# DANE COUNTY DEPT. OF PUBLIC WORKS, HIGHWAY & TRANSPORTATION

1919 Alliant Energy Center Way
Madison, Wisconsin 53713
Office: 608/266-4018 ◊ Fax: 608/267-1533
Public Works Engineering Division


# ADDENDUM

August 14, 2019

**ATTENTION ALL REQUEST FOR BID (RFB) HOLDERS**

**RFB NO. 319001 - ADDENDUM NO. 1**

**BUILDING DEMOLITIONS AT FORMER MESSNER BUIDLING SITE**

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**BIDS DUE**: THURSDAY, AUGUST 29, 2019, 2:00 PM. DUE DATE AND TIME ARE NOT CHANGED BY THIS ADDENDUM.

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This Addendum is issued to modify, explain or clarify the original Request for Bid (RFB) and is hereby made a part of the RFB. Please attach this Addendum to the RFB.

**PLEASE MAKE THE FOLLOWING CHANGES:**

Note the RFB reference no. used throughout this document needed to be changed from 318068 to 319001. These change are made by this Addendum.

1. **All RFB Documents**
   In the lower left corner of every page, change: " **318068** " to: " **319001** ".

2. **RFB Cover Page**
   Delete current Cover Page; add new Cover Page, issued with this Addendum.

3. **Table of Contents**
   Delete current Table of Contents; add new Table of Contents, issued with this Addendum.

4. **Request for Bid Ad (Legal Notice)**
   Change: " **RFB NO. 318068** ", to: " **RFB NO. 319001** ".

5. **Bid Form**
   Change: " **BID NO. 318068** ", to: " **BID NO. 319001** ".

6. **Sample Construction Contract**
   Change: " **Bid No. 318068** ", to: " **Bid No. 319001** ".

7. **Section 02 41 16 Structure Demolition**
   Page 4 - Item 3.5.A.:
   Replace with: " Disconnect, remove and cap designated utilities at site boundary. Identify utilities at termination of demolition. Record termination or capped location on Record Documents. "

**PLEASE NOTE THE FOLLOWING CONTRACTOR SUBMITTED QUESTIONS:**

**Q1:** Is there an estimated size of the basements in all buildings?
**A1:** Plan to bid on a total of 5,000 square feet of basement with 8-foot ceilings.

If any additional information about this Addendum is needed, please call Todd Draper at 608/267-0119, draper@countyofdane.com.

Sincerely,
*Todd Draper*
Project Manager

Enclosures:
Soil and Groundwater Sampling, Phase II Environmental Site Assessment: SCS Engineers

H:\Shared\ENGINEERING DIVISION\Todd Draper\319001(Not 318068) - Messner Building Demolition\03 - Addendum\319001-Addendum #1.docx

**RFB NO. 319001**

# CONSTRUCTION DOCUMENTS
# PROJECT MANUAL

DANE COUNTY DEPARTMENT OF PUBLIC WORKS,
HIGHWAY AND TRANSPORTATION

**PUBLIC WORKS ENGINEERING DIVISION**
1919 ALLIANT ENERGY CENTER WAY
MADISON, WISCONSIN 53713

## REQUEST FOR BIDS NO. 319001
## BUILDING DEMOLITIONS
## FORMER MESSNER BUILDING
## 1314-1326 EAST WASHINGTON AVENUE
## MADISON, WISCONSIN

Due Date / Time: **THURSDAY, AUGUST 29, 2019 / 2:00 P.M.**

Location: **PUBLIC WORKS OFFICE**

Performance / Payment Bond: **100% OF CONTRACT AMOUNT**

Bid Deposit: **5% OF BID AMOUNT**

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FOR INFORMATION ON THIS REQUEST FOR BIDS, PLEASE CONTACT:

TODD DRAPER, PROJECT MANAGER
TELEPHONE NO.: 608/267-0119
FAX NO.: 608/267-1533
E-MAIL: DRAPER@COUNTYOFDANE.COM

**Addendum No. 1**

## TABLE OF CONTENTS FOR RFB NO. 319001

August 13, 2019
File No. 25219155.00

Mr. Todd Draper
Dane County Department of Public Works, Highway & Transportation
1919 Alliant Energy Center Way
Madison, WI 53713

Subject: Phase 2 Environmental Site Assessment
1314, 1318, and 1326 East Washington Avenue, Madison, WI
Dane County Project No. 319012

Dear Mr. Draper:

SCS Engineers (SCS) completed a Phase 2 Environmental Site Assessment (ESA) for a property at 1314, 1318, and 1326 East Washington Avenue, Madison, WI (**Figures 1** and **2**). The work was performed consistent with the County's Request for Quotes (RFQ) and subsequent communications. The Phase 2 ESA included soil and groundwater sampling and preparation of this report.

The Phase 2 ESA identified soil and groundwater contamination which will require some additional action but could potentially be managed during proposed property redevelopment without active cleanup. Additional information is provided below.

## Background

The Phase 2 ESA was performed to assess Recognized Environmental Conditions (RECs) identified by The Sigma Group's (Sigma's) October 2015 Phase 1 ESA and subsequently identified additional environmental concerns. Sigma identified the following RECs:

1. Sigma observed an aboveground storage tank (AST), which likely contained fuel oil, in the basement of the 1326 Washington Avenue subject property parcel. Due to water accumulation on the basement floor, observations of the AST for integrity purposes were limited; however, a fuel oil odor was observed in that basement area and the associated stairway. Given the odor, a release from the AST is possible, therefore the fuel oil AST has the potential to negatively impact the subject property via soil, groundwater, and/or vapor migration.

2. A leaking underground storage tank (LUST) release (BRRTS # 03-13-000521) associated with a historic leaded gasoline underground storage tank (UST) was identified at the 1326 Washington Avenue subject property parcel during the UST removal activities in 1990. Remedial excavation activities were conducted and the Wisconsin Department of Natural Resources (WDNR) granted case closure in 1999 contingent on filing a GIS registry and groundwater use restriction due to the residual soil and groundwater impacts documented at the time of closure. Given the closed status and the reported residual contamination, the LUST release is considered a controlled REC. If encountered, contaminated soil and groundwater will require appropriate management in accordance with applicable state and federal regulations. In addition, although a vapor intrusion risk to the current structure does not appear to be present given the existing site conditions, if

building expansion or redevelopment is conducted in the future, the potential for vapor intrusion from the residual impacts associated with the former LUST release should be reevaluated.

3. Coal piles were identified to have historically been on the property located immediately north/northwest adjacent to the subject property on the Sanborn maps. Given the close proximity and historic exterior storage, the coal piles historically located adjacent to the subject property have the potential to negatively impact the subject property.

The following additional potential environmental concerns were identified subsequent to the Sigma Phase 1 ESA:

- The County identified a second fuel oil AST in the basement of the building at 1318 East Washington Avenue.
- The County identified an apparent auto oil change pit inside the historic garage building which is fully enclosed within the 1326 East Washington Avenue building.
- During the Phase 2 ESA, SCS identified a fuel oil UST located inside the 1326 East Washington Avenue building.

## Methods

Soil and Groundwater Sampling

Soil and groundwater sampling was performed using a Geoprobe™ (geoprobe) rig operated by On-site Environmental Services, Inc. of Sun Prairie, Wisconsin, under the supervision of SCS. A total of ten soil borings were advanced to a maximum depth of 15 feet bgs (SB-1 through SB-9). The boring locations are shown on **Figure 2**.

Soil at each boring was tested in the field for the presence of volatile organic compounds (VOCs) using a photo-ionization detector (PID). Soil characteristics were recorded on boring logs and described consistent with the Unified Soil Classification System. Up to two soil samples were collected from each boring for laboratory analysis based on PID readings and field observations. Groundwater samples were also collected from borings SB-3, SB-4, SB-6, SB-7, SB-8, and SB-9. All boreholes were abandoned consistent with Wisconsin Administrative Code, Chapter NR 141 requirements.

Soil and groundwater samples were submitted to TestAmerica of University Park, Illinois. Soil samples were analyzed for VOCs, polynuclear aromatic hydrocarbons (PAHs), and metals, including arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Groundwater samples were analyzed for VOCs and PAHs.

## Findings

Soil and Groundwater Sampling

Soil boring logs and abandonment forms are included in **Attachment A**. A soil and groundwater sample laboratory report is included in **Attachment B** and analytical results are summarized in **Tables 1** through **5**.

In general, site soils include up to approximately 8 feet of sand and sandy fill with occasional thin layers of cinders or brick fragments. The fill is underlain by native silt, sand, or clay, which extend to a depth of approximately 15 feet bgs. Groundwater was observed at the borings at approximately 8 feet bgs.

A lens of cinder-like material (potentially coal) was identified at the northwest corner of the property at boring SB-7. Also, fill material likely used to backfill remedial excavation related to the above-noted LUST case was observed at the northeast corner of the property at boring SB-8.

The sampling results confirm the presence of soil and groundwater contaminants at concentrations in excess of regulatory standards. PAHs, VOCs, and metals were detected in soil samples at concentrations exceeding NR 720 residual contaminant levels (RCLs). The soil contaminants are mostly limited to fill material, which is widespread at the property and common to the Madison Isthmus.

Metals, including arsenic, barium, cadmium, and chromium, were detected in soil at concentrations below background threshold values (BTVs), suggesting these constituents are potentially background in nature. Lead was detected at two locations (SB-1 and SB-3) in excess of the BTV and the direct contact RCL. Mercury, selenium, and silver were detected in excess of RCLs, but do not have BTVs.

VOCs and PAHs were detected in groundwater samples at concentrations in excess of NR 140 standards. Additional details are provided below:

- VOCs and PAHs detected in the groundwater sample collected from boring SB-6 are likely related to a release of petroleum (e.g., fuel oil) from the UST that SCS discovered at the 1326 East Washington Avenue building.

- PAHs detected in the groundwater sample collected from boring SB-4 may be related to operations at the former garage building or possibly a release from fuel oil ASTs in the 1318 or 1326 East Washington Avenue buildings.

- The PAHs detected in the groundwater sample from boring SB-8 may be related to the discovered UST near boring SB-6 and/or the former UST case which was closed out in 1999.

## Conclusions and Recommendations

- Soil and groundwater contamination was identified at the subject property and, in accordance with Wisconsin Statutes, Section 292.11, the WDNR should be notified of contamination.

- A UST was discovered during the Phase 2 ESA near boring SB-6 inside the building at 1326 East Washington Avenue. The UST should be properly removed and assessed. The WDNR may require additional work to evaluate the extent of contamination related to the UST.

- Soil contamination identified during the Phase 2 ESA is related to fill material and may not require further investigation or active remediation. The WDNR would likely allow the fill material to be reused on site as part of the redevelopment as long as it was covered

by building foundation, pavement, or other material which could serve as a barrier to prevent directly human contact or leaching of the material. If the material under an approved Material Management Plan (MMP) cannot be reused on site it should be properly disposed of at a licensed landfill or other appropriate disposal facility.

