2021 8:52 AM
To: Michalets, Linda M - DNR; Eric Ogden
Cc: Joshua Neudorfer; Sean Flanagan (sflanagan@hsacommercial.com)
Subject: RE: Former Biogenesis site work plan review letter
Attachments: 16366 Figure 6 proposed well map 2rev011321.pdf; Vapor Data Table 16366.pdf

Good morning Linda,

We are providing this electronic correspondence in response to the Department's letter dated March 16, 2021.

Sub-Slab Vapor Sampling Update

In accordance with the *Supplemental Site Investigation Work Plan* dated December 28, 2020, The Sigma Group, Inc. (Sigma) on behalf of Oak Creek Rawson Industrial, collected an additional round of sub-slab vapor samples from the existing sub-slab vapor sample points installed within the existing Site building located at the subject property on March 4, 2021. The passive ventilation system has remained sealed since prior to collection of the first post-construction sub-slab sampling event on January 3, 2020 and remained sealed between the sub-slab sampling events including during the March 4, 2021 event. The site building is currently occupied by one tenant who utilizes the western approximately 1/3 of the building including the area where sub-slab sampling points VP-1 through VP-4 are located. The remainder of the site building, including the area where sub-slab sample points VP-5 and VP-6 are located is not occupied however building HVAC systems within this portion of the building (generally open warehouse space) operate normally.

The sub-slab vapor sampling points are installed with flush-mount covers and remain sealed between sampling events. A laboratory supplied summa canister equipped with a flow controller to collect a six liter sample over a period of approximately 30 minutes was connected to each sample point using new nylon tubing. Prior to sample collection, a "shut-in" test is completed on the tubing connected to the sample can by introducing a vacuum pressure into the sample train using a hand-powered vacuum pump. The vacuum pressure within the sample train is measured over a period of at least 5 minutes to ensure the vacuum level remains stable and there are no leaks within the sample train. Following "shut-In" test completion and prior to collection of the sub-slab samples, each sample point was purged using a photo-ionization detector to remove ambient air introduced during unsealing of the point/connection to the sample train tubing. Following purging, the sample at each location was collected by opening the control valve on the summa can.

The March 4, 2021 samples were submitted for laboratory analytical consistent with previous sub-slab sampling events; sub-slab samples collected from sample points VP-1, VP-2, VP-5 and VP-6 were analyzed for petroleum VOCs (PVOCs) and naphthalene and samples collected from points VP-3 and VP-4 were analyzed for PVOCs and naphthalene and select chlorinated VOCs (CVOCs) previously identified as contaminants of concern at the site. An updated table (**Table 2**) summarizing the sub-slab sampling results is attached. Results from the March 4, 2021 sampling event were consistent with results of previous post-construction sampling events and indicate sub-slab concentrations of identified contaminants of concern with the potential to pose a vapor intrusion risk remain well below applicable Vapor Risk Screening Levels (VRSLs). Based on the sub-slab sampling results, an identified post-construction vapor intrusion risk to the site building associated with residual VOC impacts is not present.

Therefore, maintenance of the passive sub-slab vent system will not be recommended as a continuing obligation at the time of regulatory case closure.

Additional Emerging Contaminants Investigation

Sigma and Oak Creek Rawson Industrial acknowledge the Department's request for the collection of additional soil samples for laboratory analysis of PFAS. Based on that request, in addition to the proposed soil sample collection as part of the additional groundwater monitoring well to be installed in the right-of-way to the northeast of the site, collection of a soil sample for laboratory analysis of PFAS from the boring associated with the proposed additional groundwater monitoring well location to the southeast of well SMW-6 will be incorporated into the proposed scope of work (additional proposed well locations are illustrated on the attached **Figure 6**). The soil sample from the southeast well location will be collected at a depth representative of soil undisturbed during site redevelopment (approximately 3 feet below current grade). Prior to development of a plan for additional soil sampling for PFAS beyond the location of the two additional groundwater monitoring wells, Sigma recommends collecting additional groundwater data, consistent with the scope proposed in the December 2020 work plan (including laboratory analysis for the Wisconsin list of 33 constituents).

Therefore, Oak Creek Rawson Industrial is notifying the Department of our intention to proceed with the scope of work recommended in the December 2020 work plan with the additional soil sampling at the southeast groundwater monitoring well as discussed above. Following completion of the additional investigation a report providing the additional results and recommendations based on those results will be provided to the Department.

Please let us know if you have any questions.

Regards,

Stephen R. Meer, P.E.

