Site Investigation Status Report
BRRTS #02-13-552179

Smoke-Out Cleaners
535 Half Mile Road
Verona, Wisconsin

Prepared For:

Wisconsin Department of Natural Resources
Milwaukee, Wisconsin

October 13, 2023
Project No. 1E-1105024

GILES
ENGINEERING ASSOCIATES, INC.

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GEOTECHNICAL, ENVIRONMENTAL & CONSTRUCTION MATERIALS CONSULTANTS

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October 13, 2023

Wisconsin Department of Natural Resources
1027 W. St. Paul Avenue
Milwaukee, WI 53233

Attention: Mr. Trevor Bannister
Hydrogeologist

Subject: Site Investigation Status Update Report
Smoke Out Cleaners
535 Half Mile Road
Verona, Wisconsin
BRRTS #02-13-552179
Project ID: 1E-1105024

Dear Mr. Bannister:

The following Site Status Update Report was prepared at the request of Mr. Mark Woppert, for the properties located south of Half Mile Road between S. Nine Mound Road and W Verona Avenue in Verona, Wisconsin. The Site Status Update summarizes the findings of the historical investigations conducted at 535 Half Mile Road and the investigative activities performed by Giles Engineering Associates, Inc. to date. Please contact the undersigned if you have any questions regarding the information contained herein.

Very truly yours,

GILES ENGINEERING ASSOCIATES, INC.

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Distribution: Wisconsin Department of Natural Resources (1 pdf: RR Program Submittal Portal)
Attn: Mr. Trevor Bannister (1 copy uploaded)

EXECUTIVE SUMMARY

On behalf of Mr. Mark Woppert, Giles Engineering Associates, Inc. (Giles) submits this site investigation status report to the Wisconsin Department of Natural Resources (WDNR) for the property ("Site") is located south of Half Mile Road between S. Nine Mound Road and W. Verona Avenue in the City of Verona, Dane County, Wisconsin. The site investigation activities completed to date included the completion of soil borings, monitoring wells, and sub-slab vapor probes, with soil, groundwater, and sub-slab vapor sampling to define the degree and extent of impacts related to historical uses.

The Site currently consists of a single parcel currently owned by Krantz Properties LLC and Patch Real Estate LLC. The parcel tax number is 286/0608-211-1032-7. The Site is listed in the WDNR Bureau of Remediation and Redevelopment Tracking System (BRRTS) website as an open Environmental Repair Program (ERP) activity which was opened in 2008. Residual contamination due to the sites former use as a dry cleaner was discovered during a Preliminary Site Assessment consisting of three soil borings conducted on the interior and exterior of the building.

The Site is covered in one foot of asphalt and base course or landscaped topsoil. Underlying soils consist of native silty or sandy clay with trace sand and/or gravel to a depth of 5-12 feet bgs. Silty/sandy clay is underlain by clayey silt or silty sand with some interbedded sandy clay and gravel layers to the maximum depth drilled.

Based on observations by Giles during site investigation activities, the saturated conditions were generally observed within soil borings at approximately 24 to 44 feet at the Site. The depth of groundwater varied between 22 feet and 36 feet below ground surface (bgs) in permanent monitoring wells. The direction of groundwater flow appears to be to the northwest on the southern portion of the site, and to the southwest on the northern portion of the site.

Soil samples were analyzed for volatile organic compounds (VOCs). Review of the analytical data indicates the shallow soil is impacted with VOCs, generally in the locations below the building slab in the location of the current dry-cleaning facility. Several VOCs including cis-1,2-dichloroethene, tetrachloroethene (PCE), and trichloroethene (TCE) were detected at concentrations greater than their Ch. NR 720 RCLs for groundwater protection.

Groundwater grab samples were collected from 7 groundwater monitoring wells and one piezometer. The oldest monitoring wells installed on the site have been sampled during a total of twelve sampling events. Sampling events are now performed quarterly. Several VOCs were detected in the sampled monitoring wells. Cis-1,2-Dichloroethene, PCE, and/or TCE exceeded their respective Ch. NR 140 PAL or ES in all monitoring wells except for MW-4 in at least one sampling event. Naphthalene was also detected in MW-1 exceeding its NR 140 PAL. Concentrations of contaminants decreased in their respective monitoring wells during the most recent sampling event and show an overall negative trend in MW-1, PZ-1, MW-3, and MW-7. Concentrations are stable at MW-2, MW-4 (no exceedances), and MW-5.

Multiple VOCs including trans-1,2-Dichloroethene, cis-1,2-Dichloroethene, 1,2-Dichloroethene

(total), PCE, TCE, and Vinyl chloride were detected in each of the sub-slab vapor samples collected. A total of twenty-six (26) sub-slab vapor samples were collected from fifteen (15) sampling locations over multiple sampling events. PCE was detected in SS-1, SS-2, SS-3, SS-12, SS-13, SS-14, and SS-15 at concentrations greater than its Wisconsin Vapor Risk Screening Level (VRSL) for a Residential, Small Commercial, and/or Large Commercial/Industrial property. TCE was also detected in SS-13, SS-14 and SS-15 exceeding its VRSL for a Small Commercial or Large Commercial/Industrial property. Additional detections did not exceed their respective VRSLs established by the WDNR.

Giles recommends the completion of site investigation activities and the continued implementation and monitoring of remedial actions at the Site. Additional site investigation activities and remedial actions include the following:

- Soil impacts consist of exceedances of the Ch. NR 720 protection of groundwater RCLs by the VOCs cis-1,2-Dichloroethene. Based on detected contamination, direct contact is not a concern and additional soil investigation is not warranted.
- Shallow groundwater has been impacted at concentrations greater than Ch. NR 140 ESs. Piezometer groundwater samples were identified to be impacted at concentrations greater than the Ch. NR 140 PAL for PCE. Overall, groundwater concentrations have been stable or decreasing, except for MW-6. Continued monitoring is recommended.
- Sub-slab vapor sampling indicates the presence of TCE and PCE at concentrations exceeding large commercial VRSLs. The continued monitoring sub-slab vapor is recommended after system upgrades to the vapor mitigation system.
- Recent sub-slab vapor sampling indicates that the current vapor mitigation system is not sufficient to mitigate sub-slab contamination. The system will be upgraded to improve its effect on the sub-slab environment. Details of system upgrades will be submitted in a separate submittal, and pressure field extension testing will be performed after its installation.

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1 INTRODUCTION

On behalf of Mr. Mark Woppert, Giles Engineering Associates, Inc. (Giles) is submitting this site investigation status report to the Wisconsin Department of Natural Resources (WDNR) for the property ("Site") is located south of Half Mile Road between S. Nine Mound Road and W. Verona Avenue in the City of Verona, Dane County, Wisconsin. The site investigation activities completed to date included the completion of soil borings, monitoring wells, and sub-slab vapor probes, with soil, groundwater, and sub-slab vapor sampling to define the degree and extent of impacts related to historical uses.

Giles has prepared this report to review and summarize the subsurface conditions encountered during the completion of these site investigation activities. Giles's site investigation activities were completed in general accordance with Wisconsin laws and regulations at the time work was performed; specifically, Wisconsin Administrative Code (WAC) Chapters NR 700 through NR 726, NR 140, and NR 141.

2 BACKGROUND INFORMATION AND HISTORICAL USE

2.1 Site Information

The following parties and contractors are associated with the project and/or provided services during site investigation activities:

Current Owner / Responsible Party:	Smoke-Out Cleaners 535 Half-Mile Road Verona, Wisconsin 53593 Attn: Mr. Mark Woppert mark.woppert@smoke-out.net
Consultant	Giles Engineering Associates, Inc. N8 W22350 Johnson Dr., Suite A1 Waukesha, WI 53186 Project Manager: Michelle Peed 262.544.0118 mpeed@gilesengr.com
Drilling Services	Giles Engineering Associates, Inc. N8 W22350 Johnson Dr., Suite A1 Waukesha, WI 53186
Laboratory Services	Eurofins TestAmerica, Chicago 2417 Bond Street University Park, IL 60484

2.2 Project Area Information

The Site is situated in a commercial area in the City of Verona. The Site is described as being in the northeast ¼ of the northeast ¼ of Section 21, Township 6 North, Range 8 East. The location of the site is shown in Figure 1. The approximate geographic coordinates (in the Wisconsin Transverse Mercator '91 system) of the property boundary corners are as follows:

- Northeast corner: 557041, 279504
- Southeast corner: 557043, 279423
- Southwest corner: 556947, 279421
- Northwest corner: 556930, 279465

The coordinates were determined using the WDNR Interactive Geographic Information System (GIS)[1] at a scale of 1:1,980.

The Site is bounded commercial properties (636 through 700 S. Nine Mound Road, 517 through 655 Half Mile Road) to the north, south, and west; and Hayes Transport (514 S. Nine Mound Road) and Holiday Inn Express & Suites Madison-Verona (515 W. Verona Avenue) to the east.

2.3 Site Description

The Site currently consists of a single parcel currently owned by Krantz Properties LLC and Patch Real Estate LLC. The parcel tax number is 286/0608-211-1032-7. The approximately 2.029-acre Site is located in the west-central portion of the City of Verona. The majority of the property consists of a multi-tenant commercial development with two primary structures. The Site is located in the east building, with several additional tenants. The west building on Site contains one tenant. The remainder of the site is occupied by asphalt parking and landscaped areas. A Detailed Site Map is provided as Figure 2.

2.3.1 Zoning

The parcel is zoned as UI Urban Industrial District.

2.3.2 Topography and Drainage

The USGS Verona, Wisconsin, 7.5-Minute Series (topographic) Quadrangle Map (2022) was reviewed and is included as Figure 1. The Site generally slopes to the east, however the surrounding area sloped southwest, towards an unnamed creek and wetlands to the southwest of the Site. The property undulates with an overall surface elevation difference of approximately 5 feet. Surface elevation ranges from approximately 973 feet mean sea level (MSL) on the northern portion of the Site, to approximately 978 feet MSL on the southwestern portion.

[1] Wisconsin Department of Natural Resources Interactive Geographic Information System http://dnrmaps.wi.gov/H5/?viewer= rrsites

2.3.3 Utility Review

Information regarding utilities is based on field markings provided by Diggers Hotline representatives and observations by Giles personnel. Underground utilities run from Half Mile Road to the north of the site, to the respective buildings constructed on the Site. Water, gas, telecommunications, and sanitary sewer utilities are installed beneath the access drive connecting Half Mile Road to the Site. An additional gas line as well as the storm sewer are located to the east of the access road and enter the Site from the north. Underground electrical lines connect two transformers in the southwest and southeast corners of the Site to each other as well as the two Site buildings.

2.3.4 Potential Receptors

Review of the current site conditions identifies the following potential receptors: on-site buildings, utility corridors, surface bodies of water/wetlands, drinking water wells and monitoring wells.

There are two structures currently developed on the Site. The west building, which includes the Site, has been the target of a sub-slab vapor investigation due to its history as a dry cleaner. The locations of sub-slab impacts have not been delineated; additional vapor points are planned to be installed to better define the extent of contamination. Based on pressure field extension testing and sub-slab vapor sampling, the vapor mitigation system currently installed does not appear to adequately depressurize the sub-slab environment. The system is planned to be upgraded in order to remediate the source of contamination. The east building on Site is also a potential receptor for vapors. Sub-slab sampling was conducted in the east building in 2014 and 2020.

Underground utilities run from Half Mile Road to the north of the site, to the respective buildings constructed on the Site. Water, gas, telecommunications, and sanitary sewer utilities are installed beneath the access drive connecting Half Mile Road to the Site. An additional gas line as well as the storm sewer are located to the east of the access road and enter the Site from the north. Underground electrical lines connect two transformers in the southwest and southeast corners of the Site to each other as well as the two Site buildings.

The closest surface water body, as identified on the U.S.G.S. 7.5-minute series topographic map, is an unnamed creek to the southwest of the Site, as shown in Figure 1, and the wetlands surrounding the creek.

Potable well construction reports from WDNR Well Construction Information System[2] were reviewed in August 2023. Records indicate that 68 potable wells were identified within 1,200 feet of the Site, abandoned well records were searched on the WDNR website. Each of the wells identified on nearby sites are 150-300 feet in depth and completed into either a gravel layer or bedrock. Based on the depth of these wells and limited impacts on the Site, it is unlikely that the Site has impacted these offsite wells.

[2] Wisconsin Department of Natural Resources Well Construction Information System
https://dnr.wi.gov/WellConstructionSearch/#!/PublicSearch/Index

2.4 Site Geology and Hydrogeology

Soil types in the area belong to the St. Charles silt loam, which is described as well drained soils with a subsoil of silty clay loam and sandy loam, or the McHenry silt loam, which is described as well drained soils with a subsoil of fine sandy loam. The fill and reworked soils are underlain by clayey silt / silty clay with pebbles, inferred to be glacial till of the Holy Hill Formation.[3] The unconsolidated section beneath the Site ranges from 100 to 150 feet in thickness in Dane County and is underlain by the quartz sandstone, dolomitic sandstone, silty dolomite, and sandy dolomite of Trempealeau Group.[4]

Based on observation by Giles during site investigation activities, the saturated conditions were generally observed within soil borings at approximately 24-44 feet at the Site. The depth to groundwater varied between 22 feet below ground surface (bgs) and 36 feet bgs in permanent, Ch. NR 141-compliant monitoring wells. The direction of groundwater flow appears to be to the northwest on the southern portion of the site, and to the southwest on the northern portion of the site. The direction of deep groundwater is presumed to flow west towards the Mississippi River. According to published conductivity values[5] for soil types consistent with those found on the Site (Fine to Coarse Sand/Silty Sand) range from 10E-5 to 10E-3 centimeters per second (cm/sec), or approximately 0.283 to 28.339 feet per day (ft/day). The intrinsic permeability ranges from 10E-2 to 1 cm/sec, or approximately 283.46 to 2834.65 ft/day.

3 SCOPE OF WORK / INVESTIGATION ACTIVITIES

The Site has been listed in the WDNR Bureau of Remediation and Redevelopment Tracking System (BRRTS) website as an open Environmental Repair Program (ERP) activity (BRRTS #02-13-552179) since 2008. The Site is identified with contaminated soil and groundwater due to chlorinated volatile organic compounds (CVOCs), including tetrachloroethene (PCE), at concentrations exceeding their respective Ch. NR 720 Residual Contaminant Levels (RCLs) for direct contact and/or groundwater protection. The Site is also enrolled in the Dry Cleaner Environmental Response Fund (DERF) program.

3.1 Purpose of Work

The purpose of additional subsurface investigation activities was to: 1) adequately identify and define the degree and extent of impacts to soil, groundwater, and soil vapor related to the historical uses of the site; 2) generate sufficient data to evaluate potential risks to human health and the surrounding environment; and 3) provide recommendations for strategies to address identified risks as part of proposed site development activities.

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[3] Syverson, K.M., Clayton, L., Attig, J.M. and Mickelson, D.M., 2011, *Lexicon of Pleistocene Units of Wisconsin*. Wisconsin Geological and Natural History Survey, Technical Report 1.
[4] Evans, T.J., 2004, *Preliminary bedrock map of Dane County, Wisconsin,* Wisconsin Geologic and Natural History Survey Open-File Report 2013-14C.
[5] Fetter, C.W., *Applied Hydrogeology*, 1988

3.2 Investigation Methods and Procedures

3.2.1 Initial Soil Sampling – August 2008

On August 6, 2008, Giles conducted environmental sampling (Initial Scoping) on the Site parcel. Three soil borings were completed at the Site. The locations of the soil borings are shown in Figure 2. Soil borings were completed using a 1.5-inch inside diameter (ID) 5-foot long Macro-Core® soil sampler, advanced with track-mounted direct-push equipment (Geoprobe®) by Giles. Soil samples were collected in continuous 5-foot sample intervals. The extracted 5-foot soil sample was subsequently logged in 2-foot intervals. The soil descriptions were documented on the soil boring logs which are included in Appendix A. Upon completion of sampling, the borings were abandoned with bentonite chips. Abandonment forms are provided in Appendix A.

Two (2) soil samples were collected from each of the soil borings. One soil sample was collected from the interval 2 to 4feet bgs and a second soil sample was collected from the interval 12 to 14-feet in HP-1 and HP-2; or from the interval 18 to 20-feet bgs in GP-1. The sample containers were placed in an iced cooler and shipped with chain of custody documentation to a Wisconsin certified laboratory for analysis. Soil samples were analyzed for VOCs by EPA Method 8260.

3.2.2 Sub-slab Vapor Investigation – November 2012

On November 7, 2012, Giles performed sub-slab vapor sampling at three (3) locations beneath the floor of the dry-cleaning facility (SS-1 through SS-3). To install vapor points, a 1-inch diameter hole was drilled to a depth of approximately 3 inches into the concrete slab, and a 0.8-inch drill guide was inserted into the hole. Using the guide, a 3/8-inch hole was drilled in the center of the 1-inch hole to 2 inches below the bottom of the concrete slab. A vacuum cleaner and damp towel were used to clean the hole. A preassembled vapor sampling point was placed into the hole and quick-drying hydraulic cement was used to seal the annular space. The cement was allowed to cure for a minimum of 30 minutes prior to collecting the vapor samples. Each sample was then collected by using tubing to connect the vapor sampling point to a 200-milliliter per minute flow regulator attached to a laboratory-provided, vacuum charged 6-liter Summa canister. Each sample was collected in the Summa canister for a period of approximately 30 minutes. The samples were shipped via FedEx under chain-of-custody to TestAmerica for analysis. The sub-slab vapor samples were submitted for laboratory analysis of VOCs using Method TO-15. Upon completion of sampling, the vapor pins were extracted and the holes in the slab were patched with concrete.

Boring logs and abandonment forms are provided in Appendix A.

3.2.3 Supplemental Soil Sampling, Monitoring Well Installation, and Supplemental Vapor Investigation – March through September 2014

On March 13, 2014, Giles performed additional soil gas sampling to further delineate the extent of potential sub-slab vapor and ambient indoor air impacts to both buildings present on the Site.

A total of nine (9) additional sub-slab vapor samples (SS-4 through SS-12) and two (2) indoor air samples were collected. The samples were shipped under chain-of-custody to TestAmerica for laboratory analysis of VOCs using Method TO-15.

Additionally, from August 26 through August 27, 2014, Giles advanced additional soil borings on the Site (MW-1 through MW-3) to delineate the extent of VOC impacts beneath the building on the Site. Soil samples were taken from the interval 32 to 34 feet bgs in MW-1, the interval 40 to 42 feet bgs in MW-2, and the interval 30 to -32 feet bgs in MW-3. Soil samples were placed in an iced cooler and shipped with chain of custody documentation to a Wisconsin certified laboratory for analysis for VOCs by EPA Method 8260.

MW-1 through MW-3 were completed as NR 141 compliant monitoring wells. Additionally, NR 141 wells MW-4 and MW-5 were blind drilled due to a mechanical problem with the Geoprobe rig. The monitoring wells were constructed using 10 feet of 2-inch inside diameter (ID), factory-cut, 0.010-inch slotted, schedule 40 PVC screen flush-threaded to a length of 2-inch ID PVC riser casing to extend the well to the ground surface. The monitoring wells were secured with an expandable well cap and completed with a 10-inch outside diameter (OD) bolted-cover traffic-rated flush-mount cover within a concrete surface seal. Giles developed the groundwater monitoring wells using a new 1.5-inch OD polyethylene bailer and submersible pump to surge and purge the well until the water from the well was relatively free of suspended solids. Each well was purged with a peristaltic pump or a polyethylene bailer for several minutes to reduce suspended solids prior to sampling. During each sampling event, one groundwater sample was collected after purging, stored on ice, and submitted to a Wisconsin certified laboratory for analysis of VOCs. Monitoring well construction and abandonment forms are included in Appendix B.

3.2.4 Additional Sub-slab Vapor Sampling and Monitoring Well Installation – September through October 2019

On September 18, 2019, Giles performed additional sub-slab vapor sampling to further delineate the extent of sub-slab vapor impacts below the structure on the Site. Two sub-slab vapor samples (SS-13 and SS-14) were collected from below the concrete slab. The samples were shipped under chain-of-custody to TestAmerica for laboratory analysis of VOCs using Method TO-15.

Additionally, two monitoring wells (MW-6 and MW-7) were installed by Giles on October 3, 2019. Both monitoring wells were advanced to a depth of 36 feet bgs to delineate the extent of groundwater impacts on the Site. No soil samples were collected during the installation of the monitoring wells.

3.2.5 Well Replacement and Peizometer Installation – September 2022

On September 14, 2022, Giles advanced two additional soil borings on the subject site (PZ-1 and MW-3R) to delineate the vertical extent of VOC impacts on the Site and to collect a shallow soil sample north of the building in the area of MW-3. A shallow soil sample was collected from PZ-

1 from the interval 2 to 4 feet bgs and was then blind drilled to a depth of 60 feet. A soil sample was collected from MW-3R at 2-4 feet bgs and the boring was abandoned. The soil boring logs and abandonment form are provided in Appendix A and the well construction form for PZ-1 is provided in Appendix B.

3.2.6 Additional Vapor Pin Installation and Sampling – July 2023

On July 5, 2023, Giles installed 4 additional vapor pins (SS-15 through SS-18) for additional pressure field extension testing in the building. Sub-slab vapor samples were collected from SS-14 and SS-15 within the dry cleaner portion of the building and SS-12, located in the Valhalla Hobby storefront portion of the building. The samples were shipped under chain-of-custody to TestAmerica for laboratory analysis of VOCs using Method TO-15.

4 INVESTIGATION RESULTS

The results of the investigation activities completed at the site are presented below.

4.1 Physical Conditions

4.1.1 Site Geology

The Site is covered in one foot of asphalt and base course or landscaped topsoil. Underlying soils appear to consist of native silty or sandy clay with trace sand and/or gravel to a depth of 5-12 feet bgs. Silty/sandy clay is underlain by clayey silt or silty sand with some interbedded sandy clay and gravel layers to the maximum depth drilled. Boring logs and abandonment forms are provided in Appendix A.

4.1.2 Site Hydrogeology

Saturated soil conditions were generally encountered between 23.6 and 44 feet in the soil borings completed on the Site. The depth of groundwater historically varied from 22.04 feet bgs in groundwater monitoring well MW-7 to 35.94 feet bgs in groundwater monitoring well MW-3. During the last 4 gauging events for MW-6, less than 2 feet of water was observed within the well. During the December 2022 sampling event, monitoring well MW-6 was dry. Currently, groundwater ranges from 30.40 to 35.31 feet bgs.

Between 2020 and 2022, groundwater elevations fell by approximately 3 to 5 feet in all wells on the Site. This drop in groundwater elevation coincides with the construction of the Epic Systems campus to the northwest of the Site. The campus has high-capacity wells installed on the property, with a withdrawal of several million gallons per year. The direction of groundwater flow has remained the same at the Site, however, the drop in groundwater levels may be resulting in interactions between groundwater flow and bedrock. This interaction is a potential cause of the higher groundwater elevations in MW-6 and MW-7.

Based on the groundwater elevations in the monitoring wells in the July 2023 sampling event the direction of groundwater flow is to the north-northwest on the southern portion of the Site, and to the south-southwest on the northern portion of the Site. This creates Site groundwater lows in the central portion of the Site. Groundwater monitoring wells MW-6 and MW-7 are consistently dry, indicating that the higher groundwater elevations at those locations are possibly due to fragmented bedrock which interrupts a regional groundwater trend to the northwest. The direction of groundwater flow is consistent with previous sampling events. Groundwater elevations are summarized in Table 1 and the direction of groundwater flow is shown on Figure 3.

4.2 Analytical Results

4.2.1 Soil In-Field Screening Results

Soil samples from the borings were field screened for organic vapors using a MiniRAE Lite photoionization detector (PID) equipped with a 10.6 eV lamp. The PID readings for the soil samples ranged from 0.0 to 1241 instrument units (iu). The PID instrument readings are included on the boring logs in Appendix A.

4.2.2 Soil Quality Results

Soil sampling for the open ERP activity has included the submittal of 11 soil samples for VOCs. Two hand augers (HP-1 and HP-2) were advanced near the former dry-cleaning machine to collect soil samples below the building in 2008. Soil samples were collected at 4 to 6 feet and 12 to 14 feet. Laboratory analysis of soil samples indicated the presence of PCE and c-1,2-DCE in both samples at concentrations greater than their NR 720 RCLs for groundwater protection. TCE was also detected in the deep sample of HP-1 and shallow sample of HP-2 greater than its NR 720 RCL for groundwater protection. One soil boring (GP-1) was also advanced in the former dumpster area to the east of the loading dock. No VOCs were detected in the 2 to 4 foot or 18-to-20-foot samples.

Soil samples were collected at the water table interface during the installation of monitoring wells MW-1, MW-2, and MW-3. PCE was detected at concentrations greater than NR 720 RCLs for groundwater protection in the samples from MW-1 and MW-3. In 2022, a soil boring (MW-3R) was completed proximate to MW-3 and a soil sample was collected at 2 to 4 feet. No VOCs were detected in the sample. One soil sample was collected from PZ-1 at 2 to 4 feet during the piezometer installation. PCE was detected at a concentration greater than its NR 720 RCL for groundwater protection. There were no additional detections of VOCs in MW-3R or PZ-1.

Soil analytical results are included on Table 2 and soil laboratory data is provided in Appendix C. A soil contamination map is provided as Figure 4.

4.2.3 Groundwater Quality Results

Groundwater samples were collected from 7 groundwater monitoring wells, and one piezometer.

Up to 12 groundwater sampling events have been conducted for the Site. Cis-1,2-DCE, PCE, and/or TCE exceeded their respective NR 140 Preventive Action Limits (PALs) or Enforcement Standards (ES) in each of the monitoring wells, except for MW-4, in at least one sampling event.

Review of the groundwater laboratory analytical results indicates that PCE has been detected in each of the 12 sampling events in groundwater samples collected from MW-1 and MW-3; and 8 groundwater sampling events from MW-7 at concentrations greater than the ES. The highest concentrations of PCE were detected in samples collected from MW-1 in 2017 at 9,300 µg/L. PCE detection in groundwater from MW-1 during the most recent sampling event (July 2023) was reported at a concentration of 4,800 µg/L. Concentrations of PCE in groundwater samples collected from MW-3 are approximately an order of magnitude less than MW-1, and range from 56 to 680 µg/L, with the July 2023 concentration of 380 µg/L. Concentrations in MW-7 decrease another order of magnitude compared to MW-1 and range from 27 to 43 µg/L, with a July 2023 concentration of 29 µg/L. PCE was detected in two of the sampling events for MW-6, with PAL exceedances in the remaining 5 sampling events. PCE exceeded the PAL in 7 of 12 sampling events for MW-5 and 2 of 12 sampling events in MW-2. For PZ-1, PCE was detected at 5.3 µg/L in the first sampling event, greater than its ES, and at concentrations greater than its PAL for the 3 following sampling events.

Additionally, monitoring wells MW-1 and MW-3 were identified with concentrations of TCE in groundwater samples collected from 12 and 11 sampling events, respectively, with concentrations ranging between 7.2 and 58 µg/L. Cis-1,2-DCE was detected in 10 sampling events from MW-1 and 11 events from of MW-3 greater than its ES, with concentrations ranging from 72 to 260 µg/L. Additionally, naphthalene was detected in MW-1 in October 2019 at a concentration of 16 µg/L, exceeding its NR 140 PAL. No exceedances of naphthalene were detected in the 7 groundwater sampling events from MW-1 since October 2019.

Several detections of trans-1,2-dichloroethene, ethylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-butylbenzene, and/or styrene were detected in groundwater samples collected from MW-1, MW-2, MW-3, MW-4 and MW-7, however, these detections did not exceed their respective NR 140 PALs or ESs.

The most recent analytical data is included in Table 3. The laboratory analytical report is included as Appendix D. A groundwater isoconcentration map is provided as Figure 5.

4.2.4 Sub-slab Vapor Results

Multiple VOCs including trans-1,2-dichloroethene, cis-1,2-DCE, 1,2-dichloroethene (total), PCE, TCE, and vinyl chloride were detected in each of the sub-slab vapor samples collected at the Site. A total of twenty-six (26) sub-slab vapor samples were collected from fifteen (15) sampling locations over multiple sampling events.

Historically, PCE was detected in SS-1, SS-2, SS-3, SS-12, SS-13, and SS-14 at concentrations greater than its Wisconsin Vapor Risk Screening Level (VRSL) for a residential, small commercial,

and/or large commercial/industrial setting. TCE was also detected in SS-13 and SS-14 greater than its VRSL for residential, small commercial, and large commercial/industrial settings.

Sub-slab samples SS-6 through SS-11 were collected in 2014 and 2020 from the west building on Site's occupant Karate America (SS-6 and SS-7), and offsite properties to the north Bethke Heating and Air Conditioning (SS-8 and SS-9) and Atkins Verona Bicycle Shoppe (SS-10 and SS-11). No VOCs were detected at concentrations greater than residential VRSLs in these 6 samples during either sampling event.

A vapor mitigation system was installed in August 2022. Pressure field extension testing was conducted on the sub-slab vapor pins S-12 through SS-18 quarterly between September 2022 and July 2023.

Pressure field extension testing has indicated that the current system does not provide adequate vacuum in the sub-slab environment. The most recent round of testing shows readings between -0.001 and -0.006 inches of water. The only testing point to exceed the benchmark of -0.004 inches of water was SS-15. All other points tested did not exceed the benchmark. Previous rounds of testing indicate that SS-15 consistently meets or exceeds the benchmark, with measurements between -0.004 and -0.008.

Sub-slab vapor samples were collected in July 2023 from SS-12, SS-14, and SS-15. PCE was detected in SS-14 and SS-15 greater than its VRSL for a large commercial/industrial setting and was greater than its residential VRSL in SS-12. TCE was detected greater than its small commercial VRSL in SS-14 and large commercial/industrial VRSL in SS-15. Additional detections of chlorinated VOCs did not exceed the VRSLs established by the WDNR.

The sub-slab vapor analytical results are summarized in Table 4, and the laboratory report and chain-of-custody documentation are included in Appendix E.

4.2.5 Indoor Air Sampling Results

No VOCs were detected in exceedance of laboratory reporting limits in indoor air samples IA-1 and IA-2, except for PCE, which was detected in IA-2 at a concentration below the WDNR Indoor Air vapor action level (VAL) for residential, small, and large commercial/industrial properties.

The indoor air vapor analytical results are summarized in Table 4, and the laboratory report and chain-of-custody documentation are included in Appendix E.

4.3 Summary and Conclusions / Conceptual Site Model

The Site appears to be covered in one foot of asphalt and base course or topsoil in landscaped areas. Underlying soils appear to consist of native silty or sandy clay with trace sand and/or gravel to a depth of 5 to 12 feet bgs. Silty/sandy clay is underlain by clayey silt or silty sand with some interbedded sandy clay and gravel layers to the maximum depth drilled. Currently,

groundwater ranges from 30.40 to 35.31 feet bgs.

Based on the groundwater elevations in the monitoring wells in the July 2023 sampling event the direction of groundwater flow is to the north-northwest on the southern portion of the Site, and to the south-southwest on the northern portion of the Site. This creates Site groundwater lows in the central portion of the Site. Groundwater monitoring wells MW-6 and MW-7 are consistently dry, indicating that the higher groundwater elevations at those locations are possibly due to fragmented bedrock which interrupts a regional groundwater trend to the northwest.

4.3.1 Soil Quality

Review of the analytical data indicates that the shallow soil interval is impacted with CVOCs is located beneath the building and extends to the southwest outside of the building, and below the landscaping and parking lot (area of PZ-1). Additionally, soil impacts at the water table interface were observed in MW-1 and MW-3. Each of these concentrations was detected exceeding their NR 720 RCL for groundwater protection. Since the dry-cleaning machine has been removed from service, concentrations in the soil are expected to decrease as additional contaminants will not be added to the soil. The NR 720 exceedances will be addressed.by capping or removal at case closure.

4.3.2 Groundwater Quality

Based on the groundwater analytical data collected to date, a declining trend of PCE concentrations is shown for monitoring wells MW-1, PZ-1, MW-3, MW-5, and MW-7. No detections of PCE were observed in the 12 groundwater sampling events of sampling for MW-4, and in the last 4 sampling events for MW-2. A slightly increasing trend of the breakdown product TCE is observed in MW-1 and MW-3, nearest the source of the release.