- Groundwater contamination appears to be limited to relatively low concentrations of petroleum constituents, potentially related to leaking petroleum storage tanks or possibly operations related to the former garage inside the 1326 East Washington Avenue building. The WDNR may require further work to assess groundwater impacts, but it is unlikely active remediation would be necessary.

- An MMP should be prepared to describe how contaminated and non-contaminated materials will be managed during redevelopment of the property.

Please don't hesitate to contact Robert Langdon at 608-216-7329 if you have any questions concerning this letter.

Sincerely,

Robert Langdon
Senior Project Manager
SCS Engineers

Ray Tierney, PG
Vice President
SCS Engineers

NDK/jsn/AJR/REL/RT

cc: Eric Urtes, Dane County Public Works
Drue DeVente, Dane County Public Works

Enclosures: Table 1 – Soil Analytical Results Summary – VOCs
Table 2 – Soil Analytical Results Summary – PAHs
Table 3 – Soil Analytical Results Summary – Metals
Table 4 – Groundwater Analytical Results Summary – VOCs
Table 5 – Groundwater Analytical Results Summary – PAHs
Figure 1 – Site Location Map
Figure 2 – Site Plan
Attachment A – Soil Boring Logs and Abandonment Forms
Attachment B – Soil and Groundwater Laboratory Report

Tables

**Table 1. Soil Analytical Results Summary - VOCs**
**Messner Bldg. and Associated Properties / SCS Engineers Project #25219155.00**
(Results are in µg/kg)

| Sample | Date | Depth (feet) | PID (ppm) | Lab Notes | Benzene | n-Butylbenzene | Chloroform | Ethylbenzene | Isopropyl-benzene | Naphthalene | n-Propylbenzene | Toluene | 1,2,4-Trimethylbenzene | 1,3,5-Trimethylbenzene | Xylenes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-1 | 7/18/2019 | 2-4 | 0.4 | (1) | <12 | <31 | <29 | <14 | <30 | <26 | <33 | <12 | <28 | <30 | <17 |
| SB-2 | 7/18/2019 | 7.5-10 | 3.2 | (1) | <9.1 | <24 | <23 | <11 | <24 | <21 | <26 | <9.2 | <22 | <24 | <14 |
| SB-3 | 7/18/2019 | 0-2.5 | 2.6 | (1) | <11 | <29 | <28 | <14 | <29 | <25 | <31 | <11 | <27 | <28 | <16 |
| SB-4 | 7/18/2019 | 4-6 | 2.2 | (1) | <13 | <33 | <32 | <16 | <33 | <29 | <36 | <13 | <31 | <33 | <19 |
| SB-5 | 7/18/2019 | 2-4 | 4.7 | (1) | **20** | <26 | <24 | <12 | <25 | <22 | <27 | <9.7 | <24 | <25 | <14 |
| SB-5 | 7/18/2019 | 6-8 | 8.1 | (1) | <9.6 | <26 | <24 | <12 | <25 | <22 | <27 | <9.7 | <24 | <25 | <14 |
| SB-6 | 7/18/2019 | 10-12 | 26.7 | (1) | <11 | 56 J | <28 | 360 | 38 J | 270 | 150 | 35 | 970 | 260 | 920 |
| SB-7 | 7/18/2019 | 5-7.5 | 11.5 | (1) | <12 | <32 | <31 | <15 | <32 | <28 | <34 | <12 | <30 | <32 | <18 |
| SB-8 | 7/18/2019 | 5-7.5 | 8.6 | (1) | <10 | <28 | <27 | <13 | <28 | 27 J | <30 | <11 | <26 | <27 | 41 |
| SB-9 | 7/18/2019 | 5-7.5 | 9.6 | (1) | <10 | <28 | <27 | <13 | <28 | <24 | <30 | <11 | <26 | <27 | <16 |
| Methanol Blank | 7/18/2019 | -- | -- | (1) | <7.3 | <19 | 19 J | <9.2 | <19 | <17 | <21 | <7.4 | <18 | <19 | <11 |
| NR 720 Groundwater Pathway RCLs with a Wisconsin-Default Dilution Factor of 2 | | | | | 5.1 | NE | 3.3 | 1,570 | NE | 658.2 | NE | 1,107.2 | (a) | | 3,960 |
| NR 720 Non-Industrial Direct Contact RCLs | | | | | 1,600 | 108,000 | 454 | 8,020 | 268,000 | 5,520 | 264,000 | 818,000 | 219,000 | 182,000 | 260,000 |
| NR 720 Industrial Direct Contact RCLs | | | | | 7,070 | 108,000 | 1,980 | 35,400 | 268,000 | 24,100 | 264,000 | 818,000 | 219,000 | 182,000 | 260,000 |
| CAS No. | | | | | 71-43-2 | 104-51-8 | 67-66-3 | 100-41-4 | 98-82-8 | 91-20-3 | 103-65-1 | 108-88-3 | 95-63-6 | 108-67-8 | 1330-20-7 |

Abbreviations:
µg/kg = micrograms per kilogram or parts per billion (ppb)
CAS No. = Chemical Abstracts Service Number
VOCs = Volatile Organic Compounds
NE = Not Established
PID = Photoionization Detector
-- = Not Applicable
ppm = PID measured in ppm as isobutylene

Notes:
**Bold+underlined** values exceed December 2018 NR 720 RCLs.
(a) 1,2,4- and 1,3,5-Trimethylbenzenes combined total = 1,378.7

Table shows only detected VOCs.

Laboratory Notes/Qualifiers:
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
(1) Bromoform and 1,2-Dibromo-3-Chloropropane - LCS or LCSD is outside acceptance limits.

Created by: LMH Date: 8/1/2019
Last revision by: LMH Date: 8/1/2019
Checked by: JSN Date: 8/2/2019
Proj Mgr QA/QC: REL Date: 8/5/2019

I:\25219155.00\Data and Calculations\Tables\[Table 1_Soil_VOCs.xlsx]Soil VOCs

**Table 2. Soil Analytical Results Summary - PAHs**
**Messner Bldg. and Associated Properties / SCS Engineers Project #25219155.00**
(Results are in µg/kg, except where noted otherwise)

| Sample | Date | Depth (feet) | Lab Notes | Acenaph-thene | Acenaph-thylene | Anthracene | Benzo(a) anthracene | Benzo(b) fluoranthene | Benzo(k) fluoranthene | Benzo(a) pyrene | Benzo(ghi) perylene | Chrysene | Dibenzo(a,h) anthracene | Fluoranthene | Fluorene | Indeno(1,2,3-cd) pyrene | 1-Methyl-naphthalene | 2-Methyl-naphthalene | Naphthalene | Phenanthrene | Pyrene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-1 | 7/18/2019 | 2-4 | -- | <7.7 | 8.5 J | 9.7 J | 65 | 96 | 44 | 74 | 56 | 80 | <8.2 | 130 | <6.0 | 49 | 11 J | 13 J | 9.1 J | 54 | 110 |
| SB-2 | 7/18/2019 | 7.5-10 | -- | <6.4 | <4.7 | <5.9 | <4.8 | <7.7 | <10 | <6.9 | <11 | <9.7 | <6.9 | <6.6 | <5.0 | <9.2 | <8.7 | <6.5 | <5.5 | <4.9 | <7.1 |
| SB-3 | 7/18/2019 | 0-2.5 | -- | 26 J | 69 | 140 | 890 | **1,300** | 380 | **1,000** | 580 | **950** | **210** | 1,800 | 28 J | 540 | 39 J | 43 J | 31 J | 610 | 1,500 |
| SB-4 | 7/18/2019 | 4-6 | -- | <7.7 | <5.6 | <7.2 | <5.8 | <9.2 | <13 | <8.3 | <14 | <12 | <8.3 | <7.9 | <6.0 | <11 | <10 | <7.9 | <6.6 | <6.0 | <8.5 |
| SB-5 | 7/18/2019 | 2-4 | -- | <7.0 | 18 J | 36 J | 120 | 160 | 180 | **190** | 130 | **260** | 30 J | 340 | 11 J | 120 | <9.5 | 11 J | 17 J | 170 | 310 |
| SB-5 | 7/18/2019 | 6-8 | -- | <7.0 | <5.1 | <6.5 | <5.2 | <8.4 | <11 | <7.5 | <12 | <11 | <7.5 | <7.2 | <5.4 | <10 | <9.4 | <7.1 | <6.0 | <5.4 | <7.7 |
| SB-6 | 7/18/2019 | 10-12 | -- | <7.5 | <5.5 | <6.9 | <5.6 | <9.0 | <12 | <8.0 | <13 | <11 | <8.0 | <7.7 | <5.8 | <11 | 270 | 410 | 480 | 6.9 J | <8.3 |
| SB-7 | 7/18/2019 | 5-7.5 | -- | <7.8 | <5.7 | <7.2 | <5.8 | 23 J | <13 | 13 J | <14 | 27 J | <8.4 | 37 J | <6.1 | <11 | <11 | <7.9 | <6.6 | 19 J | 32 J |
| SB-8 | 7/18/2019 | 5-7.5 | -- | 11 J | 18 J | 52 | 280 | 420 | 140 | **310** | 210 | **340** | 50 | 690 | 15 J | 170 | 20 J | 30 J | 16 J | 310 | 520 |
| SB-9 | 7/18/2019 | 5-7.5 | -- | <7.1 | <5.2 | <6.6 | <5.3 | <8.5 | <12 | <7.6 | <13 | <11 | <7.6 | 10 J | <5.5 | <10 | <9.6 | <7.2 | <6.0 | 6.4 J | <7.8 |
| NR 720 Groundwater Pathway RCLs with a Wisconsin-Default Dilution Factor of 2 | | | | NE | NE | 196,949.2 | NE | 478.1 | NE | 470 | NE | 144.2 | NE | 88,877.8 | 14,829.9 | NE | NE | NE | 658.2 | NE | 54,545.5 |
| NR 720 Non-Industrial Direct Contact RCLs | | | | 3,590,000 | NE | 17,900,000 | 1,140 | 1,150 | 11,500 | 115 | NE | 115,000 | 115 | 2,390,000 | 2,390,000 | 1,150 | 17,600 | 239,000 | 5,520 | NE | 1,790,000 |
| NR 720 Industrial Direct Contact RCLs | | | | 45,200,000 | NE | 100,000,000 | 20,800 | 21,100 | 211,000 | 2,110 | NE | 2,110,000 | 2,110 | 30,100,000 | 30,100,000 | 21,100 | 72,700 | 3,010,000 | 24,100 | NE | 22,600,000 |
| CAS No. | | | | 83-32-9 | 208-96-8 | 120-12-7 | 56-55-3 | 205-99-2 | 207-08-9 | 50-32-8 | 191-24-2 | 218-01-9 | 53-70-3 | 206-44-0 | 86-73-7 | 193-39-5 | 90-12-0 | 91-57-6 | 91-20-3 | 85-01-8 | 129-00-0 |

Abbreviations:
µg/kg = micrograms per kilogram or parts per billion (ppb)
PAHs = Polynuclear Aromatic Hydrocarbons
RCLs = Residual Contaminant Levels
CAS No. = Chemical Abstracts Service Number
NE = No Standard Established
-- = Not Applicable

Notes:
**Bold+underlined** values meet or exceed an NR 720 RCL, as of December 2018.