Senior Engineer

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From: Michalets, Linda M - DNR <Linda.Michalets@wisconsin.gov>
Sent: Tuesday, March 16, 2021 9:54 AM
To: Eric Ogden <eogden@hsacommercial.com>; Stephen Meer, P.E. <smeer@thesigmagroup.com>
Subject: Former Biogenesis site work plan review letter

Dear Messrs. Ogden and Meer,
I have attached the work plan review letter for the Former Biogenesis site, BRRTS #02-41-107191. Please let me know if you have questions about anything in the letter.
Thank you,
Linda

We are committed to service excellence.

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

Linda Michalets

Cell Phone: (414) 435-8010

Linda.Michalets@wisconsin.gov

LEGEND

- Soil Boring
- ⊕ Monitoring Well
- ⊕ Piezometer
- ▭ Test Pit
- Previous Consultant Soil Boring
- ⊕ Previous Consultant Monitoring Well
- ▭ Previous Consultant Test Pit

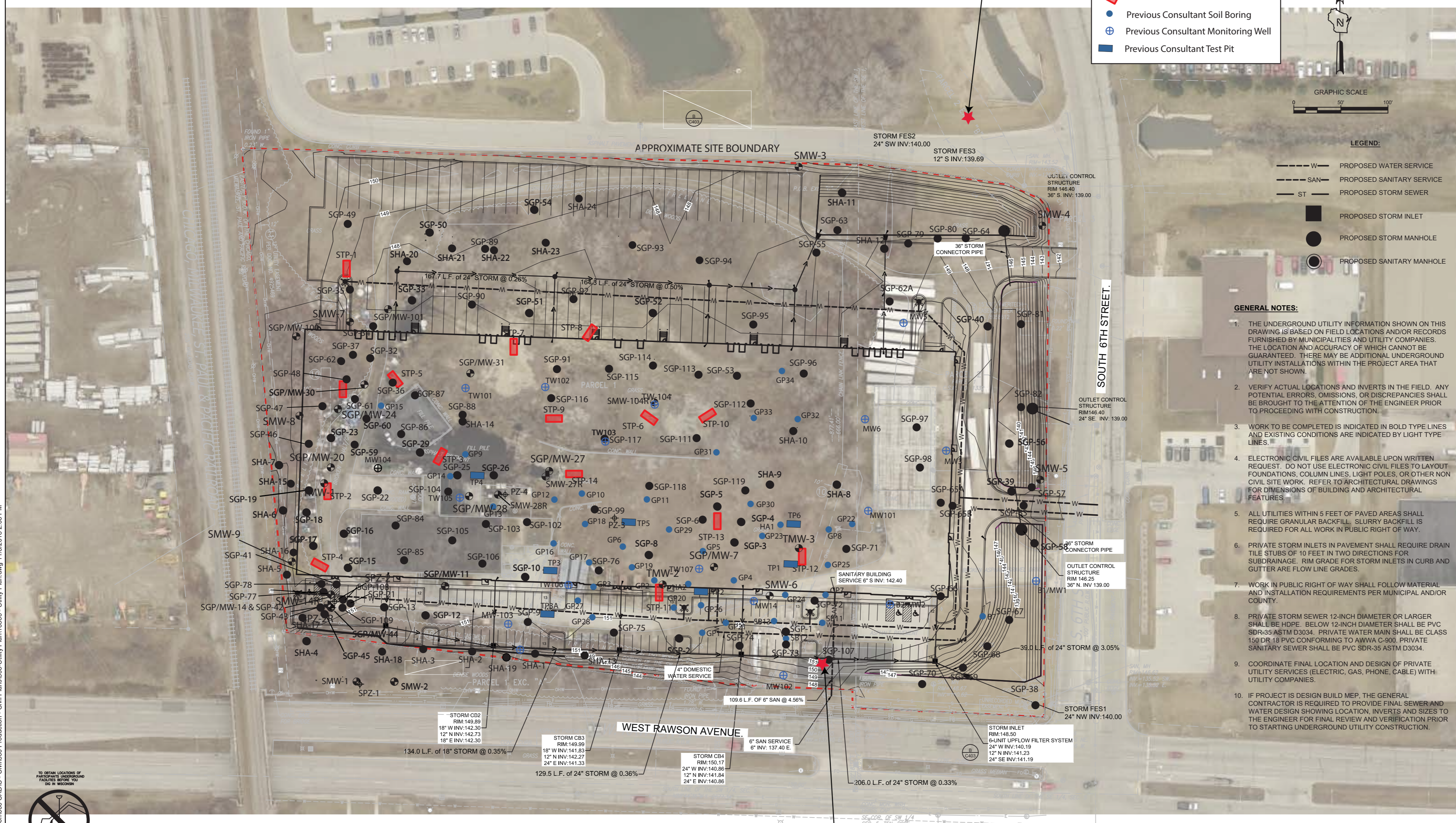
GRAPHIC SCALE

0 50' 100'

LEGEND:

- W --- PROPOSED WATER SERVICE
- SAN --- PROPOSED SANITARY SERVICE
- ST --- PROPOSED STORM SEWER
- PROPOSED STORM INLET
- PROPOSED STORM MANHOLE
- ⊕ PROPOSED SANITARY MANHOLE

- GENERAL NOTES:**
1. THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
 2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
 3. WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
 4. ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. DO NOT USE ELECTRONIC CIVIL FILES TO LAYOUT FOUNDATIONS, COLUMN LINES, LIGHT POLES, OR OTHER NON CIVIL SITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
 5. ALL UTILITIES WITHIN 5 FEET OF PAVED AREAS SHALL REQUIRE GRANULAR BACKFILL. SLURRY BACKFILL IS REQUIRED FOR ALL WORK IN PUBLIC RIGHT OF WAY.
 6. PRIVATE STORM INLETS IN PAVEMENT SHALL REQUIRE DRAIN TILE STUBS OF 10 FEET IN TWO DIRECTIONS FOR SUBDRAINAGE. RIM GRADE FOR STORM INLETS IN CURB AND GUTTER ARE FLOW LINE GRADES.
 7. WORK IN PUBLIC RIGHT OF WAY SHALL FOLLOW MATERIAL AND INSTALLATION REQUIREMENTS PER MUNICIPAL AND/OR COUNTY.
 8. PRIVATE STORM SEWER 12-INCH DIAMETER OR LARGER SHALL BE HDPE. BELOW 12-INCH DIAMETER SHALL BE PVC SDR-35 ASTM D3034. PRIVATE WATER MAIN SHALL BE CLASS 150 DR 18 PVC CONFORMING TO AWWA C-900. PRIVATE SANITARY SEWER SHALL BE PVC SDR-35 ASTM D3034.
 9. COORDINATE FINAL LOCATION AND DESIGN OF PRIVATE UTILITY SERVICES (ELECTRIC, GAS, PHONE, CABLE) WITH UTILITY COMPANIES.
 10. IF PROJECT IS DESIGN BUILD MEP, THE GENERAL CONTRACTOR IS REQUIRED TO PROVIDE FINAL SEWER AND WATER DESIGN SHOWING LOCATION, INVERTS AND SIZES TO THE ENGINEER FOR FINAL REVIEW AND VERIFICATION PRIOR TO STARTING UNDERGROUND UTILITY CONSTRUCTION.



FORMER BIOGENESIS
 610 W. RAWSON AVENUE
 OAK CREEK, WISCONSIN

Proposed Well Locations

NO. REVISION	DATE BY

DRAWING NO.	16366 - Utility Plan.dwg
DRAWN BY:	---
DATE:	11/8/18
PROJECT NO.:	16366
CHECKED BY:	---
APPROVED BY:	---
SHEET NO.:	---

Figure 6

File: I:\HSA Commercial\16366_6th & Rawson\060 CAD\IC - Civil Plans\06-Utility Plant\16366 - Utility Plan.dwg 11/8/2018 2:06 PM

TO OBTAIN LOCATIONS OF PARTICIPATING UNDERGROUND UTILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
 1-800-242-8511
 TOLL FREE

WE STRIVE TO GET YOU RECORDED MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE
 MILWAUKEE AREA 259-1181

THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

Table 2
Subslab Vapor Analytical Data
Former Biogenesis - 610 W. Rawson Ave., Oak Creek, Wisconsin
Sigma Project No. #16366