It appears that natural attenuation (aka reductive dichlorination) is occurring on site. Groundwater geochemical parameters will be collected during upcoming sampling events to corroborate these results. Additionally, since the dry-cleaning operations have ceased, soil will act as a secondary contaminant source to groundwater, however, concentrations in the groundwater are expected to decrease over time.

4.3.3 Vapor Assessment

A sub-slab vapor assessment was initially conducted in 2012 and indicated PCE contamination exceeding large commercial/industrial VRSLs. Additional sub-slab vapor sampling was conducted on and off-site in 2014 and 2020. No sub-slab vapor impacts were identified in the sub-slab samples collected in the west building on Site or in the two north adjoining properties.

A vapor mitigation system was installed near the former dry-cleaning machine and SS-13 in August 2022. Pressure field extension testing was conducted on the sub-slab vapor pins S-12 through SS-18 quarterly between September 2022 and July 2023. Additionally, sub-slab vapor

samples were collected in July 2023. Sub-slab vapor samples were collected in July 2023 from SS-12, SS-14, and SS-15. PCE was detected in SS-14 and SS-15 at concentrations greater than the VRSL for a large commercial/industrial structure and was greater than its residential VRSL in SS-12. TCE was detected greater than its small commercial VRSL in SS-14 and large commercial/industrial VRSL in SS-15. Additional detections of CVOCs did not exceed the VRSLs established by the WDNR. The sub-slab vapor extents of CVOCs are not fully defined below the east building.

5 RECOMMENDATIONS

Giles recommends the completion of site investigation activities and the continued implementation and monitoring of remedial actions at the Site. Additional site investigation activities and remedial actions include the following:

- Soil impacts consist of exceedances of the NR 720 protection of groundwater RCLs by the VOCs PCE, TCE, and cis-1,2-Dichloroethene. Based on detected contamination, direct contact is not a concern and additional soil investigation is not warranted.

- Shallow groundwater has been impacted at concentrations greater than Ch. NR 140 Ess, with MW-1 exhibiting the highest PCE concentrations in groundwater. Piezometer PZ-1 is “nested” with MW-1. Groundwater samples from PZ-1 were impacted at concentrations exceeding the Ch. NR ES (first sampling event) and exceeding the Ch. NR 140 PAL for PCE in the remailing events. The vertical concentrations of PCE dissipate two orders of magnitude from an ES to a PAL when comparing samples from MW-1 to PZ-1. Overall, groundwater concentrations have been stable or decreasing, except for MW-6. Continued monitoring is recommended.

- Sub-slab vapor sampling results indicate the presence of TCE and PCE at concentrations exceeding large commercial VRSLs. The continued monitoring sub-slab vapor is recommended after system upgrades to the vapor mitigation system.

- Recent sub-slab vapor sampling indicates that the current vapor mitigation system is not sufficient to mitigate sub-slab contamination. The system will be upgraded to improve the pressure field. Details of system upgrades will be submitted in a separate submittal, and pressure field extension testing will be performed after its installation.

6 SUBMITTAL CERTIFICATION

I, Michelle L. Peed, hereby certify that I am a registered professional geologist in the State of Wisconsin, registered in accordance with the requirements of Ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in Ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in Ch. NR 700 to Ch. 726, Wis. Adm. Code.

_____ _____

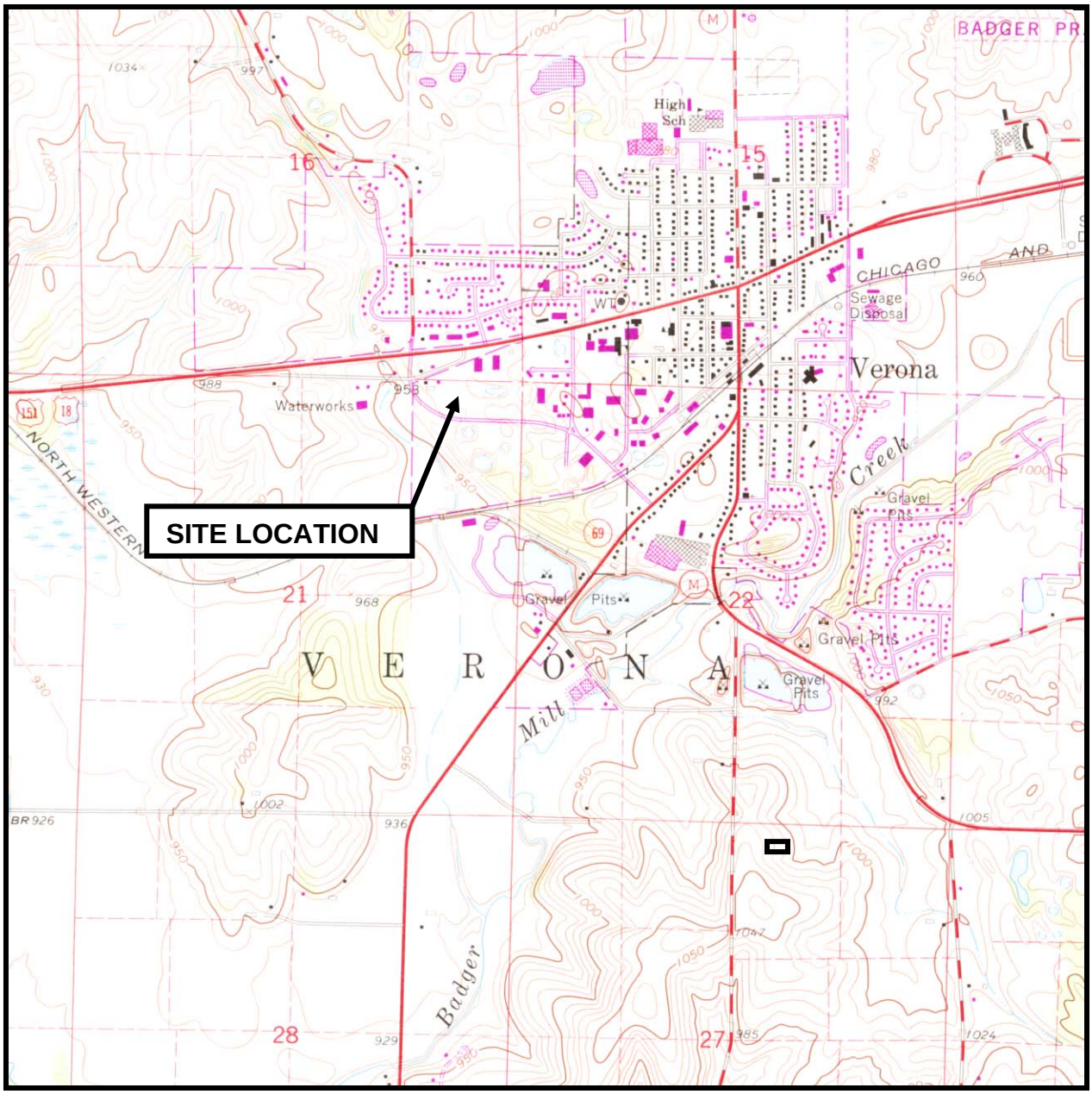
Michelle L. Peed, P.G., Project Manager P.G. Stamp
Signature and Title

7 GENERAL COMMENTS

This Site Investigation Status Report has been prepared to aid in the evaluation of the Site located south of Half Mile Road between S. Nine Mound Road and W. Verona Avenue in the City of Verona, Dane County, Wisconsin, with regard to the known release of a hazardous substance. The conclusions presented in this report were based on available information pertaining to various points in time. We do not warrant the accuracy of information supplied by others.

The boring logs and related information enclosed within the Appendices depict subsurface conditions only at specific locations drilled and at the particular times designated on the logs. Soil conditions at other locations may differ from conditions occurring at these boring locations. Also, the passage of time may result in a change of soil conditions at the boring locations drilled.

FIGURES



Source: USGS 7.5 Minute Series (Topographic) *Verona, Wisconsin* Quadrangle Map (1962, photo-revised 1982)

Scale: 1:24,000
Contour Interval: 10 feet

N
W E
S

FIGURE 1
SITE LOCATION MAP

Smoke-Out Cleaners
535 Half Mile Road
Verona, WI
Project No. 1E-1105024

GILES ENGINEERING ASSOCIATES, INC.

BETHKE HEATING & AIR CONDITIONING

ATKINS VERONA BICYCLE SHOPPE

HOLIDAY INN EXPRESS

SEMI-TRAILER PARKING (HAYES TRANSPORT, INC.)

KARATE AMERICA

GRASS

ASPHALT

SIDEWALK

SHED

TRASH ENCLOSURE

CONC.

MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
PZ-1
SS-1
SS-2
SS-3
SS-4
SS-5
SS-12
SS-13
SS-14
HP-1
HP-2
IA-2
GP-1

SMOKE-OUT CLEANERS

DRY CLEANING MACHINE

FORMER DUMPSTER AREA

RAMP UP

WALL

HALLWAY

OH DOOR

UNBROKEN STRENGTH

SCHULTZ VENDING

HOMETOWN PILATES

VALHALLA HOBBY

PATCH CONSTRUCTION (STORAGE)

N
W E
S

0 15 30

APPROXIMATE SCALE

LEGEND:

- PZ-1 — PROPOSED PIEZOMETER (QTY: 1)
- MW-1 — GROUNDWATER MONITORING WELL
- IA-2 — INDOOR AIR SAMPLE
- SS-4 — SUBSLAB VAPOR SAMPLE (LOCATIONS IN GRAY ARE ABANDONED)
- GP-1 — DIRECT-PUSH SOIL BORING
- HP-1 — HAND PROBE SOIL BORING
- PROPERTY LINE
- FENCE
- LIGHT POLE
- UE — UNDERGROUND ELECTRIC LINE
- W — WATER LINE
- FIRE HYDRANT
- SN — SANITARY SEWER LINE
- ST — STORM SEWER LINE
- T — TELECOMMUNICATIONS LINE
- MANHOLE
- G — GAS LINE

NOTES:

1.) BASE MAP IS APPROXIMATE AND BASED ON AERIAL PHOTOGRAPHY AND FIELD OBSERVATIONS.

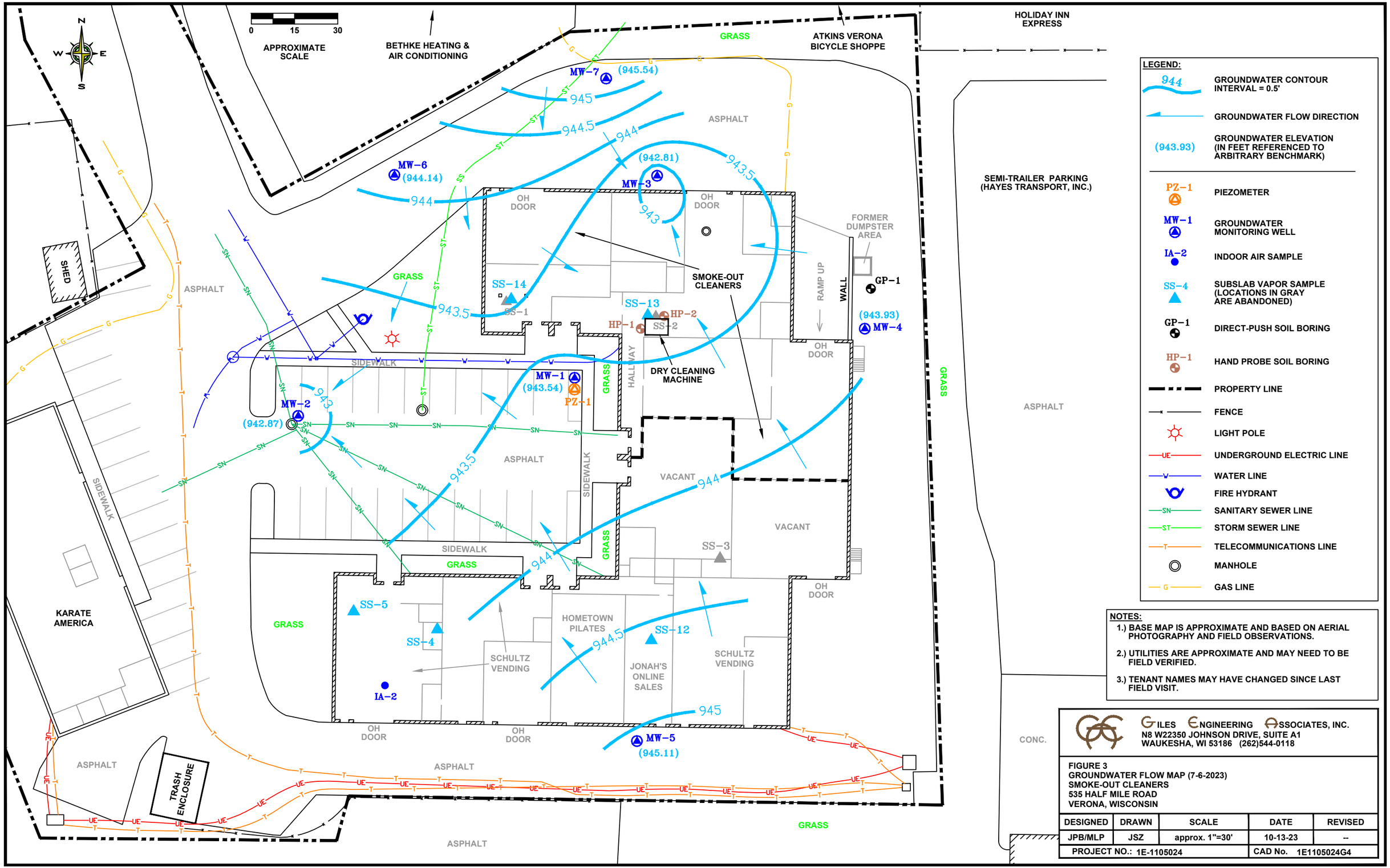
2.) UTILITIES ARE APPROXIMATE AND MAY NEED TO BE FIELD VERIFIED.

3.) TENANT NAMES MAY HAVE CHANGED SINCE LAST FIELD VISIT.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 1
SITE MAP
SMOKE-OUT CLEANERS AND VERONA BUSINESS CENTRE
535 HALF MILE ROAD
VERONA, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
SMO	JSZ	approx. 1"=30'	08-23-21	10-28-21
PROJECT NO.: 1E-1105024			CAD No. 1E1105024J	



NOTES:

1.) BASE MAP IS APPROXIMATE AND BASED ON AERIAL PHOTOGRAPHY AND FIELD OBSERVATIONS.

2.) UTILITIES ARE APPROXIMATE AND MAY NEED TO BE FIELD VERIFIED.

3.) TENANT NAMES MAY HAVE CHANGED SINCE LAST FIELD VISIT.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 3
GROUNDWATER FLOW MAP (7-6-2023)
SMOKE-OUT CLEANERS
535 HALF MILE ROAD
VERONA, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
JPB/MLP	JSZ	approx. 1"=30'	10-13-23	--
PROJECT NO.: 1E-1105024			CAD No.	1E1105024G4

TABLES

Table 1
Groundwater Elevation Summary
Smoke-Out Cleaners
535 Half Mile Road
Verona, Wisconsin
Giles Project No. 1E-1105024

Well ID	Elevation (TOC)*	Elevation Ground Surface	Well Depth	Screen Length	Groundwater Depth (TOC)	Calculated Groundwater Elevation	Date
MW-1	977.63	977.71	44.5	15	33.11	944.52	9/5/14
					31.88	945.75	1/19/17
					30.23	947.40	6/28/17
					29.85	947.78	9/27/17
					28.81	948.82	9/18/19
					27.69	949.94	10/23/19
					29.83	947.80	1/28/20
					29.80	947.83	4/30/20
					30.33	947.30	8/26/20
					34.52	943.11	9/28/22
					35.14	942.49	12/13/22
					33.45	944.18	3/13/23
					34.09	943.54	7/6/23
MW-2	977.46	977.57	48.5	15	33.14	944.32	9/5/14
					32.02	945.44	1/19/17
					30.80	946.66	6/28/17
					36.20	941.26	9/27/17
					29.55	947.91	9/18/19
					28.75	948.71	10/23/19
					30.51	946.95	1/28/20
					30.28	947.18	4/30/20
					31.28	946.18	8/26/20
					34.75	942.71	9/28/22
					35.48	941.98	12/13/22
					33.51	943.95	3/13/23
					34.59	942.87	7/6/23
MW-3	977.94	977.89	44.5	15	33.38	944.56	9/5/14
					32.44	945.50	1/19/17
					31.15	946.79	6/28/17
					31.10	946.84	9/27/17
					29.98	947.96	9/18/19
					29.15	948.79	10/23/19
					30.91	947.03	1/29/20
					30.71	947.23	4/30/20
					31.75	946.19	8/26/20
					35.54	942.40	9/28/22
					35.94	942.00	12/13/22
					34.14	943.80	3/13/23
					35.13	942.81	7/6/23
MW-4	974.33	974.36	40	15	28.54	945.79	9/5/14
					27.25	947.08	1/19/17
					24.05	950.28	6/28/17
					25.13	949.20	9/27/17
					23.33	951.00	9/18/19
					22.39	951.94	10/23/19
					25.25	949.08	1/28/20
					24.99	949.34	4/30/20
					26.23	948.10	8/26/20
					30.68	943.65	9/28/22
					well repaired 9/28/22		
	974.33	974.36			31.58	942.75	12/13/22
					28.13	946.20	3/13/23
					30.40	943.93	7/6/23

					31.82	946.00	9/5/14
					31.29	946.53	1/19/17
					28.70	949.12	6/28/17
					28.51	949.31	9/27/17
					27.00	950.82	9/18/19
					25.28	952.54	10/23/19
MW-5	977.82	977.71	42	15	28.40	949.42	1/28/20
					28.24	949.58	4/30/20
					28.59	949.23	8/26/20
					33.05	944.77	9/28/22
					well repaired 9/28/22		
					34.22	943.60	12/13/22
	977.82	977.71			32.27	945.55	3/13/23
					32.71	945.11	7/6/23
					27.41	950.23	10/23/19
					29.49	948.15	1/28/20
					28.14	949.50	4/30/20
MW-6	977.64	977.82	35	15	30.19	947.45	8/26/20
					34.69	942.95	9/28/22
					DRY	--	12/13/22
					33.22	944.42	3/13/23
					33.50	944.14	7/6/23
					22.04	954.92	10/23/19
					27.19	949.77	1/28/20
					26.20	950.76	4/30/20
MW-7	976.96	977.11	35	15	27.76	949.20	8/26/20
					31.01	945.95	9/28/22
					32.56	944.40	12/13/22
					29.20	947.76	3/13/23
					31.42	945.54	7/6/23
					35.48	942.26	9/28/22
					35.94	941.80	12/13/22
PZ-1	977.74		60	5	34.08	943.66	3/13/23
					35.31	942.43	7/6/23

Notes:

TOC = Top of Casing

* = Elevations referenced to mean sea level.

TABLE 2
SOIL ANALYTICAL RESULTS
(DETECTED VOCs)
Smoke-Out Cleaners
535 Half Mile Road
Verona, Wisconsin
1E-1105024

Analyte	Sample Location											NR 720 RCLs[1]		
	GP-1		HP-1		HP-2		MW-1	MW-2	MW-3	MW-3R	PZ-1			
Sample Depth (feet)	2-4	18-20	4-6	12-14	4-6	12-14	32-34	40-42	30-32	2-4	2-4	**Soil to Goundwater Pathway**	**Direct Contact Pathway[2] (Non-Industrial)**	**Direct Contact Pathway[2] (Non-Industrial)**
Sample Date	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/27/14	8/26/14	8/27/14	9/14/22	9/14/22			
PID	<5	<5	266	40.3	209.5	964	<5	<5	<5	<5	<5			
Detected VOCs (µg/kg)														
cis-1,2-Dichloroethene	<29	<30	**1,400**	**320**	**1,400**	**170**	<7.3	<7.3	<7.3	<29	<31	**41.2**	**156,000**	**2,340,000**
Tetrachloroethene (PCE)	<29	<30	**34,000**	**10,000**	**7,600**	**2,800**	**280**	<9.9	**94**	<28	**2,200**	**4.5**	**33,000**	**145,000**
Trichloroethene (TCE)	<29	<30	<280	**26**	**79**	<27	<11	<25	<11	<11	<13	**3.6**	**1,300**	**8,410**

NOTES:

RCLs: Residual Contaminant Levels

[1] : Wisconsin Adminiarative Code Natural Resources Chapter (NR) 720 RCLs from WDNR RCL Spreadsheet (updated December 2018)

[2] : Direct Contact Pathway RCLs only apply to soil within 4 feet of ground surface

PID: Photoionization Detector

VOCs: Volatile Organic Compounds

µg/kg: Micrograms per kilogram; equivalent to parts per billion (ppb)

Results shown in blue/underline exceed the RCL for Soil to Groundwater Pathway

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
(DETECTED VOCS)
Smoke Out Cleaners
Verona, Wisconsin
Project No. 1E-1105024

Sample Location	NR 140[1] PAL (µg/L)	NR 140[1] ES (µg/L)	MW-1											
Sample Date			9/5/14	1/19/17	6/28/17	9/27/17	10/23/19	1/28/20	4/30/20	8/26/20	9/28/22	12/13/22	3/13/23	7/6/23
DTW (ft TOC)			33.11	31.88	30.23	29.85	27.69	29.83	29.80	30.33	34.52	35.14	33.45	34.09
Detected VOCs (µg/L)														
cis-1,2-Dichloroethene	**7**	**70**	**120**	**220**	**210**	**220**	**180**	**140**	**150**	**130**	**74**	*(62)*	**72**	(52)
trans-1,2-Dichloroethene	**20**	**100**	<1.3	<3.5	<3.5	<3.5	<7.0	<3.5	<3.5	<3.5	<1.7	<3.5	<3.5	<1.7
Ethylbenzene	**140**	**700**	<0.65	<1.8	<1.8	<1.8	<3.7	<1.8	<1.8	2.0 J	<0.92	<1.8	<1.8	<0.92
Naphthalene	**10**	**100**	<0.80	<0.34	8.3 J	<3.4	*(16 JB)*	<3.4	<3.4	7.9 J	<1.7	<3.4	8.5 JB	<1.7
Toluene	**160**	**800**	<0.55	3.8 J	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.76	<1.5	<1.5	<0.76
1,2,4-Trimethylbenzene	**96**	**480**	<0.70	<3.6	<3.6	<3.6	13 JB	<3.6	<3.6	<3.6	<1.8	<3.6	7.6 JB	<1.8
1,3,5-Trimethylbenzene	**96**	**480**	<0.90	<2.5	<2.5	<2.5	12 JB	<2.5	<2.5	<2.5	<1.3	<2.5	<2.5	<1.3
n-Butylbenzene	**NS**	**NS**	<0.65	<3.9	<3.9	<3.9	11 JB	<3.9	<3.9	<3.9	<1.9	<3.9	<3.9	<1.9
Styrene	**10**	**100**	<0.50	<3.9	<3.9	<3.9	9.8 JB	<3.9	<3.9	<3.9	<1.9	<3.9	<3.9	<1.9
Tetrachloroethene	**0.5**	**5**	**2,800**	**6,700**	**6,900**	**9,300**	**7,600**	**6,000**	**6,700**	**6,300**	**5,100**	**5,400**	**5700**	**4800**
Trichloroethene	**0.5**	**5**	**25**	**46**	**44**	**57**	**58**	**48**	**56**	**57**	**39**	**41**	**48**	**34**

NOTES:
(1): Wisconsin Administrative Code Natural Resources Chapter (NR) 140

ES: Enforcement Standard

PAL: Preventive Action Limit

NS: No Standard Established

DTW (ft TOC): Depth to water in feet below top of casing

VOCs: Volatile Organic Compounds

µg/L: Micrograms per Liter; equivalent to parts per billion (ppb)

--: Not analyzed

J: Result is less than the reporting limit but greater than the method detection limit and the concentration is an approximate value

B: Compound was found in the blank and sample

Concentrations expressed in (Italics / Blue / Parentheses) exceed NR 140 Preventive Action Limit

Concentrations expressed in Red / Underine exceed NR 140 Enforcement Standard

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
(DETECTED VOCS)
Smoke Out Cleaners
Verona, Wisconsin
Project No. 1E-1105024

Sample Location	NR 140[1] PAL (µg/L)	NR 140[1] ES (µg/L)	PZ-1				MW-2											
Sample Date			9/28/22	12/13/22	3/13/23	7/6/23	9/5/14	1/19/17	6/28/17	9/27/17	10/23/19	1/28/20	4/30/20	8/26/20	9/28/22	12/13/22	3/13/23	7/6/23
DTW (ft TOC)			35.48	35.94	34.08	35.31	33.14	32.02	30.80	36.20	28.75	30.51	30.28	31.28	34.75	35.48	33.51	34.59
Detected VOCs (µg/L)																		
cis-1,2-Dichloroethene	**7**	**70**	1.4	0.94 J	<0.41	<0.41	<0.12	<0.41	<0.41	<0.41	<0.41	<0.39	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
trans-1,2-Dichloroethene	**20**	**100**	<0.35	<0.35	<0.35	<0.35	<0.25	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
Ethylbenzene	**140**	**700**	<0.18	<0.18	<0.18	<0.18	<0.13	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Naphthalene	**10**	**100**	<0.34	<0.34	<0.34	<0.34	<0.16	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Toluene	**160**	**800**	<0.15	<0.15	<0.15	<0.15	0.25 J	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
1,2,4-Trimethylbenzene	**96**	**480**	<0.36	<0.36	<0.36	<0.36	<0.14	<0.36	<0.36	<0.36	0.63 JB	<0.38	<0.36	<0.36	<0.36	<0.36	0.74 JB	<0.36
1,3,5-Trimethylbenzene	**96**	**480**	<0.25	<0.25	<0.25	<0.25	<0.18	<0.25	<0.25	<0.25	0.59 JB	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
n-Butylbenzene	**NS**	**NS**	<0.39	<0.39	<0.39	<0.39	<0.13	<0.39	<0.39	<0.39	0.52 JB	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Styrene	**10**	**100**	<0.39	<0.39	<0.39	<0.39	<0.10	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Tetrachloroethene	**0.5**	**5**	**6.3**	*(2.8)*	*(1.9)*	*(1.5)*	<0.17	<0.37	<0.37	<0.37	<0.37	*(1.1)*	<0.37	*(0.80 J)*	<0.37	<0.37	<0.37	<0.37
Trichloroethene	**0.5**	**5**	<0.16	<0.16	<0.16	<0.16	<0.19	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16

NOTES:
(1): Wisconsin Administrative Code Natural Resources Chapter (NR) 140

ES: Enforcement Standard

PAL: Preventive Action Limit

NS: No Standard Established

DTW (ft TOC): Depth to water in feet below top of casing

VOCs: Volatile Organic Compounds

µg/L: Micrograms per Liter; equivalent to parts per billion (ppb)

--: Not analyzed

J: Result is less than the reporting limit but greater than the method detection limit and the concentration is an approximate value

B: Compound was found in the blank and sample

Concentrations expressed in (Italics / Blue / Parentheses) exceed NR 140 Preventive Action Limit

Concentrations expressed in Red / Underine exceed NR 140 Enforcement Standard

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
(DETECTED VOCS)
Smoke Out Cleaners
Verona, Wisconsin
Project No. 1E-1105024

Sample Location	NR 140[1] PAL (µg/L)	NR 140[1] ES (µg/L)	MW-3											
Sample Date			9/5/14	1/19/17	6/28/17	9/27/17	10/23/19	1/29/20	4/30/20	8/26/20	9/28/22	12/13/22	3/13/23	7/6/23
DTW (ft TOC)			33.38	32.44	31.15	31.10	29.15	30.91	30.71	31.75	35.54	35.94	34.14	35.13
Detected VOCs (µg/L)														
cis-1,2-Dichloroethene	7	70	*(57)*	210	200	260	180	150	130	110	91	73	190	160
trans-1,2-Dichloroethene	20	100	<0.25	0.57 J	0.60 J	<0.70	0.53 J	0.50 J	0.44 J	<0.35	<0.35	0.44 J	0.65 J	0.69 J
Ethylbenzene	140	700	<0.13	<0.18	<0.18	<0.37	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Naphthalene	10	100	<0.16	<0.34	<0.34	<0.67	0.66 JB	0.66 JB	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Toluene	160	800	<0.11	<0.15	<0.15	<0.30	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
1,2,4-Trimethylbenzene	96	480	<0.14	<0.36	<0.36	<0.72	0.65 JB	<0.36	<0.36	<0.36	<0.36	<0.36	0.73 JB	<0.36
1,3,5-Trimethylbenzene	96	480	<0.18	<0.25	<0.25	<0.51	0.59 JB	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
n-Butylbenzene	NS	NS	<0.13	<0.39	<0.39	<0.78	0.53 JB	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Styrene	10	100	<0.10	<0.39	<0.39	<0.77	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Tetrachloroethene	0.5	5	56	370	430	680	660	590	490	500	300	260	430	380
Trichloroethene	0.5	5	*(2.8)*	11	13	15	13	13	12	13	7.2	6.3	14	11

NOTES:
(1): Wisconsin Administrative Code Natural Resources Chapter (NR) 140

ES: Enforcement Standard

PAL: Preventive Action Limit

NS: No Standard Established

DTW (ft TOC): Depth to water in feet below top of casing

VOCs: Volatile Organic Compounds

µg/L: Micrograms per Liter; equivalent to parts per billion (ppb)

--: Not analyzed

J: Result is less than the reporting limit but greater than the method detection limit and the concentration is an approximate value

B: Compound was found in the blank and sample

Concentrations expressed in (Italics / Blue / Parentheses) exceed NR 140 Preventive Action Limit

Concentrations expressed in Red / Underine exceed NR 140 Enforcement Standard

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
(DETECTED VOCS)
Smoke Out Cleaners
Verona, Wisconsin
Project No. 1E-1105024

Sample Location	NR 140[1] PAL (µg/L)	NR 140[1] ES (µg/L)	MW-4											
Sample Date			9/5/14	1/19/17	6/28/17	9/27/17	10/23/19	1/28/20	4/30/20	8/26/20	9/28/22	12/13/22	3/13/23	7/6/23
DTW (ft TOC)			28.54	27.25	24.05	25.13	22.39	25.25	24.99	26.23	30.68	31.58	28.13	30.40
Detected VOCs (µg/L)														
cis-1,2-Dichloroethene	**7**	**70**	<0.12	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
trans-1,2-Dichloroethene	**20**	**100**	<0.25	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
Ethylbenzene	**140**	**700**	<0.16	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Naphthalene	**10**	**100**	<0.16	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Toluene	**160**	**800**	<0.11	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
1,2,4-Trimethylbenzene	**96**	**480**	<0.14	<0.36	<0.36	<0.36	0.63 JB	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
1,3,5-Trimethylbenzene	**96**	**480**	<0.18	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
n-Butylbenzene	**NS**	**NS**	<0.13	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Styrene	**10**	**100**	<0.10	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Tetrachloroethene	**0.5**	**5**	<0.17	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37
Trichloroethene	**0.5**	**5**	<0.19	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16

NOTES:
(1): Wisconsin Administrative Code Natural Resources Chapter (NR) 140

ES: Enforcement Standard

PAL: Preventive Action Limit

NS: No Standard Established

DTW (ft TOC): Depth to water in feet below top of casing

VOCs: Volatile Organic Compounds

µg/L: Micrograms per Liter; equivalent to parts per billion (ppb)

--: Not analyzed

J: Result is less than the reporting limit but greater than the method detection limit and the concentration is an approximate value

B: Compound was found in the blank and sample

Concentrations expressed in (Italics / Blue / Parentheses) exceed NR 140 Preventive Action Limit

Concentrations expressed in Red / Underine exceed NR 140 Enforcement Standard

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
(DETECTED VOCS)
Smoke Out Cleaners
Verona, Wisconsin
Project No. 1E-1105024