Laboratory Notes/Qualifiers:
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Created by: LMH Date: 8/1/2019
Last revision by: LMH Date: 8/1/2019
Checked by: JSN Date: 8/2/2019
Proj Mgr QA/QC: REL Date: 8/5/2019

I:\25219155.00\Data and Calculations\Tables\[Table 2_Soil_PAHs.xlsx]Soil PAHs

**Table 3. Soil Analytical Results Summary - Metals**
**Messner Bldg. and Associated Properties / SCS Engineers Project #25219155.00**
(Results are in mg/kg, except where noted otherwise)

| Sample | Date | Depth (feet) | Lab Notes | Arsenic | Barium | Cadmium | Chromium (Total) | Lead | Mercury | Selenium | Silver |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-1 | 7/18/2019 | 2-4 | -- | **5.5** | 110 | 0.42 B | 16 | **92** | 0.047 | **1.3** B | **2.5** |
| SB-2 | 7/18/2019 | 7.5-10 | -- | <0.37 | 9.2 | 0.19 J B | 4.7 | 2.5 | <0.0058 | <0.64 | **1.0** |
| SB-3 | 7/18/2019 | 0-2.5 | -- | **7.0** | 160 | 0.74 B | 13 | **480** | 0.11 | <0.66 | **2.3** |
| SB-4 | 7/18/2019 | 4-6 | -- | **3.2** | 110 | 0.51 B | 15 | 15 | 0.072 | **1.4** B | **2.2** |
| SB-5 | 7/18/2019 | 2-4 | -- | **5.3** | 75 | **0.87** B | 14 | **46** | 0.19 | **0.78** J B | **2.1** |
| SB-5 | 7/18/2019 | 6-8 | -- | **1.9** | 26 | 0.21 J B | 9.4 | 3.4 | <0.0063 | **0.85** J B | **1.4** |
| SB-6 | 7/18/2019 | 10-12 | -- | **0.79** J | 31 | 0.27 B | 11 | 5.8 | <0.0066 | **1.3** B | **1.5** |
| SB-7 | 7/18/2019 | 5-7.5 | -- | **2.4** | 150 | 0.43 B | 19 | **30** | 0.12 | **1.4** B | **2.9** |
| SB-8 | 7/18/2019 | 5-7.5 | -- | **4.0** | 96 | 0.44 B | 13 | **28** | **0.44** | **1.2** B | **2.4** |
| SB-9 | 7/18/2019 | 5-7.5 | -- | **4.0** | 100 F1 | 0.25 B | 10 | 4.5 | <0.0062 | **0.70** J B | **1.8** |
| NR 720 Groundwater Pathway RCLs with a Wisconsin-Default Dilution Factor of 2 | | | | 0.584 | 164.8 | 0.752 | 360,000 [2] | 27 | 0.208 | 0.52 | 0.8491 |
| NR 720 Non-Industrial Direct Contact RCLs | | | | 0.677 | 15,300 | 71.1 | NE [1] | 400 | 3.13 | 391 | 391 |
| NR 720 Industrial Direct Contact RCLs | | | | 3 | 100,000 | 985 | NE [1] | 800 | 3.13 | 5,840 | 5,840 |
| Background Threshold Value | | | | 8 | 364 | 1 | 44 | 52 | NE | NE | NE |
| CAS No. | | | | 7440-38-2 | 7440-39-3 | 7440-43-9 | 7440-47-3 | 7439-92-1 | 7439-97-6 | 7782-49-2 | 7440-22-4 |

Abbreviations:
mg/kg - milligrams per kilogram or parts per million (ppm)
CAS No. = Chemical Abstracts Service Number
RCLs = Residual Contaminant Levels
-- = Not Applicable
NE = No Standard Established

**Table 3. Soil Analytical Results Summary - Metals**
**Messner Bldg. and Associated Properties / SCS Engineers Project #25219155.00**

Notes:
**Bold+underlined** values exceed NR 720 RCLs, as of December 2018.
[1] Chromium Direct Contact Standards: III Non-Industrial Direct Contact RCL = 100,000 mg/kg; Industrial Direct Contact RCL = 100,000 mg/kg
VI Non-Industrial Direct Contact RCL = 0.301 mg/kg; Industrial Direct Contact RCL = 6.36 mg/kg
[2] If no Chromium-VI
Background threshold values are non-outlier trace element maximum levels in Wisconsin surface soils from the USGS Report at: http://pubs.usgs.gov/sir/2011/5202, as listed in the WDNR RR Program's RCL spreadsheet at: http://dnr.wi.gov/topic/Brownfields/professionals.html.

Laboratory Notes/Qualifiers:
B = Compound was found in the blank and sample.
F1 = MS and/or MSD Recovery is outside acceptance limits.
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

| | | | |
|---|---|---|---|
| Created by: | LMH | Date: | 8/1/2019 |
| Last revision by: | LMH | Date: | 8/1/2019 |
| Checked by: | JSN | Date: | 8/2/2019 |
| Proj Mgr QA/QC: | REL | Date: | 8/5/2019 |

I:\25219155.00\Data and Calculations\Tables\[Table 3_Soil_Metals.xlsx]Soil Metals

**Table 4. Groundwater Analytical Results Summary - VOCs**
**Messner Bldg. and Associated Properties / SCS Engineers Project #25219155.00**
(Results are in µg/L)

| Sample | Date | Lab Notes | Benzene | n-Butylbenzene | sec-Butylbenzene | Chloroform | cis-1,2-Dichloroethylene | Ethylbenzene | Isopropyl-benzene (Cumene) | p-Isopropyl-toluene | Methylene Chloride | Naphthalene | n-Propylbenzene | Toluene | TMBs | Xylenes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-3 GW | 7/18/2019 | -- | <0.15 | <0.39 | <0.40 | 0.58 J | <0.41 | <0.18 | <0.39 | <0.36 | <1.6 | <0.34 | <0.41 | 0.44 J | <0.61 | <0.22 |
| SB-4 GW | 7/18/2019 | -- | <0.15 | <0.39 | <0.40 | 0.58 J | 0.67 J | <0.18 | <0.39 | <0.36 | <1.6 | <0.34 | <0.41 | 0.33 J | <0.61 | <0.22 |
| SB-6 GW | 7/18/2019 | -- | *1.1* J | 52 | 11 | <1.9 | <2.0 | *610* | 63 | 10 | <8.2 | **220** | 210 | 43 | **2,110** | *1,500* |
| SB-7 GW | 7/18/2019 | -- | <0.15 | <0.39 | <0.40 | <0.37 | <0.41 | <0.18 | <0.39 | <0.36 | <1.6 | <0.34 | <0.41 | 0.24 J | <0.61 | <0.22 |
| SB-8 GW | 7/18/2019 | -- | <0.15 | <0.39 | <0.40 | <0.37 | <0.41 | <0.18 | <0.39 | <0.36 | <1.6 | <0.34 | <0.41 | 0.32 J | <0.61 | <0.22 |
| SB-9 GW | 7/18/2019 | -- | <0.15 | <0.39 | <0.40 | <0.37 | <0.41 | <0.18 | <0.39 | <0.36 | <1.6 | <0.34 | <0.41 | 0.19 J | <0.61 | <0.22 |
| Trip Blank | 7/18/2019 | -- | <0.15 | <0.39 | <0.40 | <0.37 | <0.41 | <0.18 | <0.39 | <0.36 | *1.7* J | <0.34 | <0.41 | 0.33 J | <0.61 | <0.22 |
| NR 140 Enforcement Standards | | | 5 | NE | NE | 6 | 70 | 700 | NE | NE | 5 | 100 | NE | 800 | 480 | 2,000 |
| NR 140 Preventive Action Limits | | | 0.5 | NE | NE | 0.6 | 7 | 140 | NE | NE | 0.5 | 10 | NE | 160 | 96 | 400 |
| CAS No. | | | 71-43-2 | 104-51-8 | 135-98-8 | 67-66-3 | 156-59-2 | 100-41-4 | 98-82-8 | 99-87-6 | 75-09-2 | 91-20-3 | 103-65-1 | 108-88-3 | See Notes | 1330-20-7 (See Notes) |

Abbreviations:
µg/ L = micrograms per liter or parts per billion (ppb)
NE = No Standard Established
VOCs = Volatile Organic Compounds
-- = Not Applicable

Notes:
NR 140 Enforcement Standards - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards.
NR 140 Preventive Action Limits - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards.

Table shows only detected VOCs.

**Bold+underlined** values meet or exceed NR 140 enforcement standards.
*Italic+underlined* values meet or exceed NR 140 preventive action limits.

Laboratory Notes/Qualifiers:
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

| | | | |
|---|---|---|---|
| Created by: | LMH | Date: | 8/1/2019 |
| Last revision by: | LMH | Date: | 8/1/2019 |
| Checked by: | JSN | Date: | 8/2/2019 |
| Proj Mgr QA/QC: | REL | Date: | 8/5/2019 |

I:\25219155.00\Data and Calculations\Tables\[Table 4_GW_VOCs.xlsx]GW VOCs

**Table 5. Groundwater Analytical Results Summary - PAHs**
**Messner Bldg. and Associated Properties / SCS Engineers Project #25219155.00**
(Results are in µg/L)

| Sample | Date | Lab Notes | Acenaph-thene | Acenaph-thylene | Anthracene | Benzo(a) anthracene | Benzo(a) pyrene | Benzo(b) fluoranthene | Benzo(ghi) perylene | Benzo(k) fluoranthene | Chrysene | Dibenzo(a,h) anthracene | Fluoranthene | Fluorene | Indeno(1,2,3-cd) pyrene | 1-Methyl-naphthalene | 2-Methyl-naphthalene | Naphthalene | Phenanthrene | Pyrene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-3 GW | 7/18/2019 | -- | <0.27 | <0.23 | <0.29 | <0.049 | <0.086 | <0.070 | <0.33 | <0.056 | <0.059 | <0.044 | <0.39 | <0.21 | <0.065 | <0.26 | <0.057 | <0.27 | <0.26 | <0.37 |
| SB-4 GW | 7/18/2019 | -- | <0.29 | <0.25 | <0.31 | 0.19 | **0.25** | *0.18* J | <0.35 | <0.060 | *0.16* J | <0.047 | <0.42 | <0.23 | 0.25 | <0.28 | 0.077 J | <0.29 | 0.30 J | <0.40 |
| SB-6 GW | 7/18/2019 | (1) | 0.76 J | <0.30 | <0.37 | 0.20 J | **0.27** | **0.20** J | <0.42 | <0.072 | *0.19* J | <0.057 | <0.51 | 0.51 J | 0.29 | 110 | 190 | **390** | 1.0 J | <0.48 |
| SB-7 GW | 7/18/2019 | -- | <0.28 | <0.24 | <0.30 | <0.051 | <0.088 | *0.075* J | <0.33 | <0.057 | *0.084* J | <0.045 | <0.40 | <0.22 | <0.067 | <0.27 | <0.058 | <0.28 | <0.27 | <0.38 |
| SB-8 GW | 7/18/2019 | -- | <0.27 | <0.23 | <0.29 | 1.2 | **1.8** | **2.1** | 1.1 | 0.65 | **1.5** | 0.24 J | 2.3 | <0.21 | 1.1 | <0.26 | 0.20 J | <0.27 | 1.2 | 2.3 |
| SB-9 GW | 7/18/2019 | -- | <0.29 | <0.25 | <0.31 | <0.053 | <0.092 | <0.075 | <0.35 | <0.060 | <0.064 | <0.047 | <0.42 | <0.23 | <0.070 | <0.28 | <0.061 | <0.29 | <0.28 | <0.40 |
| NR 140 Enforcement Standards (ESs) | | | NE | NE | 3,000 | NE | 0.2 | 0.2 | NE | NE | 0.2 | NE | 400 | 400 | NE | NE | NE | 100 | NE | 250 |
| NR 140 Preventive Action Limits (PALs) | | | NE | NE | 600 | NE | 0.02 | 0.02 | NE | NE | 0.02 | NE | 80 | 80 | NE | NE | NE | 10 | NE | 50 |
| CAS No. | | | 83-32-9 | 208-96-8 | 120-12-7 | 56-55-3 | 50-32-8 | 205-99-2 | 191-24-2 | 207-08-9 | 218-01-9 | 53-70-3 | 206-44-0 | 86-73-7 | 193-39-5 | 90-12-0 | 91-57-6 | 91-20-3 | 85-01-8 | 129-00-0 |