Sample Type: Sample Identification:	Subslab Air Samples																		Residential Vapor Risk Screening Level ² (AF=0.03)	Small Commercial Vapor Risk Screening Level ³ (AF = 0.03)	Large Commercial / Industrial Vapor Risk Screening Level ⁴ (AF = 0.01)	
	VP-1			VP-2			VP-3			VP-4			VP-5			VP-6						
Date:	1/3/20	4/20/20	3/4/21	1/3/20	4/20/20	3/4/21	1/3/20	4/20/20	3/4/21	1/3/20	4/20/20	3/4/21	1/3/20	4/20/20	3/4/21	1/3/20	4/20/20	3/4/21				
Duration:	39 minutes	40 minutes	35 minutes	236 minutes	238 minutes	248 minutes	39 minutes	42 minutes	36 minutes	34 minutes	43 minutes	38 minutes	89 minutes	98 minutes	245 minutes	41 minutes	44 minutes	36 minutes				
VOCs (Summa canisters by EPA Method TO-15)																						
Benzene	µg/m ³	0.77	0.34 J	0.32 J	2.8	1.7	1.3	0.47J	0.34 J	0.25 J	0.61	0.28 J	0.35 J	1	0.37 J	1.5	3.6	0.29 J	<0.20	120	530	1,600
1,1-Dichloroethane	µg/m ³	NA	NA	NA	NA	NA	NA	<0.22	0.75 J	1.1 J	<0.22	0.55 J	<0.19	NA	NA	NA	NA	NA	NA	37	160	470
cis-1,2-Dichloroethene	µg/m ³	NA	NA	NA	NA	NA	NA	<0.33	<0.16	<0.21	<0.33	0.41 J	<0.21	NA	NA	NA	NA	NA	NA	NS	NS	NS
trans-1,2-Dichloroethene	µg/m ³	NA	NA	NA	NA	NA	NA	<0.42	0.73 J	<0.25	<0.42	0.84 J	<0.25	NA	NA	NA	NA	NA	NA	NS	NS	NS
Ethylbenzene	µg/m ³	<0.45	0.62 J	1.2 J	2.8	3.9	8.7	0.66J	0.73 J	1.2 J	1.5	0.73 J	1.7	2.7	2.4	6	3.6	1.1 J	0.87 J	370	1,600	4,900
Methyl-tert-butyl ether	µg/m ³	<0.99	<0.15	<0.21	<1.3	<0.16	<0.29	<0.99	<0.14	<0.20	<0.99	<0.14	<0.20	<1.0	<0.15	<0.32	<0.95	<0.14	<0.19	3,700	16,000	47,000
Naphthalene	µg/m ³	<2.0	<1.9	3.2 J	5.1	<2.0	5.9	2.7J	<1.7	3.2 J	2.8J	<1.8	3.4 J	5.8	<1.9	6.8	3.1J	<1.8	3.1 J	28	120	360
Tetrachloroethene (PCE)	µg/m ³	NA	NA	NA	NA	NA	NA	<0.47	3.4	1.6	0.78J	2.7	2.4	NA	NA	NA	NA	NA	NA	1,400	6,000	18,000
Toluene	µg/m ³	0.69J	1.4	3.1	6.4	15.9	33.2	0.87J	3.6	3.1	13.5	1.7	3.9	5.3	3.7	12.0	3.2	3.6	1.9	170,000	730,000	2,200,000
1,1,1-Trichloroethane	µg/m ³	NA	NA	NA	NA	NA	NA	<0.46	0.44 J	0.56 J	<0.46	0.84 J	<0.29	NA	NA	NA	NA	NA	NA	170,000	730,000	2,200,000
Trichloroethene (TCE)	µg/m ³	NA	NA	NA	NA	NA	NA	<0.38	0.59 J	0.65 J	<0.38	0.92	0.42 J	NA	NA	NA	NA	NA	NA	70	290	880
1,2,4-Trimethylbenzene	µg/m ³	<0.67	0.98 J	1.3 J	2.7	3.0	6.6	<0.67	1.2 J	1.3 J	1.3J	1.1 J	1.6	2.5	1.5	6.4	1.6	1.2 J	1.0 J	2,100	8,700	26,000
1,3,5-Trimethylbenzene	µg/m ³	<0.59	0.66 J	<0.32	<0.77	1.1 J	1.9 J	<0.59	0.53 J	<0.31	<0.59	0.55 J	<0.31	0.80 J	0.60 J	1.9 J	<0.57	0.65 J	<0.30	2,100	8,700	26,000
Vinyl Chloride	µg/m ³	NA	NA	NA	NA	NA	NA	<0.19	<0.13	<0.13	<0.19	<0.14	<0.13	NA	NA	NA	NA	NA	NA	57	930	2,800
Xylenes, total	µg/m ³	<1.51	3.2 J	7.4	13.3	19.5	43.5	3.7 J	3.9 J	6.6	7.7	3.8 J	9.0	14.2	13.8	30.5	42.2	6.3	4.9	3,300	15,000	44,000

Notes:

- Analytical units: µg/m³ = micrograms per cubic meter
- Residential Vapor Risk Screening Level = Risk-based concentrations based on VALs for **residential** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **residential** building. VALs for residential indoor air based on WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for residential air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) November 2019] and residential air in November 2017 "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels". VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).
- Small Commercial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **small commercial** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **small commercial** building. VALs for small commercial building indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) November 2019] and small commercial air in November 2017 "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels". VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).
- Large Commercial / Industrial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **large commercial/industrial** air which has been adjusted with an **Attenuation Factor of 0.01** for the subslab vapor to ambient air pathway in a **large commercial/industrial** building. VALs for large commercial / industrial indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) November 2019] and large commercial / industrial air in November 2017 "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels". VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).
- NA = not analyzed
- Laboratory flags: J = Estimated concentration at or above the Limit of Detection and below the Limit of Quantiation
- Exceedances: **BOLD** = concentration exceeds Vapor Risk Screening Level (specify residential / small commercial / or large commercial-industrial)

Data entered / updated by: JJK Date: 3/22/2021
 Data checked by: SRM Date: 3/22/2021