Sample Location	NR 140[1] PAL (µg/L)	NR 140[1] ES (µg/L)	MW-5											
Sample Date			9/5/14	1/19/17	6/28/17	9/27/17	10/23/19	1/28/20	4/30/20	8/26/20	9/28/22	12/13/22	3/13/23	7/6/23
DTW (ft TOC)			31.82	31.29	28.70	28.51	25.28	28.40	28.24	28.59	33.05	34.22	32.27	32.71
Detected VOCs (µg/L)														
cis-1,2-Dichloroethene	**7**	**70**	<0.12	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
trans-1,2-Dichloroethene	**20**	**100**	<0.25	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
Ethylbenzene	**140**	**700**	<0.13	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Naphthalene	**10**	**100**	<0.16	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Toluene	**160**	**800**	<0.11	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
1,2,4-Trimethylbenzene	**96**	**480**	<0.14	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
1,3,5-Trimethylbenzene	**96**	**480**	<0.18	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
n-Butylbenzene	**NS**	**NS**	<0.13	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Styrene	**10**	**100**	<0.10	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Tetrachloroethene	**0.5**	**5**	*(2.5)*	<0.37	<0.37	<0.37	*(0.79 J)*	*(0.90 J)*	*(0.65 J)*	*(0.81 J)*	<0.37	*(0.57 J)*	<0.37	*0.88 J*
Trichloroethene	**0.5**	**5**	<0.19	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16

NOTES:
(1): Wisconsin Administrative Code Natural Resources Chapter (NR) 140

ES: Enforcement Standard

PAL: Preventive Action Limit

NS: No Standard Established

DTW (ft TOC): Depth to water in feet below top of casing

VOCs: Volatile Organic Compounds

µg/L: Micrograms per Liter; equivalent to parts per billion (ppb)

--: Not analyzed

J: Result is less than the reporting limit but greater than the method detection limit and the concentration is an approximate value

B: Compound was found in the blank and sample

Concentrations expressed in (Italics / Blue / Parentheses) exceed NR 140 Preventive Action Limit

Concentrations expressed in Red / Underine exceed NR 140 Enforcement Standard

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
(DETECTED VOCS)
Smoke Out Cleaners
Verona, Wisconsin
Project No. 1E-1105024

Sample Location	NR 140[1] PAL (µg/L)	NR 140[1] ES (µg/L)	MW-6								MW-7							
Sample Date			10/23/19	1/28/20	4/30/20	8/26/20	9/28/22	12/13/22	3/13/23	7/6/23	10/23/19	1/28/20	4/30/20	8/26/20	9/28/22	12/13/22	3/13/23	7/6/23
DTW (ft TOC)			27.41	29.49	28.14	30.19	34.69	34.98	33.22	33.50	22.04	27.19	26.20	27.76	31.01	32.56	29.20	31.42
Detected VOCs (µg/L)																		
cis-1,2-Dichloroethene	**7**	**70**	<0.41	<0.41	<0.41	<0.41	<0.41	--	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
trans-1,2-Dichloroethene	**20**	**100**	<0.35	<0.35	<0.35	<0.35	<0.35	--	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
Ethylbenzene	**140**	**700**	<0.18	<0.18	<0.18	<0.18	<0.18	--	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Naphthalene	**10**	**100**	<0.34	<0.34	<0.34	<0.34	<0.34	--	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Toluene	**160**	**800**	<0.15	<0.15	<0.15	<0.15	<0.15	--	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
1,2,4-Trimethylbenzene	**96**	**480**	<0.36	<0.36	<0.36	<0.36	<0.36	--	<0.36	<0.36	0.63 JB	0.63 JB	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
1,3,5-Trimethylbenzene	**96**	**480**	<0.25	<0.25	<0.25	<0.25	<0.25	--	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
n-Butylbenzene	**NS**	**NS**	<0.39	<0.39	<0.39	<0.39	<0.39	--	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Styrene	**10**	**100**	<0.39	<0.39	<0.39	<0.39	<0.39	--	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Tetrachloroethene	**0.5**	**5**	*(1.1)*	*(1.2)*	*(1.8)*	*(1.6)*	**6.1**	--	**7.4**	(4.7)	**43**	**30**	**27**	**29**	**33**	**31**	**35**	**29**
Trichloroethene	**0.5**	**5**	<0.16	<0.16	<0.16	<0.16	<0.16	--	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	0.23 J	<0.16	<0.16

NOTES:
(1): Wisconsin Administrative Code Natural Resources Chapter (NR) 140

ES: Enforcement Standard

PAL: Preventive Action Limit

NS: No Standard Established

DTW (ft TOC): Depth to water in feet below top of casing

VOCs: Volatile Organic Compounds

µg/L: Micrograms per Liter; equivalent to parts per billion (ppb)

--: Not analyzed

J: Result is less than the reporting limit but greater than the method detection limit and the concentration is an approximate value

B: Compound was found in the blank and sample

Concentrations expressed in (Italics / Blue / Parentheses) exceed NR 140 Preventive Action Limit

Concentrations expressed in Red / Underine exceed NR 140 Enforcement Standard

TABLE 4
SUB-SLAB VAPOR ANALYTICAL RESULTS (VOCs)
Smoke-Out Cleaners
535 Half Mile Road
Verona, Wisconsin
Project No. 1E-1105024

Analyte	Sample Location								Sub-Slab Vapor VRSLs* (µg/m^3)		
	SS-1	SS-2	SS-3	SS-4			SS-5	SS-6	Residential	Small Commerical	Large Commerical / Industrial
Sample Date	11/7/12	11/7/12	11/7/12	3/13/14	10/10/19	1/29/20	3/13/14	3/13/14			
Detected VOCs (µg/m^3)											
trans-1,2-Dichloroethene	<250	<7,900	<200	<0.79	<0.40	<0.20	<0.79	<0.79	**1,400**	**5,800**	**18,000**
cis-1,2-Dichloroethene	1,300	500,000	<200	<0.79	<0.48	<0.24	<0.79	<0.79	**NS**	**NS**	**NS**
1,2-Dichloroethene (total)	1,300	500,000	<400	<1.58	<0.88	<0.44	<1.58	<1.58	**NS**	**NS**	**NS**
Tetrachloroethene	**[81,000]**	**[22,000,000]**	**[55,000]**	35	150	110	27	<1.4	**1,400**	**5,800**	**18,000**
Trichloroethene	<340	<110,000	<270	<1.1	<0.39	<0.19	<1.1	<1.1	**70**	**290**	**880**
Vinyl chloride	<160	<51,000	<0.29	<0.51	<0.36	<0.18	<0.51	<0.51	**57**	**930**	**2,800**

Notes:

VRSLs: Vapor Risk Screening Levels
VOCs: Volatile Organic Compounds
µg/m^3: Micrograms per cubic meter
J: Concentration reported between the laboratory method detection limit and the reporting limit.
-- : Not analyzed
NS: No Established Standard
Results shown in **blue/underline** exceed the Residential VRSLs
Results shown in **(green/parentheses)** exceed the Small Commercial and Residential VRSLs
Results shown in **[red/brackets]** exceed the Large Commercial / Industrial, Small Commercial and Residential VRSLs
* VRSLs obtained from the Wisconsin Department of Natural Resources WI Quick Look-Up Table (updated September 2021)

TABLE 4
SUB-SLAB VAPOR ANALYTICAL RESULTS (VOCs)
Smoke-Out Cleaners
535 Half Mile Road
Verona, Wisconsin
Project No. 1E-1105024

Analyte	Sample Location								Sub-Slab Vapor VRSLs (µg/m^3)		
	SS-7		SS-8	SS-9		SS-10		SS-11	Residential	Small Commerical	Large Commerical / Industrial
Sample Date	3/13/14	1/29/20	3/13/14	3/13/14	1/29/20	3/13/14	1/29/20	3/13/14			
Detected VOCs (µg/m^3)											
trans-1,2-Dichloroethene	<0.79	<0.20	1.6	1.0	1.6 J	<0.79	<0.20	<0.79	**1,400**	**5,800**	**18,000**
cis-1,2-Dichloroethene	<0.79	<0.24	<0.79	<0.79	<1.2	<0.79	<0.24	<0.79	**NS**	**NS**	**NS**
1,2-Dichloroethene (total)	<1.58	<0.44	1.6	1.0	1.6 J	<1.58	<0.44	<1.58	**NS**	**NS**	**NS**
Tetrachloroethene	<1.4	1.5	4.5	4.1	2.7 J	<1.4	1.0 J	2.5	**1,400**	**5,800**	**18,000**
Trichloroethene	<1.1	<0.19	<1.1	<1.1	<0.97	<1.1	<0.19	<1.1	**70**	**290**	**880**
Vinyl chloride	<0.51	<0.18	<0.51	<0.51	<0.91	<0.51	<0.18	<0.51	**57**	**930**	**2,800**

Notes:

VRSLs: Vapor Risk Screening Levels
VOCs: Volatile Organic Compounds
µg/m^3: Micrograms per cubic meter
J: Concentration reported between the laboratory method detection limit and the reporting limit.
-- : Not analyzed
NS: No Established Standard
Results shown in **blue/underline** exceed the Residential VRSLs
Results shown in **(green/parentheses)** exceed the Small Commercial and Residenial VRSLs
Results shown in **[red/brackets]** exceed the Large Commercial / Industrial, Small Commercial and Residenial VRSLs
* VRSLs obtained from the Wisconsin Department of Natural Resources WI Quick Look-Up Table (updated September 2021)

TABLE 4
SUB-SLAB VAPOR ANALYTICAL RESULTS (VOCs)
Smoke-Out Cleaners
535 Half Mile Road
Verona, Wisconsin
Project No. 1E-1105024

Analyte	Sample Location										Sub-Slab Vapor VRSLs* (µg/m3)		
	SS-12				SS-13		SS-14			SS-15	Residential	Small Commerical	Large Commerical / Industrial
Sample Date	3/13/14	10/10/19	1/29/20	7/5/23	9/18/19	1/29/20	9/18/19	1/29/20	7/5/23	7/5/23			
Detected VOCs (µg/m^3)													
trans-1,2-Dichloroethene	<2.0	<4.0	<3.6	<4.5	<5,900	<5,500	<400	<110	<80	1,200 J	**1,400**	**5,800**	**18,000**
cis-1,2-Dichloroethene	<2.0	<4.8	<4.3	<3.4	320,000	230,000	<480	280 J	83 J	5,600	**NS**	**NS**	**NS**
1,2-Dichloroethene (total)	<4.0	<8.8	<7.9	<7.9	320,000	230,000	<880	280 J	83 J	6,800	**NS**	**NS**	**NS**
Tetrachloroethene	550	**3,800**	**2,900**	**2,600**	**[4,700,000]**	**[3,900,000]**	**[220,000]**	**[60,000]**	**[67,000]**	**[300,000]**	**1,400**	**5,800**	**18,000**
Trichloroethene	<2.7	<3.9	<3.5	<6.1	**[58,000]**	**[50,000]**	**[1,000 J]**	**(390 J)**	**(340 J)**	**[3,300]**	**70**	**290**	**880**
Vinyl chloride	<1.3	<3.6	<3.3	<5.7	<5,400	<3,700	<360	<99	<100	<400	**57**	**930**	**2,800**

Notes:

VRSLs: Vapor Risk Screening Levels
VOCs: Volatile Organic Compounds
µg/m^3: Micrograms per cubic meter
J: Concentration reported between the laboratory method detection limit and the reporting limit.
-- : Not analyzed
NS: No Established Standard
Results shown in **blue/underline** exceed the Residential VRSLs
Results shown in **(green/parentheses)** exceed the Small Commercial and Residential VRSLs
Results shown in **[red/brackets]** exceed the Large Commercial / Industrial, Small Commercial and Residential VRSLs
* VRSLs obtained from the Wisconsin Department of Natural Resources WI Quick Look-Up Table (updated September 2021)

Table 5
INDOOR AIR ANALYTICAL RESULTS
Smoke Out Cleaners
Verona, Wisconsin
Project Number 1E-1105024

Sample Location	IA-1	IA-2	Indoor Air VAL (µg/m^3)	
			Land Use	
Sample Depth	---	---	Residential	Small and Large Commercial / Industrial
Sample Date	3/13/2014	3/13/2014		
CVOCs (µg/m^3)				
1,1-Dichloroethene	---	---	210	880
1,2-Dichloroethane	---	---	1.10	4.70
cis-1,2-Dichloroethene	<0.20	<0.20	42	180
Tetrachloroethene (PCE)	<0.20	0.23	42	180
trans-1,2-Dichloroethene	<0.20	<0.20	42	180
Trichloroethene (TCE)	<0.20	<0.20	2.1	8.80
Vinyl chloride	<0.20	<0.20	1.7	28

Notes:
VAL: Vapor Action Level
CVOCs: Chlorinated Volatile Organic Compounds
µg/m^3: Micrograms per cubic meter
xx.x: Underlined results exceed the VAL for Residential land use
(xx.x): Parenthesized results exceed the sub-slab VAL for both Residential and Small Commercial la
[xx.x]: Bracketed results exceed the VAL for Residential, Small Commercial, and Large Commercial/
VALs were obtained/calculated from the Wisconsin Vapor Quick Look-Up Table based on the August 2023 US EPA Regional Scree

APPENDIX A

Boring Logs and Abandonment Forms

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Beaufort Jones Giles Engineering Associates, Inc.	8/27/2014	8/27/2014	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-1	Feet MSL	Feet MSL	8.25 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1-SS	24/0		1	Asphalt and Base Course Sand and Gravel										
				Greenish Brown Silty Clay with trace rootlets - Moist				0						
2-SS	24/11		2		CL									
			3					0.6						
3-SS	24/13		4											
			5	Tan very fine Sand - Moist				0						
4-SS	24/18		6		SP									
			7	Brown Clayey Sand with trace Orange staining - Moist	SC			3.0						
5-SS	24/16		8	Tan Silt and very fine Sand with little to trace Clay and trace Gravel - Moist										
			9					4.9						
6-SS	24/14		10		ML									
			11					6.5						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Stephen Owens Firm Giles Engineering Associates, Inc.
N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186
Tel: 262-544-0118 Fax: 262-549-5868

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-1 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
7-SS	24/20		13	Brown Clayey very fine Sand with little to trace Gravel and trace Orange mottling - Moist	SC			11.3						
8-SS	24/18		14											
			15					7.8						
9-SS	24/24		16											
			17	Brown to Tan Silt and very fine Sand with trace Clay and dolomite rock chips - Moist				10.5						
10-SS	24/16		18											
			19					7.9						
11-SS	24/19		20											
			21					14.2						
12-SS	24/0		22											
			23											
13-SS	24/20		24		ML									
			25					6.7						
14-SS	24/20		26											
			27					8.1						
15-SS	24/22		28											
			29					8.8						
			30											
			31											
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-1 Use only as an attachment to Form 4400-122.

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			33	Brown to Tan Silt and very fine Sand with trace Clay and dolomite rock chips - Moist *(continued)*										
			34	Wet at 34 feet										
			35											
			36											
			37											
			38		ML									
			39											
			40											
			41											
			42											
			43											
			44											
				Borings Terminated at 44.5 feet										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Beaufort Jones Giles Engineering Associates, Inc.	8/26/2014	8/26/2014	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-2	Feet MSL	Feet MSL	8.25 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8E

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Asphalt, fine to coarse Gravel										
				Tan fine to coarse Sand, some Silt, trace fine Gravel - Moist										
1-SS	10/24		2											
			3					0						
2-SS	14/24		4											
			5		SP			0						
3-SS	11/24		6											
			7					0						
4-SS	18/24		8											
			9					0						
				Tan fine to coarse grained Sandy Clay - Moist	SC									
5-SS	18/24		10											
			11	Tan Clayey Silt, soft, Gray and rust colored mottling - Moist	CL			0						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Lee M Wilson Jr. Firm Giles Engineering Associates, Inc.
N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186
Tel: 262-544-0118
Fax: 262-549-5868

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SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-2 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
6-SS	24/24		13	Tan Clayey Silt, soft, Gray and rust colored mottling - Moist *(continued)*	CL			0						
7-SS	19/24		14	Tan fine to coarse grained Sandy Clay with Gray mottling - Moist	SC									
8-SS	16/24		15	Tan Silty Clay, some fine to coarse Sand, trace fine gravel - Moist				0						
9-SS	6/24		16											
10-SS	0/24		17					0						
11-SS	18/24		18	Increases in Gravel										
12-SS	24/24		19					0						
13-SS	10/24		20		CL									
14-SS	24/24		21					0						
15-SS	0/24		22											
			23	fine to medium grained Gravel seam				0						
			24											
			25					0						
			26	Tan Sandy Silt, fine to coarse grained, trace fine Gravel, Gray mottling - Moist										
			27					0						
			28		SM									
			29					0						
			30	Tan fine to coarse grained Sandy Silt, trace fine Gravel - Moist										
			31		SM			0						
			32											

SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A

Boring Number MW-2 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
16-SS	18/24		33	Tan fine to coarse grained Sandy Silt, trace fine Gravel - Moist *(continued)*	SM			0						
17-SS	16/24		34	Tan fine to coarse Sand, Gray Mottling - Moist										
			35					0						
18-SS	13/24		36	some fine Gravel										
			37					0						
19-SS	12/24		38	some rust colored mottling										
			39					0						
20-SS	14/24		40											
			41		SW			0						
21-SS	6/24		42											
			43					0						
22-SS	24/24		44	Wet										
			45					0						
23-SS	/24		46											
			47					0						
24-SS	/24		48											
				Borings Terminated at 48.5 feet				0						

Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Beaufort Jones Giles Engineering Associates, Inc.	8/27/2014	8/27/2014	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-3	Feet MSL	Feet MSL	8.25 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Asphalt and Base Course Sand and Gravel										
1-SS	24/10		2	Dark Brown to Gray Silty or Sandy Clay and very fine Sand with little Clay and trace Gravel - Moist										
			3					0.5						
2-SS	24/12		4		CL									
			5					0.8						
3-SS	24*22		6											
			7					1.1						
4-SS	24/19		8	Tan very fine Sand - Moist	SP									
			9	Brown Clayey Sand - Moist	SC			1.9						
5-SS	24/17		10											
			11	Tan to Brown and Gray Silt with some to trace very fine Sand, locally with little Clay and trace Gravel - Moist	ML			3.4						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Stephen Owen

Firm Giles Engineering Associates, Inc.
N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186
Tel: 262-544-0118
Fax: 262-549-5868

Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A

Boring Number MW-3 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
6-SS	24/22		13	Tan to Brown and Gray Silt with some to trace very fine Sand, locally with little Clay and trace Gravel - Moist *(continued)*				8.0						
7-SS	24/22		14		ML									
			15					12.2						
8-SS	24/19		16											
			17					13.0						
9-SS	24/24		18											
			19					2.0						
10-SS	24/17		20											
			21					13.1						
11-SS	24/22		22	trace dolomite rock chips										
			23					16.5						
12-SS	24/14		24		ML									
			25					2.7						
13-SS	24/15		26											
			27					3.0						
14-SS	24/21		28											
			29					7.4						
15-SS	24/16		30	Wet										
			31					6.8						
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-3 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
16-SS	24/19		33	Tan to Brown and Gray Silt with some to trace very fine Sand, locally with little Clay and trace Gravel - Moist *(continued)*	ML			1.9						
17-SS	24/13		34											
			35					0.8						
18-SS	24/13		36											
			37					0.6						
19-SS	24/17		38											
			39					1.7						
20-SS	24/19		40											
			41					0.3						
21-SS	24/9		42											
			43					0.9						
			44											
				Borings Terminated at 44.5 feet										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name: Smoke-Out Cleaners (1E-1105024)	License/Permit/Monitoring Number:	Boring Number: MW-4
Boring Drilled By: Name of crew chief (first, last) and Firm: Beaufort Jones, Giles Engineering Associates, Inc.	Date Drilling Started: 8/28/2014	Date Drilling Completed: 8/28/2014
Drilling Method: Hollow-Stem Auger		
WI Unique Well No.	DNR Well ID No.	Common Well Name: MW-4
Final Static Water Level: Feet MSL	Surface Elevation: Feet MSL	Borehole Diameter: 8.25 inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐		
State Plane: SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8E	N, E S/C/N	Lat ° ' " Long ° ' "
Local Grid Location: ☐ N Feet ☐ S ☐ E Feet ☐ W		
Facility ID	County: Dane	County Code: 13
Civil Town/City/ or Village: Verona		

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Asphalt and Base Course Sand and Gravel										
			2	Brown to Dark Brown Silty Clay with trace to little very fine Sand, locally trace Gravel - Moist										
1-SS	24/20		3					0						
2-SS	24/24		4											
			5					0						
3-SS	24/24		6		CL									
			7					0						
4-SS	24/14		8											
			9	2" Brown very fine to medium Sand with trace Gravel - Moist	SW			0						
5-SS	24/13		10											
			11	6" Brown very fine to medium Sand with trace Gravel - Moist	CL			0						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Stephen Owens

Firm: Giles Engineering Associates, Inc.
N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186

Tel: 262-544-0118
Fax: 262-549-5868

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-4 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
6-SS	24/7		13	Brown to Dark Brown Silty Clay with trace to little very fine Sand, locally trace Gravel - Moist *(continued)*	CL			0						
7-SS	24/0		14	No recovery; Drilling on boulder										
			15											
			16	Remainder of boring blind drilled due to mechanical problem with motor for rig's hammer										
			17											
			18											
			19											
			20											
			21											
			22											
			23											
			24											
			25											
			26											
			27											
			28											
			29											
			30											
			31											
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-4 Use only as an attachment to Form 4400-122.

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			33	Remainder of boring blind drilled due to mechanical problem with motor for rig's hammer *(continued)*										
			34											
			35											
			36											
			37											
			38											
			39											
			40	Borings Terminated at 40 feet										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-5

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Beaufort Jones Giles Engineering Associates, Inc.	8/28/2014	8/28/2014	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-5	Feet MSL	Feet MSL	8.25 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8E

Lat ° ' "
Long ° ' "

Local Grid Location
Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0–12	Blind drilled due to mechanical problem with rig's hammer.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Stephen Owens

Firm: Giles Engineering Associates, Inc.
N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186
Tel: 262-544-0118
Fax: 262-549-5868

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-5 Use only as an attachment to Form 4400-122.

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			13	Blind drilled due to mechanical problem with rig's hammer. *(continued)*										
			14											
			15											
			16											
			17											
			18											
			19											
			20											
			21											
			22											
			23											
			24											
			25											
			26											
			27											
			28											
			29											
			30											
			31											
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-5 Use only as an attachment to Form 4400-122.

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			33	Blind drilled due to mechanical problem with rig's hammer. *(continued)*										
			34											
			35											
			36											
			37											
			38											
			39											
			40											
			41											
			42	Borings Terminated at 42 feet										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 5-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-6

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Keith Flowers, Giles Engineering Associates	10/3/2019	10/3/2019	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-6	Feet MSL	Feet MSL	8.3 Inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane S / C / N
SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8 E
Lat. ° ' "
Long. ° ' "
Local Grid Location (If applicable) ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				Asphalt, fine to coarse Gravel	Asphalt									
1-SS	24/18		3	Dark Brown Silty Clay with some Red-Brown mottling, Native-Moist	CL			0.1						
2-SS	24/24							0.2						
3-SS	24/12		6	Red-Brown Clayey Silt, trace fine Sand, Native-Moist	CL-ML			0.3						
4-SS	24/24		9	Gray-Brown Silt and Clay with Red-Brown mottling, trace roots, Native-Moist	CL			0.3						
5-SS	24/24							0.4						
6-SS	24/24		12	Brown Silt and fine Sand with trace fine Gravel, Native-Moist	SM			0.4						
7-SS	24/24		15	Tan-Brown fine Sand with trace fine Gravel and dolomite rock chips, Native-Moist				0.5						
8-SS	24/12							0.6						
9-SS	24/24		18					1.1						
10-SS	24/24							0.9						
11-SS	24/24		21					0.9						
12-SS	24/24		24	Wet at 24.6 feet	SM			0.6						
13-SS	24/24							1.4						
14-SS	24/24		27					0.8						
15-SS	24/12		30					0.9						
16-SS	24/18							0.5						
17-SS	24/18		33					0.4						
18-SS	24/18		36	Boring terminated at 36 feet bgs.				0.5						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel
	Giles Engineering Associates, Inc. N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186	Tel: 262-544-0118 Fax: 262-549-5868

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 5-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-7

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Keith Flowers, Giles Engineering Associates	10/3/2019	10/3/2019	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-7	Feet MSL	Feet MSL	8.3 Inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane S / C / N
SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8 E
Lat. ° ' "
Long. ° ' "
Local Grid Location (If applicable)
☐ N ☐ E
Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				Asphalt, fine to coarse Gravel	Asphalt			0.1						
1-SS	24/12		3	Dark Brown Silty Clay with trace Roots and Red mottling, Native-Moist	CL			0.1						
2-SS	24/24			Light Brown fine Sand and Silt with trace fine Gravel, Native-Moist				0.2						
3-SS	24/24		6					0.2						
4-SS	24/24		9		SM			0.3						
5-SS	24/24							0.4						
6-SS	24/12		12	Brown-Gray Clayey Silt and fine Sand with trace fine Gravel, Native-Moist	CL-ML			0.6						
7-SS	24/24		15	Light Brown Silty Sand with trace fine Gravel and dolomite/sandstone rock chips, Native-Moist				0.4						
8-SS	24/24							0.4						
9-SS	24/24		18					0.4						
10-SS	24/24		21					0.7						
11-SS	24/24							0.5						
12-SS	24/24		24	Wet at 23.6 feet	SM			0.2						
13-SS	24/24		27					0.6						
14-SS	24/24							0.9						
15-SS	24/24		30					0.7						
16-SS	24/24		33					0.4						
17-SS	24/18							0.1						
18-SS	24/24		36	Boring terminated at 36 feet bgs.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel:
	Giles Engineering Associates, Inc. N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186	262-544-0118 Fax: 262-549-5868

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ _____

Facility/Project Name: Verona Smoke Out Cleaners IE-1105024	License/Permit/Monitoring Number	Boring Number: PZ-1	
Boring Drilled By: Name of crew chief (first, last) and Firm — First Name: Jim Last Name: Blair — Firm: Giles Engr	Date Drilling Started: 09/14/2022	Date Drilling Completed: 09/14/2022	Drilling Method: HSA DP
WI Unique Well No.: WA 341	DNR Well ID No.:	Well Name:	Final Static Water Level: ____ Feet MSL	Surface Elevation: ____ Feet MSL	Borehole Diameter: 8.25 inches DP-2"
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ — State Plane ____ N, ____ E	Lat ° ' "	Local Grid Location: ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W	
NE 1/4 of NE 1/4 of Section 21, T 06 N, R 08	Long ° ' "		
Facility ID	County: Dane	County Code: 13	Civil Town/City/ or Village: Verona, WI

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
DP-1	24/12		2	Asplt, base course, sand r grav grnish brwn, SC, lit f-g moist				0.4 935						
DP-2	24/12		4	brwn f-s, &S, trc c-s moist				3.1 936						
			6	term @ 60' well set @ 60' 2" well piezometer installed										
			8	Soil boring term @ 4'										
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Cody L Root Firm: Giles Engr

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ ______

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke Out Cleaners 1E-1105024		MW-3R

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Last Name: Firm:	09/14/2022 (mm dd yyyy)	09/14/2022 (mm dd yyyy)	Direct Push

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			____ Feet MSL	____ Feet MSL	2 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane ____ N, ____ E
NE 1/4 of NE 1/4 of Section 21, T 06 N, R 08
Lat ° ' " Long ° ' "
Local Grid Location ☐ N ☐ E ____ Feet ☐ S ____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona, WI

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
DP-1	24 / 15			ASP, base course S+g, tan c-s c-g				0.0						
				gry SD, trc f-s, trc f-g moist				1241						
			2											
DP-2	24 / 12							0.4						
			4	term @ 4' bgs										
			6											
			8											
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Cody L Bluth	Giles Engr

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ■ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane	___ ___ ___ ___ ___	

Latitude / Longitude (see instructions): 42.9868842 N / -89.5461679 W
Format Code: ■ DD ☐ DDM
Method Code: ☐ GPS008 ■ SCR002 ☐ OTH001

¼ / ¼ NE	¼ NE	Section	Township	Range
or Gov't Lot #		21	6 N	8 ■ E ☐ W

Well Street Address: 535 Half Mile Road
Well City, Village or Town: Verona
Well ZIP Code: 53593
Subdivision Name:
Lot #:
Reason for Removal from Service: Sampling completed
WI Unique Well # of Replacement Well: ___ ___ ___ ___ ___

2. Facility / Owner Information

Facility Name: Smoke Out Cleaners
Facility ID (FID or PWS):
License/Permit/Monitoring #: MW-3R
Original Well Owner: Mark Woppert
Present Well Owner: Mark Woppert
Mailing Address of Present Owner: 535 Half Mile Road
City of Present Owner: Verona
State: WI
ZIP Code: 53593

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
■ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 09/14/2022
If a Well Construction Report is available, please attach.

Construction Type:
■ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify): _____

Formation Type:
■ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.): 4
Casing Diameter (in.):
Lower Drillhole Diameter (in.): 2
Casing Depth (ft.):

Was well annular space grouted? ☐ Yes ■ No ☐ Unknown
If yes, to what depth (feet)?
Depth to Water (feet): NA

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	■ N/A
Liner(s) removed?	☐ Yes	☐ No	■ N/A
Liner(s) perforated?	☐ Yes	☐ No	■ N/A
Screen removed?	☐ Yes	☐ No	■ N/A
Casing left in place?	☐ Yes	☐ No	■ N/A
Was casing cut off below surface?	☐ Yes	☐ No	■ N/A
Did sealing material rise to surface?	■ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☐ No	■ N/A
If yes, was hole retopped?	☐ Yes	☐ No	■ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☐ No	■ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ■ Other (Explain): Gravity Pour

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ■ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite	0	4	0.2 bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Giles Engineering Associates, Inc.		09/14/2022

Street or Route	Telephone Number
N8 W22350 Johnson Dr., Suite A1	(262) 544-0118

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Waukesha	WI	53186		

DNR Use Only

Date Received	Noted By

Comments:

APPENDIX B

Monitoring Well Construction Logs and Development Forms

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

IE-1105084

Facility/Project Name: Smoke-Out Cleaners	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-1
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 08/27/2014 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16, T. 6 N, R. 8 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Beaufort Jones / Giles Engineering Associates, Inc.
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☒ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐ _____

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis, if required):
_____

E. Bentonite seal, top _____ ft. MSL or 1.5 ft.

F. Fine sand, top _____ ft. MSL or 27.5 ft.

G. Filter pack, top _____ ft. MSL or 28.5 ft.

H. Screen joint, top _____ ft. MSL or 29.5 ft.

I. Well bottom _____ ft. MSL or 44.5 ft.

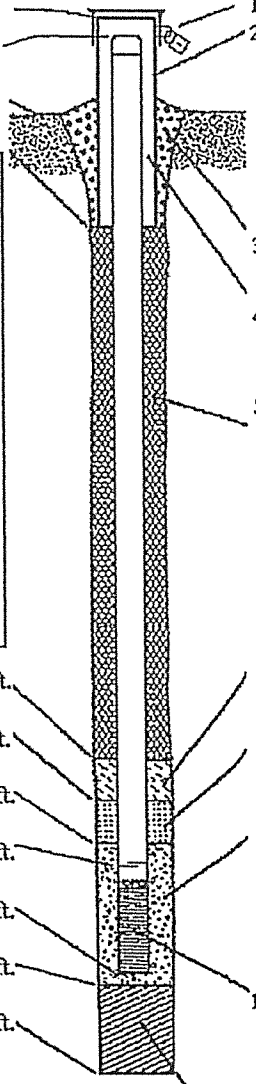
J. Filter pack, bottom _____ ft. MSL or 44.5 ft.

K. Borehole, bottom _____ ft. MSL or 44.5 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.375 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30 / Concrete ☒ 01 / Other ☐ _____

4. Material between well casing and protective pipe: Fine Sand
Bentonite ☐ 30 / Other ☐ _____

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. _____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ _____

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1-50# bag ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 10-50# bags ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ _____

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.