Abbreviations:
µg/L = micrograms per liter or parts per billion (ppb)
-- = Not Applicable
PAHs = Polynuclear Aromatic Hydrocarbons
CAS No. = Chemical Abstracts Service Number
NE = No Standard Established

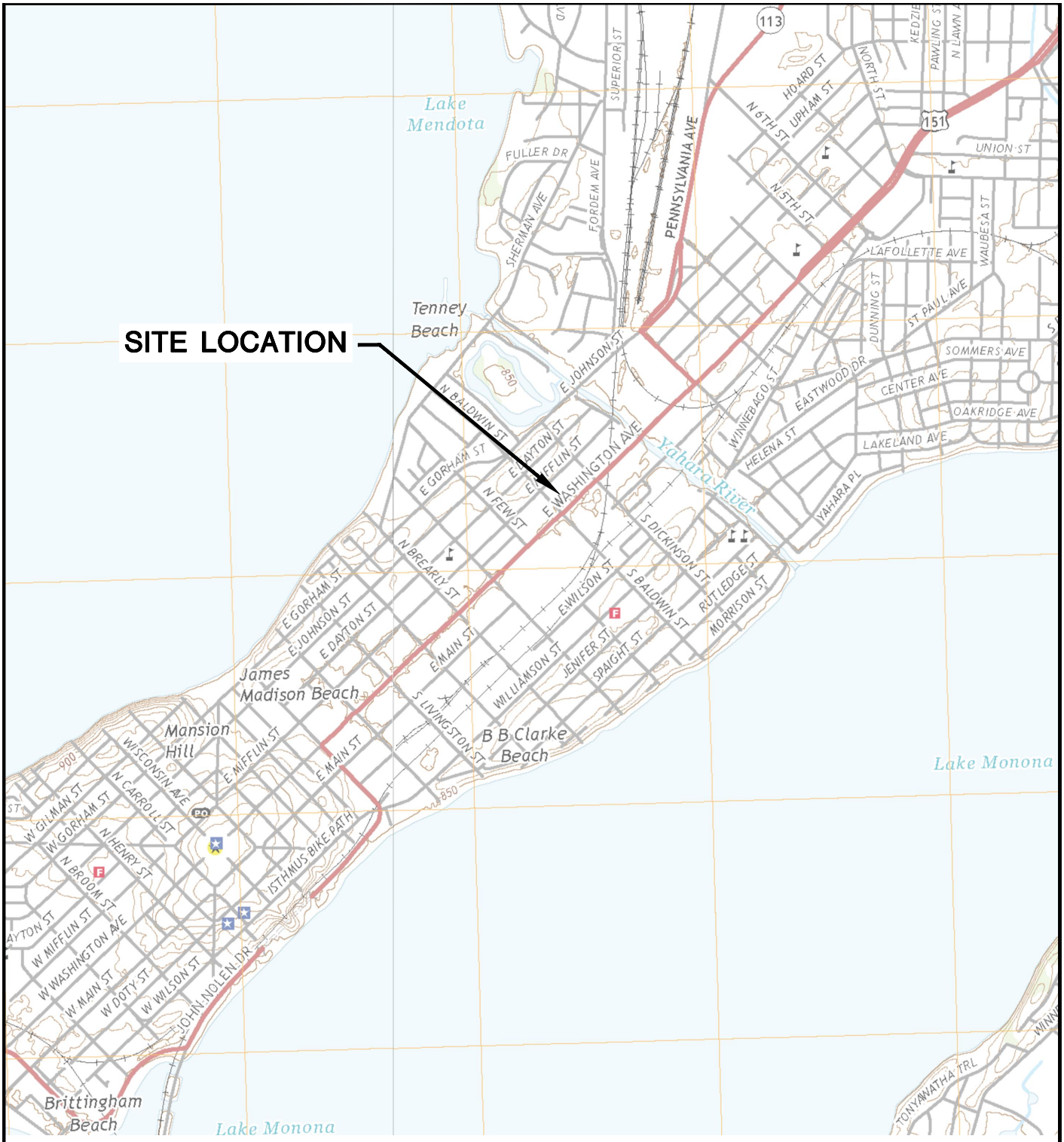
Notes:
NR 140 ES - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from February 2017
NR 140 PAL - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from February 2017
**Bold+underlined** values meet or exceed NR 140 enforcement standards.
*Italic+underlined* values meet or exceed NR 140 preventive action limits.

Laboratory Notes/Qualifiers:
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
(1) Surrogate Nitrobenzene-d5 (Surr) = Surrogate is outside control limits.

| | | | |
|---|---|---|---|
| Created by: | LMH | Date: | 8/1/2019 |
| Last revision by: | LMH | Date: | 8/1/2019 |
| Checked by: | JSN | Date: | 8/2/2019 |
| Proj Mgr QA/QC: | REL | Date: | 8/5/2019 |

I:\25219155.00\Data and Calculations\Tables\[Table 5_GW_PAHs.xlsx]GW PAHs

Figures



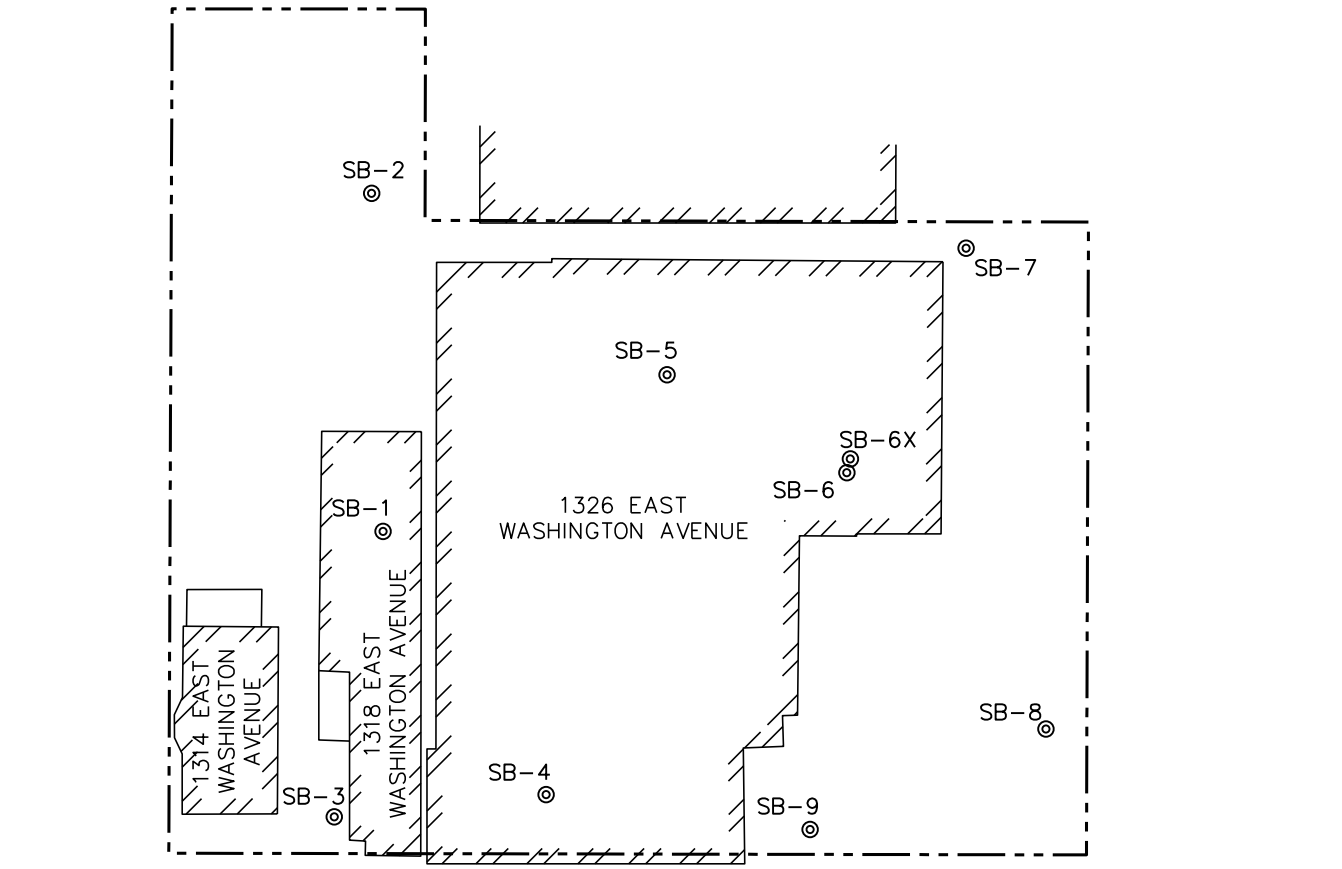

N

MADISON WEST/EAST QUADRANGLE
WISCONSIN–DANE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
2018
SCALE: 1" = 2,000'


| | | |
|---|---|---|
| CLIENT | DANE CO. DEPT. OF PUBLIC WORKS<br>HIGHWAY & TRANSPORATION<br>1919 ALLIANT ENERGY CENTER WAY | |
| SITE | 1314, 1316, 1318, AND 1326<br>EAST WASHINGTON AVENUE<br>MADISON, WI 53704 | SITE LOCATION MAP |

| | | | | | |
|---|---|---|---|---|---|
| PROJECT NO. | 25219155.00 | DRAWN BY: | BSS | ENGINEER | SCS ENGINEERS<br>2830 DAIRY DRIVE MADISON, WI 53718-6751<br>PHONE: (608) 224-2830 |
| DRAWN: | 07/16/19 | CHECKED BY: | NDK | | FIGURE 1 |
| REVISED: | 08/02/19 | APPROVED BY: | NDK 08/02/19 | | |

\\Mad-fs01\data\Projects\25219155.00\Drawings\1 Site Location Map.dwg, 8/2/2019 12:29:15 PM




LEGEND

PROPERY LINE

EXISTING BUILDING

SOIL BORING

50 0 50

SCALE: 1" = 50'

NOTES:

1. BUILDINGS AND PROPERTY LINE BASED ON JSD PROFESSIONAL SERVICES, INC. EXISTING CONDITIONS MAP, JSD PROJECT NO. 18-8568, DATED AUGUST 21, 2018.