11. Backfill material (below filter pack): None ☒ 14 / Other ☐ _____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Stephen Owens	Giles Engineering Associates, Inc

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

IE-1105084

Facility/Project Name: Smoke-Out Cleaners	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-2
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 08/26/2014 (m m d d y y y y)
Type of Well: Well Code 11 / mw	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16, T. 6 N, R. 8 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Beaufort Jones / Giles Engineering Associates, Inc.
Distance from Waste/Source _____ ft.	Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known
		Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
_____ Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis, if required):

_____

E. Bentonite seal, top _____ ft. MSL or 1.5 ft.

F. Fine sand, top _____ ft. MSL or 31.5 ft.

G. Filter pack, top _____ ft. MSL or 32.5 ft.

H. Screen joint, top _____ ft. MSL or 33.5 ft.

I. Well bottom _____ ft. MSL or 48.5 ft.

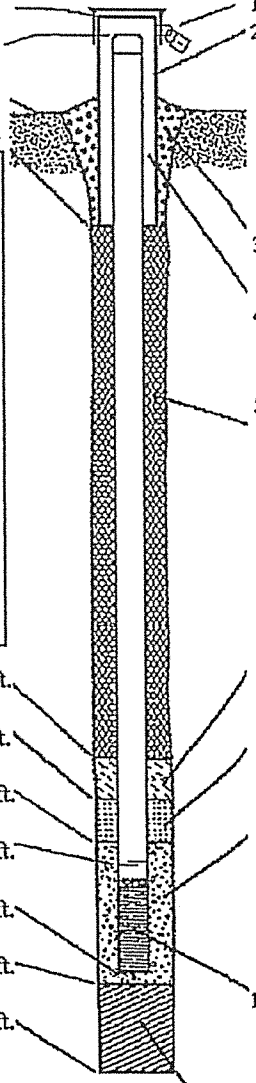
J. Filter pack, bottom _____ ft. MSL or 48.5 ft.

K. Borehole, bottom _____ ft. MSL or 48.5 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.375 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐

4. Material between well casing and protective pipe:
Fine Sand Bentonite ☐ 30
Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1-50# bag ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 10-50# bags ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.

11. Backfill material (below filter pack): None ☒ 14
_____ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Stephen Owens	Giles Engineering Associates, Inc.

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources
IE-1105084

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: Smoke-Out Cleaners	Local Grid Location of Well ☐N. ☐S. _____ ft. ☐E. ☐W. _____ ft.	Well Name: MW-3
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VQ718 / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 08/27/2014 (m m d d y y y y)
Type of Well: Well Code 11 / mw	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16, T. 6 N, R. 8 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Beaufort Jones / Giles Engineering Associates, Inc.
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: _____

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☒ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

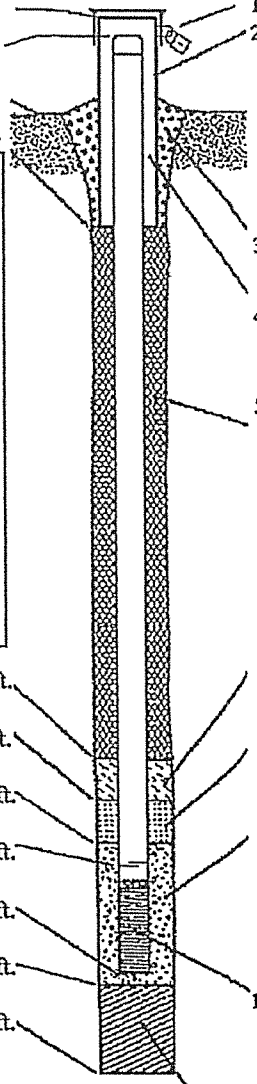
14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐ _____

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis, if required):
_____

E. Bentonite seal, top _____ ft. MSL or 1.5 ft.
F. Fine sand, top _____ ft. MSL or 27.5 ft.
G. Filter pack, top _____ ft. MSL or 28.5 ft.
H. Screen joint, top _____ ft. MSL or 29.5 ft.
I. Well bottom _____ ft. MSL or 44.5 ft.
J. Filter pack, bottom _____ ft. MSL or 44.5 ft.
K. Borehole, bottom _____ ft. MSL or 44.5 ft.
L. Borehole, diameter 8.25 in.
M. O.D. well casing 2.375 in.
N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30 / Concrete ☒ 01 / Other ☐ _____
4. Material between well casing and protective pipe: Fine Sand
Bentonite ☐ 30 / Other ☐ _____
5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. _____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1-50# bag ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 10-50# bags ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ _____
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.
11. Backfill material (below filter pack): None ☒ 14 / Other ☐ _____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Stephen Owens | Firm: Giles Engineering Associates, Inc.

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

IE-1105084

Facility/Project Name: Smoke-Out Cleaners	Local Grid Location of Well ☐N. ☐S. ft. ☐E. ☐W. ft.	Well Name: MW-4
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VQ719 DNR Well ID No.
Facility ID	St. Plane ft. N, ft. E. S/C/N	Date Well Installed: 08/28/2014 (m m d d y y y y)
Type of Well: Well Code 11 / mw	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16, T. 6 N, R. 8 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Beaufort Jones; Giles Engineering Associates, Inc.
Distance from Waste/Source ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top _____ ft. MSL or 1.5 ft.

F. Fine sand, top _____ ft. MSL or 23 ft.

G. Filter pack, top _____ ft. MSL or 24 ft.

H. Screen joint, top _____ ft. MSL or 25 ft.

I. Well bottom _____ ft. MSL or 40 ft.

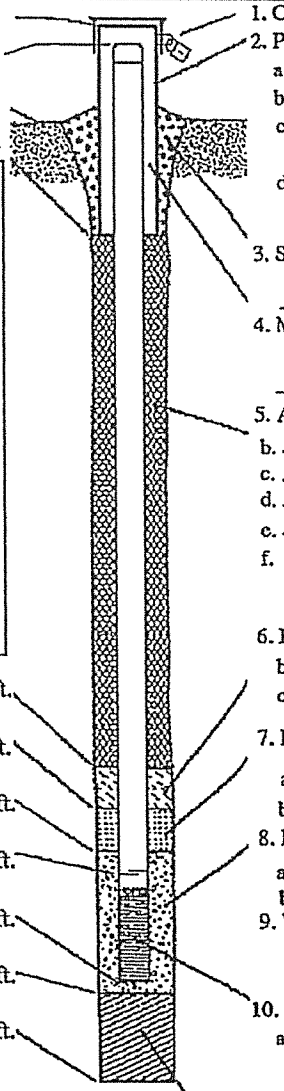
J. Filter pack, bottom _____ ft. MSL or 40 ft.

K. Borehole, bottom _____ ft. MSL or 40 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.375 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30 Concrete ☒ 01 Other ☐

4. Material between well casing and protective pipe: Fine Sand
Bentonite ☐ 30 Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1-50# bag ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 10-50# bags ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.

11. Backfill material (below filter pack): None ☒ 14 Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Stephen Owens	Giles Engineering Associates, Inc.

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources
IE-1105084

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: Smoke-Out Cleaners	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-5
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VQ720 / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 08/28/2014 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16, T. 6 N, R. 8 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Beaufort Jones / Giles Engineering Associates, Inc.
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: _____

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

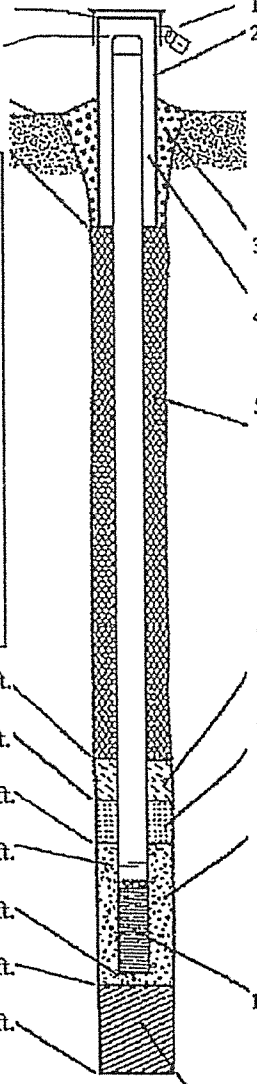
14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐ _____

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis, if required):
_____

E. Bentonite seal, top _____ ft. MSL or 1.5 ft.
F. Fine sand, top _____ ft. MSL or 25 ft.
G. Filter pack, top _____ ft. MSL or 26 ft.
H. Screen joint, top _____ ft. MSL or 27 ft.
I. Well bottom _____ ft. MSL or 42 ft.
J. Filter pack, bottom _____ ft. MSL or 42 ft.
K. Borehole, bottom _____ ft. MSL or 42 ft.
L. Borehole, diameter 8.25 in.
M. O.D. well casing 2.375 in.
N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30 / Concrete ☒ 01 / Other ☐ _____
4. Material between well casing and protective pipe: Fine Sand — Bentonite ☐ 30 / Other ☐ _____
5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. _____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1-50# bag ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 9-50#bags ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ _____
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.
11. Backfill material (below filter pack): None ☒ 14 / Other ☐ _____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Stephen Owens	Giles Engineering Associates, Inc.

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners	Dane	MW-1
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	13	_____ / ____

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 32 min.

4. Depth of well (from top of well casisng) 44.0 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 13.5 gal.

8. Volume of water added (if any) ____.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	32.78 ft.	43.95 ft.
Date b. (mm dd yyyy)	09/03/2014	09/03/2014
Time c.	11:26 ☒ a.m. ☐ p.m.	14:00 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	____.__ inches	____.__ inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Lee Last Name: Wilson
Firm: Giles Engineering Associates, Inc.

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Stephen Owens
Print Name: Stephen Owens
Firm: Giles Engineering Associates, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners	Dane	MW-2

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	13	_____	___

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well ___60___ min.

4. Depth of well (from top of well casisng) ___46.0___ ft.

5. Inside diameter of well ___2.07___ in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well ___30.5___ gal.

8. Volume of water added (if any) ____.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	33.32 ft.	46.00 ft.
Date b. (mm dd yyyy)	09/03/2014	09/03/2014
Time c.	10:15 ☒ a.m. ☐ p.m.	11:15 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	____.__ inches	____.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) medium	Clear ☐ 20 Turbid ☒ 25 (Describe) low-medium

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Lee Last Name: Wilson
Firm: Giles Engineering Associates, Inc.

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Stephen Owens
Print Name: Stephen Owens
Firm: Giles Engineering Associates, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners	Dane	MW-3
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	13	_____ / _____

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 25 min.

4. Depth of well (from top of well casisng) 42.2 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing ___.__ gal.

7. Volume of water removed from well 16.0 gal.

8. Volume of water added (if any) ___.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 33.35 ft.	42.18 ft.
Date	b. 09/03/2014 (mm/dd/yyyy)	09/03/2014 (mm/dd/yyyy)
Time	c. 13:15 ☐ a.m. ☒ p.m.	15:15 ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Lee Last Name: Wilson
Firm: Giles Engineering Associates, Inc.

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Stephen Owens
Print Name: Stephen Owens
Firm: Giles Engineering Associates, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners	Dane	MW-4
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	13	_____ / _____

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 43 min.

4. Depth of well (from top of well casisng) 39.5 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 16.0 gal.

8. Volume of water added (if any) ____.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	28.56 ft.	39.53 ft.
Date b. (mm dd yyyy)	09/03/2014	09/03/2014
Time c.	12:51 ☐ a.m. ☒ p.m.	14:55 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) low	Clear ☐ 20 Turbid ☒ 25 (Describe) low
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Lee Last Name: Wilson
Firm: Giles Engineering Associates, Inc.

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Stephen Owens
Print Name: Stephen Owens
Firm: Giles Engineering Associates, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners	Dane	MW-5
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	13	_____ / ____

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well ___15___ min.

4. Depth of well (from top of well casisng) ___41.3___ ft.

5. Inside diameter of well ___2.07___ in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well ___7.0___ gal.

8. Volume of water added (if any) ____.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	31.84 ft.	41.27 ft.
Date b. (mm dd yyyy)	09/03/2014	09/03/2014
Time c.	14:08 ☐ a.m. ☒ p.m.	14:23 ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Lee Last Name: Wilson
Firm: Giles Engineering Associates, Inc.

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Stephen Owens
Print Name: Stephen Owens
Firm: Giles Engineering Associates, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

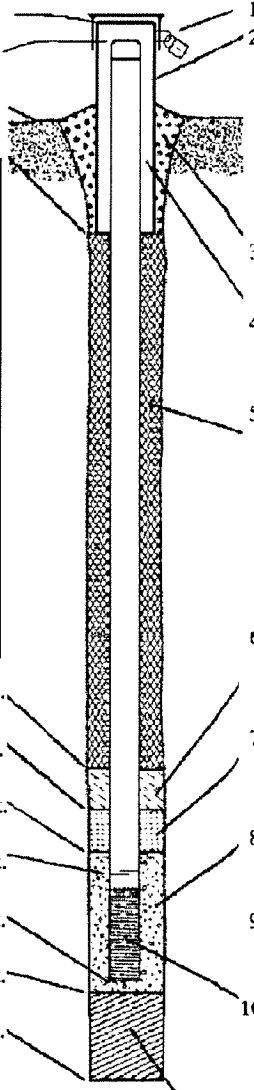
State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name Smoke-Out Cleaners 1E-1105024	Local Grid Location of Well _____ ft. ☐ N. ☐ S. _____ ft. ☐ E. ☐ W.	Well Name MW-6
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed 1 0 / 0 3 / 2 0 1 9 m m d d y y y y
Type of Well Well Code 11 / MW	Section Location of Waste/Source SE 1/4 of SE 1/4 of Sec. 16, T. 6 N, R. 8 E ☐ E ☐ W	Well Installed By: Name (first, last) and Firm Keith Flowers Giles Engineering Associates
Distance from Waste/ Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number



A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐ ___

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top _____ ft. MSL or 1.5 ft.

F. Fine sand, top _____ ft. MSL or 17 ft.

G. Filter pack, top _____ ft. MSL or 18 ft.

H. Screen joint, top _____ ft. MSL or 21 ft.

I. Well bottom _____ ft. MSL or 35.5 ft.

J. Filter pack, bottom _____ ft. MSL or 36 ft.

K. Borehole, bottom _____ ft. MSL or 36 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.00 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04
Other ☐ ___
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
Other ☐ ___

4. Material between well casing and protective pipe:
Bentonite ☐ 30
Fine Sand Other ☐ ___

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ ___

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15 ___
b. Volume added 1 ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40 ___
b. Volume added 11 ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐ ___

10. Screen material: PVC ___
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
Other ☐ ___
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.

11. Backfill material (below filter pack): None ☒ 14
Other ☐ ___

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Giles Engineering Associates

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

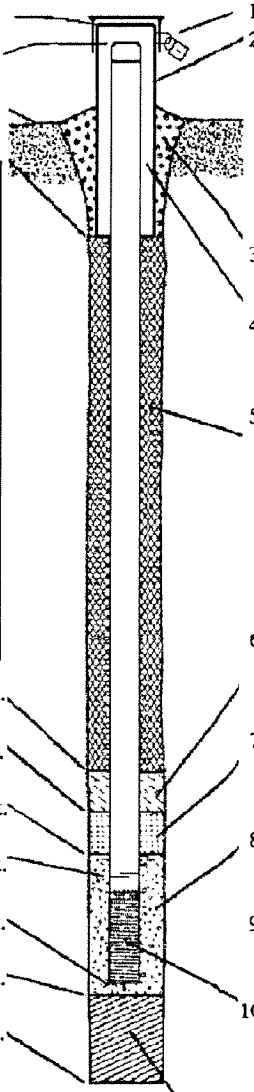
State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Smoke-Out Cleaners 1E-1105024	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-7
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 10/03/2019 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16, T. 6 N, R. 8 E ☐E ☐W	Well Installed By: Name (first, last) and Firm: Keith Flowers / Giles Engineering Associates
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number



A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐ ___
_____

15. Drilling fluid used: Water ☐ 02 Air ☐ 01 / Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis, if required):
_____

E. Bentonite seal, top _____ ft. MSL or 1.5 ft.

F. Fine sand, top _____ ft. MSL or 17 ft.

G. Filter pack, top _____ ft. MSL or 18 ft.

H. Screen joint, top _____ ft. MSL or 21 ft.

I. Well bottom _____ ft. MSL or 35.5 ft.

J. Filter pack, bottom _____ ft. MSL or 36 ft.

K. Borehole, bottom _____ ft. MSL or 36 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.00 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐ ___
_____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30 / Concrete ☒ 01 / Other ☐ ___
_____

4. Material between well casing and protective pipe: Bentonite ☐ 30 / Other ☐ ___
Fine Sand

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ ___

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1 ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 11 ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ ___
_____

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐ ___
_____
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.

11. Backfill material (below filter pack): None ☒ 14 / Other ☐ ___
_____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Giles Engineering Associates

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners, 1E-1105024	Dane	MW-6

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	13	VQ766	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☒ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐ __

3. Time spent developing well 30 min.

4. Depth of well (from top of well casisng) 353 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 65.5 gal.

8. Volume of water added (if any) ____.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 27.19 ft.	34.82 ft.
Date	b. 10/10/2019 (m m d d y y y y)	10/10/2019 (m m d d y y y y)
Time	c. 11:20 ☒ a.m. ☐ p.m.	12:20 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	____.__ inches	____.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☐ 20 Turbid ☒ 25
(Describe)	Thick, Brown Sediment Laden	Brown - Translucent

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Joseph Last Name: Wolske
Firm: Giles Engineering Associates

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Joseph Wolske
Print Name: Joseph Wolske
Firm: Giles Engineering Associates

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners, 1E-1105024	Dane	MW-7

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	13	VQ767	

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☒ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐ ___

3. Time spent developing well 30 min.

4. Depth of well (from top of well casisng) 35.3 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing ___.__ gal.

7. Volume of water removed from well 135. gal.

8. Volume of water added (if any) ___.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 19.76 ft.	34.82 ft.
Date	b. 10/10/2019 (m m d d y y y y)	10/10/2019
Time	c. 12:30 ☐ a.m. ☒ p.m.	13:30 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☐ 20 Turbid ☒ 25
(Describe)	Thick, Brown Sediment Laden	Translucent Light Brown

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Joseph Last Name: Wolske
Firm: Giles Engineering Associates

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: _____
Print Name: Joseph Wolske
Firm: Giles Engineering Associates

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name	Local Grid Location of Well _____ ft. ☐ N. ☐ S. _____ ft. ☐ E. ☐ W.	Well Name
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed ___/___/___ (m m d d y y y y)
Type of Well Well Code (Gravity Pour) /	Section Location of Waste/Source ____1/4 of ____ 1/4 of Sec. ____, T. ____ N, R. ____ ☐ E ☐ W	Well Installed By: Name (first, last) and Firm
Distance from Waste/ Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known / Gov. Lot Number	

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or _____ ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☐ No

14. Drilling method used: Rotary ☐ 50 Hollow Stem Auger ☐ 41 Other ☐ _____

15. Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☐ 99

16. Drilling additives used? ☐ Yes ☐ No
Describe _____

17. Source of water (attach analysis, if required):
_____

E. Bentonite seal, top _____ ft. MSL or _____ ft.

F. Fine sand, top _____ ft. MSL or _____ ft.

G. Filter pack, top _____ ft. MSL or _____ ft.

H. Screen joint, top _____ ft. MSL or _____ ft.

I. Well bottom _____ ft. MSL or _____ ft.

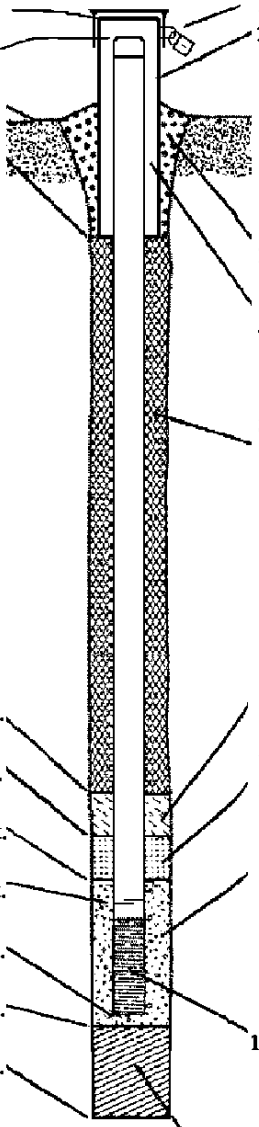
J. Filter pack, bottom _____ ft. MSL or _____ ft.

K. Borehole, bottom _____ ft. MSL or _____ ft.

L. Borehole, diameter _____ in.

M. O.D. well casing _____ in.

N. I.D. well casing _____ in.



1. Cap and lock? ☐ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: ___ in.
b. Length: ___ ft.
c. Material: Steel ☐ 04 Other ☐ __
_____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30 Concrete ☐ 01 Other ☐ __
_____

4. Material between well casing and protective pipe: Bentonite ☐ 30 Other ☐ __
_____

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☐ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 32
c. _____ Other ☐ __

7. Fine sand material: Manufacturer, product name & mesh size
a. _____ __
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. _____ __
b. Volume added _____ ft^3

9. Well casing: Flush threaded PVC schedule 40 ☐ 23 Flush threaded PVC schedule 80 ☐ 24 Other ☐ __
_____

10. Screen material: _____ __
a. Screen type: Factory cut ☐ 11 Continuous slot ☐ 01 Other ☐ __
_____
b. Manufacturer _____
c. Slot size: 0.___ in.
d. Slotted length: ____ ft.

11. Backfill material (below filter pack): None ☐ 14 Other ☐ __
_____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	__	_ _ _ _ _ _	_ _ _

1. Can this well be purged dry? ☐ Yes ☐ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐ __

3. Time spent developing well _ _ _ _ min.

4. Depth of well (from top of well casisng) _ _ _ . _ ft.

5. Inside diameter of well _ _ . _ _ in.

6. Volume of water in filter pack and well casing _ _ _ . _ gal.

7. Volume of water removed from well _ _ _ . _ gal.

8. Volume of water added (if any) _ _ _ . _ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. _ _ _ . _ _ ft.	_ _ _ . _ _ ft.
Date	b. _ _/_ _/_ _ _ _ m m d d y y y y	_ _/_ _/_ _ _ _ m m d d y y y y
Time	c. _ _ : _ _ ☐ a.m. ☐ p.m.	_ _ : _ _ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	_ _ . _ inches	_ _ . _ inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	_ _ _ _ . _ mg/l	_ _ _ _ . _ mg/l
15. COD	_ _ _ _ . _ mg/l	_ _ _ _ . _ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Last Name:
Firm:

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: _____ Last Name: _____
Facility/Firm: _____
Street: _____
City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: _____
Print Name: _____
Firm: _____

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

INSTRUCTIONS
Monitoring Well Construction Form 4400-113A

General Instructions: Fill out both a monitoring well construction form (4400-113A) and a monitoring well development form (4400-113B) for each well installed. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

Routing: Return these forms to the project manager or plan reviewer for the DNR program who required the well installation. If the project manager/plan reviewer is in the Regional Office, send the original forms to the Regional Office and a copy to the Central Office in Madison. If the project manager/plan reviewer is in the Central Office, send the original forms there and a copy to the Regional Office. If your project does not have a project manager or plan reviewer or you don't know who it is, send the forms to the appropriate program in the Central Office. The addresses of the DNR offices are provided on the attached map.

Check the appropriate routing box at the top of the forms to assure proper routing once the forms reach DNR.

Time-saving tip: When filling out many forms at once, you can save time by using a photocopier. Fill out one form (the "original") with any information that is the same for all wells, such as facility name, section location, grid origin location, drilling method and well casing type. Photocopy both sides of the "original", making as many copies as there are wells. On the separate copies, fill in the details that are unique for each well.

TOP LEFT

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License, Permit, or Monitoring Number: Fill in number assigned to facility by the Department. If unknown, leave blank.

Facility ID: Fill in the nine digit Facility ID (FID) assigned to the site.

Type of Well: Record the type of well code (number/initials) from the following list:

11/mw	Water table observation well (monitoring well screen intersecting the water table) (non Subtitle D well)
12/pz	Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D well)
17/gc	Gradient control
18/at	Aquifer test
24/lh	Leachate head well
26/ew	Groundwater extraction well
27/he	Horizontal groundwater extraction well
28/hw	Horizontal monitoring well
29/ha	Horizontal vapor extraction well
51/gp	Gas probe
53/ge	Gas extraction well
57/sv	Soil venting wells (includes both soil vapor extraction and bioventing, includes both extraction and unsaturated zone gas phase injection wells installed in soil or fill, but not refuse
61/ij	Injection well (injection of liquids not gases)
62/as	In situ air sparging well (injection well to inject gases into the aquifer
63/uv	Unterdruck Verdampfer Brunnen (UVB) wells (sparging wells where the gases remain in the well and are not injected into the aquifer)
64/le	Groundwater and light non-aqueous phase liquid (LNAPL) extraction wells
65/de	Groundwater and dense non-aqueous phase liquid (DNAPL) extraction wells
66/ve	Vacuum enhanced groundwater extraction wells
67/vi	Vacuum enhanced groundwater and LNAPL extraction wells
68/vd	Vacuum enhanced groundwater and DNAPL extraction wells
71/dw	Subtitle D water table observation well (see 11/mw above)
72/dp	Subtitle D piezometer (see 12/pz above)
99/Ot	Other

Distance From Waste/Source: Enter distance in feet from the monitoring well to the edge of a facility waste storage or discharge structure, e.g., from the edge of a wastewater lagoon or the approved waste fill boundary for a landfill. For a contaminant source which is not a facility, e.g., a spill, enter the distance the well is from the contaminant source.

Enf. Stds. Apply: Check this box only if enforcement standards apply at this well. Enforcement standards apply at any well beyond the Design Management Zone or the property boundary of the facility or at a water supply well. For spills, enforcement standards apply at every point at which groundwater is monitored. (For more information, see s. NR 140.22, Wis. Adm. Code.)

TOP CENTER

Local Grid Location: The location of the well to the nearest foot, in relation to the grid origin established for the site. If the exact location of the well is given in State Plane Coordinates, then leave these fields blank.

Local Grid Origin or Well Location: Check the appropriate box behind the Local Grid Origin or the Well Location text. Locate the grid origin at a permanent feature near the waste or source of contamination. Give the location in State Plane Coordinates or Latitude and Longitude in degrees, minutes and seconds (using 1927 North American Datum). If State Plane Coordinates are used, circle the appropriate letter for south, central or north zone. Alternately, an acceptable method for providing this information without surveying is to locate the Grid Origin on a USGS 7.5 minute quadrangle map. The Location of the Grid Origin can then be interpolated (estimated) using standard cartographic techniques. If the Grid Origin location is estimated, check the estimated box.

The Well Location can be determined directly by surveying or by Global Positioning System (GPS) (with processing to be accurate within 1 foot and reported with precision to hundredths of a second). If the exact location of the well is given in State Plane Coordinates, then leave the Local Grid Location fields blank.

Section Location of Waste/Source: Fill in the quarter quarter and quarter section, section, township, range and range direction of the waste or source.

Location of Well Relative to Waste/Source: Check the box which describes the location of the well in the groundwater flow system relative to the disposal site, spill, etc. If groundwater flow directions are unknown, check "not known."

Gov. Lot Number: Provide the government lot number for the property if applicable. (Government lot numbers are the legal description of a tract of land adjacent to a lake or stream where a proper quarter or quarter quarter section corner could not be established.)

TOP RIGHT

Well Name: Fill in common well name, such as B-ll, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) on this form. In addition, attach the WUWN tag to the inside of the protective cover pipe and record that number on the Soil Boring Log Information form 4400-122 and Monitoring Well Development form 4400-113B. WUWN tags are available from the DNR Central or Regional Offices.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

Date Well Installed: List Month/Day/Year (mm/dd/yyyy) the well was installed.

Well Installed By: Fill in name (first and last) and firm of the person who supervised the drilling. The person must be a hydrogeologist, a drilling crew chief or experienced engineering technician.

LEFT SIDE

Numerical Specifications: Fill in data for letters A through N which refer to design elements on the figure on the form. Letters A, B and C must be reported as elevations in feet above mean sea level (MSL), surveyed to the nearest 0.01 foot. Letters D through K may be either elevation above MSL or depth below land surface, accurate to the nearest 0.1 foot.

A. **Protective pipe, top elevation**. With cap off. Referenced to Mean Sea Level (MSL).

B. **Well casing, top elevation**. With cap off. Referenced to MSL.

C. **Land surface elevation**. Referenced to MSL.

D. **Surface seal, bottom**. Fill in elevation, MSL or depth below land surface.

E. **Bentonite seal, top**. MSL or depth below land surface. (See NR 141.13(1) to determine if this seal is required)

F. **Fine sand, top**. MSL or depth below land surface. Cross out if not installed.

G. **Filter pack, top**. MSL or depth below land surface.

H. **Screen joint, top**. MSL or depth below land surface. (Top of the entire screen section, NOT the top slot)

L. **Well bottom**. MSL or depth below land surface.

J. **Filter pack, bottom**. MSL or depth below land surface.

K. **Borehole, bottom**. MSL or depth below land surface.

L. **Borehole, diameter**: Diameter to nearest 0.1 inch.

M. **O.D. well casing**: Outside diameter to nearest 0.01 inch.

N. **I.D. well casing**: Inside diameter to nearest 0.01 inch.

LEFT CENTER INSERT (BOX)

12. **USCS classification of soil near screen**: Check boxes for all soil types (or bedrock) found at the depths spanned by the well screen, using the Unified Soil Classification System symbols. Refer to the native soil near the screen, not to the filter pack material.

13. **Sieve analysis performed?**: Check box. A sieve analysis for soil near the screen is required for all wells.

14. **Drilling method used**: Choose from among the choices on the form or check "Other" and write in one of the choices below:

Reverse rotary	Solid stem auger	Cable tool	Driven point
Vibratory	Casing hammer	Wash boring	

15. **Drilling fluid used**: Check appropriate box or boxes.

16. **Drilling additives used**: Check box. If yes, describe.

17. **Source of water**: Cite source(s) of any water used to drill the well OR to hydrate dry bentonite OR to mix annular space sealant. Cite exact source so that a sample of the water can be obtained later, if necessary. If the well is at a solid waste facility, attach an analysis of the water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT SIDE

1. **Cap and Lock**: Check box.

2. **Protective pipe**: Provide the information below.

   a. **Inside diameter**: Give to nearest 0.1 inch.
   b. **Length**: Give to nearest 0.1 foot
   c. **Material**: Check box. If "Other", describe.
   d. **Additional protection?**: Check box. If 'Yes', describe.

3. **Surface seal**: Check box for the material used to prevent surface water from entering the borehole. If "Other," describe.

4. **Material between well casing and protective pipe**: Check box. If "Other", describe.

5. **Annular space seal**: Check boxes for both materials used and how installed, and fill in volume used.

   Material: If dry bentonite, list source of water used for hydration on line #17. For wells installed at a solid waste site, attach an analysis of water (see s. NR 507.06(1), Wis. Adm. Code.) For other choices, fill in pounds per gallon mud weight or percent bentonite as appropriate.

   e. **Volume**: Fill in volume used in cubic feet.
   f. **How installed**: Check box for how the annular space seal was installed. If dropped from the land surface, check "Gravity."

6. **Bentonite seal**: If bentonite pellets were used, also check the pellet diameter. If material installed was the same as the annular space seal, or if no filter pack seal was installed, write "none."

7. **Fine sand material**: Fine sand is used to prevent migration of annular space seal material into the filter pack.
   a. Indicate manufacturer, product name, and mesh size.
   b. Indicate volume added.

8. **Filter pack material**: General description of filter pack material, e.g., "430 grit sand," and name of filter pack manufacturer, product name or number, and volume added. Attach grain size analysis of filter pack and state quantity used.

9. **Well casing**: Check box for PVC type. If "Other", describe. Examples of "Other" include stainless steel, steel, and Teflon ©.

10. **Screen material**: If same as well casing, write "same."

    a. **Screen type**: Check box. If "Other", describe the design.
    b. **Manufacturer**: List name of manufacturer.
    c. **Slot size**: Give width of slot in thousandths (0.001) of an inch.
    d. **Slotted length**: Give distance from top slot to bottom slot to nearest 0.1 foot.

11. **Backfill material**: Check "None" or, if "Other", describe any backfill installed below the filter pack.

FAR BOTTOM

"I hereby certify that the information on this form is true and correct to the best of my knowledge.": Sign the form and indicate name of firm.

MONITORING WELL DEVELOPMENT FORM 4400-113B

TOP TWO LINES

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License Permit, or Monitoring Number: Enter number assigned to facility by the DNR. If unknown, leave blank.

County Name: Fill in the name of the county in which the well is installed.

County Code: Fill in the two digit county code number.