N

| | | | |
|---|---|---|---|
| CLIENT | DANE CO. DEPT. OF PUBLIC WORKS<br>HIGHWAY & TRANSPORATION<br>1919 ALLIANT ENERGY CENTER WAY | SITE | 1314, 1316, 1318, AND 1326<br>EAST WASHINGTON AVENUE<br>MADISON, WI 53704 |
| | | | SITE PLAN |

| | | | |
|---|---|---|---|
| PROJECT NO. | 25219155.00 | DRAWN BY: | KRG |
| DRAWN: | 07/24/19 | CHECKED BY: | REL |
| REVISED: | 08/06/19 | APPROVED BY: | NDK 08/06/19 |

ENGINEER

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

FIGURE 2

I:\25219155.00\Drawings\Site Plan.dwg, 8/7/2019 2:05:06 PM

# Appendix A

## Soil 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 |
|---|---|---|
| Messner Building and Associated Properties SCS#: 25219155 | | SB-1 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| Gage Kapugi<br>On-Site Environmental Services, Inc. | 7/18/2019 | 7/18/2019 | Direct Push |

| WI Unique Well No. | DNR Well ID No. | Common Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | | | 2.0 in. |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of NE 1/4 of Section 13, T 7 N, R 9 E
Lat ° ' "
Long ° ' "
Local Grid Location
Feet ☐ N ☐ S Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | Dane | 13 | Madison |

| 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: Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | Concrete. | | | | | | | | | | |
| S1 | 24 | | 1 | SILTY SAND, tan, with cinders (fill). | SM | | | 0.2 | | D | | | | |
| | | | 2 | | | | | | | | | | | |
| S2 | | | 3 | PEAT, black organics, trace gravel. | PT | | | 0.4 | | | | | | Soil sample 2-4 feet |
| | | | 4 | SILTY SAND, tan, with trace gravel. | | | | | | | | | | |
| S3 | 32 | | 5 | | | | | 0.4 | | M | | | | |
| | | | 6 | Red mottling. | | | | | | | | | | |
| S4 | | | 7 | | | | | 0.3 | | W | | | | Depth to water at ~7.5 feet |
| | | | 8 | Gray, no gravel. | | | | | | | | | | |
| S5 | | | 9 | | SM | | | 1.2 | | W | | | | |
| | 48 | | 10 | Tan. | | | | | | | | | | |
| S6 | | | 11 | | | | | 2.0 | | W | | | | |
| | | | 12 | | | | | | | | | | | |
| S7 | | | 13 | | | | | 2.1 | | W | | | | |
| | 48 | | 14 | | | | | | | | | | | |
| | | | 15 | | | | | | | | | | | |

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

Signature Firm SCS Engineers Tel: Fax:

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 SB-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: Standard Penetration | Soil Properties: Moisture Content | Soil Properties: Liquid Limit | Soil Properties: Plasticity Index | Soil Properties: P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S8 | | | | | SM | | | 2.6 | | W | | | | |
| | | | 16 | End of Boring at 16 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 |
|---|---|---|
| Messner Building and Associated Properties SCS#: 25219155 | | SB-2 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| Gage Kapugi<br>On-Site Environmental Services, Inc. | 7/18/2019 | 7/18/2019 | Direct Push |

| WI Unique Well No. | DNR Well ID No. | Common Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | Feet | Feet | 2.0 in. |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of NE 1/4 of Section 13, T 7 N, R 9 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | Dane | 13 | Madison |

| Sample Number and Type | 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: Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | Asphalt. | | | | | | | | | | |
| S1 | 54 | | 1 | SILTY GRAVEL, tan (fill). | GM | | | 0.5 | | D | | | | |
| | | | 2 | SILT, black. | ML | | | | | | | | | |
| S2 | | | 3 | | | | | 1.5 | | M | | | | |
| | | | 4 | LEAN CLAY, tan, trace silt. | | | | | | | | | | |
| | | | 5 | | | | | | | | | | | |
| S3 | | | 6 | | CL | | | 1.5 | | M | | | | |
| | 60 | | 7 | | | | | | | | | | | |
| | | | 8 | SILTY SAND, tan, trace gravel. | | | | | | | | | | |
| S4 | | | 9 | | | | | 3.2 | | W | | | | Depth to water is 8 feet. Soil sample 7.5 - 10 feet |
| | | | 10 | | | | | | | | | | | |
| S5 | | | 11 | Red and green mottling. | SP | | | 2.1 | | W | | | | |
| | 60 | | 12 | | | | | | | | | | | |
| | | | 13 | | | | | | | | | | | |
| S6 | | | 14 | | | | | 2.2 | | W | | | | |
| | | | 15 | | | | | | | | | | | |

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

Signature Firm SCS Engineers Tel: Fax:

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 SB-2 Use only as an attachment to Form 4400-122. 

| Sample | | | | | | | | | Soil Properties | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number and Type | 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 | Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
| | | | | End of Boring is at 15 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 |
|---|---|---|
| Messner Building sand Associated Properties SCS#: 25219155 | | SB-3 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| Gage Kapugi<br>On-Site Environmental Services, Inc. | 7/18/2019 | 7/18/2019 | Direct Push |

| WI Unique Well No. | DNR Well ID No. | Common Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | Feet | Feet | 2.0 in. |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of NE 1/4 of Section 13, T 7 N, R 9 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | Dane | 13 | Madison |

| 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: Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | Concrete. | | | | | | | | | | |
| | | | | SILTY GRAVEL (base course). | GM | | | | | | | | | |
| S1 | | | 1 | SILT, with cinders, some clay (fill). | ML | | | 2.6 | | D | | | | Soil sample 0 - 2.5 feet |
| | 24 | | 2 | | | | | | | | | | | |
| | | | 3 | LEAN CLAY, some silt, tan/brown. | | | | | | | | | | |
| S2 | | | 4 | | CL | | | 2.3 | | M | | | | |
| | | | 5 | Tan/gray. | | | | | | | | | | |
| | | | 6 | | | | | | | | | | | |
| S3 | | | | POORLY GRADED SAND, with silt, fine, tan/brown. | | | | 2.2 | | M | | | | |
| | 48 | | 8 | | | | | | | | | | | |
| S4 | | | 9 | Red motttling. | SP | | | | | W | | | | Depth to Water is 8.0 feet. |
| | | | 10 | | | | | | | | | | | |
| | | | 11 | | | | | | | | | | | |
| S5 | | | 12 | LEAN CLAY, tan/gray. | | | | 2.1 | | W | | | | |
| | 60 | | 13 | | CL | | | | | | | | | |
| S6 | | | 14 | | | | | 1.6 | | W | | | | |
| | | | 15 | | | | | | | | | | | |

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

Signature Firm SCS Engineers Tel: Fax:

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 SB-3 Use only as an attachment to Form 4400-122. 

| Sample | | | | | | | | | Soil Properties | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number and Type | 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 | Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
| | | | | End of Boring at 15 feet.<br><br>Set temporary PVC well and collected groundwater sample. | | | | | | | | | | |

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 |
|---|---|---|
| Messner Building and Associated Properties SCS#: 25219155 | | SB-4 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| Gage Kapugi<br>On-Site Environemental Services, Inc. | 7/18/2019 | 7/18/2019 | Direct Push |

| WI Unique Well No. | DNR Well ID No. | Common Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | Feet | Feet | 2.0 in. |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of NE 1/4 of Section 13, T 7 N, R 9 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | Dane | 13 | Madison |

| Sample Number and Type | 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: Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S1 | 24 | | 1 | Concrete. | | | | | | | | | | |
| | | | | SILTY GRAVEL (base course). | GM | | | 1.7 | | D | | | | |
| | | | 2 | SILT, with sand, tan with brown and black, cinders (fill). | | | | | | | | | | |
| S2 | | | 3 | | ML | | | 2.2 | | D | | | | Soil sample 2 - 4 feet. |
| S3 | | | 4 | | | | | | | | | | | |
| | | | 5 | | | | | | | | | | | |
| | 42 | | 6 | SILT. | ML | | | | | | | | | |
| S4 | | | 7 | PEAT, black, grass, roots. | PT | | | 1.5 | | M | | | | Depth to water is at 7.5 feet. |
| | | | 8 | | | | | | | | | | | |
| S5 | | | 9 | LEAN CLAY, gray. | CL | | | 2.9 | | W | | | | |
| | 48 | | 10 | POORLY GRADED SAND, fine sand, tan, red mottling, little silt. | SP | | | | | | | | | |
| S6 | | | 11 | | | | | 3.4 | | W | | | | |
| | | | 12 | LEAN CLAY, tan/gray. | CL | | | | | | | | | |
| S7 | | | 13 | POORLY GRADED SAND, fine sand, tan, red mottling, little silt. | SP | | | 5.1 | | W | | | | |
| | 36 | | 14 | LEAN CLAY, tan/gray. | | | | | | | | | | |
| S8 | | | 15 | | CL | | | 3.7 | | W | | | | |

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

Signature Nicole Kuss Firm SCS Engineers Tel: Fax:

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 SB-4 Use only as an attachment to Form 4400-122. 

| Sample | | | | | | | | | Soil Properties | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number and Type | 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 | Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
| | | | | End of Boring at 15 feet.<br><br>Set temporary PVC well and collected groundwater sample. | | | | | | | | | | |

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 |
|---|---|---|
| Messener Building and Associated Properties SCS#: 25219155 | | SB-5 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| Gage Kapugi<br>On-Site Environemental Services, Inc. | 7/18/2019 | 7/18/2019 | Direcrt Push |

| WI Unique Well No. | DNR Well ID No. | Common Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | | | 2.0 in. |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of NE 1/4 of Section 13, T 7 N, R 9 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | Dane | 13 | Madison |

| 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: Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | Concrete. | | | | | | | | | | |
| S1 | 32 | | 1 | SILTY GRAVEL (base course). | GM | | | | | | | | | |
| | | | 2 | SILT, brown/tan, with cinders and crushed bricks (fill). | ML | | | 3.8 | | D | | | | |
| S2 | | | 3 | LEAN CLAY, gray/black, trace gravel, cinders (fill). | | | | 4.7 | | D | | | | Soil sample 2 - 4 feet. |
| | | | 4 | | | | | | | | | | | |
| S3 | 48 | | 5 | | CL | | | 3.8 | | D-M | | | | |
| | | | 6 | | | | | | | | | | | |
| S4 | | | 7 | LEAN CLAY, gray, brown/tan mottling. | | | | 8.1 | | W | | | | Depth to water is 7.5 feet. |
| | | | 8 | | | | | | | | | | | |
| S5 | 48 | | 9 | With silt, tan with red mottling. | CL | | | 3.0 | | W | | | | |
| | | | 10 | | | | | | | | | | | |
| S6 | | | 11 | | | | | 3.5 | | W | | | | Soil sample 10 - 12 feet |
| | | | 12 | SILTY SAND, tan with red mottling, trace gravel. | | | | | | | | | | |
| S7 | 36 | | 13 | | SM | | | 6.2 | | W | | | | |
| | | | 14 | | | | | | | | | | | |
| S8 | | | 15 | Black mottling. | | | | 6.7 | | W | | | | |