1 . Adams	16. Douglas	31. Kewaunee	46. Ozaukee	61. Taylor
2. Ashland	17. Dunn	32. La Crosse	47. Pepin	62. Trempealeau
3. Barron	18. Eau Claire	33. Lafayette	48. Pierce	63. Vernon
4. Bayfield	19. Florence	34. Langlade	49. Polk	64. Vilas
5. Brown	20. Fond Du Lac	35. Lincoln	50. Portage	65. Walworth
6. Buffalo	21. Forest	36. Manitowoc	51. Price	66. Washburn
7. Burnett	22. Grant	37. Marathon	52. Racine	67. Washington
8. Calumet	23. Green	38. Marinette	53. Richland	68. Waukesha
9. Chippewa	24. Green Lake	39. Marquette	54. Rock	69. Waupaca
10. Clark	25. Iowa	40. Menominee	55. Rusk	70. Waushara
11. Columbia	26. Iron	41. Mlwaukee	56. St. Croix	71. Winnebago
12. Crawford	27. Jackson	42. Monroe	57. Sauk	72. Wood
13. Dane	28 Jefferson	43. Oconto	58. Sawyer	
14. Dodge	29. Juneau	44. Oneida	59. Shawano	
15. Door	30. Kenosha	45. Outagamie	60. Sheboygan	

Well Name: Fill in common well name, such as P-11, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Record the Wisconsin Unique Well Number assigned to the well.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

LEFT COLUMN

1. **Can this well be purged dry?** Check whether well can or cannot be purged dry (all water removed).

2. **Well development method**: Check appropriate box. If "Other", describe. Note that a well shall be surged and purged for a minimum of 30 minutes.

3. **Time spent developing well**: In minutes.

4. **Depth of well**: In tenths (0.1) of feet, from top of well casing.

5. **Inside diameter of well**: In hundredths (0.01) of inches.

6. **Volume of water in filter pack and well casing**: In tenths (0.1) of gallons.

7. **Volume of water removed from well**: In tenths (0.1) of gallons.

8. **Volume of water added, if any**: In tenths (0.1) of gallons.

9. **Source of water added**: Cite exact source so that a sample of the water can be obtained later, if necessary.

10. **Analysis performed on water added?** Check appropriate box. If well is installed at a solid waste facility, attach analysis of water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT COLUMN

11. **Depth to water**:

    a. Enter distance from top of well casing to water level in well, in hundredths (0.01) of a foot, both before and after development.

    b. **Date**: Enter month/day/year (mm/dd/yyyy) development began and ended.

    c. **Time**: Enter according to a twelve hour clock the time development began and ended.

12. **Sediment in well bottom**: Compute to tenths (0.1) of inches, both before and after development.

13. **Water clarity**: Check box and describe.

14. **Total suspended solids**: Total Suspended Solids, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.

15. **COD**: Chemical oxygen demand, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.

16. **Well developed by**: Enter the name (first and last) and firm of the person who supervised the development This person must be a hydrogeologist, the drilling crew chief, or an experienced engineering technician.

BOTTOM SECTION

17. **Additional comments on development**: Describe any of the above in more detail or add information such as the relative recovery rates of wells or the amount of drilling fluid lost to the formation and the amount of water removed to account for lost drilling fluid. For example, if 150 gallons of drilling water were, lost, you should remove the volume of water in the filter pack and well casing plus 150 gallons as part of development.

Name and Address of Facility/Owner/Responsible Party Contact: Enter a contact name (first and last), or a firm name or facility name, street address, city, state, and zip code of the facility or site.

Signature, Print Name, and Firm: Signature and printed name of the person filling out the form and name of firm for which the person works.

APPENDIX C

Soil Laboratory Report and Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-222351-1
Client Project/Site: Smoke Out Cleaners

For:
Giles Engineering Associates
N8 W 22350 Johnson Road
Waukesha, Wisconsin 53186

Attn: Michelle Peed

Sandra Fredrick

Authorized for release by:
9/26/2022 3:13:40 PM

Sandie Fredrick, Project Manager II
(920)261-1660
Sandra.Fredrick@et.eurofinsus.com

Table of Contents

Case Narrative

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Job ID: 500-222351-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-222351-1

Comments
No additional comments.

Receipt
The samples were received on 9/16/2022 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.6º C.

Receipt Exceptions
A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC). Added to COC and logged in.

GC/MS VOA
Method 8260B: The matrix spike duplicate (MSD) for the following sample was analyzed outside the 12 hour tune window. No further action was taken.PZ-1 (2-4) (500-222351-1)

Methods 8260B, 8260D: Methylene chloride was detected in the following items: PZ-1 (2-4) (500-222351-1), PZ-1 Comp (500-222351-2), MW-3R (2-4) (500-222351-3) and Trip Blank (500-222351-4). Methylene chloride is a known lab contaminant; therefore all low level detects for this compound could be suspected as lab contamination.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: PZ-1 (2-4) — Lab Sample ID: 500-222351-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	150	J B	350	110	ug/Kg	50	☼	8260B	Total/NA
Tetrachloroethene	2200		70	26	ug/Kg	50	☼	8260B	Total/NA

Client Sample ID: PZ-1 Comp — Lab Sample ID: 500-222351-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	110	J B	300	97	ug/Kg	50	☼	8260B	Total/NA
Tetrachloroethene	130		59	22	ug/Kg	50	☼	8260B	Total/NA

Client Sample ID: MW-3R (2-4) — Lab Sample ID: 500-222351-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	160	J B	380	130	ug/Kg	50	☼	8260B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 500-222351-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	89	J B	250	82	ug/Kg	50		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CHI
Moisture	Percent Moisture	EPA	EET CHI
5035	Closed System Purge and Trap	SW846	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-222351-1	PZ-1 (2-4)	Soil	09/14/22 09:32	09/16/22 09:50
500-222351-2	PZ-1 Comp	Soil	09/14/22 10:35	09/16/22 09:50
500-222351-3	MW-3R (2-4)	Soil	09/14/22 12:45	09/16/22 09:50
500-222351-4	Trip Blank	Soil	09/14/22 00:00	09/16/22 09:50

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: PZ-1 (2-4)
Date Collected: 09/14/22 09:32
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-1
Matrix: Soil
Percent Solids: 83.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<32		70	32	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,1,1-Trichloroethane	<27		70	27	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,1,2,2-Tetrachloroethane	<28		70	28	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,1,2-Trichloroethane	<25		70	25	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,1-Dichloroethane	<29		70	29	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,1-Dichloroethene	<27		70	27	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,1-Dichloropropene	<21		70	21	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,2,3-Trichlorobenzene	<32		70	32	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,2,3-Trichloropropane	<29		140	29	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,2,4-Trichlorobenzene	<24		70	24	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,2,4-Trimethylbenzene	<25		70	25	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,2-Dibromo-3-Chloropropane	<140		350	140	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Ethylene Dibromide	<27		70	27	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,2-Dichlorobenzene	<23		70	23	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,2-Dichloroethane	<27		70	27	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,2-Dichloropropane	<30		70	30	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,3,5-Trimethylbenzene	<27		70	27	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,3-Dichlorobenzene	<28		70	28	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,3-Dichloropropane	<25		70	25	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
1,4-Dichlorobenzene	<25		70	25	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
2,2-Dichloropropane	<31		70	31	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
2-Chlorotoluene	<22		70	22	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
4-Chlorotoluene	<24		70	24	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Benzene	<10		17	10	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Bromobenzene	<25		70	25	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Bromochloromethane	<30		70	30	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Bromodichloromethane	<26		70	26	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Bromoform	<34		70	34	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Bromomethane	<56		210	56	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Carbon tetrachloride	<27		70	27	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Chlorobenzene	<27		70	27	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Chloroethane	<35		70	35	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Chloroform	<26		140	26	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Chloromethane	<22		70	22	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
cis-1,2-Dichloroethene	<29		70	29	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
cis-1,3-Dichloropropene	<29		70	29	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Dibromochloromethane	<34		70	34	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Dibromomethane	<19		70	19	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Dichlorodifluoromethane	<47		210	47	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Ethylbenzene	<13		17	13	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Hexachlorobutadiene	<31		70	31	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Isopropyl ether	<19		70	19	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Isopropylbenzene	<27		70	27	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Methyl tert-butyl ether	<28		70	28	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Methylene Chloride	**150**	**J B**	350	110	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Naphthalene	<23		70	23	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
n-Butylbenzene	<27		70	27	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
N-Propylbenzene	<29		70	29	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
p-Isopropyltoluene	<25		70	25	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: PZ-1 (2-4)
Date Collected: 09/14/22 09:32
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-1
Matrix: Soil
Percent Solids: 83.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<28		70	28	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Styrene	<27		70	27	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
tert-Butylbenzene	<28		70	28	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Tetrachloroethene	**2200**		70	26	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Toluene	<10		17	10	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
trans-1,2-Dichloroethene	<24		70	24	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
trans-1,3-Dichloropropene	<25		70	25	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Trichloroethene	<11		35	11	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Trichlorofluoromethane	<30		70	30	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Vinyl chloride	<18		70	18	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50
Xylenes, Total	<15		35	15	ug/Kg	☼	09/14/22 09:32	09/21/22 18:30	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*75 - 126*	*09/14/22 09:32*	*09/21/22 18:30*	*50*
4-Bromofluorobenzene (Surr)	*82*		*72 - 124*	*09/14/22 09:32*	*09/21/22 18:30*	*50*
Dibromofluoromethane (Surr)	*100*		*75 - 120*	*09/14/22 09:32*	*09/21/22 18:30*	*50*
Toluene-d8 (Surr)	*97*		*75 - 120*	*09/14/22 09:32*	*09/21/22 18:30*	*50*

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: PZ-1 Comp
Date Collected: 09/14/22 10:35
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-2
Matrix: Soil
Percent Solids: 91.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<27		59	27	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,1,1-Trichloroethane	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,1,2,2-Tetrachloroethane	<24		59	24	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,1,2-Trichloroethane	<21		59	21	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,1-Dichloroethane	<24		59	24	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,1-Dichloroethene	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,1-Dichloropropene	<18		59	18	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,2,3-Trichlorobenzene	<27		59	27	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,2,3-Trichloropropane	<25		120	25	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,2,4-Trichlorobenzene	<20		59	20	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,2,4-Trimethylbenzene	<21		59	21	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,2-Dibromo-3-Chloropropane	<120		300	120	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Ethylene Dibromide	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,2-Dichlorobenzene	<20		59	20	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,2-Dichloroethane	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,2-Dichloropropane	<25		59	25	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,3,5-Trimethylbenzene	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,3-Dichlorobenzene	<24		59	24	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,3-Dichloropropane	<21		59	21	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
1,4-Dichlorobenzene	<22		59	22	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
2,2-Dichloropropane	<26		59	26	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
2-Chlorotoluene	<19		59	19	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
4-Chlorotoluene	<21		59	21	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Benzene	<8.7		15	8.7	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Bromobenzene	<21		59	21	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Bromochloromethane	<25		59	25	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Bromodichloromethane	<22		59	22	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Bromoform	<29		59	29	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Bromomethane	<47		180	47	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Carbon tetrachloride	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Chlorobenzene	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Chloroethane	<30		59	30	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Chloroform	<22		120	22	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Chloromethane	<19		59	19	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
cis-1,2-Dichloroethene	<24		59	24	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
cis-1,3-Dichloropropene	<25		59	25	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Dibromochloromethane	<29		59	29	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Dibromomethane	<16		59	16	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Dichlorodifluoromethane	<40		180	40	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Ethylbenzene	<11		15	11	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Hexachlorobutadiene	<26		59	26	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Isopropyl ether	<16		59	16	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Isopropylbenzene	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Methyl tert-butyl ether	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Methylene Chloride	**110**	**J B**	300	97	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Naphthalene	<20		59	20	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
n-Butylbenzene	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
N-Propylbenzene	<25		59	25	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
p-Isopropyltoluene	<21		59	21	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: PZ-1 Comp
Date Collected: 09/14/22 10:35
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-2
Matrix: Soil
Percent Solids: 91.0

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<24		59	24	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Styrene	<23		59	23	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
tert-Butylbenzene	<24		59	24	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Tetrachloroethene	**130**		59	22	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Toluene	<8.7		15	8.7	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
trans-1,2-Dichloroethene	<21		59	21	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
trans-1,3-Dichloropropene	<21		59	21	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Trichloroethene	<9.7		30	9.7	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Trichlorofluoromethane	<25		59	25	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Vinyl chloride	<16		59	16	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50
Xylenes, Total	<13		30	13	ug/Kg	☼	09/14/22 10:35	09/21/22 18:53	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*75 - 126*	*09/14/22 10:35*	*09/21/22 18:53*	*50*
4-Bromofluorobenzene (Surr)	*85*		*72 - 124*	*09/14/22 10:35*	*09/21/22 18:53*	*50*
Dibromofluoromethane (Surr)	*100*		*75 - 120*	*09/14/22 10:35*	*09/21/22 18:53*	*50*
Toluene-d8 (Surr)	*100*		*75 - 120*	*09/14/22 10:35*	*09/21/22 18:53*	*50*

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: MW-3R (2-4)
Date Collected: 09/14/22 12:45
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-3
Matrix: Soil
Percent Solids: 78.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<36		77	36	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,1,1-Trichloroethane	<29		77	29	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,1,2,2-Tetrachloroethane	<31		77	31	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,1,2-Trichloroethane	<27		77	27	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,1-Dichloroethane	<32		77	32	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,1-Dichloroethene	<30		77	30	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,1-Dichloropropene	<23		77	23	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,2,3-Trichlorobenzene	<35		77	35	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,2,3-Trichloropropane	<32		150	32	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,2,4-Trichlorobenzene	<26		77	26	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,2,4-Trimethylbenzene	<28		77	28	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,2-Dibromo-3-Chloropropane	<150		380	150	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Ethylene Dibromide	<30		77	30	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,2-Dichlorobenzene	<26		77	26	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,2-Dichloroethane	<30		77	30	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,2-Dichloropropane	<33		77	33	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,3,5-Trimethylbenzene	<29		77	29	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,3-Dichlorobenzene	<31		77	31	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,3-Dichloropropane	<28		77	28	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
1,4-Dichlorobenzene	<28		77	28	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
2,2-Dichloropropane	<34		77	34	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
2-Chlorotoluene	<24		77	24	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
4-Chlorotoluene	<27		77	27	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Benzene	<11		19	11	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Bromobenzene	<27		77	27	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Bromochloromethane	<33		77	33	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Bromodichloromethane	<29		77	29	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Bromoform	<37		77	37	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Bromomethane	<61		230	61	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Carbon tetrachloride	<30		77	30	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Chlorobenzene	<30		77	30	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Chloroethane	<39		77	39	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Chloroform	<28		150	28	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Chloromethane	<25		77	25	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
cis-1,2-Dichloroethene	<31		77	31	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
cis-1,3-Dichloropropene	<32		77	32	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Dibromochloromethane	<38		77	38	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Dibromomethane	<21		77	21	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Dichlorodifluoromethane	<52		230	52	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Ethylbenzene	<14		19	14	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Hexachlorobutadiene	<34		77	34	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Isopropyl ether	<21		77	21	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Isopropylbenzene	<30		77	30	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Methyl tert-butyl ether	<30		77	30	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Methylene Chloride	**160**	**J B**	380	130	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Naphthalene	<26		77	26	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
n-Butylbenzene	<30		77	30	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
N-Propylbenzene	<32		77	32	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
p-Isopropyltoluene	<28		77	28	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: MW-3R (2-4)
Date Collected: 09/14/22 12:45
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-3
Matrix: Soil
Percent Solids: 78.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<31		77	31	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Styrene	<30		77	30	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
tert-Butylbenzene	<31		77	31	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Tetrachloroethene	<28		77	28	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Toluene	<11		19	11	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
trans-1,2-Dichloroethene	<27		77	27	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
trans-1,3-Dichloropropene	<28		77	28	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Trichloroethene	<13		38	13	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Trichlorofluoromethane	<33		77	33	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Vinyl chloride	<20		77	20	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50
Xylenes, Total	<17		38	17	ug/Kg	☼	09/14/22 12:45	09/21/22 19:16	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*75 - 126*	*09/14/22 12:45*	*09/21/22 19:16*	*50*
4-Bromofluorobenzene (Surr)	*83*		*72 - 124*	*09/14/22 12:45*	*09/21/22 19:16*	*50*
Dibromofluoromethane (Surr)	*99*		*75 - 120*	*09/14/22 12:45*	*09/21/22 19:16*	*50*
Toluene-d8 (Surr)	*99*		*75 - 120*	*09/14/22 12:45*	*09/21/22 19:16*	*50*

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: Trip Blank

Date Collected: 09/14/22 00:00
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-4

Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<23		50	23	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,1,1-Trichloroethane	<19		50	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,1,2,2-Tetrachloroethane	<20		50	20	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,1,2-Trichloroethane	<18		50	18	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,1-Dichloroethane	<21		50	21	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,1-Dichloroethene	<20		50	20	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,1-Dichloropropene	<15		50	15	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,2,3-Trichlorobenzene	<23		50	23	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,2,3-Trichloropropane	<21		100	21	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,2,4-Trichlorobenzene	<17		50	17	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,2,4-Trimethylbenzene	<18		50	18	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,2-Dibromo-3-Chloropropane	<100		250	100	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Ethylene Dibromide	<19		50	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,2-Dichlorobenzene	<17		50	17	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,2-Dichloroethane	<20		50	20	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,2-Dichloropropane	<21		50	21	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,3,5-Trimethylbenzene	<19		50	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,3-Dichlorobenzene	<20		50	20	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,3-Dichloropropane	<18		50	18	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
1,4-Dichlorobenzene	<18		50	18	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
2,2-Dichloropropane	<22		50	22	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
2-Chlorotoluene	<16		50	16	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
4-Chlorotoluene	<18		50	18	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Benzene	<7.3		13	7.3	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Bromobenzene	<18		50	18	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Bromochloromethane	<21		50	21	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Bromodichloromethane	<19		50	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Bromoform	<24		50	24	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Bromomethane	<40		150	40	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Carbon tetrachloride	<19		50	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Chlorobenzene	<19		50	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Chloroethane	<25		50	25	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Chloroform	<19		100	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Chloromethane	<16		50	16	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
cis-1,2-Dichloroethene	<20		50	20	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
cis-1,3-Dichloropropene	<21		50	21	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Dibromochloromethane	<24		50	24	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Dibromomethane	<14		50	14	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Dichlorodifluoromethane	<34		150	34	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Ethylbenzene	<9.2		13	9.2	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Hexachlorobutadiene	<22		50	22	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Isopropyl ether	<14		50	14	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Isopropylbenzene	<19		50	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Methyl tert-butyl ether	<20		50	20	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Methylene Chloride	**89**	**J B**	250	82	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Naphthalene	<17		50	17	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
n-Butylbenzene	<19		50	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
N-Propylbenzene	<21		50	21	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
p-Isopropyltoluene	<18		50	18	ug/Kg		09/14/22 00:00	09/21/22 19:39	50

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: Trip Blank

Date Collected: 09/14/22 00:00
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-4

Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<20		50	20	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Styrene	<19		50	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
tert-Butylbenzene	<20		50	20	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Tetrachloroethene	<19		50	19	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Toluene	<7.4		13	7.4	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
trans-1,2-Dichloroethene	<18		50	18	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
trans-1,3-Dichloropropene	<18		50	18	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Trichloroethene	<8.2		25	8.2	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Trichlorofluoromethane	<21		50	21	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Vinyl chloride	<13		50	13	ug/Kg		09/14/22 00:00	09/21/22 19:39	50
Xylenes, Total	<11		25	11	ug/Kg		09/14/22 00:00	09/21/22 19:39	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*75 - 126*	*09/14/22 00:00*	*09/21/22 19:39*	*50*
4-Bromofluorobenzene (Surr)	*85*		*72 - 124*	*09/14/22 00:00*	*09/21/22 19:39*	*50*
Dibromofluoromethane (Surr)	*103*		*75 - 120*	*09/14/22 00:00*	*09/21/22 19:39*	*50*
Toluene-d8 (Surr)	*100*		*75 - 120*	*09/14/22 00:00*	*09/21/22 19:39*	*50*

Definitions/Glossary

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

GC/MS VOA

Prep Batch: 675515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-222351-1	PZ-1 (2-4)	Total/NA	Soil	5035	
500-222351-2	PZ-1 Comp	Total/NA	Soil	5035	
500-222351-3	MW-3R (2-4)	Total/NA	Soil	5035	
500-222351-4	Trip Blank	Total/NA	Soil	5035	
LB3 500-675515/21-A	Method Blank	Total/NA	Solid	5035	
LCS 500-675515/22-A	Lab Control Sample	Total/NA	Solid	5035	
500-222351-1 MS	PZ-1 (2-4)	Total/NA	Soil	5035	
500-222351-1 MSD	PZ-1 (2-4)	Total/NA	Soil	5035	

Analysis Batch: 675584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-222351-1	PZ-1 (2-4)	Total/NA	Soil	8260B	675515
500-222351-2	PZ-1 Comp	Total/NA	Soil	8260B	675515
500-222351-3	MW-3R (2-4)	Total/NA	Soil	8260B	675515
500-222351-4	Trip Blank	Total/NA	Soil	8260B	675515
LB3 500-675515/21-A	Method Blank	Total/NA	Solid	8260B	675515
MB 500-675584/7	Method Blank	Total/NA	Solid	8260B	
LCS 500-675515/22-A	Lab Control Sample	Total/NA	Solid	8260B	675515
LCS 500-675584/4	Lab Control Sample	Total/NA	Solid	8260B	
500-222351-1 MS	PZ-1 (2-4)	Total/NA	Soil	8260B	675515
500-222351-1 MSD	PZ-1 (2-4)	Total/NA	Soil	8260B	675515

General Chemistry

Analysis Batch: 675311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-222351-1	PZ-1 (2-4)	Total/NA	Soil	Moisture	
500-222351-2	PZ-1 Comp	Total/NA	Soil	Moisture	
500-222351-3	MW-3R (2-4)	Total/NA	Soil	Moisture	

Surrogate Summary

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Soil **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(75-126)	(72-124)	(75-120)	(75-120)
500-222351-1	PZ-1 (2-4)	106	82	100	97
500-222351-1 MS	PZ-1 (2-4)	102	89	97	102
500-222351-1 MSD	PZ-1 (2-4)	106	91	99	101
500-222351-2	PZ-1 Comp	105	85	100	100
500-222351-3	MW-3R (2-4)	108	83	99	99
500-222351-4	Trip Blank	107	85	103	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(75-126)	(72-124)	(75-120)	(75-120)
LB3 500-675515/21-A	Method Blank	105	87	99	96
LCS 500-675515/22-A	Lab Control Sample	104	92	100	102
LCS 500-675584/4	Lab Control Sample	97	91	94	104
MB 500-675584/7	Method Blank	102	89	98	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LB3 500-675515/21-A
Matrix: Solid
Analysis Batch: 675584

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 675515

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<23		50	23	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,1,1-Trichloroethane	<19		50	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,1,2,2-Tetrachloroethane	<20		50	20	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,1,2-Trichloroethane	<18		50	18	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,1-Dichloroethane	<21		50	21	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,1-Dichloroethene	<20		50	20	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,1-Dichloropropene	<15		50	15	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,2,3-Trichlorobenzene	<23		50	23	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,2,3-Trichloropropane	<21		100	21	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,2,4-Trichlorobenzene	<17		50	17	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,2,4-Trimethylbenzene	<18		50	18	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,2-Dibromo-3-Chloropropane	<100		250	100	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Ethylene Dibromide	<19		50	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,2-Dichlorobenzene	<17		50	17	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,2-Dichloroethane	<20		50	20	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,2-Dichloropropane	<21		50	21	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,3,5-Trimethylbenzene	<19		50	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,3-Dichlorobenzene	<20		50	20	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,3-Dichloropropane	<18		50	18	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
1,4-Dichlorobenzene	<18		50	18	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
2,2-Dichloropropane	<22		50	22	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
2-Chlorotoluene	<16		50	16	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
4-Chlorotoluene	<18		50	18	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Benzene	<7.3		13	7.3	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Bromobenzene	<18		50	18	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Bromochloromethane	<21		50	21	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Bromodichloromethane	<19		50	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Bromoform	<24		50	24	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Bromomethane	<40		150	40	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Carbon tetrachloride	<19		50	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Chlorobenzene	<19		50	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Chloroethane	<25		50	25	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Chloroform	<19		100	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Chloromethane	<16		50	16	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
cis-1,2-Dichloroethene	<20		50	20	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
cis-1,3-Dichloropropene	<21		50	21	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Dibromochloromethane	<24		50	24	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Dibromomethane	<14		50	14	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Dichlorodifluoromethane	<34		150	34	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Ethylbenzene	<9.2		13	9.2	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Hexachlorobutadiene	<22		50	22	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Isopropyl ether	<14		50	14	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Isopropylbenzene	<19		50	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Methyl tert-butyl ether	<20		50	20	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Methylene Chloride	107	J	250	82	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Naphthalene	<17		50	17	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
n-Butylbenzene	<19		50	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
N-Propylbenzene	<21		50	21	ug/Kg		09/20/22 15:00	09/21/22 17:21	50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB3 500-675515/21-A
Matrix: Solid
Analysis Batch: 675584

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 675515

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<18		50	18	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
sec-Butylbenzene	<20		50	20	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Styrene	<19		50	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
tert-Butylbenzene	<20		50	20	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Tetrachloroethene	<19		50	19	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Toluene	<7.4		13	7.4	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
trans-1,2-Dichloroethene	<18		50	18	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
trans-1,3-Dichloropropene	<18		50	18	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Trichloroethene	<8.2		25	8.2	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Trichlorofluoromethane	<21		50	21	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Vinyl chloride	<13		50	13	ug/Kg		09/20/22 15:00	09/21/22 17:21	50
Xylenes, Total	<11		25	11	ug/Kg		09/20/22 15:00	09/21/22 17:21	50

Surrogate	*LB3 %Recovery*	*LB3 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*75 - 126*	*09/20/22 15:00*	*09/21/22 17:21*	*50*
4-Bromofluorobenzene (Surr)	*87*		*72 - 124*	*09/20/22 15:00*	*09/21/22 17:21*	*50*
Dibromofluoromethane (Surr)	*99*		*75 - 120*	*09/20/22 15:00*	*09/21/22 17:21*	*50*
Toluene-d8 (Surr)	*96*		*75 - 120*	*09/20/22 15:00*	*09/21/22 17:21*	*50*

Lab Sample ID: LCS 500-675515/22-A
Matrix: Solid
Analysis Batch: 675584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 675515

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	2500	2440		ug/Kg		98	70 - 125
1,1,1-Trichloroethane	2500	2490		ug/Kg		100	70 - 125
1,1,2,2-Tetrachloroethane	2500	2210		ug/Kg		88	62 - 140
1,1,2-Trichloroethane	2500	2600		ug/Kg		104	71 - 130
1,1-Dichloroethane	2500	2490		ug/Kg		100	70 - 125
1,1-Dichloroethene	2500	2370		ug/Kg		95	67 - 122
1,1-Dichloropropene	2500	2350		ug/Kg		94	70 - 121
1,2,3-Trichlorobenzene	2500	1800		ug/Kg		72	51 - 145
1,2,3-Trichloropropane	2500	2310		ug/Kg		93	50 - 133
1,2,4-Trichlorobenzene	2500	2000		ug/Kg		80	57 - 137
1,2,4-Trimethylbenzene	2500	2340		ug/Kg		94	70 - 123
1,2-Dibromo-3-Chloropropane	2500	2100		ug/Kg		84	56 - 123
Ethylene Dibromide	2500	2470		ug/Kg		99	70 - 125
1,2-Dichlorobenzene	2500	2400		ug/Kg		96	70 - 125
1,2-Dichloroethane	2500	2650		ug/Kg		106	68 - 127
1,2-Dichloropropane	2500	2470		ug/Kg		99	67 - 130
1,3,5-Trimethylbenzene	2500	2300		ug/Kg		92	70 - 123
1,3-Dichlorobenzene	2500	2360		ug/Kg		95	70 - 125
1,3-Dichloropropane	2500	2490		ug/Kg		100	62 - 136
1,4-Dichlorobenzene	2500	2350		ug/Kg		94	70 - 120
2,2-Dichloropropane	2500	2130		ug/Kg		85	58 - 139
2-Chlorotoluene	2500	2320		ug/Kg		93	70 - 125
4-Chlorotoluene	2500	2290		ug/Kg		92	68 - 124
Benzene	2500	2490		ug/Kg		100	70 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-675515/22-A
Matrix: Solid
Analysis Batch: 675584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 675515

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromobenzene	2500	2450		ug/Kg		98	70 - 122
Bromochloromethane	2500	2620		ug/Kg		105	65 - 122
Bromodichloromethane	2500	2710		ug/Kg		109	69 - 120
Bromoform	2500	2750		ug/Kg		110	56 - 132
Bromomethane	2500	2320		ug/Kg		93	40 - 152
Carbon tetrachloride	2500	2520		ug/Kg		101	59 - 133
Chlorobenzene	2500	2520		ug/Kg		101	70 - 120
Chloroethane	2500	2280		ug/Kg		91	48 - 136
Chloroform	2500	2500		ug/Kg		100	70 - 120
Chloromethane	2500	1620		ug/Kg		65	56 - 152
cis-1,2-Dichloroethene	2500	2480		ug/Kg		99	70 - 125
cis-1,3-Dichloropropene	2500	2410		ug/Kg		96	64 - 127
Dibromochloromethane	2500	2650		ug/Kg		106	68 - 125
Dibromomethane	2500	2480		ug/Kg		99	70 - 120
Dichlorodifluoromethane	2500	1010		ug/Kg		41	40 - 159
Ethylbenzene	2500	2340		ug/Kg		93	70 - 123
Hexachlorobutadiene	2500	2350		ug/Kg		94	51 - 150
Isopropylbenzene	2500	2270		ug/Kg		91	70 - 126
Methyl tert-butyl ether	2500	2420		ug/Kg		97	55 - 123
Methylene Chloride	2500	2580		ug/Kg		103	69 - 125
Naphthalene	2500	1700		ug/Kg		68	53 - 144
n-Butylbenzene	2500	2190		ug/Kg		88	68 - 125
N-Propylbenzene	2500	2270		ug/Kg		91	69 - 127
p-Isopropyltoluene	2500	2250		ug/Kg		90	70 - 125
sec-Butylbenzene	2500	2300		ug/Kg		92	70 - 123
Styrene	2500	2480		ug/Kg		99	70 - 120
tert-Butylbenzene	2500	2320		ug/Kg		93	70 - 121
Tetrachloroethene	2500	2620		ug/Kg		105	70 - 128
Toluene	2500	2380		ug/Kg		95	70 - 125
trans-1,2-Dichloroethene	2500	2420		ug/Kg		97	70 - 125
trans-1,3-Dichloropropene	2500	2360		ug/Kg		95	62 - 128
Trichloroethene	2500	2430		ug/Kg		97	70 - 125
Trichlorofluoromethane	2500	2290		ug/Kg		92	55 - 128
Vinyl chloride	2500	1730		ug/Kg		69	64 - 126
Xylenes, Total	5000	4820		ug/Kg		96	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*75 - 126*
4-Bromofluorobenzene (Surr)	*92*		*72 - 124*
Dibromofluoromethane (Surr)	*100*		*75 - 120*
Toluene-d8 (Surr)	*102*		*75 - 120*

Lab Sample ID: 500-222351-1 MS
Matrix: Soil
Analysis Batch: 675584

Client Sample ID: PZ-1 (2-4)
Prep Type: Total/NA
Prep Batch: 675515

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	<32		3500	3320		ug/Kg	☼	95	70 - 125

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 500-222351-1 MS
Matrix: Soil
Analysis Batch: 675584

Client Sample ID: PZ-1 (2-4)
Prep Type: Total/NA
Prep Batch: 675515

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	<27		3500	3370		ug/Kg	☼	96	70 - 125
1,1,2,2-Tetrachloroethane	<28		3500	2880		ug/Kg	☼	82	62 - 140
1,1,2-Trichloroethane	<25		3500	3420		ug/Kg	☼	98	71 - 130
1,1-Dichloroethane	<29		3500	3320		ug/Kg	☼	95	70 - 125
1,1-Dichloroethene	<27		3500	3400		ug/Kg	☼	97	67 - 122
1,1-Dichloropropene	<21		3500	3190		ug/Kg	☼	91	70 - 121
1,2,3-Trichlorobenzene	<32		3500	2650		ug/Kg	☼	76	51 - 145
1,2,3-Trichloropropane	<29		3500	3020		ug/Kg	☼	86	50 - 133
1,2,4-Trichlorobenzene	<24		3500	2840		ug/Kg	☼	81	57 - 137
1,2,4-Trimethylbenzene	<25		3500	3120		ug/Kg	☼	89	70 - 123
1,2-Dibromo-3-Chloropropane	<140		3500	2740		ug/Kg	☼	78	56 - 123
Ethylene Dibromide	<27		3500	3100		ug/Kg	☼	89	70 - 125
1,2-Dichlorobenzene	<23		3500	3220		ug/Kg	☼	92	70 - 125
1,2-Dichloroethane	<27		3500	3510		ug/Kg	☼	100	68 - 127
1,2-Dichloropropane	<30		3500	3230		ug/Kg	☼	92	67 - 130
1,3,5-Trimethylbenzene	<27		3500	3110		ug/Kg	☼	89	70 - 123
1,3-Dichlorobenzene	<28		3500	3170		ug/Kg	☼	90	70 - 125
1,3-Dichloropropane	<25		3500	3250		ug/Kg	☼	93	62 - 136
1,4-Dichlorobenzene	<25		3500	3160		ug/Kg	☼	90	70 - 120
2,2-Dichloropropane	<31		3500	2950		ug/Kg	☼	84	58 - 139
2-Chlorotoluene	<22		3500	3130		ug/Kg	☼	89	70 - 125
4-Chlorotoluene	<24		3500	3100		ug/Kg	☼	89	68 - 124
Benzene	<10		3500	3330		ug/Kg	☼	95	70 - 120
Bromobenzene	<25		3500	3300		ug/Kg	☼	94	70 - 122
Bromochloromethane	<30		3500	3470		ug/Kg	☼	99	65 - 122
Bromodichloromethane	<26		3500	3590		ug/Kg	☼	103	69 - 120
Bromoform	<34		3500	3540		ug/Kg	☼	101	56 - 132
Bromomethane	<56		3500	3390		ug/Kg	☼	97	40 - 152
Carbon tetrachloride	<27		3500	3500		ug/Kg	☼	100	59 - 133
Chlorobenzene	<27		3500	3390		ug/Kg	☼	97	70 - 120
Chloroethane	<35		3500	3360		ug/Kg	☼	96	48 - 136
Chloroform	<26		3500	3340		ug/Kg	☼	95	70 - 120
Chloromethane	<22		3500	2820		ug/Kg	☼	81	56 - 152
cis-1,2-Dichloroethene	<29		3500	3310		ug/Kg	☼	95	70 - 125
cis-1,3-Dichloropropene	<29		3500	3270		ug/Kg	☼	93	64 - 127
Dibromochloromethane	<34		3500	3540		ug/Kg	☼	101	68 - 125
Dibromomethane	<19		3500	3330		ug/Kg	☼	95	70 - 120
Dichlorodifluoromethane	<47		3500	2540		ug/Kg	☼	73	40 - 159
Ethylbenzene	<13		3500	3170		ug/Kg	☼	90	70 - 123
Hexachlorobutadiene	<31		3500	3220		ug/Kg	☼	92	51 - 150
Isopropylbenzene	<27		3500	3070		ug/Kg	☼	88	70 - 126
Methyl tert-butyl ether	<28		3500	3150		ug/Kg	☼	90	55 - 123
Methylene Chloride	150	J B	3500	3400		ug/Kg	☼	93	69 - 125
Naphthalene	<23		3500	2540		ug/Kg	☼	73	53 - 144
n-Butylbenzene	<27		3500	2870		ug/Kg	☼	82	68 - 125
N-Propylbenzene	<29		3500	3060		ug/Kg	☼	87	69 - 127
p-Isopropyltoluene	<25		3500	3050		ug/Kg	☼	87	70 - 125
sec-Butylbenzene	<28		3500	3150		ug/Kg	☼	90	70 - 123
Styrene	<27		3500	3310		ug/Kg	☼	95	70 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 500-222351-1 MS
Matrix: Soil
Analysis Batch: 675584

Client Sample ID: PZ-1 (2-4)
Prep Type: Total/NA
Prep Batch: 675515

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
tert-Butylbenzene	<28		3500	3180		ug/Kg	☼	91	70 - 121
Tetrachloroethene	2200		3500	5890		ug/Kg	☼	104	70 - 128
Toluene	<10		3500	3300		ug/Kg	☼	94	70 - 125
trans-1,2-Dichloroethene	<24		3500	3380		ug/Kg	☼	97	70 - 125
trans-1,3-Dichloropropene	<25		3500	3120		ug/Kg	☼	89	62 - 128
Trichloroethene	<11		3500	3430		ug/Kg	☼	98	70 - 125
Trichlorofluoromethane	<30		3500	3330		ug/Kg	☼	95	55 - 128
Vinyl chloride	<18		3500	2840		ug/Kg	☼	81	64 - 126
Xylenes, Total	<15		7000	6610		ug/Kg	☼	95	70 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*
4-Bromofluorobenzene (Surr)	*89*		*72 - 124*
Dibromofluoromethane (Surr)	*97*		*75 - 120*
Toluene-d8 (Surr)	*102*		*75 - 120*

Lab Sample ID: 500-222351-1 MSD
Matrix: Soil
Analysis Batch: 675584

Client Sample ID: PZ-1 (2-4)
Prep Type: Total/NA
Prep Batch: 675515

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	<32		3500	3250		ug/Kg	☼	93	70 - 125	2	30
1,1,1-Trichloroethane	<27		3500	3400		ug/Kg	☼	97	70 - 125	1	30
1,1,2,2-Tetrachloroethane	<28		3500	3000		ug/Kg	☼	86	62 - 140	4	30
1,1,2-Trichloroethane	<25		3500	3400		ug/Kg	☼	97	71 - 130	1	30
1,1-Dichloroethane	<29		3500	3340		ug/Kg	☼	96	70 - 125	1	30
1,1-Dichloroethene	<27		3500	3400		ug/Kg	☼	97	67 - 122	0	30
1,1-Dichloropropene	<21		3500	3360		ug/Kg	☼	96	70 - 121	5	30
1,2,3-Trichlorobenzene	<32		3500	2800		ug/Kg	☼	80	51 - 145	5	30
1,2,3-Trichloropropane	<29		3500	3260		ug/Kg	☼	93	50 - 133	8	30
1,2,4-Trichlorobenzene	<24		3500	2920		ug/Kg	☼	83	57 - 137	3	30
1,2,4-Trimethylbenzene	<25		3500	3260		ug/Kg	☼	93	70 - 123	4	30
1,2-Dibromo-3-Chloropropane	<140		3500	2680		ug/Kg	☼	77	56 - 123	2	30
Ethylene Dibromide	<27		3500	3170		ug/Kg	☼	91	70 - 125	2	30
1,2-Dichlorobenzene	<23		3500	3340		ug/Kg	☼	95	70 - 125	4	30
1,2-Dichloroethane	<27		3500	3610		ug/Kg	☼	103	68 - 127	3	30
1,2-Dichloropropane	<30		3500	3430		ug/Kg	☼	98	67 - 130	6	30
1,3,5-Trimethylbenzene	<27		3500	3220		ug/Kg	☼	92	70 - 123	4	30
1,3-Dichlorobenzene	<28		3500	3230		ug/Kg	☼	92	70 - 125	2	30
1,3-Dichloropropane	<25		3500	3210		ug/Kg	☼	92	62 - 136	1	30
1,4-Dichlorobenzene	<25		3500	3170		ug/Kg	☼	91	70 - 120	0	30
2,2-Dichloropropane	<31		3500	2910		ug/Kg	☼	83	58 - 139	2	30
2-Chlorotoluene	<22		3500	3210		ug/Kg	☼	92	70 - 125	3	30
4-Chlorotoluene	<24		3500	3170		ug/Kg	☼	91	68 - 124	2	30
Benzene	<10		3500	3400		ug/Kg	☼	97	70 - 120	2	30
Bromobenzene	<25		3500	3370		ug/Kg	☼	96	70 - 122	2	30
Bromochloromethane	<30		3500	3520		ug/Kg	☼	101	65 - 122	2	30
Bromodichloromethane	<26		3500	3560		ug/Kg	☼	102	69 - 120	1	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 500-222351-1 MSD
Matrix: Soil
Analysis Batch: 675584

Client Sample ID: PZ-1 (2-4)
Prep Type: Total/NA
Prep Batch: 675515

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromoform	<34		3500	3540		ug/Kg	☼	101	56 - 132	0	30
Bromomethane	<56		3500	3440		ug/Kg	☼	98	40 - 152	1	30
Carbon tetrachloride	<27		3500	3580		ug/Kg	☼	102	59 - 133	2	30
Chlorobenzene	<27		3500	3360		ug/Kg	☼	96	70 - 120	1	30
Chloroethane	<35		3500	3480		ug/Kg	☼	100	48 - 136	4	30
Chloroform	<26		3500	3370		ug/Kg	☼	96	70 - 120	1	30
Chloromethane	<22		3500	3020		ug/Kg	☼	86	56 - 152	7	30
cis-1,2-Dichloroethene	<29		3500	3380		ug/Kg	☼	97	70 - 125	2	30
cis-1,3-Dichloropropene	<29		3500	3220		ug/Kg	☼	92	64 - 127	1	30
Dibromochloromethane	<34		3500	3370		ug/Kg	☼	96	68 - 125	5	30
Dibromomethane	<19		3500	3410		ug/Kg	☼	97	70 - 120	2	30
Dichlorodifluoromethane	<47		3500	2990		ug/Kg	☼	86	40 - 159	16	30
Ethylbenzene	<13		3500	3130		ug/Kg	☼	89	70 - 123	1	30
Hexachlorobutadiene	<31		3500	3450		ug/Kg	☼	99	51 - 150	7	30
Isopropylbenzene	<27		3500	3200		ug/Kg	☼	91	70 - 126	4	30
Methyl tert-butyl ether	<28		3500	3230		ug/Kg	☼	92	55 - 123	3	30
Methylene Chloride	150	J B	3500	3470		ug/Kg	☼	95	69 - 125	2	30
Naphthalene	<23		3500	2670		ug/Kg	☼	76	53 - 144	5	30
n-Butylbenzene	<27		3500	3010		ug/Kg	☼	86	68 - 125	5	30
N-Propylbenzene	<29		3500	3210		ug/Kg	☼	92	69 - 127	5	30
p-Isopropyltoluene	<25		3500	3180		ug/Kg	☼	91	70 - 125	4	30
sec-Butylbenzene	<28		3500	3240		ug/Kg	☼	93	70 - 123	3	30
Styrene	<27		3500	3350		ug/Kg	☼	96	70 - 120	1	30
tert-Butylbenzene	<28		3500	3280		ug/Kg	☼	94	70 - 121	3	30
Tetrachloroethene	2200		3500	5900		ug/Kg	☼	104	70 - 128	0	30
Toluene	<10		3500	3190		ug/Kg	☼	91	70 - 125	3	30
trans-1,2-Dichloroethene	<24		3500	3290		ug/Kg	☼	94	70 - 125	3	30
trans-1,3-Dichloropropene	<25		3500	3030		ug/Kg	☼	87	62 - 128	3	30
Trichloroethene	<11		3500	3450		ug/Kg	☼	99	70 - 125	1	30
Trichlorofluoromethane	<30		3500	3460		ug/Kg	☼	99	55 - 128	4	30
Vinyl chloride	<18		3500	2890		ug/Kg	☼	82	64 - 126	2	30
Xylenes, Total	<15		7000	6600		ug/Kg	☼	94	70 - 125	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*75 - 126*
4-Bromofluorobenzene (Surr)	*91*		*72 - 124*
Dibromofluoromethane (Surr)	*99*		*75 - 120*
Toluene-d8 (Surr)	*101*		*75 - 120*

Lab Sample ID: MB 500-675584/7
Matrix: Solid
Analysis Batch: 675584

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/Kg			09/21/22 11:35	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/Kg			09/21/22 11:35	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/Kg			09/21/22 11:35	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/Kg			09/21/22 11:35	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-675584/7
Matrix: Solid
Analysis Batch: 675584

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	<0.41		1.0	0.41	ug/Kg			09/21/22 11:35	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/Kg			09/21/22 11:35	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/Kg			09/21/22 11:35	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/Kg			09/21/22 11:35	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/Kg			09/21/22 11:35	1
1,2,4-Trichlorobenzene	0.380	J	1.0	0.34	ug/Kg			09/21/22 11:35	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/Kg			09/21/22 11:35	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/Kg			09/21/22 11:35	1
Ethylene Dibromide	<0.39		1.0	0.39	ug/Kg			09/21/22 11:35	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/Kg			09/21/22 11:35	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/Kg			09/21/22 11:35	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/Kg			09/21/22 11:35	1
1,3,5-Trimethylbenzene	<0.38		1.0	0.38	ug/Kg			09/21/22 11:35	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/Kg			09/21/22 11:35	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/Kg			09/21/22 11:35	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/Kg			09/21/22 11:35	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/Kg			09/21/22 11:35	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/Kg			09/21/22 11:35	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/Kg			09/21/22 11:35	1
Benzene	<0.15		0.25	0.15	ug/Kg			09/21/22 11:35	1
Bromobenzene	<0.36		1.0	0.36	ug/Kg			09/21/22 11:35	1
Bromochloromethane	<0.43		1.0	0.43	ug/Kg			09/21/22 11:35	1
Bromodichloromethane	<0.37		1.0	0.37	ug/Kg			09/21/22 11:35	1
Bromoform	<0.48		1.0	0.48	ug/Kg			09/21/22 11:35	1
Bromomethane	<0.80		3.0	0.80	ug/Kg			09/21/22 11:35	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/Kg			09/21/22 11:35	1
Chlorobenzene	<0.39		1.0	0.39	ug/Kg			09/21/22 11:35	1
Chloroethane	<0.50		1.0	0.50	ug/Kg			09/21/22 11:35	1
Chloroform	<0.37		2.0	0.37	ug/Kg			09/21/22 11:35	1
Chloromethane	<0.32		1.0	0.32	ug/Kg			09/21/22 11:35	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/Kg			09/21/22 11:35	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/Kg			09/21/22 11:35	1
Dibromochloromethane	<0.49		1.0	0.49	ug/Kg			09/21/22 11:35	1
Dibromomethane	<0.27		1.0	0.27	ug/Kg			09/21/22 11:35	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/Kg			09/21/22 11:35	1
Ethylbenzene	<0.18		0.25	0.18	ug/Kg			09/21/22 11:35	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/Kg			09/21/22 11:35	1
Isopropyl ether	<0.28		1.0	0.28	ug/Kg			09/21/22 11:35	1
Isopropylbenzene	<0.38		1.0	0.38	ug/Kg			09/21/22 11:35	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/Kg			09/21/22 11:35	1
Methylene Chloride	<1.6		5.0	1.6	ug/Kg			09/21/22 11:35	1
Naphthalene	0.412	J	1.0	0.33	ug/Kg			09/21/22 11:35	1
n-Butylbenzene	<0.39		1.0	0.39	ug/Kg			09/21/22 11:35	1
N-Propylbenzene	<0.41		1.0	0.41	ug/Kg			09/21/22 11:35	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/Kg			09/21/22 11:35	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/Kg			09/21/22 11:35	1
Styrene	<0.39		1.0	0.39	ug/Kg			09/21/22 11:35	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/Kg			09/21/22 11:35	1
Tetrachloroethene	<0.37		1.0	0.37	ug/Kg			09/21/22 11:35	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-675584/7
Matrix: Solid
Analysis Batch: 675584

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.15		0.25	0.15	ug/Kg			09/21/22 11:35	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/Kg			09/21/22 11:35	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/Kg			09/21/22 11:35	1
Trichloroethene	<0.16		0.50	0.16	ug/Kg			09/21/22 11:35	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/Kg			09/21/22 11:35	1
Vinyl chloride	<0.26		1.0	0.26	ug/Kg			09/21/22 11:35	1
Xylenes, Total	<0.22		0.50	0.22	ug/Kg			09/21/22 11:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*		*09/21/22 11:35*	*1*
4-Bromofluorobenzene (Surr)	*89*		*72 - 124*		*09/21/22 11:35*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 120*		*09/21/22 11:35*	*1*
Toluene-d8 (Surr)	*99*		*75 - 120*		*09/21/22 11:35*	*1*

Lab Sample ID: LCS 500-675584/4
Matrix: Solid
Analysis Batch: 675584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	50.9		ug/Kg		102	70 - 125
1,1,1-Trichloroethane	50.0	53.4		ug/Kg		107	70 - 125
1,1,2,2-Tetrachloroethane	50.0	44.7		ug/Kg		89	62 - 140
1,1,2-Trichloroethane	50.0	49.3		ug/Kg		99	71 - 130
1,1-Dichloroethane	50.0	49.5		ug/Kg		99	70 - 125
1,1-Dichloroethene	50.0	52.4		ug/Kg		105	67 - 122
1,1-Dichloropropene	50.0	51.1		ug/Kg		102	70 - 121
1,2,3-Trichlorobenzene	50.0	40.0		ug/Kg		80	51 - 145
1,2,3-Trichloropropane	50.0	44.4		ug/Kg		89	50 - 133
1,2,4-Trichlorobenzene	50.0	46.3		ug/Kg		93	57 - 137
1,2,4-Trimethylbenzene	50.0	51.0		ug/Kg		102	70 - 123
1,2-Dibromo-3-Chloropropane	50.0	41.3		ug/Kg		83	56 - 123
Ethylene Dibromide	50.0	48.1		ug/Kg		96	70 - 125
1,2-Dichlorobenzene	50.0	49.2		ug/Kg		98	70 - 125
1,2-Dichloroethane	50.0	50.0		ug/Kg		100	68 - 127
1,2-Dichloropropane	50.0	48.0		ug/Kg		96	67 - 130
1,3,5-Trimethylbenzene	50.0	50.6		ug/Kg		101	70 - 123
1,3-Dichlorobenzene	50.0	50.9		ug/Kg		102	70 - 125
1,3-Dichloropropane	50.0	47.4		ug/Kg		95	62 - 136
1,4-Dichlorobenzene	50.0	50.0		ug/Kg		100	70 - 120
2,2-Dichloropropane	50.0	47.1		ug/Kg		94	58 - 139
2-Chlorotoluene	50.0	49.8		ug/Kg		100	70 - 125
4-Chlorotoluene	50.0	49.3		ug/Kg		99	68 - 124
Benzene	50.0	49.7		ug/Kg		99	70 - 120
Bromobenzene	50.0	51.0		ug/Kg		102	70 - 122
Bromochloromethane	50.0	50.4		ug/Kg		101	65 - 122
Bromodichloromethane	50.0	51.6		ug/Kg		103	69 - 120
Bromoform	50.0	55.3		ug/Kg		111	56 - 132
Bromomethane	50.0	61.9		ug/Kg		124	40 - 152

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-675584/4
Matrix: Solid
Analysis Batch: 675584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon tetrachloride	50.0	57.1		ug/Kg		114	59 - 133
Chlorobenzene	50.0	51.3		ug/Kg		103	70 - 120
Chloroethane	50.0	59.1		ug/Kg		118	48 - 136
Chloroform	50.0	49.1		ug/Kg		98	70 - 120
Chloromethane	50.0	43.7		ug/Kg		87	56 - 152
cis-1,2-Dichloroethene	50.0	49.3		ug/Kg		99	70 - 125
cis-1,3-Dichloropropene	50.0	49.8		ug/Kg		100	64 - 127
Dibromochloromethane	50.0	53.8		ug/Kg		108	68 - 125
Dibromomethane	50.0	46.8		ug/Kg		94	70 - 120
Dichlorodifluoromethane	50.0	48.4		ug/Kg		97	40 - 159
Ethylbenzene	50.0	49.5		ug/Kg		99	70 - 123
Hexachlorobutadiene	50.0	53.9		ug/Kg		108	51 - 150
Isopropylbenzene	50.0	51.1		ug/Kg		102	70 - 126
Methyl tert-butyl ether	50.0	45.0		ug/Kg		90	55 - 123
Methylene Chloride	50.0	50.6		ug/Kg		101	69 - 125
Naphthalene	50.0	36.5		ug/Kg		73	53 - 144
n-Butylbenzene	50.0	50.9		ug/Kg		102	68 - 125
N-Propylbenzene	50.0	51.7		ug/Kg		103	69 - 127
p-Isopropyltoluene	50.0	52.0		ug/Kg		104	70 - 125
sec-Butylbenzene	50.0	53.3		ug/Kg		107	70 - 123
Styrene	50.0	50.1		ug/Kg		100	70 - 120
tert-Butylbenzene	50.0	52.5		ug/Kg		105	70 - 121
Tetrachloroethene	50.0	59.2		ug/Kg		118	70 - 128
Toluene	50.0	49.8		ug/Kg		100	70 - 125
trans-1,2-Dichloroethene	50.0	49.8		ug/Kg		100	70 - 125
trans-1,3-Dichloropropene	50.0	47.0		ug/Kg		94	62 - 128
Trichloroethene	50.0	51.4		ug/Kg		103	70 - 125
Trichlorofluoromethane	50.0	54.8		ug/Kg		110	55 - 128
Vinyl chloride	50.0	43.4		ug/Kg		87	64 - 126
Xylenes, Total	100	102		ug/Kg		102	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*75 - 126*
4-Bromofluorobenzene (Surr)	*91*		*72 - 124*
Dibromofluoromethane (Surr)	*94*		*75 - 120*
Toluene-d8 (Surr)	*104*		*75 - 120*

Lab Chronicle

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: PZ-1 (2-4)
Date Collected: 09/14/22 09:32
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-1
Matrix: Soil

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	675311	LWN	EET CHI	09/19/22 14:53

Client Sample ID: PZ-1 (2-4)
Date Collected: 09/14/22 09:32
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-1
Matrix: Soil
Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			675515	WRE	EET CHI	09/14/22 09:32
Total/NA	Analysis	8260B		50	675584	W1T	EET CHI	09/21/22 18:30

Client Sample ID: PZ-1 Comp
Date Collected: 09/14/22 10:35
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-2
Matrix: Soil

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	675311	LWN	EET CHI	09/19/22 14:53

Client Sample ID: PZ-1 Comp
Date Collected: 09/14/22 10:35
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-2
Matrix: Soil
Percent Solids: 91.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			675515	WRE	EET CHI	09/14/22 10:35
Total/NA	Analysis	8260B		50	675584	W1T	EET CHI	09/21/22 18:53

Client Sample ID: MW-3R (2-4)
Date Collected: 09/14/22 12:45
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-3
Matrix: Soil

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	675311	LWN	EET CHI	09/19/22 14:53

Client Sample ID: MW-3R (2-4)
Date Collected: 09/14/22 12:45
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-3
Matrix: Soil
Percent Solids: 78.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			675515	WRE	EET CHI	09/14/22 12:45
Total/NA	Analysis	8260B		50	675584	W1T	EET CHI	09/21/22 19:16

Lab Chronicle

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners

Job ID: 500-222351-1

Client Sample ID: Trip Blank

Date Collected: 09/14/22 00:00
Date Received: 09/16/22 09:50

Lab Sample ID: 500-222351-4

Matrix: Soil

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			675515	WRE	EET CHI	09/14/22 00:00
Total/NA	Analysis	8260B		50	675584	W1T	EET CHI	09/21/22 19:39

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Giles Engineering Associates
Job ID: 500-222351-1
Project/Site: Smoke Out Cleaners

Laboratory: Eurofins Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-23

Eurofins Chicago
2417 Bond Street

University Park IL 60484-3101
phone 708 534 5200 fax 708 534 5211

Chain of Custody Record

eurofins Environment Testing America

Regulatory Program. ☐ DW ☐ NPDES ☐ RCRA ☐ Other

Eurofins Environment Testing America

Client Contact	Project Manager: Michelle Peed	Site Contact M Peed		COC No 1
Giles Engineering Associates Inc	Email mpeed@gilesengr com	Lab Contact S Fredrick	Carrier	1 of 1 COCs
Address N8 W22350 Johnson Dr Suite A1	Tel/Fax 262-544-0118			TALS Project #
City/State/Zip Waukesha, WI 53186	Analysis Turnaround Time			Sampler: C Reich
262-544-0118	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only
	TAT if different from Below ____standard_____			Walk-in Client
Project Name Smoke Out Cleaners	☐ 2 weeks			Lab Sampling
Site 1E-1105024	☐ 1 week			
P O # 1E 1105024	☐ 2 days			Job / SDG No
500-222351 COC	☐ 1 day			500-222351

	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	VOC	Sample Specific Notes
1	PZ 1 (2-4)	9/14/2022	9 32	G	s	2			x	
2	PZ 1 Comp	9/14/2022	10 35	C	s	2			x	
3	MW 3R (2-4)	9/14/2022	12 45	G	s	2			x	
4	Trip Blank									Added by EETA

Preservation Used 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

☐ Non-Hazard ☐ Flammable Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments

Custody Seals Intact ☐ Yes ☐ No	Custody Seal No 20084115		Cooler Temp (°C) Obs'd 1.1	Corr'd 0.6	Therm ID No _____
Relinquished by	Company Giles	Date/Time 9/15/22 1305	Received by	Company Eurofins	Date/Time 9.15.22 1305
Relinquished by	Company Eurofins 9.15.22	Date/Time 1700	Received by	Company	Date/Time
Relinquished by	Company	Date/Time	Received in Laboratory by	Company EETA	Date/Time 9/16/22 0950

Login Sample Receipt Checklist

Client: Giles Engineering Associates

Job Number: 500-222351-1

Login Number: 222351
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX D

Groundwater Laboratory Reports and Chain-of Custody Documentation

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ANALYTICAL REPORT

PREPARED FOR

Attn: Cody Reich
Giles Engineering Associates
N8 W 22350 Johnson Road
Waukesha, Wisconsin 53186

Generated 7/13/2023 2:41:57 PM

JOB DESCRIPTION

Smoke Out Cleaners - 1E-1105024

JOB NUMBER

500-236289-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Authorization

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7/13/2023 2:41:57 PM

Authorized for release by
Sandie Fredrick, Project Manager II
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

Table of Contents

Job ID: 500-236289-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-236289-1

Receipt
The samples were received on 7/8/2023 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.5º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: PZ-1 — Lab Sample ID: 500-236289-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.5		1.0	0.37	ug/L	1		8260D	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 500-236289-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	52		5.0	2.0	ug/L	5		8260D	Total/NA
Tetrachloroethene	4800		50	19	ug/L	50		8260D	Total/NA
Trichloroethene	34		2.5	0.82	ug/L	5		8260D	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 500-236289-3

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 500-236289-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	160		1.0	0.41	ug/L	1		8260D	Total/NA
Tetrachloroethene	380		10	3.7	ug/L	10		8260D	Total/NA
trans-1,2-Dichloroethene	0.69	J	1.0	0.35	ug/L	1		8260D	Total/NA
Trichloroethene	11		0.50	0.16	ug/L	1		8260D	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 500-236289-5

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 500-236289-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.88	J	1.0	0.37	ug/L	1		8260D	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 500-236289-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	4.7		1.0	0.37	ug/L	1		8260D	Total/NA

Client Sample ID: MW-7 — Lab Sample ID: 500-236289-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	29		1.0	0.37	ug/L	1		8260D	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 500-236289-9

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CHI
5030B	Purge and Trap	SW846	EET CHI

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-236289-1	PZ-1	Water	07/06/23 12:10	07/08/23 10:10
500-236289-2	MW-1	Water	07/06/23 12:15	07/08/23 10:10
500-236289-3	MW-2	Water	07/06/23 08:50	07/08/23 10:10
500-236289-4	MW-3	Water	07/06/23 11:00	07/08/23 10:10
500-236289-5	MW-4	Water	07/06/23 07:50	07/08/23 10:10
500-236289-6	MW-5	Water	07/06/23 09:25	07/08/23 10:10
500-236289-7	MW-6	Water	07/06/23 09:55	07/08/23 10:10
500-236289-8	MW-7	Water	07/06/23 10:45	07/08/23 10:10
500-236289-9	Trip Blank	Water	07/06/23 00:00	07/08/23 10:10

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Client Sample ID: PZ-1
Date Collected: 07/06/23 12:10
Date Received: 07/08/23 10:10

Lab Sample ID: 500-236289-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/13/23 02:11	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/13/23 02:11	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/13/23 02:11	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/13/23 02:11	1
Bromoform	<0.48		1.0	0.48	ug/L			07/13/23 02:11	1
Bromomethane	<0.80		3.0	0.80	ug/L			07/13/23 02:11	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/13/23 02:11	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/13/23 02:11	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/13/23 02:11	1
Chloroform	<0.37		2.0	0.37	ug/L			07/13/23 02:11	1
Chloromethane	<0.32	*-	5.0	0.32	ug/L			07/13/23 02:11	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/13/23 02:11	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/13/23 02:11	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/13/23 02:11	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/13/23 02:11	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/13/23 02:11	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/13/23 02:11	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/13/23 02:11	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/13/23 02:11	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/13/23 02:11	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/13/23 02:11	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			07/13/23 02:11	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/13/23 02:11	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/13/23 02:11	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/13/23 02:11	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/13/23 02:11	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/13/23 02:11	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/13/23 02:11	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/13/23 02:11	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/13/23 02:11	1
Ethylene Dibromide	<0.39		1.0	0.39	ug/L			07/13/23 02:11	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/13/23 02:11	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 02:11	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/13/23 02:11	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/13/23 02:11	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/13/23 02:11	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/13/23 02:11	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 02:11	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/13/23 02:11	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/13/23 02:11	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 02:11	1
Styrene	<0.39		1.0	0.39	ug/L			07/13/23 02:11	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 02:11	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/13/23 02:11	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/13/23 02:11	1
Tetrachloroethene	**1.5**		1.0	0.37	ug/L			07/13/23 02:11	1
Toluene	<0.15		0.50	0.15	ug/L			07/13/23 02:11	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/13/23 02:11	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/13/23 02:11	1

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: PZ-1
Lab Sample ID: 500-236289-1
Date Collected: 07/06/23 12:10
Matrix: Water
Date Received: 07/08/23 10:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/13/23 02:11	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/13/23 02:11	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/13/23 02:11	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/13/23 02:11	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/13/23 02:11	1
Trichlorofluoromethane	<0.43	*-	1.0	0.43	ug/L			07/13/23 02:11	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			07/13/23 02:11	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/13/23 02:11	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/13/23 02:11	1
Vinyl chloride	<0.20	*-	1.0	0.20	ug/L			07/13/23 02:11	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/13/23 02:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*72 - 124*		*07/13/23 02:11*	*1*
Dibromofluoromethane (Surr)	*93*		*75 - 120*		*07/13/23 02:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*75 - 126*		*07/13/23 02:11*	*1*
Toluene-d8 (Surr)	*99*		*75 - 120*		*07/13/23 02:11*	*1*