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

Signature Nicole Kron Firm SCS Engineers Tel: Fax:

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 SB-5 Use only as an attachment to Form 4400-122. 

| Sample | | | | | | | | | Soil Properties | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number and Type | 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 | Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
| | | | | End of Boring at 15 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 |
|---|---|---|
| Messner Building and Associated Properities SCS#: 25219155 | | SB-6X |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| Gage Kapugi<br>On-Site Environmental Services, Inc. | 7/18/2019 | 7/18/2019 | Direct Push |

| WI Unique Well No. | DNR Well ID No. | Common Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | | | 2.0 in. |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of NE 1/4 of Section 13, T 7 N, R 9 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | Dane | 13 | Madison |

| 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: Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Concrete. | | | | | | | | | | |
| | | | | SILTY GRAVEL, tan/white (base course). | GM | | | | | | | | | |
| | | | 1 | SILT, with gravel, red mottling, cinders (fill). | | | | | | | | | | |
| S1 | 12 | | 2 | | | | | 8.1 | | D | | | | |
| | | | 3 | | ML | | | | | | | | | |
| | | | 4 | | | | | | | | | | | |
| S2 | 0 | | 5 | | | | | | | | | | | |
| | | | | End of boring at 5 feet, hit refusal. Moved boring over, see soil boring log SB-6 for lithology. | | | | | | | | | | |

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

Signature: Nicole Kron Firm: SCS Engineers Tel: Fax:

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

Form 4400-122 Rev. 7-98

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



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Messner Building and Associated Properites SCS#: 25219155 | | SB-6 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| Gage Kapugi<br>On-Site Environmental Services, Inc. | 7/18/2019 | 7/18/2019 | Direct Push |

| WI Unique Well No. | DNR Well ID No. | Common Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | | | 2.0 in. |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of NE 1/4 of Section 13, T 7 N, R 9 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | Dane | 13 | Madison |

| 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: Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | Concrete. | | | | | | | | | | |
| | | | | SILTY GRAVEL, tan/white (base course). | GM | | | | | | | | | |
| S1 | | | 1 | SILT, with gravel, black and brown, cinders (fill). | | | | 7.5 | | D | | | | Potential void from approximately 1-4 feet. |
| | 12 | | 2 | | | | | | | | | | | |
| S2 | | | 3 | | | | | | | D | | | | |
| | | | 4 | | | | | | | | | | | |
| | | | | | ML | | | | | | | | | |
| S3 | | | 5 | With lean clay and fine gravel, tan/brown, red mottling | | | | | | D | | | | |
| | 18 | | 6 | | | | | | | | | | | |
| S4 | | | 7 | Black. | | | | 7.7 | | M/D | | | | |
| | | | 8 | LEAN CLAY, with silt and sand, gray. | | | | | | | | | | |
| S5 | | | 9 | | | | | 6.7 | | W | | | | Depth to water is at 8 feet. |
| | 48 | | 10 | With gravel, black. | CL | | | | | | | | | Strong petroleum odors. |
| S6 | | | 11 | | | | | 26.7 | | W | | | | Soil sample 10 - 12 feet. |
| | | | | No Gravel, gray/tan with black mottling. | | | | | | | | | | |
| | | | 12 | End of Boring, hit refusal at 12 feet. | | | | | | | | | | |
| | | | | Set temporary PVC well and collected groundwater sample. | | | | | | | | | | |

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

Signature Nicole Kyon Firm SCS Engineers Tel: Fax:

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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 |
|---|---|---|
| Messner Building and Associated Properties SCS#: 25219155 | | SB-7 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| Gage Kapugi<br>On-Site Environmental Services, Inc. | 7/18/2019 | 7/18/2019 | Direct Push |

| WI Unique Well No. | DNR Well ID No. | Common Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | Feet | Feet | 2.0 in. |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of NE 1/4 of Section 13, T 7 N, R 9 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | Dane | 13 | Madison |

| 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: Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | Asphalt. | | | | | | | | | | |
| S1 | | | 1 | POORLY GRADED SAND, with gravel, fine, tan, with some gray silt, friable glassy cinders (fill). | SP | | | 4.2 | | D | | | | |
| | 32 | | 2 | | | | | | | | | | | |
| | | | 3 | | | | | | | | | | | |
| S2 | | | 4 | | | | | 5.1 | | D | | | | |
| | | | 5 | SILT, fine, black/brown mottling, friable material (fill). | ML | | | | | | | | | |
| S3 | | | 6 | LEAN CLAY, black, cinders (fill). | CL | | | 11.5 | | M | | | | Soil sample 5 - 7.5 feet. |
| | | | 7 | LEAN CLAY, tan/light brown, with red mottling, and silt lenses. | | | | | | | | | | |
| | 60 | | 8 | | | | | | | | | | | |
| S4 | | | 9 | | CL | | | 11.1 | | M | | | | |
| | | | 10 | | | | | | | | | | | |
| | | | 11 | SILT, with clay, tan/brown, red mottling. | | | | 11.2 | | | | | | |
| S5 | | | 12 | | ML | | | | | | | | | |
| | 48 | | 13 | With some gravel. | | | | | | | | | | |
| S6 | | | 14 | SILTY SAND, tan/brown, with red mottling. | SM | | | 11.0 | | | | | | |
| | | | 15 | | | | | | | | | | | |

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

Signature Nicole Kron Firm SCS Engineers Tel: Fax:

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State of Wisconsin
Department of Natural Resources

**SOIL BORING LOG INFORMATION SUPPLEMENT**
Form 4400-122A

Boring Number SB-7 Use only as an attachment to Form 4400-122. 

| Sample | | | | | | | | | Soil Properties | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number and Type | 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 | Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
| | | | | End of Boring at 15 feet.<br><br>Set temporary PVC well and collected groundwater sample. | | | | | | | | | | |

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 |
|---|---|---|
| Messner Building and Associated Properties SCS#: 25219155 | | SB-8 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| Gage Kapugi<br>On-Site Environmental | 7/18/2019 | 7/18/2019 | Direct Push |

| WI Unique Well No. | DNR Well ID No. | Common Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | Feet | Feet | 2.0 in. |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of NE 1/4 of Section 13, T 7 N, R 9 E
Lat ° ' "
Long ° ' "
Local Grid Location
Feet ☐ N ☐ S Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | Dane | 13 | Madison |

| 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: Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | Asphalt. | | | | | | | | | | |
| S1 | | | 1 | POORLY GRADED SAND, with gravel (fill). | SP | | | 7.2 | | D | | | | |
| | 48 | | 2 | SILTY SAND, red mottling, crushed bricks (fill). | | | | | | | | | | |
| S2 | | | 4 | | | | | 7.0 | | D/M | | | | |
| | | | 5 | With black silt and gravel, cinders. | SM | | | | | | | | | |
| S3 | | | 6 | | | | | 8.6 | | D/M | | | | Soil sample 5 - 7.5 feet. |
| | 54 | | 7 | With coarse sand, tan. | | | | | | | | | | |
| S4 | | | 9 | | | | | 7.2 | | W | | | | Depth to water is 8 feeet. |
| | | | 9 | SILT, black and gray (fill). | ML | | | | | | | | | |
| | | | 10 | SILTY SAND, tan, loose (fill). | | | | | | | | | | |
| S5 | | | 11 | | | | | 7.0 | | W | | | | |
| | 60 | | 12 | | SM | | | 5.6 | | | | | | |
| | | | 13 | With silt, gravel, and cinders. | | | | | | | | | | |
| S6 | | | 14 | | | | | 4.5 | | W | | | | |
| | | | 15 | | | | | | | | | | | |

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

Signature Nicole Kern Firm SCS Engineers Tel: Fax:

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 SB-8 Use only as an attachment to Form 4400-122. 

| Sample | | | | | | | | | Soil Properties | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number and Type | 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 | Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
| | | | | End of Boring at 15 feet.<br><br>Set temporary PVC well and collected groundwater sample. | | | | | | | | | | |

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 |
|---|---|---|
| Messner Building and Associated Properties SCS#: 25219155 | | SB-9 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| Gage Kapugi<br>On-Site Environmental Services, Inc. | 7/18/2019 | 7/18/2019 | Direct Push |

| WI Unique Well No. | DNR Well ID No. | Common Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | | | 2.0 in. |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of NE 1/4 of Section 13, T 7 N, R 9 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | Dane | 13 | Maidson |

| 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: Standard Penetration | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | Asphalt. | | | | | | | | | | |
| S1 | | | 1 | SILTY SAND, with gravel (fill). | | | | 7.3 | | | | | | |
| | 25 | | 2 | With cinders. | SM | | | | | | | | | |
| S2 | | | 3 | | | | | 7.9 | | | | | | |
| | | | 4 | | | | | | | | | | | |
| | | | 5 | SILTY GRAVEL, with sand, tan/black mottling. | | | | | | | | | | |
| | | | 6 | | GM | | | 9.6 | | | | | | Soil sample 5 - 7.5 feet. |
| | | | 7 | | | | | | | | | | | |
| | 42 | | 8 | SILTY SAND, red mottling. | | | | 8.6 | | | | | | Depth to water is at 8 feet. |
| S3 | | | 9 | | | | | | | | | | | |
| S4 | | | 10 | | SM | | | 4.2 | | | | | | |
| | | | 11 | | | | | | | | | | | |
| S5 | | | 12 | | | | | 6.7 | | W | | | | |
| | 60 | | 13 | SILT, gray. | ML | | | | | | | | | |
| S6 | | | 14 | | | | | 10.8 | | | | | | |
| | | | 15 | SILTY SAND, with gravel, gray. | SM | | | | | | | | | |

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

Signature Nicole Kim Firm SCS Engineers Tel: Fax:

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State of Wis., Dept. of Natural Resources SCS No.
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 | NA | SB- 1 |

Latitude / Longitude (see instructions) ____ N ____ W — Format Code: ☐ DD ☐ DDM — Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ NE | ¼ NE | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # | | 13 | 7 N | ☒ E ☐ W 9 |

Well Street Address: 1316/1318/1326 East Washington Avenue

| Well City, Village or Town | Well ZIP Code |
|---|---|
| Madison | 53703 |

| Subdivision Name | Lot # |
|---|---|
| NA | NA |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| soil boring | NA |

## 2. Facility / Owner Information

Facility Name: Messner Building and Associates Properties

Facility ID (FID or PWS): NA

License/Permit/Monitoring #: NA

Original Well Owner: Dane Co. Department Public Works, Highway & Transportation

Present Well Owner: Dane Co. Department Public Works, Highway & Transportation

Mailing Address of Present Owner: 1919 Alliant Energy Center Way

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Madison | WI | 53713 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 7/18/2019

If a Well Construction Report is available, please attach.