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Client Sample ID: MW-1

Date Collected: 07/06/23 12:15
Date Received: 07/08/23 10:10

Lab Sample ID: 500-236289-2

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.73		2.5	0.73	ug/L			07/13/23 05:25	5
Bromobenzene	<1.8		5.0	1.8	ug/L			07/13/23 05:25	5
Bromochloromethane	<2.1		5.0	2.1	ug/L			07/13/23 05:25	5
Bromodichloromethane	<1.9		5.0	1.9	ug/L			07/13/23 05:25	5
Bromoform	<2.4		5.0	2.4	ug/L			07/13/23 05:25	5
Bromomethane	<4.0		15	4.0	ug/L			07/13/23 05:25	5
Carbon tetrachloride	<1.9		5.0	1.9	ug/L			07/13/23 05:25	5
Chlorobenzene	<1.9		5.0	1.9	ug/L			07/13/23 05:25	5
Chloroethane	<2.5		5.0	2.5	ug/L			07/13/23 05:25	5
Chloroform	<1.9		10	1.9	ug/L			07/13/23 05:25	5
Chloromethane	<1.6	*-	25	1.6	ug/L			07/13/23 05:25	5
2-Chlorotoluene	<1.6		5.0	1.6	ug/L			07/13/23 05:25	5
4-Chlorotoluene	<1.7		5.0	1.7	ug/L			07/13/23 05:25	5
cis-1,2-Dichloroethene	**52**		5.0	2.0	ug/L			07/13/23 05:25	5
cis-1,3-Dichloropropene	<2.1		5.0	2.1	ug/L			07/13/23 05:25	5
Dibromochloromethane	<2.4		5.0	2.4	ug/L			07/13/23 05:25	5
1,2-Dibromo-3-Chloropropane	<10		25	10	ug/L			07/13/23 05:25	5
Dibromomethane	<1.4		5.0	1.4	ug/L			07/13/23 05:25	5
1,2-Dichlorobenzene	<1.7		5.0	1.7	ug/L			07/13/23 05:25	5
1,3-Dichlorobenzene	<2.0		5.0	2.0	ug/L			07/13/23 05:25	5
1,4-Dichlorobenzene	<1.8		5.0	1.8	ug/L			07/13/23 05:25	5
Dichlorodifluoromethane	<3.4		15	3.4	ug/L			07/13/23 05:25	5
1,1-Dichloroethane	<2.1		5.0	2.1	ug/L			07/13/23 05:25	5
1,2-Dichloroethane	<2.0		5.0	2.0	ug/L			07/13/23 05:25	5
1,1-Dichloroethene	<2.0		5.0	2.0	ug/L			07/13/23 05:25	5
1,2-Dichloropropane	<2.1		5.0	2.1	ug/L			07/13/23 05:25	5
1,3-Dichloropropane	<1.8		5.0	1.8	ug/L			07/13/23 05:25	5
2,2-Dichloropropane	<2.2		5.0	2.2	ug/L			07/13/23 05:25	5
1,1-Dichloropropene	<1.5		5.0	1.5	ug/L			07/13/23 05:25	5
Ethylbenzene	<0.92		2.5	0.92	ug/L			07/13/23 05:25	5
Ethylene Dibromide	<1.9		5.0	1.9	ug/L			07/13/23 05:25	5
Hexachlorobutadiene	<2.2		5.0	2.2	ug/L			07/13/23 05:25	5
Isopropylbenzene	<1.9		5.0	1.9	ug/L			07/13/23 05:25	5
Isopropyl ether	<1.4		5.0	1.4	ug/L			07/13/23 05:25	5
Methylene Chloride	<8.2		25	8.2	ug/L			07/13/23 05:25	5
Methyl tert-butyl ether	<2.0		5.0	2.0	ug/L			07/13/23 05:25	5
Naphthalene	<1.7		5.0	1.7	ug/L			07/13/23 05:25	5
n-Butylbenzene	<1.9		5.0	1.9	ug/L			07/13/23 05:25	5
N-Propylbenzene	<2.1		5.0	2.1	ug/L			07/13/23 05:25	5
p-Isopropyltoluene	<1.8		5.0	1.8	ug/L			07/13/23 05:25	5
sec-Butylbenzene	<2.0		5.0	2.0	ug/L			07/13/23 05:25	5
Styrene	<1.9		5.0	1.9	ug/L			07/13/23 05:25	5
tert-Butylbenzene	<2.0		5.0	2.0	ug/L			07/13/23 05:25	5
1,1,1,2-Tetrachloroethane	<2.3		5.0	2.3	ug/L			07/13/23 05:25	5
1,1,2,2-Tetrachloroethane	<2.0		5.0	2.0	ug/L			07/13/23 05:25	5
Tetrachloroethene	**4800**		50	19	ug/L			07/13/23 05:49	50
Toluene	<0.76		2.5	0.76	ug/L			07/13/23 05:25	5
trans-1,2-Dichloroethene	<1.7		5.0	1.7	ug/L			07/13/23 05:25	5
trans-1,3-Dichloropropene	<1.8		5.0	1.8	ug/L			07/13/23 05:25	5

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Client Sample ID: MW-1
Date Collected: 07/06/23 12:15
Date Received: 07/08/23 10:10

Lab Sample ID: 500-236289-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<2.3		5.0	2.3	ug/L			07/13/23 05:25	5
1,2,4-Trichlorobenzene	<1.7		5.0	1.7	ug/L			07/13/23 05:25	5
1,1,1-Trichloroethane	<1.9		5.0	1.9	ug/L			07/13/23 05:25	5
1,1,2-Trichloroethane	<1.8		5.0	1.8	ug/L			07/13/23 05:25	5
Trichloroethene	**34**		2.5	0.82	ug/L			07/13/23 05:25	5
Trichlorofluoromethane	<2.1	*-	5.0	2.1	ug/L			07/13/23 05:25	5
1,2,3-Trichloropropane	<2.1		10	2.1	ug/L			07/13/23 05:25	5
1,2,4-Trimethylbenzene	<1.8		5.0	1.8	ug/L			07/13/23 05:25	5
1,3,5-Trimethylbenzene	<1.3		5.0	1.3	ug/L			07/13/23 05:25	5
Vinyl chloride	<1.0	*-	5.0	1.0	ug/L			07/13/23 05:25	5
Xylenes, Total	<1.1		5.0	1.1	ug/L			07/13/23 05:25	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*72 - 124*		*07/13/23 05:25*	*5*
4-Bromofluorobenzene (Surr)	*115*		*72 - 124*		*07/13/23 05:49*	*50*
Dibromofluoromethane (Surr)	*98*		*75 - 120*		*07/13/23 05:25*	*5*
Dibromofluoromethane (Surr)	*96*		*75 - 120*		*07/13/23 05:49*	*50*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*		*07/13/23 05:25*	*5*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*		*07/13/23 05:49*	*50*
Toluene-d8 (Surr)	*96*		*75 - 120*		*07/13/23 05:25*	*5*
Toluene-d8 (Surr)	*96*		*75 - 120*		*07/13/23 05:49*	*50*

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: MW-2
Lab Sample ID: 500-236289-3
Date Collected: 07/06/23 08:50
Matrix: Water
Date Received: 07/08/23 10:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/13/23 02:35	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/13/23 02:35	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/13/23 02:35	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/13/23 02:35	1
Bromoform	<0.48		1.0	0.48	ug/L			07/13/23 02:35	1
Bromomethane	<0.80		3.0	0.80	ug/L			07/13/23 02:35	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/13/23 02:35	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/13/23 02:35	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/13/23 02:35	1
Chloroform	<0.37		2.0	0.37	ug/L			07/13/23 02:35	1
Chloromethane	<0.32	*-	5.0	0.32	ug/L			07/13/23 02:35	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/13/23 02:35	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/13/23 02:35	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/13/23 02:35	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/13/23 02:35	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/13/23 02:35	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/13/23 02:35	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/13/23 02:35	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/13/23 02:35	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/13/23 02:35	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/13/23 02:35	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			07/13/23 02:35	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/13/23 02:35	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/13/23 02:35	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/13/23 02:35	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/13/23 02:35	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/13/23 02:35	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/13/23 02:35	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/13/23 02:35	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/13/23 02:35	1
Ethylene Dibromide	<0.39		1.0	0.39	ug/L			07/13/23 02:35	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/13/23 02:35	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 02:35	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/13/23 02:35	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/13/23 02:35	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/13/23 02:35	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/13/23 02:35	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 02:35	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/13/23 02:35	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/13/23 02:35	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 02:35	1
Styrene	<0.39		1.0	0.39	ug/L			07/13/23 02:35	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 02:35	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/13/23 02:35	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/13/23 02:35	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/13/23 02:35	1
Toluene	<0.15		0.50	0.15	ug/L			07/13/23 02:35	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/13/23 02:35	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/13/23 02:35	1

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: MW-2
Lab Sample ID: 500-236289-3
Date Collected: 07/06/23 08:50
Matrix: Water
Date Received: 07/08/23 10:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/13/23 02:35	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/13/23 02:35	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/13/23 02:35	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/13/23 02:35	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/13/23 02:35	1
Trichlorofluoromethane	<0.43	*-	1.0	0.43	ug/L			07/13/23 02:35	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			07/13/23 02:35	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/13/23 02:35	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/13/23 02:35	1
Vinyl chloride	<0.20	*-	1.0	0.20	ug/L			07/13/23 02:35	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/13/23 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*72 - 124*		*07/13/23 02:35*	*1*
Dibromofluoromethane (Surr)	*94*		*75 - 120*		*07/13/23 02:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 126*		*07/13/23 02:35*	*1*
Toluene-d8 (Surr)	*97*		*75 - 120*		*07/13/23 02:35*	*1*

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Client Sample ID: MW-3
Date Collected: 07/06/23 11:00
Date Received: 07/08/23 10:10

Lab Sample ID: 500-236289-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/13/23 04:36	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/13/23 04:36	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/13/23 04:36	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/13/23 04:36	1
Bromoform	<0.48		1.0	0.48	ug/L			07/13/23 04:36	1
Bromomethane	<0.80		3.0	0.80	ug/L			07/13/23 04:36	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/13/23 04:36	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/13/23 04:36	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/13/23 04:36	1
Chloroform	<0.37		2.0	0.37	ug/L			07/13/23 04:36	1
Chloromethane	<0.32	*-	5.0	0.32	ug/L			07/13/23 04:36	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/13/23 04:36	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/13/23 04:36	1
cis-1,2-Dichloroethene	**160**		1.0	0.41	ug/L			07/13/23 04:36	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/13/23 04:36	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/13/23 04:36	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/13/23 04:36	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/13/23 04:36	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/13/23 04:36	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/13/23 04:36	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/13/23 04:36	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			07/13/23 04:36	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/13/23 04:36	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/13/23 04:36	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/13/23 04:36	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/13/23 04:36	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/13/23 04:36	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/13/23 04:36	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/13/23 04:36	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/13/23 04:36	1
Ethylene Dibromide	<0.39		1.0	0.39	ug/L			07/13/23 04:36	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/13/23 04:36	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 04:36	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/13/23 04:36	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/13/23 04:36	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/13/23 04:36	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/13/23 04:36	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 04:36	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/13/23 04:36	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/13/23 04:36	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 04:36	1
Styrene	<0.39		1.0	0.39	ug/L			07/13/23 04:36	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 04:36	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/13/23 04:36	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/13/23 04:36	1
Tetrachloroethene	**380**		10	3.7	ug/L			07/13/23 05:00	10
Toluene	<0.15		0.50	0.15	ug/L			07/13/23 04:36	1
trans-1,2-Dichloroethene	**0.69**	**J**	1.0	0.35	ug/L			07/13/23 04:36	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/13/23 04:36	1

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Client Sample ID: MW-3
Date Collected: 07/06/23 11:00
Date Received: 07/08/23 10:10

Lab Sample ID: 500-236289-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/13/23 04:36	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/13/23 04:36	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/13/23 04:36	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/13/23 04:36	1
Trichloroethene	**11**		0.50	0.16	ug/L			07/13/23 04:36	1
Trichlorofluoromethane	<0.43	*-	1.0	0.43	ug/L			07/13/23 04:36	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			07/13/23 04:36	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/13/23 04:36	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/13/23 04:36	1
Vinyl chloride	<0.20	*-	1.0	0.20	ug/L			07/13/23 04:36	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/13/23 04:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*72 - 124*		*07/13/23 04:36*	*1*
4-Bromofluorobenzene (Surr)	*113*		*72 - 124*		*07/13/23 05:00*	*10*
Dibromofluoromethane (Surr)	*96*		*75 - 120*		*07/13/23 04:36*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 120*		*07/13/23 05:00*	*10*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 126*		*07/13/23 04:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*75 - 126*		*07/13/23 05:00*	*10*
Toluene-d8 (Surr)	*98*		*75 - 120*		*07/13/23 04:36*	*1*
Toluene-d8 (Surr)	*97*		*75 - 120*		*07/13/23 05:00*	*10*

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Client Sample ID: MW-4
Date Collected: 07/06/23 07:50
Date Received: 07/08/23 10:10

Lab Sample ID: 500-236289-5
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/13/23 02:59	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/13/23 02:59	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/13/23 02:59	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/13/23 02:59	1
Bromoform	<0.48		1.0	0.48	ug/L			07/13/23 02:59	1
Bromomethane	<0.80		3.0	0.80	ug/L			07/13/23 02:59	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/13/23 02:59	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/13/23 02:59	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/13/23 02:59	1
Chloroform	<0.37		2.0	0.37	ug/L			07/13/23 02:59	1
Chloromethane	<0.32	*-	5.0	0.32	ug/L			07/13/23 02:59	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/13/23 02:59	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/13/23 02:59	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/13/23 02:59	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/13/23 02:59	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/13/23 02:59	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/13/23 02:59	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/13/23 02:59	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/13/23 02:59	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/13/23 02:59	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/13/23 02:59	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			07/13/23 02:59	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/13/23 02:59	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/13/23 02:59	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/13/23 02:59	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/13/23 02:59	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/13/23 02:59	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/13/23 02:59	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/13/23 02:59	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/13/23 02:59	1
Ethylene Dibromide	<0.39		1.0	0.39	ug/L			07/13/23 02:59	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/13/23 02:59	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 02:59	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/13/23 02:59	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/13/23 02:59	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/13/23 02:59	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/13/23 02:59	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 02:59	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/13/23 02:59	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/13/23 02:59	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 02:59	1
Styrene	<0.39		1.0	0.39	ug/L			07/13/23 02:59	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 02:59	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/13/23 02:59	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/13/23 02:59	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/13/23 02:59	1
Toluene	<0.15		0.50	0.15	ug/L			07/13/23 02:59	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/13/23 02:59	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/13/23 02:59	1

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: MW-4
Lab Sample ID: 500-236289-5
Date Collected: 07/06/23 07:50
Matrix: Water
Date Received: 07/08/23 10:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/13/23 02:59	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/13/23 02:59	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/13/23 02:59	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/13/23 02:59	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/13/23 02:59	1
Trichlorofluoromethane	<0.43	*-	1.0	0.43	ug/L			07/13/23 02:59	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			07/13/23 02:59	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/13/23 02:59	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/13/23 02:59	1
Vinyl chloride	<0.20	*-	1.0	0.20	ug/L			07/13/23 02:59	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/13/23 02:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*72 - 124*		*07/13/23 02:59*	*1*
Dibromofluoromethane (Surr)	*94*		*75 - 120*		*07/13/23 02:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*		*07/13/23 02:59*	*1*
Toluene-d8 (Surr)	*98*		*75 - 120*		*07/13/23 02:59*	*1*

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Client Sample ID: MW-5
Date Collected: 07/06/23 09:25
Date Received: 07/08/23 10:10

Lab Sample ID: 500-236289-6
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/13/23 03:24	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/13/23 03:24	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/13/23 03:24	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/13/23 03:24	1
Bromoform	<0.48		1.0	0.48	ug/L			07/13/23 03:24	1
Bromomethane	<0.80		3.0	0.80	ug/L			07/13/23 03:24	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/13/23 03:24	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/13/23 03:24	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/13/23 03:24	1
Chloroform	<0.37		2.0	0.37	ug/L			07/13/23 03:24	1
Chloromethane	<0.32	*-	5.0	0.32	ug/L			07/13/23 03:24	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/13/23 03:24	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/13/23 03:24	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/13/23 03:24	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/13/23 03:24	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/13/23 03:24	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/13/23 03:24	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/13/23 03:24	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/13/23 03:24	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/13/23 03:24	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/13/23 03:24	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			07/13/23 03:24	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/13/23 03:24	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/13/23 03:24	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/13/23 03:24	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/13/23 03:24	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/13/23 03:24	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/13/23 03:24	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/13/23 03:24	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/13/23 03:24	1
Ethylene Dibromide	<0.39		1.0	0.39	ug/L			07/13/23 03:24	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/13/23 03:24	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 03:24	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/13/23 03:24	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/13/23 03:24	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/13/23 03:24	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/13/23 03:24	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 03:24	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/13/23 03:24	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/13/23 03:24	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 03:24	1
Styrene	<0.39		1.0	0.39	ug/L			07/13/23 03:24	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 03:24	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/13/23 03:24	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/13/23 03:24	1
Tetrachloroethene	**0.88**	**J**	1.0	0.37	ug/L			07/13/23 03:24	1
Toluene	<0.15		0.50	0.15	ug/L			07/13/23 03:24	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/13/23 03:24	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/13/23 03:24	1

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: MW-5
Lab Sample ID: 500-236289-6
Date Collected: 07/06/23 09:25
Matrix: Water
Date Received: 07/08/23 10:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/13/23 03:24	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/13/23 03:24	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/13/23 03:24	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/13/23 03:24	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/13/23 03:24	1
Trichlorofluoromethane	<0.43	*-	1.0	0.43	ug/L			07/13/23 03:24	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			07/13/23 03:24	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/13/23 03:24	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/13/23 03:24	1
Vinyl chloride	<0.20	*-	1.0	0.20	ug/L			07/13/23 03:24	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/13/23 03:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*72 - 124*		*07/13/23 03:24*	*1*
Dibromofluoromethane (Surr)	*95*		*75 - 120*		*07/13/23 03:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*		*07/13/23 03:24*	*1*
Toluene-d8 (Surr)	*97*		*75 - 120*		*07/13/23 03:24*	*1*

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Client Sample ID: MW-6

Date Collected: 07/06/23 09:55
Date Received: 07/08/23 10:10

Lab Sample ID: 500-236289-7

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/13/23 03:48	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/13/23 03:48	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/13/23 03:48	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/13/23 03:48	1
Bromoform	<0.48		1.0	0.48	ug/L			07/13/23 03:48	1
Bromomethane	<0.80		3.0	0.80	ug/L			07/13/23 03:48	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/13/23 03:48	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/13/23 03:48	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/13/23 03:48	1
Chloroform	<0.37		2.0	0.37	ug/L			07/13/23 03:48	1
Chloromethane	<0.32	*-	5.0	0.32	ug/L			07/13/23 03:48	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/13/23 03:48	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/13/23 03:48	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/13/23 03:48	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/13/23 03:48	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/13/23 03:48	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/13/23 03:48	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/13/23 03:48	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/13/23 03:48	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/13/23 03:48	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/13/23 03:48	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			07/13/23 03:48	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/13/23 03:48	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/13/23 03:48	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/13/23 03:48	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/13/23 03:48	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/13/23 03:48	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/13/23 03:48	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/13/23 03:48	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/13/23 03:48	1
Ethylene Dibromide	<0.39		1.0	0.39	ug/L			07/13/23 03:48	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/13/23 03:48	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 03:48	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/13/23 03:48	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/13/23 03:48	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/13/23 03:48	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/13/23 03:48	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 03:48	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/13/23 03:48	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/13/23 03:48	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 03:48	1
Styrene	<0.39		1.0	0.39	ug/L			07/13/23 03:48	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 03:48	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/13/23 03:48	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/13/23 03:48	1
Tetrachloroethene	**4.7**		1.0	0.37	ug/L			07/13/23 03:48	1
Toluene	<0.15		0.50	0.15	ug/L			07/13/23 03:48	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/13/23 03:48	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/13/23 03:48	1

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: MW-6
Lab Sample ID: 500-236289-7
Date Collected: 07/06/23 09:55
Matrix: Water
Date Received: 07/08/23 10:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/13/23 03:48	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/13/23 03:48	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/13/23 03:48	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/13/23 03:48	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/13/23 03:48	1
Trichlorofluoromethane	<0.43	*-	1.0	0.43	ug/L			07/13/23 03:48	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			07/13/23 03:48	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/13/23 03:48	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/13/23 03:48	1
Vinyl chloride	<0.20	*-	1.0	0.20	ug/L			07/13/23 03:48	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/13/23 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*72 - 124*		*07/13/23 03:48*	*1*
Dibromofluoromethane (Surr)	*93*		*75 - 120*		*07/13/23 03:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 126*		*07/13/23 03:48*	*1*
Toluene-d8 (Surr)	*97*		*75 - 120*		*07/13/23 03:48*	*1*

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Client Sample ID: MW-7
Date Collected: 07/06/23 10:45
Date Received: 07/08/23 10:10

Lab Sample ID: 500-236289-8
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/13/23 04:12	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/13/23 04:12	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/13/23 04:12	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/13/23 04:12	1
Bromoform	<0.48		1.0	0.48	ug/L			07/13/23 04:12	1
Bromomethane	<0.80		3.0	0.80	ug/L			07/13/23 04:12	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/13/23 04:12	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/13/23 04:12	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/13/23 04:12	1
Chloroform	<0.37		2.0	0.37	ug/L			07/13/23 04:12	1
Chloromethane	<0.32	*-	5.0	0.32	ug/L			07/13/23 04:12	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/13/23 04:12	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/13/23 04:12	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/13/23 04:12	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/13/23 04:12	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/13/23 04:12	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/13/23 04:12	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/13/23 04:12	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/13/23 04:12	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/13/23 04:12	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/13/23 04:12	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			07/13/23 04:12	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/13/23 04:12	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/13/23 04:12	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/13/23 04:12	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/13/23 04:12	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/13/23 04:12	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/13/23 04:12	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/13/23 04:12	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/13/23 04:12	1
Ethylene Dibromide	<0.39		1.0	0.39	ug/L			07/13/23 04:12	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/13/23 04:12	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 04:12	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/13/23 04:12	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/13/23 04:12	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/13/23 04:12	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/13/23 04:12	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/13/23 04:12	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/13/23 04:12	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/13/23 04:12	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 04:12	1
Styrene	<0.39		1.0	0.39	ug/L			07/13/23 04:12	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/13/23 04:12	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/13/23 04:12	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/13/23 04:12	1
Tetrachloroethene	**29**		1.0	0.37	ug/L			07/13/23 04:12	1
Toluene	<0.15		0.50	0.15	ug/L			07/13/23 04:12	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/13/23 04:12	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/13/23 04:12	1

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: MW-7
Lab Sample ID: 500-236289-8
Date Collected: 07/06/23 10:45
Matrix: Water
Date Received: 07/08/23 10:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/13/23 04:12	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/13/23 04:12	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/13/23 04:12	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/13/23 04:12	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/13/23 04:12	1
Trichlorofluoromethane	<0.43	*-	1.0	0.43	ug/L			07/13/23 04:12	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			07/13/23 04:12	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/13/23 04:12	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/13/23 04:12	1
Vinyl chloride	<0.20	*-	1.0	0.20	ug/L			07/13/23 04:12	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/13/23 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*72 - 124*		*07/13/23 04:12*	*1*
Dibromofluoromethane (Surr)	*96*		*75 - 120*		*07/13/23 04:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*		*07/13/23 04:12*	*1*
Toluene-d8 (Surr)	*96*		*75 - 120*		*07/13/23 04:12*	*1*

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Client Sample ID: Trip Blank

Date Collected: 07/06/23 00:00
Date Received: 07/08/23 10:10

Lab Sample ID: 500-236289-9

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/12/23 22:58	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/12/23 22:58	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/12/23 22:58	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/12/23 22:58	1
Bromoform	<0.48		1.0	0.48	ug/L			07/12/23 22:58	1
Bromomethane	<0.80		3.0	0.80	ug/L			07/12/23 22:58	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/12/23 22:58	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/12/23 22:58	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/12/23 22:58	1
Chloroform	<0.37		2.0	0.37	ug/L			07/12/23 22:58	1
Chloromethane	<0.32	*-	5.0	0.32	ug/L			07/12/23 22:58	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/12/23 22:58	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/12/23 22:58	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/12/23 22:58	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/12/23 22:58	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/12/23 22:58	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/12/23 22:58	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/12/23 22:58	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/12/23 22:58	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/12/23 22:58	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/12/23 22:58	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			07/12/23 22:58	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/12/23 22:58	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/12/23 22:58	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/12/23 22:58	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/12/23 22:58	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/12/23 22:58	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/12/23 22:58	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/12/23 22:58	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/12/23 22:58	1
Ethylene Dibromide	<0.39		1.0	0.39	ug/L			07/12/23 22:58	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/12/23 22:58	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/12/23 22:58	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/12/23 22:58	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/12/23 22:58	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/12/23 22:58	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/12/23 22:58	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/12/23 22:58	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/12/23 22:58	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/12/23 22:58	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/12/23 22:58	1
Styrene	<0.39		1.0	0.39	ug/L			07/12/23 22:58	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/12/23 22:58	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/12/23 22:58	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/12/23 22:58	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/12/23 22:58	1
Toluene	<0.15		0.50	0.15	ug/L			07/12/23 22:58	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/12/23 22:58	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/12/23 22:58	1

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: Trip Blank
Lab Sample ID: 500-236289-9
Date Collected: 07/06/23 00:00
Matrix: Water
Date Received: 07/08/23 10:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/12/23 22:58	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/12/23 22:58	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/12/23 22:58	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/12/23 22:58	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/12/23 22:58	1
Trichlorofluoromethane	<0.43	*-	1.0	0.43	ug/L			07/12/23 22:58	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			07/12/23 22:58	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/12/23 22:58	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/12/23 22:58	1
Vinyl chloride	<0.20	*-	1.0	0.20	ug/L			07/12/23 22:58	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/12/23 22:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*72 - 124*		*07/12/23 22:58*	*1*
Dibromofluoromethane (Surr)	*93*		*75 - 120*		*07/12/23 22:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 126*		*07/12/23 22:58*	*1*
Toluene-d8 (Surr)	*99*		*75 - 120*		*07/12/23 22:58*	*1*

Definitions/Glossary

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

GC/MS VOA

Analysis Batch: 722819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-236289-1	PZ-1	Total/NA	Water	8260D	
500-236289-2	MW-1	Total/NA	Water	8260D	
500-236289-2	MW-1	Total/NA	Water	8260D	
500-236289-3	MW-2	Total/NA	Water	8260D	
500-236289-4	MW-3	Total/NA	Water	8260D	
500-236289-4	MW-3	Total/NA	Water	8260D	
500-236289-5	MW-4	Total/NA	Water	8260D	
500-236289-6	MW-5	Total/NA	Water	8260D	
500-236289-7	MW-6	Total/NA	Water	8260D	
500-236289-8	MW-7	Total/NA	Water	8260D	
500-236289-9	Trip Blank	Total/NA	Water	8260D	
MB 500-722819/6	Method Blank	Total/NA	Water	8260D	
LCS 500-722819/4	Lab Control Sample	Total/NA	Water	8260D	

Surrogate Summary

Client: Giles Engineering Associates
Project/Site: Smoke Out Cleaners - 1E-1105024

Job ID: 500-236289-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(72-124)	(75-120)	(75-126)	(75-120)
500-236289-1	PZ-1	113	93	103	99
500-236289-2	MW-1	110	98	102	96
500-236289-2	MW-1	115	96	102	96
500-236289-3	MW-2	112	94	98	97
500-236289-4	MW-3	112	96	100	98
500-236289-4	MW-3	113	98	95	97
500-236289-5	MW-4	113	94	102	98
500-236289-6	MW-5	114	95	102	97
500-236289-7	MW-6	110	93	99	97
500-236289-8	MW-7	113	96	102	96
500-236289-9	Trip Blank	112	93	98	99
LCS 500-722819/4	Lab Control Sample	101	97	96	97
MB 500-722819/6	Method Blank	113	92	96	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 500-722819/6
Matrix: Water
Analysis Batch: 722819

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/12/23 22:07	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/12/23 22:07	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/12/23 22:07	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/12/23 22:07	1
Bromoform	<0.48		1.0	0.48	ug/L			07/12/23 22:07	1
Bromomethane	<0.80		3.0	0.80	ug/L			07/12/23 22:07	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/12/23 22:07	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/12/23 22:07	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/12/23 22:07	1
Chloroform	<0.37		2.0	0.37	ug/L			07/12/23 22:07	1
Chloromethane	<0.32		5.0	0.32	ug/L			07/12/23 22:07	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/12/23 22:07	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/12/23 22:07	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/12/23 22:07	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/12/23 22:07	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/12/23 22:07	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/12/23 22:07	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/12/23 22:07	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/12/23 22:07	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/12/23 22:07	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/12/23 22:07	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			07/12/23 22:07	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/12/23 22:07	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/12/23 22:07	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/12/23 22:07	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/12/23 22:07	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/12/23 22:07	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/12/23 22:07	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/12/23 22:07	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/12/23 22:07	1
Ethylene Dibromide	<0.39		1.0	0.39	ug/L			07/12/23 22:07	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/12/23 22:07	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/12/23 22:07	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/12/23 22:07	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/12/23 22:07	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/12/23 22:07	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/12/23 22:07	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/12/23 22:07	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/12/23 22:07	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/12/23 22:07	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/12/23 22:07	1
Styrene	<0.39		1.0	0.39	ug/L			07/12/23 22:07	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/12/23 22:07	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/12/23 22:07	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/12/23 22:07	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/12/23 22:07	1
Toluene	<0.15		0.50	0.15	ug/L			07/12/23 22:07	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/12/23 22:07	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 500-722819/6
Matrix: Water
Analysis Batch: 722819

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/12/23 22:07	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/12/23 22:07	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/12/23 22:07	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/12/23 22:07	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/12/23 22:07	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/12/23 22:07	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/12/23 22:07	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			07/12/23 22:07	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/12/23 22:07	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/12/23 22:07	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			07/12/23 22:07	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/12/23 22:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*72 - 124*		*07/12/23 22:07*	*1*
Dibromofluoromethane (Surr)	*92*		*75 - 120*		*07/12/23 22:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*75 - 126*		*07/12/23 22:07*	*1*
Toluene-d8 (Surr)	*96*		*75 - 120*		*07/12/23 22:07*	*1*

Lab Sample ID: LCS 500-722819/4
Matrix: Water
Analysis Batch: 722819

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	50.0	47.4		ug/L		95	70 - 120
Bromobenzene	50.0	45.8		ug/L		92	70 - 122
Bromochloromethane	50.0	43.2		ug/L		86	65 - 122
Bromodichloromethane	50.0	43.6		ug/L		87	69 - 120
Bromoform	50.0	37.6		ug/L		75	56 - 132
Bromomethane	50.0	52.6		ug/L		105	40 - 152
Carbon tetrachloride	50.0	45.8		ug/L		92	59 - 133
Chlorobenzene	50.0	46.5		ug/L		93	70 - 120
Chloroethane	50.0	57.4		ug/L		115	48 - 136
Chloroform	50.0	45.9		ug/L		92	70 - 120
Chloromethane	50.0	52.7		ug/L		105	56 - 152
2-Chlorotoluene	50.0	46.2		ug/L		92	70 - 125
4-Chlorotoluene	50.0	45.6		ug/L		91	68 - 124
cis-1,2-Dichloroethene	50.0	45.6		ug/L		91	70 - 125
cis-1,3-Dichloropropene	50.0	45.1		ug/L		90	64 - 127
Dibromochloromethane	50.0	39.9		ug/L		80	68 - 125
1,2-Dibromo-3-Chloropropane	50.0	36.5		ug/L		73	56 - 123
Dibromomethane	50.0	42.5		ug/L		85	70 - 120
1,2-Dichlorobenzene	50.0	43.5		ug/L		87	70 - 125
1,3-Dichlorobenzene	50.0	43.9		ug/L		88	70 - 125
1,4-Dichlorobenzene	50.0	43.4		ug/L		87	70 - 120
Dichlorodifluoromethane	50.0	66.3		ug/L		133	40 - 159
1,1-Dichloroethane	50.0	47.1		ug/L		94	70 - 125
1,2-Dichloroethane	50.0	45.1		ug/L		90	68 - 127

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 500-722819/4
Matrix: Water
Analysis Batch: 722819

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	50.0	47.7		ug/L		95	67 - 122
1,2-Dichloropropane	50.0	45.8		ug/L		92	67 - 130
1,3-Dichloropropane	50.0	48.8		ug/L		98	62 - 136
2,2-Dichloropropane	50.0	44.8		ug/L		90	58 - 139
1,1-Dichloropropene	50.0	49.6		ug/L		99	70 - 121
Ethylbenzene	50.0	45.2		ug/L		90	70 - 123
Ethylene Dibromide	50.0	44.6		ug/L		89	70 - 125
Hexachlorobutadiene	50.0	55.8		ug/L		112	51 - 150
Isopropylbenzene	50.0	47.7		ug/L		95	70 - 126
Methylene Chloride	50.0	45.3		ug/L		91	69 - 125
Methyl tert-butyl ether	50.0	47.7		ug/L		95	55 - 123
Naphthalene	50.0	36.4		ug/L		73	53 - 144
n-Butylbenzene	50.0	44.8		ug/L		90	68 - 125
N-Propylbenzene	50.0	46.3		ug/L		93	69 - 127
p-Isopropyltoluene	50.0	46.5		ug/L		93	70 - 125
sec-Butylbenzene	50.0	47.0		ug/L		94	70 - 123
Styrene	50.0	45.6		ug/L		91	70 - 120
tert-Butylbenzene	50.0	47.1		ug/L		94	70 - 121
1,1,1,2-Tetrachloroethane	50.0	42.9		ug/L		86	70 - 125
1,1,2,2-Tetrachloroethane	50.0	43.1		ug/L		86	62 - 140
Tetrachloroethene	50.0	50.2		ug/L		100	70 - 128
Toluene	50.0	43.3		ug/L		87	70 - 125
trans-1,2-Dichloroethene	50.0	46.7		ug/L		93	70 - 125
trans-1,3-Dichloropropene	50.0	43.1		ug/L		86	62 - 128
1,2,3-Trichlorobenzene	50.0	41.2		ug/L		82	51 - 145
1,2,4-Trichlorobenzene	50.0	42.6		ug/L		85	57 - 137
1,1,1-Trichloroethane	50.0	47.2		ug/L		94	70 - 125
1,1,2-Trichloroethane	50.0	42.9		ug/L		86	71 - 130
Trichloroethene	50.0	45.9		ug/L		92	70 - 125
Trichlorofluoromethane	50.0	54.2		ug/L		108	55 - 128
1,2,3-Trichloropropane	50.0	46.7		ug/L		93	50 - 133
1,2,4-Trimethylbenzene	50.0	46.9		ug/L		94	70 - 123
1,3,5-Trimethylbenzene	50.0	47.6		ug/L		95	70 - 123
Vinyl chloride	50.0	57.1		ug/L		114	64 - 126
Xylenes, Total	100	91.9		ug/L		92	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*72 - 124*
Dibromofluoromethane (Surr)	*97*		*75 - 120*
1,2-Dichloroethane-d4 (Surr)	*96*		*75 - 126*
Toluene-d8 (Surr)	*97*		*75 - 120*