Construction Type: ☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Direct Push

Formation Type: ☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| 16 | |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| 2.0 | NA |

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| NA | 7.5 |

## 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):

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

| Material | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| 3/8" Bentonite Chips | Surface | 16 | 16 # | |
| | | | | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| On-site Environmental Services, Inc. | | 7/18/2019 |

| Street or Route | Telephone Number |
|---|---|
| PO Box 280 | ( 608 ) 837-8992 |

| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| Sun Prairie | WI | 53590 | Gage Kapugi | 8/2/2019 |

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources SCS No.
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 | NA | SB- 2 |

Latitude / Longitude (see instructions) ____ N ____ W — Format Code: ☐ DD ☐ DDM — Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ NE | ¼ NE | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # | | 13 | 7 N | ☒ E ☐ W 9 |

Well Street Address: 1316/1318/1326 East Washington Avenue

| Well City, Village or Town | Well ZIP Code |
|---|---|
| Madison | 53703 |

| Subdivision Name | Lot # |
|---|---|
| NA | NA |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| soil boring | NA |

## 2. Facility / Owner Information

Facility Name: Messner Building and Associates Properties

Facility ID (FID or PWS): NA

License/Permit/Monitoring #: NA

Original Well Owner: Dane Co. Department Public Works, Highway & Transportation

Present Well Owner: Dane Co. Department Public Works, Highway & Transportation

Mailing Address of Present Owner: 1919 Alliant Energy Center Way

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Madison | WI | 53713 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 7/18/2019

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Direct Push

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| 15 | |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| 2.0 | NA |

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| NA | 8 |

## 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):

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

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| 3/8" Bentonite Chips | Surface | 15 | 15# | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| On-site Environmental Services, Inc. | | 7/18/2019 |

| Street or Route | Telephone Number |
|---|---|
| PO Box 280 | ( 608 ) 837-8992 |

| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| Sun Prairie | WI | 53590 | Gage Kapugi | 8/2/2019 |

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources SCS No.
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 | NA | SB- 3 |

Latitude / Longitude (see instructions) ____ N ____ W — Format Code: ☐ DD ☐ DDM — Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ NE | ¼ NE | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # | | 13 | 7 N | 9 ☒ E ☐ W |

Well Street Address: 1316/1318/1326 East Washington Avenue

| Well City, Village or Town | Well ZIP Code |
|---|---|
| Madison | 53703 |

| Subdivision Name | Lot # |
|---|---|
| NA | NA |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| soil boring | NA |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 7/18/2019

If a Well Construction Report is available, please attach.

Construction Type: ☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Direct Push

Formation Type: ☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| 15 | |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| 2.0 | NA |

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| NA | 8 |

## 2. Facility / Owner Information

Facility Name: Messner Building and Associates Properties

Facility ID (FID or PWS): NA

License/Permit/Monitoring #: NA

Original Well Owner: Dane Co. Department Public Works, Highway & Transportation

Present Well Owner: Dane Co. Department Public Works, Highway & Transportation

Mailing Address of Present Owner: 1919 Alliant Energy Center Way

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Madison | WI | 53713 |

## 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):

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

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| 3/8" Bentonite Chips | Surface | 15 | 15# | |
| | | | | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| On-site Environmental Services, Inc. | | 7/18/2019 |

| Street or Route | Telephone Number |
|---|---|
| PO Box 280 | ( 608 ) 837-8992 |

| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| Sun Prairie | WI | 53590 | Gage Kapugi | 8/2/2019 |

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources SCS No.
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 | NA | SB- 4 |

Latitude / Longitude (see instructions): ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ NE | ¼ NE | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # | | 13 | 7 N | 9 ☒ E ☐ W |

Well Street Address: 1316/1318/1326 East Washington Avenue

| Well City, Village or Town | Well ZIP Code |
|---|---|
| Madison | 53703 |

| Subdivision Name | Lot # |
|---|---|
| NA | NA |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| soil boring | NA |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 7/18/2019

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Direct Push

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| 15 | |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| 2.0 | NA |

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| NA | 7.5 |

## 2. Facility / Owner Information

Facility Name: Messner Building and Associates Properties
Facility ID (FID or PWS): NA
License/Permit/Monitoring #: NA
Original Well Owner: Dane Co. Department Public Works, Highway & Transportation
Present Well Owner: Dane Co. Department Public Works, Highway & Transportation
Mailing Address of Present Owner: 1919 Alliant Energy Center Way

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Madison | WI | 53713 |

## 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):

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

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| 3/8" Bentonite Chips | Surface | 15 | 15# | |
| | | | | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| On-site Environmental Services, Inc. | | 7/18/2019 |

| Street or Route | Telephone Number |
|---|---|
| PO Box 280 | ( 608 ) 837-8992 |

| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| Sun Prairie | WI | 53590 | Gage Kapugi | 8/2/2019 |

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources SCS No.
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 | NA | SB- 5 |

Latitude / Longitude (see instructions) ____ N ____ W — Format Code: ☐ DD ☐ DDM — Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ NE | ¼ NE | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # | | 13 | 7 N | 9 ☒ E ☐ W |

Well Street Address: 1316/1318/1326 East Washington Avenue

| Well City, Village or Town | Well ZIP Code |
|---|---|
| Madison | 53703 |

| Subdivision Name | Lot # |
|---|---|
| NA | NA |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| soil boring | NA |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 7/18/2019

If a Well Construction Report is available, please attach.

Construction Type: ☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Direct Push

Formation Type: ☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| 15 | |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| 2.0 | NA |

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| NA | 7.5 |

## 2. Facility / Owner Information

Facility Name: Messner Building and Associates Properties

Facility ID (FID or PWS): NA

License/Permit/Monitoring #: NA

Original Well Owner: Dane Co. Department Public Works, Highway & Transportation

Present Well Owner: Dane Co. Department Public Works, Highway & Transportation

Mailing Address of Present Owner: 1919 Alliant Energy Center Way

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Madison | WI | 53713 |

## 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):

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

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| 3/8" Bentonite Chips | Surface | 15 | 15# | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| On-site Environmental Services, Inc. | | 7/18/2019 |

| Street or Route | Telephone Number |
|---|---|
| PO Box 280 | ( 608 ) 837-8992 |

| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| Sun Prairie | WI | 53590 | Gage Kapugi | 8/2/2019 |

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources SCS No.
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 | NA | SB- 6 |

Latitude / Longitude (see instructions) ____ N ____ W — Format Code: ☐ DD ☐ DDM — Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ NE | ¼ NE | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # | | 13 | 7 N | 9 ☒ E ☐ W |

Well Street Address: 1316/1318/1326 East Washington Avenue

| Well City, Village or Town | Well ZIP Code |
|---|---|
| Madison | 53703 |

| Subdivision Name | Lot # |
|---|---|
| NA | NA |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| soil boring | NA |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 7/18/2019

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Direct Push

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| 15 | |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| 2.0 | NA |

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| NA | 8 |

## 2. Facility / Owner Information

Facility Name: Messner Building and Associates Properties

Facility ID (FID or PWS): NA

License/Permit/Monitoring #: NA

Original Well Owner: Dane Co. Department Public Works, Highway & Transportation

Present Well Owner: Dane Co. Department Public Works, Highway & Transportation

Mailing Address of Present Owner: 1919 Alliant Energy Center Way

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Madison | WI | 53713 |

## 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):

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

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| 3/8" Bentonite Chips | Surface | 15 | 15# | |
| | | | | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| On-site Environmental Services, Inc. | | 7/18/2019 |

| Street or Route | Telephone Number |
|---|---|
| PO Box 280 | ( 608 ) 837-8992 |

| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| Sun Prairie | WI | 53590 | Gage Kapugi | 8/2/2019 |

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources SCS No.
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 | NA | SB- 7 |

Latitude / Longitude (see instructions) ____ N ____ W — Format Code: ☐ DD ☐ DDM — Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ NE | ¼ NE | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # | | 13 | 7 N | ☒ E ☐ W 9 |

Well Street Address: 1316/1318/1326 East Washington Avenue

| Well City, Village or Town | Well ZIP Code |
|---|---|
| Madison | 53703 |

| Subdivision Name | Lot # |
|---|---|
| NA | NA |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| soil boring | NA |

## 2. Facility / Owner Information

Facility Name: Messner Building and Associates Properties

Facility ID (FID or PWS): NA

License/Permit/Monitoring #: NA

Original Well Owner: Dane Co. Department Public Works, Highway & Transportation

Present Well Owner: Dane Co. Department Public Works, Highway & Transportation

Mailing Address of Present Owner: 1919 Alliant Energy Center Way

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Madison | WI | 53713 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 7/18/2019

If a Well Construction Report is available, please attach.

Construction Type: ☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Direct Push

Formation Type: ☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| 15 | |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| 2.0 | NA |

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| NA | 7.5 |

## 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):

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

| From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|
| 3/8" Bentonite Chips | Surface | 15 | 15# | |
| | | | | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| On-site Environmental Services, Inc. | | 7/18/2019 |

| Street or Route | Telephone Number |
|---|---|
| PO Box 280 | ( 608 ) 837-8992 |

| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| Sun Prairie | WI | 53590 | Gage Kapugi | 8/2/2019 |

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources SCS No.
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 | NA | SB- 8 |

Latitude / Longitude (see Instructions): ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ NE | ¼ NE | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # | | 13 | 7 N | 9 ☒ E ☐ W |

Well Street Address: 1316/1318/1326 East Washington Avenue

| Well City, Village or Town | Well ZIP Code |
|---|---|
| Madison | 53703 |

| Subdivision Name | Lot # |
|---|---|
| NA | NA |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| soil boring | NA |

## 2. Facility / Owner Information

Facility Name: Messner Building and Associates Properties
Facility ID (FID or PWS): NA
License/Permit/Monitoring #: NA
Original Well Owner: Dane Co. Department Public Works, Highway & Transportation
Present Well Owner: Dane Co. Department Public Works, Highway & Transportation
Mailing Address of Present Owner: 1919 Alliant Energy Center Way

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Madison | WI | 53713 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 7/18/2019
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Direct Push

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| 15 | |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| 2.0 | NA |

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| NA | 8 |

## 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):

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

| From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|
| 3/8" Bentonite Chips | Surface | 15 | 15# | |
| | | | | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| On-site Environmental Services, Inc. | | 7/18/2019 |

| Street or Route | Telephone Number |
|---|---|
| PO Box 280 | ( 608 ) 837-8992 |

| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| Sun Prairie | WI | 53590 | Gage Kapugi | 8/2/2019 |

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources SCS No.
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 | NA | SB- 9 |

Latitude / Longitude (see Instructions): ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ | ¼ | Section | Township | Range |
|---|---|---|---|---|
| NE | NE | 13 | 7 N | 9 ☒ E ☐ W |

or Gov't Lot #

Well Street Address: 1316/1318/1326 East Washington Avenue

| Well City, Village or Town | Well ZIP Code |
|---|---|
| Madison | 53703 |

| Subdivision Name | Lot # |
|---|---|
| NA | NA |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| soil boring | NA |

## 2. Facility / Owner Information

Facility Name: Messner Building and Associates Properties
Facility ID (FID or PWS): NA
License/Permit/Monitoring #: NA
Original Well Owner: Dane Co. Department Public Works, Highway & Transportation
Present Well Owner: Dane Co. Department Public Works, Highway & Transportation
Mailing Address of Present Owner: 1919 Alliant Energy Center Way

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Madison | WI | 53713 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 7/18/2019

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Direct Push

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| 15 | |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| 2.0 | NA |

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| NA | 7.5 |

## 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):

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

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| 3/8" Bentonite Chips | Surface | 15 | 15# | |
| | | | | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| On-site Environmental Services, Inc. | | 7/18/2019 |

| Street or Route | Telephone Number |
|---|---|
| PO Box 280 | ( 608 ) 837-8992 |

| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| Sun Prairie | WI | 53590 | Gage Kapugi | 8/2/2019 |

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

# Appendix B

# Soil and Groundwater Laboratory Report

eurofins | Environment Testing TestAmerica

# ANALYTICAL REPORT

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

Laboratory Job ID: 500-167116-1
Client Project/Site: Messner Bldg - 25219155

For:
SCS Engineers
2830 Dairy Dr
Madison, Wisconsin 53718

Attn: Mr. Robert Langdon

*Authorized for release by:*
*7/31/2019 5:03:50 PM*

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

# Table of Contents

## Job ID: 500-167116-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-167116-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 7/23/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.1º C, 3.1º C and 4.1º C.