Lab Chronicle

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: PZ-1
Lab Sample ID: 500-236289-1
Date Collected: 07/06/23 12:10
Matrix: Water
Date Received: 07/08/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	722819	AJP	EET CHI	07/13/23 02:11

Client Sample ID: MW-1
Lab Sample ID: 500-236289-2
Date Collected: 07/06/23 12:15
Matrix: Water
Date Received: 07/08/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		5	722819	AJP	EET CHI	07/13/23 05:25
Total/NA	Analysis	8260D		50	722819	AJP	EET CHI	07/13/23 05:49

Client Sample ID: MW-2
Lab Sample ID: 500-236289-3
Date Collected: 07/06/23 08:50
Matrix: Water
Date Received: 07/08/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	722819	AJP	EET CHI	07/13/23 02:35

Client Sample ID: MW-3
Lab Sample ID: 500-236289-4
Date Collected: 07/06/23 11:00
Matrix: Water
Date Received: 07/08/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	722819	AJP	EET CHI	07/13/23 04:36
Total/NA	Analysis	8260D		10	722819	AJP	EET CHI	07/13/23 05:00

Client Sample ID: MW-4
Lab Sample ID: 500-236289-5
Date Collected: 07/06/23 07:50
Matrix: Water
Date Received: 07/08/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	722819	AJP	EET CHI	07/13/23 02:59

Client Sample ID: MW-5
Lab Sample ID: 500-236289-6
Date Collected: 07/06/23 09:25
Matrix: Water
Date Received: 07/08/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	722819	AJP	EET CHI	07/13/23 03:24

Client Sample ID: MW-6
Lab Sample ID: 500-236289-7
Date Collected: 07/06/23 09:55
Matrix: Water
Date Received: 07/08/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	722819	AJP	EET CHI	07/13/23 03:48

Lab Chronicle

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Client Sample ID: MW-7
Lab Sample ID: 500-236289-8
Date Collected: 07/06/23 10:45
Matrix: Water
Date Received: 07/08/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	722819	AJP	EET CHI	07/13/23 04:12

Client Sample ID: Trip Blank
Lab Sample ID: 500-236289-9
Date Collected: 07/06/23 00:00
Matrix: Water
Date Received: 07/08/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	722819	AJP	EET CHI	07/12/23 22:58

Laboratory References:
EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Giles Engineering Associates
Job ID: 500-236289-1
Project/Site: Smoke Out Cleaners - 1E-1105024

Laboratory: Eurofins Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-23

Eurofins Chicago
2417 Bond Street
University Park IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins

500-236289 COC

Client Information	Sampler: Cody Reich	Lab PM: Fredrick Sandie	COC No: 500-113906-45067 1
Client Contact: Cody Reich / Kevin Bugel Kbugel@gilesengr.com / Michelle Reed	Phone: 262-544-0118	E-Mail: Sandra Fredrick@et eurofinsus com	Page: Page 1 of 1
Company: Giles Eng neering Associates	PWSID	Analysis R	Job #: 500-236289
Address: N8 W 22350 Johnson Road	Due Date Requested		
City: Waukesha	TAT Requested (days): 7 business days		
State, Zip: WI 53186	Compliance Project: Δ Yes Δ No		
Phone: 262-544-0118	PO #: Purchase Order not required		
Email: creich@gilesengr com / Kbugel@gilesengr.com / mpeed@gilesengr com	WO #:		
Project Name: Smoke Out Cleaners 1E 1105024	Project #: 50006545		
Site:	SSOW#:		

Preservation Codes

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Ammchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4 5, Y Trizma, Z other (specify)

Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - VOC	Total Number of containers	Special Instructions/Note
				Preservation Code:				A		
1	PZ-1	7-6-23	1210	G	Water			X		
2	MW-1		1215		Water					
3	MW-2		850		Water					
4	MW-3		1100		Water					
5	MW-4		750		Water					
6	MW-5		925		Water					
7	MW-6		955		Water					
8	MW-7		1045		Water					
9	Trip Blank		N/A	N/A	Water					
					Water					

Possible Hazard Identification
Non-Hazard, Flammable, Skin Irritant, Poison B, Unknown, Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Return To Client, Disposal By Lab, Archive For ____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:
Relinquished by: Alyssa Magnan	Date/Time: 7/7/23 11:00	Company: Giles	Received by: ER — Date/Time: 7 7 23 11 43 — Company: Eurofins
Relinquished by: ER	Date/Time: 7 7 23 14 25	Company: Eurofins	Received by: Stephanie Hennessy — Date/Time: 7/8/23 1010 — Company: EETA
Relinquished by	Date/Time	Company	Received by — Date/Time — Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks: 5.6 + 4.5


ORIGIN ID:RRLA (262) 202-
IAN EVANS
EUROFINS TESTAMERICA
4125 N 124TH ST.
SUITE F (REAR)
BROOKFIELD, WI 53005
UNITED STATES US

SHIP DATE: 07JUL23
ACTWGT: 59.90 LB
CAD: 0269688/CAFE3709

BILL RECIPIENT

TO SAMPLE RECEIPT
EUROFINS
2417 BOND ST.

UNIVERSITY PARK IL 60484
(262) 202-5955

INV:
PO:
REF:
DEPT:

FedEx Express

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 6578 9770 8240

XO JOTA

60484
IL-US ORD

500-236289 Waybi

Login Sample Receipt Checklist

Client: Giles Engineering Associates

Job Number: 500-236289-1

Login Number: 236289
List Number: 1
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX E

Sub-Slab Vapor Laboratory Report and Chain-of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Michelle Peed
Giles Engineering Associates
N8 W 22350 Johnson Road
Waukesha, Wisconsin 53186

Generated 7/12/2023 10:31:23 PM

JOB DESCRIPTION

Smokeout Cleaners 1E-1105024

JOB NUMBER

140-32577-1

Eurofins Knoxville
5815 Middlebrook Pike
Knoxville TN 37921

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization

Generated
7/12/2023 10:31:23 PM

Authorized for release by
Jamie McKinney, Senior Project Manager
Jamie.McKinney@et.eurofinsus.com
(865)291-3000

Table of Contents

Definitions/Glossary

Client: Giles Engineering Associates
Job ID: 140-32577-1
Project/Site: Smokeout Cleaners 1E-1105024

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32577-1

Job ID: 140-32577-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-32577-1

Comments
No additional comments.

Receipt
The sample was received on 7/7/2023 9:30 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice.

Receipt Exceptions
The Field Sampler was not listed on the Chain of Custody.

Air - GC/MS VOA
Methods TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by Eurofins TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32577-1

Client Sample ID: SS-12

Lab Sample ID: 140-32577-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	390		6.9	1.0	ppb v/v	3.44		TO-15	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2600		47	6.8	ug/m3	3.44		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32577-1

Client Sample ID: SS-12

Date Collected: 07/05/23 15:50
Date Received: 07/07/23 09:30
Sample Container: Summa Canister 6L

Lab Sample ID: 140-32577-1

Matrix: Air

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		6.9	0.86	ppb v/v			07/11/23 17:26	3.44
Tetrachloroethene	**390**		6.9	1.0	ppb v/v			07/11/23 17:26	3.44
trans-1,2-Dichloroethene	ND		6.9	1.1	ppb v/v			07/11/23 17:26	3.44
Trichloroethene	ND		6.9	1.1	ppb v/v			07/11/23 17:26	3.44
Vinyl chloride	ND		14	2.2	ppb v/v			07/11/23 17:26	3.44

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		27	3.4	ug/m3			07/11/23 17:26	3.44
Tetrachloroethene	**2600**		47	6.8	ug/m3			07/11/23 17:26	3.44
trans-1,2-Dichloroethene	ND		27	4.5	ug/m3			07/11/23 17:26	3.44
Trichloroethene	ND		37	6.1	ug/m3			07/11/23 17:26	3.44
Vinyl chloride	ND		35	5.7	ug/m3			07/11/23 17:26	3.44

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*60 - 140*		*07/11/23 17:26*	*3.44*

Default Detection Limits

Client: Giles Engineering Associates
Job ID: 140-32577-1
Project/Site: Smokeout Cleaners 1E-1105024

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	RL	MDL	Units
cis-1,2-Dichloroethene	0.20	0.025	ppb v/v
cis-1,2-Dichloroethene	0.79	0.099	ug/m3
Tetrachloroethene	0.20	0.029	ppb v/v
Tetrachloroethene	1.4	0.20	ug/m3
trans-1,2-Dichloroethene	0.20	0.033	ppb v/v
trans-1,2-Dichloroethene	0.79	0.13	ug/m3
Trichloroethene	0.20	0.033	ppb v/v
Trichloroethene	1.1	0.18	ug/m3
Vinyl chloride	0.40	0.065	ppb v/v
Vinyl chloride	1.0	0.17	ug/m3

Surrogate Summary

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32577-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Matrix: Air

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(60-140)								
140-32577-1	SS-12	90								
LCS 140-75166/1002	Lab Control Sample	100								
MB 140-75166/5	Method Blank	91								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 140-75166/5
Matrix: Air
Analysis Batch: 75166

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.20	0.025	ppb v/v			07/11/23 10:36	1
Tetrachloroethene	ND		0.20	0.029	ppb v/v			07/11/23 10:36	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ppb v/v			07/11/23 10:36	1
Trichloroethene	ND		0.20	0.033	ppb v/v			07/11/23 10:36	1
Vinyl chloride	ND		0.40	0.065	ppb v/v			07/11/23 10:36	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.79	0.099	ug/m3			07/11/23 10:36	1
Tetrachloroethene	ND		1.4	0.20	ug/m3			07/11/23 10:36	1
trans-1,2-Dichloroethene	ND		0.79	0.13	ug/m3			07/11/23 10:36	1
Trichloroethene	ND		1.1	0.18	ug/m3			07/11/23 10:36	1
Vinyl chloride	ND		1.0	0.17	ug/m3			07/11/23 10:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*60 - 140*		*07/11/23 10:36*	*1*

Lab Sample ID: LCS 140-75166/1002
Matrix: Air
Analysis Batch: 75166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	3.20	2.78		ppb v/v		87	70 - 130
Tetrachloroethene	3.20	2.60		ppb v/v		81	70 - 130
trans-1,2-Dichloroethene	3.20	2.79		ppb v/v		87	70 - 130
Trichloroethene	3.20	2.66		ppb v/v		83	70 - 130
Vinyl chloride	3.20	3.12		ppb v/v		97	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	13	11.0		ug/m3		87	70 - 130
Tetrachloroethene	22	17.6		ug/m3		81	70 - 130
trans-1,2-Dichloroethene	13	11.0		ug/m3		87	70 - 130
Trichloroethene	17	14.3		ug/m3		83	70 - 130
Vinyl chloride	8.2	7.97		ug/m3		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*

QC Association Summary

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32577-1

Air - GC/MS VOA

Analysis Batch: 75166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32577-1	SS-12	Total/NA	Air	TO-15	
MB 140-75166/5	Method Blank	Total/NA	Air	TO-15	
LCS 140-75166/1002	Lab Control Sample	Total/NA	Air	TO-15	

Lab Chronicle

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32577-1

Client Sample ID: SS-12

Lab Sample ID: 140-32577-1

Date Collected: 07/05/23 15:50

Matrix: Air

Date Received: 07/07/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		3.44	20 mL	500 mL	75166	07/11/23 17:26	S1K	EET KNX
	Instrument ID: MS									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-75166/5

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	200 mL	500 mL	75166	07/11/23 10:36	S1K	EET KNX
	Instrument ID: MS									

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-75166/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	500 mL	500 mL	75166	07/11/23 08:22	S1K	EET KNX
	Instrument ID: MS									

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: Giles Engineering Associates
Job ID: 140-32577-1
Project/Site: Smokeout Cleaners 1E-1105024

Laboratory: Eurofins Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-24
Colorado	State	TN00009	02-29-24
Connecticut	State	PH-0223	09-30-23
Florida	NELAP	E87177	06-30-24
Georgia (DW)	State	906	07-27-25
Hawaii	State	NA	07-27-23
Kansas	NELAP	E-10349	10-31-23
Kentucky (DW)	State	90101	12-31-23
Louisiana (All)	NELAP	83979	06-30-24
Louisiana (DW)	State	LA019	12-31-23
Maryland	State	277	03-31-24
Michigan	State	9933	07-27-25
Nevada	State	TN00009	07-31-23
New Hampshire	NELAP	2999	01-17-24
New Jersey	NELAP	TN001	07-01-24
New York	NELAP	10781	03-31-24
North Carolina (DW)	State	21705	07-31-23
North Carolina (WW/SW)	State	64	12-31-23
Oklahoma	State	9415	08-31-23
Oregon	NELAP	TNI0189	01-01-24
Pennsylvania	NELAP	68-00576	12-01-23
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-22-17	08-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	525-22-279-18762	10-06-25
Utah	NELAP	TN00009	07-31-23
Virginia	NELAP	460176	09-14-23
Washington	State	C593	01-19-24
West Virginia (DW)	State	9955C	12-31-23
West Virginia DEP	State	345	04-30-24
Wisconsin	State	998044300	08-31-23

Method Summary

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32577-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	EET KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32577-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
140-32577-1	SS-12	Air	07/05/23 15:50	07/07/23 09:30	Air Canister (6-Liter) #10825

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921-5947
phone 865.291.3000 fax 865.584.4315

Canister Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

eurofins | Environment Testing TestAmerica

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact Information	**Client Project Manager:** Michelle Reed	**Samples Collected By:**	COC No:
Company Name: Giles Engineering Assoc.	**Phone:** 262-544-0118		____ of ____ COCs
Address: N8 W22350 Johnson Dr Ste A1	**Email:** mreed@gilesengr.com		TALS Project #:
City/State/Zip Waukesha, WI 53186			**For Lab Use Only:**
Phone: 262-544-0118	**Site Contact:**		Walk-in Client:
FAX:	**Tel/Fax**		Lab Sampling:
Project Name:	**Analysis Turnaround Time**		
Site/Location:	Standard (Specific): 7 business days		Job / SDG No.:
P O #	Rush (Specifiy):		(See below for Add'l Items)

Sample Identification	Sample Start Date	Time Start	Sample End Date	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-14(15) (Standard / Low Level)	TO-15 SIM	EPA 3C	EPA 25C	ASTM D-1946	EPA 15/16	Other (Please specify in notes section)	Sample Type	Indoor Air/Ambient Air	Sub-Slab	Soil Gas	Soil Vapor Extraction (SVE)	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
SS-12	7-5-23	1520	7-5-23	1550	-27	-5	09959	10825	X									X					
Custody Seal Intact																							
Received Ambient																							
DH 7/7/23																							
1 Box FedEx 6471 4648 1118 PD																							

140-32577 Chain of Custody

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

Pressure (inches of Hg)			
Start	Interior	Ambient	
Stop			

Special Instructions/QC Requirements & Comments:
Analyze for: PCE, TCE, Cis + trans 1,2-DCE, Vinyl Chloride

Samples Shipped by: Cody L Bleck	**Date / Time:** 7-6-23 1645	**Samples Received by:** Deana Hicks ETA KNX 7/7/23 9:30
Samples Relinquished by: Cody L Bleck	**Date / Time:** 7-6-23-1645	**Received by:**
Relinquished by:	**Date / Time:**	**Received by:**

Lab Use Only: **Shipper Name:** **Opened by:** **Condition:**

Form No. CA-C-WI-003, Rev. 2.23, dated 5/4/2020

7/12/2023

Loc: 140
32577

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	✓			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?		✓		☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

10.

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 14001840 PM Instructions: _____

Sample Receiving Associate: Dean Hick Date: 7/7/23

QA026R32.doc, 062719

Eurofins Knoxville - Air Canister Initial Pressure Check

Gauge ID: g5
Date/Time: 7/7/23 1515

Analyst	Sample ID	Pressure @ Receipt (-in Hg or +psig)/initial pressurisation (if applicable)	Asset #	Cleaning Job	Cert Type	Size (L)	Comments
BTB	140-32577-a-1	-5.2	10825	140-31758-a-16	B	6	

Summa Canister Dilution Worksheet

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job No.: 140-32577-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Pressure Gauge ID	Date	Analyst Initals
140-32577-1	6	-5.6	0.81	4.88	26.4	2.80	16.78		3.44	3.44	g5	07/10/23 11:58	AFB

Formulae:

Preadjusted Volume (L) = ((Preadjusted Pressure ("Hg) + 29.92 "Hg) * Vol L) / 29.92 "Hg
Adjusted Volume (L) = ((Adjusted Pressure (psig) + 14.7 psig)* Vol L) / 14.7 psig
Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury (“Hg)
14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

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ANALYTICAL REPORT

PREPARED FOR

Attn: Michelle Peed
Giles Engineering Associates
N8 W 22350 Johnson Road
Waukesha, Wisconsin 53186

Generated 7/12/2023 10:39:34 PM

JOB DESCRIPTION

Smokeout Cleaners 1E-1105024

JOB NUMBER

140-32578-1

Eurofins Knoxville
5815 Middlebrook Pike
Knoxville TN 37921

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization

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Authorized for release by
Jamie McKinney, Senior Project Manager
Jamie.McKinney@et.eurofinsus.com
(865)291-3000

Table of Contents

Definitions/Glossary

Client: Giles Engineering Associates
Job ID: 140-32578-1
Project/Site: Smokeout Cleaners 1E-1105024

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32578-1

Job ID: 140-32578-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-32578-1

Comments
No additional comments.

Receipt
The samples were received on 7/7/2023 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice.

Air - GC/MS VOA
Methods TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by Eurofins TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32578-1

Client Sample ID: SS-14 — Lab Sample ID: 140-32578-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	21	J	120	15	ppb v/v	45.83		TO-15	Total/NA
Tetrachloroethene	9800		120	18	ppb v/v	45.83		TO-15	Total/NA
Trichloroethene	64	J	120	20	ppb v/v	45.83		TO-15	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	83	J	480	61	ug/m3	45.83		TO-15	Total/NA
Tetrachloroethene	67000		830	120	ug/m3	45.83		TO-15	Total/NA
Trichloroethene	340	J	660	110	ug/m3	45.83		TO-15	Total/NA

Client Sample ID: SS-15 — Lab Sample ID: 140-32578-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1400		480	60	ppb v/v	1311.97		TO-15	Total/NA
Tetrachloroethene	44000		480	69	ppb v/v	1311.97		TO-15	Total/NA
trans-1,2-Dichloroethene	300	J	480	79	ppb v/v	1311.97		TO-15	Total/NA
Trichloroethene	610		480	79	ppb v/v	1311.97		TO-15	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	5600		1900	240	ug/m3	1311.97		TO-15	Total/NA
Tetrachloroethene	300000		3200	470	ug/m3	1311.97		TO-15	Total/NA
trans-1,2-Dichloroethene	1200	J	1900	310	ug/m3	1311.97		TO-15	Total/NA
Trichloroethene	3300		2600	420	ug/m3	1311.97		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Giles Engineering Associates
Job ID: 140-32578-1
Project/Site: Smokeout Cleaners 1E-1105024

Client Sample ID: SS-14
Lab Sample ID: 140-32578-1
Date Collected: 07/05/23 14:40
Matrix: Air
Date Received: 07/07/23 09:30
Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	21	J	120	15	ppb v/v			07/11/23 15:52	45.83
Tetrachloroethene	9800		120	18	ppb v/v			07/11/23 15:52	45.83
trans-1,2-Dichloroethene	ND		120	20	ppb v/v			07/11/23 15:52	45.83
Trichloroethene	64	J	120	20	ppb v/v			07/11/23 15:52	45.83
Vinyl chloride	ND		240	40	ppb v/v			07/11/23 15:52	45.83

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	83	J	480	61	ug/m3			07/11/23 15:52	45.83
Tetrachloroethene	67000		830	120	ug/m3			07/11/23 15:52	45.83
trans-1,2-Dichloroethene	ND		480	80	ug/m3			07/11/23 15:52	45.83
Trichloroethene	340	J	660	110	ug/m3			07/11/23 15:52	45.83
Vinyl chloride	ND		620	100	ug/m3			07/11/23 15:52	45.83

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*60 - 140*		*07/11/23 15:52*	*45.83*

Client Sample ID: SS-15
Lab Sample ID: 140-32578-2
Date Collected: 07/05/23 14:55
Matrix: Air
Date Received: 07/07/23 09:30
Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1400		480	60	ppb v/v			07/11/23 16:38	1311.97
Tetrachloroethene	44000		480	69	ppb v/v			07/11/23 16:38	1311.97
trans-1,2-Dichloroethene	300	J	480	79	ppb v/v			07/11/23 16:38	1311.97
Trichloroethene	610		480	79	ppb v/v			07/11/23 16:38	1311.97
Vinyl chloride	ND		950	160	ppb v/v			07/11/23 16:38	1311.97

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	5600		1900	240	ug/m3			07/11/23 16:38	1311.97
Tetrachloroethene	300000		3200	470	ug/m3			07/11/23 16:38	1311.97
trans-1,2-Dichloroethene	1200	J	1900	310	ug/m3			07/11/23 16:38	1311.97
Trichloroethene	3300		2600	420	ug/m3			07/11/23 16:38	1311.97
Vinyl chloride	ND		2400	400	ug/m3			07/11/23 16:38	1311.97

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*60 - 140*		*07/11/23 16:38*	*1311.97*

Default Detection Limits

Client: Giles Engineering Associates
Job ID: 140-32578-1
Project/Site: Smokeout Cleaners 1E-1105024

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	RL	MDL	Units
cis-1,2-Dichloroethene	0.20	0.025	ppb v/v
cis-1,2-Dichloroethene	0.79	0.099	ug/m3
Tetrachloroethene	0.20	0.029	ppb v/v
Tetrachloroethene	1.4	0.20	ug/m3
trans-1,2-Dichloroethene	0.20	0.033	ppb v/v
trans-1,2-Dichloroethene	0.79	0.13	ug/m3
Trichloroethene	0.20	0.033	ppb v/v
Trichloroethene	1.1	0.18	ug/m3
Vinyl chloride	0.40	0.065	ppb v/v
Vinyl chloride	1.0	0.17	ug/m3

Surrogate Summary

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32578-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Matrix: Air

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-32578-1	SS-14	91
140-32578-2	SS-15	90
LCS 140-75166/1002	Lab Control Sample	100
MB 140-75166/5	Method Blank	91

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 140-75166/5
Matrix: Air
Analysis Batch: 75166

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.20	0.025	ppb v/v			07/11/23 10:36	1
Tetrachloroethene	ND		0.20	0.029	ppb v/v			07/11/23 10:36	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ppb v/v			07/11/23 10:36	1
Trichloroethene	ND		0.20	0.033	ppb v/v			07/11/23 10:36	1
Vinyl chloride	ND		0.40	0.065	ppb v/v			07/11/23 10:36	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.79	0.099	ug/m3			07/11/23 10:36	1
Tetrachloroethene	ND		1.4	0.20	ug/m3			07/11/23 10:36	1
trans-1,2-Dichloroethene	ND		0.79	0.13	ug/m3			07/11/23 10:36	1
Trichloroethene	ND		1.1	0.18	ug/m3			07/11/23 10:36	1
Vinyl chloride	ND		1.0	0.17	ug/m3			07/11/23 10:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*60 - 140*		*07/11/23 10:36*	*1*

Lab Sample ID: LCS 140-75166/1002
Matrix: Air
Analysis Batch: 75166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	3.20	2.78		ppb v/v		87	70 - 130
Tetrachloroethene	3.20	2.60		ppb v/v		81	70 - 130
trans-1,2-Dichloroethene	3.20	2.79		ppb v/v		87	70 - 130
Trichloroethene	3.20	2.66		ppb v/v		83	70 - 130
Vinyl chloride	3.20	3.12		ppb v/v		97	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	13	11.0		ug/m3		87	70 - 130
Tetrachloroethene	22	17.6		ug/m3		81	70 - 130
trans-1,2-Dichloroethene	13	11.0		ug/m3		87	70 - 130
Trichloroethene	17	14.3		ug/m3		83	70 - 130
Vinyl chloride	8.2	7.97		ug/m3		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*

QC Association Summary

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32578-1

Air - GC/MS VOA

Analysis Batch: 75166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32578-1	SS-14	Total/NA	Air	TO-15	
140-32578-2	SS-15	Total/NA	Air	TO-15	
MB 140-75166/5	Method Blank	Total/NA	Air	TO-15	
LCS 140-75166/1002	Lab Control Sample	Total/NA	Air	TO-15	

Lab Chronicle

Client: Giles Engineering Associates
Job ID: 140-32578-1
Project/Site: Smokeout Cleaners 1E-1105024

Client Sample ID: SS-14
Lab Sample ID: 140-32578-1
Date Collected: 07/05/23 14:40
Matrix: Air
Date Received: 07/07/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		45.83	15 mL	500 mL	75166	07/11/23 15:52	S1K	EET KNX
	Instrument ID: MS									

Client Sample ID: SS-15
Lab Sample ID: 140-32578-2
Date Collected: 07/05/23 14:55
Matrix: Air
Date Received: 07/07/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1311.97	110 mL	500 mL	75166	07/11/23 16:38	S1K	EET KNX
	Instrument ID: MS									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-75166/5
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	200 mL	500 mL	75166	07/11/23 10:36	S1K	EET KNX
	Instrument ID: MS									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-75166/1002
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	500 mL	500 mL	75166	07/11/23 08:22	S1K	EET KNX
	Instrument ID: MS									

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: Giles Engineering Associates
Job ID: 140-32578-1
Project/Site: Smokeout Cleaners 1E-1105024

Laboratory: Eurofins Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-24
Colorado	State	TN00009	02-29-24
Connecticut	State	PH-0223	09-30-23
Florida	NELAP	E87177	06-30-24
Georgia (DW)	State	906	07-27-25
Hawaii	State	NA	07-27-23
Kansas	NELAP	E-10349	10-31-23
Kentucky (DW)	State	90101	12-31-23
Louisiana (All)	NELAP	83979	06-30-24
Louisiana (DW)	State	LA019	12-31-23
Maryland	State	277	03-31-24
Michigan	State	9933	07-27-25
Nevada	State	TN00009	07-31-23
New Hampshire	NELAP	2999	01-17-24
New Jersey	NELAP	TN001	07-01-24
New York	NELAP	10781	03-31-24
North Carolina (DW)	State	21705	07-31-23
North Carolina (WW/SW)	State	64	12-31-23
Oklahoma	State	9415	08-31-23
Oregon	NELAP	TNI0189	01-01-24
Pennsylvania	NELAP	68-00576	12-01-23
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-22-17	08-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	525-22-279-18762	10-06-25
Utah	NELAP	TN00009	07-31-23
Virginia	NELAP	460176	09-14-23
Washington	State	C593	01-19-24
West Virginia (DW)	State	9955C	12-31-23
West Virginia DEP	State	345	04-30-24
Wisconsin	State	998044300	08-31-23

Method Summary

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32578-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	EET KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job ID: 140-32578-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
140-32578-1	SS-14	Air	07/05/23 14:40	07/07/23 09:30	Air Canister (6-Liter) #34002040
140-32578-2	SS-15	Air	07/05/23 14:55	07/07/23 09:30	Air Canister (6-Liter) #10106

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921-5947
phone 865.291.3000 fax 865.584.4315

Canister Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

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TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact Information	**Client Project Manager:** Michelle Peed	**Samples Collected By:** Cody Reich	COC No: 1 of 1 COCs
Company Name: Giles Engineering Assoc.	Phone: 262-544-0118		TALS Project #:
Address: N8 W22350 Johnson Dr Ste A1	Email: mpeed@gilesengr.com		**For Lab Use Only:** Walk-in Client: / Lab Sampling:
City/State/Zip Waukesha, WI 53186			Job / SDG No.: (See below for Add'l Items)
Phone: 262-544-0118	**Site Contact:**		
FAX:	**Tel/Fax**		
Project Name:	**Analysis Turnaround Time**		
Site/Location:	Standard (Specific): 7 business day		
P O #	Rush (Specifiy):		

Sample Identification	Sample Start Date	Time Start	Sample End Date	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-14(15) (Standard / Low Level)	TO-15 SIM	EPA 3C	EPA 25C	ASTM D-1946	EPA 15/16	Other (Please specify in notes section)	Sample Type	Indoor Air/Ambient Air	Sub-Slab	Soil Gas	Soil Vapor Extraction (SVE)	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
SS-14	7-5-23	1410	7-5-23	1440	-26	-6	7667	7905	X									X					
SS-15	↓	1425	↓	1455	-27	-5	10104	10106	↓									↓					
Custody Seal Intact																							
Received Ambient																							
DH 7/7/23																							
1 Box FedEx 6471 4648 1118 Pd																							

140-32578 Chain of Custody

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

Pressure (inches of Hg)			
Start	Interior	Ambient	
Stop			

Special Instructions/QC Requirements & Comments:
Analyze for: PCE, TCE, Cis and trans 1,2-DCE, Vinyl Chloride

Samples Shipped by: Cody Reich	**Date / Time:** 7-6-23 1645	**Samples Received by:** Dan Hick ETA KNX 7/7/23 9:30	
Samples Relinquished by: Cody Reich	**Date / Time:** 7-6-23 1645	**Received by:**	
Relinquished by:	**Date / Time:**	**Received by:**	
Lab Use Only:	**Shipper Name:**	**Opened by:**	**Condition:**

Form No. CA-C-WI-003, Rev. 2.23, dated 5/4/2020

7/12/2023

Loc: 140
32578

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	✓			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 1400184 PM Instructions:

Sample Receiving Associate: Deana Hicks Date: 7/7/23

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Eurofins Knoxville - Air Canister Initial Pressure Check

Gauge ID: g5
Date/Time: 7/7/23 1500

Analyst	Sample ID	Pressure @ Receipt (-in Hg or +psig)/initial pressurisation (if applicable)	Asset #	Cleaning Job	Cert Type	Size (L)	Comments
BTB	140-32578-a-1	-7.3/0.6	34002040	140-31747-a-6	B	6	
BTB	140-32578-a-2	-5.3	10106	140-31747-a-8	B	6	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Summa Canister Dilution Worksheet

Client: Giles Engineering Associates
Project/Site: Smokeout Cleaners 1E-1105024

Job No.: 140-32578-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Pressure Gauge ID	Date	Analyst Initals
140-32578-1	6	-7.3	0.76	4.54	0.6	1.04	6.24		1.38	1.38	G5	07/07/23 15:10	BTB
140-32578-1	6	0	1.00	6.00	30.9	3.10	18.61		3.10	4.27		07/10/23 12:01	AFB
140-32578-1	6	0	1.00	6.00	28.4	2.93	17.59		2.93	12.52		07/10/23 13:03	AFB
140-32578-1	6	0	1.00	6.00	39.1	3.66	21.96		3.66	45.83		07/10/23 14:14	AFB
140-32578-2	6	-5.6	0.81	4.88	2.6	1.18	7.06		1.45	1.45	g5	07/10/23 12:02	AFB
140-32578-2	6	0	1.00	6.00	7.5	1.51	9.06	10	906.12	1311.97	G5 09608	07/10/23 13:04	AFB

Formulae:

Preadjusted Volume (L) = ((Preadjusted Pressure ("Hg) + 29.92 "Hg) * Vol L) / 29.92 "Hg
Adjusted Volume (L) = ((Adjusted Pressure (psig) + 14.7 psig)* Vol L) / 14.7 psig
Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury (“Hg)
14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)