**GC/MS VOA**
Method(s) 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: SB-6 GW (500-167116-17). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following samples were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: SB-3 GW (500-167116-7), SB-4 GW (500-167116-8), SB-7 GW (500-167116-14), SB-8 GW (500-167116-15), SB-9 GW (500-167116-16) and SB-6 GW (500-167116-17).

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

**GC/MS Semi VOA**
Method(s) 8270D: The following sample contained one base surrogate outside acceptance limits: SB-6 GW (500-167116-17). The laboratory's SOP allows one base surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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.

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

# Detection Summary

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-9 5'-7.5'

Lab Sample ID: 500-167116-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 10 | J | 39 | 7.3 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 6.4 | J | 39 | 5.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 4.0 | | 1.1 | 0.38 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 100 | F1 | 1.1 | 0.13 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.25 | B | 0.22 | 0.040 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 10 | | 1.1 | 0.54 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 4.5 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Selenium | 0.70 | J B | 1.1 | 0.65 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 1.8 | | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |

## Client Sample ID: SB-1 2'-4'

Lab Sample ID: 500-167116-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 11 | J | 86 | 10 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 13 | J | 86 | 7.8 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 8.5 | J | 42 | 5.6 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 9.7 | J | 42 | 7.1 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 65 | | 42 | 5.7 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 74 | | 42 | 8.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 96 | | 42 | 9.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 56 | | 42 | 14 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 44 | | 42 | 13 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 80 | | 42 | 12 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 130 | | 42 | 7.9 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 49 | | 42 | 11 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 9.1 | J | 42 | 6.6 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 54 | | 42 | 5.9 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 110 | | 42 | 8.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 5.5 | | 1.2 | 0.42 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 110 | | 1.2 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.42 | B | 0.25 | 0.044 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 16 | | 1.2 | 0.61 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 92 | | 0.61 | 0.28 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Selenium | 1.3 | B | 1.2 | 0.72 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 2.5 | | 0.61 | 0.16 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Mercury | 0.047 | | 0.019 | 0.0064 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

## Client Sample ID: SB-6 10'-12'

Lab Sample ID: 500-167116-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 360 | | 19 | 14 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Isopropylbenzene | 38 | J | 76 | 29 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Naphthalene | 270 | | 76 | 25 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| n-Butylbenzene | 56 | J | 76 | 29 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| N-Propylbenzene | 150 | | 76 | 31 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Toluene | 35 | | 19 | 11 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| 1,2,4-Trimethylbenzene | 970 | | 76 | 27 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| 1,3,5-Trimethylbenzene | 260 | | 76 | 29 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Xylenes, Total | 920 | | 38 | 17 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| 1-Methylnaphthalene | 270 | | 84 | 10 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 410 | | 84 | 7.6 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 480 | | 41 | 6.4 | ug/Kg | 1 | ☼ | 8270D | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: SB-6 10'-12' (Continued) — Lab Sample ID: 500-167116-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Phenanthrene | 6.9 | J | 41 | 5.8 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 0.79 | J | 1.2 | 0.41 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 31 | | 1.2 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.27 | B | 0.24 | 0.043 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 11 | | 1.2 | 0.60 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 5.8 | | 0.60 | 0.28 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Selenium | 1.3 | B | 1.2 | 0.71 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 1.5 | | 0.60 | 0.16 | mg/Kg | 1 | ☼ | 6010C | Total/NA |

## Client Sample ID: SB-5 2-4 — Lab Sample ID: 500-167116-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 20 | | 16 | 9.6 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| 2-Methylnaphthalene | 11 | J | 79 | 7.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 18 | J | 39 | 5.1 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 36 | J | 39 | 6.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 120 | | 39 | 5.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 190 | | 39 | 7.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 160 | | 39 | 8.4 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 130 | | 39 | 13 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 180 | | 39 | 11 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 260 | | 39 | 11 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 30 | J | 39 | 7.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 340 | | 39 | 7.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 11 | J | 39 | 5.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 120 | | 39 | 10 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 17 | J | 39 | 6.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 170 | | 39 | 5.4 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 310 | | 39 | 7.7 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 5.3 | | 1.1 | 0.36 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 75 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.87 | B | 0.21 | 0.038 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 14 | | 1.1 | 0.52 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 46 | | 0.53 | 0.24 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Selenium | 0.78 | J B | 1.1 | 0.62 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 2.1 | | 0.53 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Mercury | 0.19 | | 0.017 | 0.0057 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

## Client Sample ID: SB-5 6-8 — Lab Sample ID: 500-167116-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 1.9 | | 1.1 | 0.37 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 26 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.21 | J B | 0.22 | 0.039 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 9.4 | | 1.1 | 0.54 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 3.4 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Selenium | 0.85 | J B | 1.1 | 0.64 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 1.4 | | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-2 7.5'-10'

Lab Sample ID: 500-167116-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 9.2 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.19 | J B | 0.22 | 0.039 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 4.7 | | 1.1 | 0.54 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 2.5 | | 0.54 | 0.25 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 1.0 | | 0.54 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |

## Client Sample ID: SB-3 GW

Lab Sample ID: 500-167116-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 0.58 | J | 2.0 | 0.37 | ug/L | 1 | | 8260B | Total/NA |
| Toluene | 0.44 | J | 0.50 | 0.15 | ug/L | 1 | | 8260B | Total/NA |

## Client Sample ID: SB-4 GW

Lab Sample ID: 500-167116-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 0.58 | J | 2.0 | 0.37 | ug/L | 1 | | 8260B | Total/NA |
| cis-1,2-Dichloroethene | 0.67 | J | 1.0 | 0.41 | ug/L | 1 | | 8260B | Total/NA |
| Toluene | 0.33 | J | 0.50 | 0.15 | ug/L | 1 | | 8260B | Total/NA |
| 2-Methylnaphthalene | 0.077 | J | 1.9 | 0.061 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[a]anthracene | 0.19 | | 0.19 | 0.053 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[a]pyrene | 0.25 | | 0.19 | 0.092 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.18 | J | 0.19 | 0.075 | ug/L | 1 | | 8270D | Total/NA |
| Chrysene | 0.16 | J | 0.19 | 0.063 | ug/L | 1 | | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.25 | | 0.19 | 0.070 | ug/L | 1 | | 8270D | Total/NA |
| Phenanthrene | 0.30 | J | 0.93 | 0.28 | ug/L | 1 | | 8270D | Total/NA |

## Client Sample ID: SB-4 4'-6'

Lab Sample ID: 500-167116-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 3.2 | | 1.2 | 0.42 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 110 | | 1.2 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.51 | B | 0.24 | 0.044 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 15 | | 1.2 | 0.60 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 15 | | 0.61 | 0.28 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Selenium | 1.4 | B | 1.2 | 0.72 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 2.2 | | 0.61 | 0.16 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Mercury | 0.072 | | 0.021 | 0.0071 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

## Client Sample ID: SB-3 0-2.5'

Lab Sample ID: 500-167116-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 39 | J | 83 | 10 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 43 | J | 83 | 7.6 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthene | 26 | J | 41 | 7.4 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 69 | | 41 | 5.4 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 140 | | 41 | 6.9 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 890 | | 41 | 5.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 1000 | | 41 | 8.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 1300 | | 41 | 8.9 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 580 | | 41 | 13 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 380 | | 41 | 12 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 950 | | 41 | 11 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 210 | | 41 | 7.9 | ug/Kg | 1 | ☼ | 8270D | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: SB-3 0-2.5' (Continued)

## Lab Sample ID: 500-167116-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 1800 | | 41 | 7.6 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 28 | J | 41 | 5.8 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 540 | | 41 | 11 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 31 | J | 41 | 6.3 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 610 | | 41 | 5.7 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 1500 | | 41 | 8.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 7.0 | | 1.1 | 0.39 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 160 | | 1.1 | 0.13 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.74 | B | 0.23 | 0.041 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 13 | | 1.1 | 0.56 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 480 | | 0.56 | 0.26 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 2.3 | | 0.56 | 0.15 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Mercury | 0.11 | | 0.020 | 0.0065 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

## Client Sample ID: SB-8 5'-7.5'

## Lab Sample ID: 500-167116-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 27 | J | 72 | 24 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Xylenes, Total | 41 | | 36 | 16 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| 1-Methylnaphthalene | 20 | J | 79 | 9.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 30 | J | 79 | 7.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthene | 11 | J | 39 | 7.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 18 | J | 39 | 5.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 52 | | 39 | 6.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 280 | | 39 | 5.3 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 310 | | 39 | 7.6 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 420 | | 39 | 8.4 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 210 | | 39 | 13 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 140 | | 39 | 12 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 340 | | 39 | 11 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 50 | | 39 | 7.6 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 690 | | 39 | 7.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 15 | J | 39 | 5.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 170 | | 39 | 10 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 16 | J | 39 | 6.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 310 | | 39 | 5.4 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 520 | | 39 | 7.8 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 4.0 | | 1.0 | 0.35 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 96 | | 1.0 | 0.12 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.44 | B | 0.21 | 0.037 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 13 | | 1.0 | 0.51 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 28 | | 0.52 | 0.24 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Selenium | 1.2 | B | 1.0 | 0.61 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 2.4 | | 0.52 | 0.13 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Mercury | 0.44 | | 0.019 | 0.0063 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

## Client Sample ID: SB-7 5'-7.5'

## Lab Sample ID: 500-167116-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]pyrene | 13 | J | 43 | 8.4 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 23 | J | 43 | 9.3 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 27 | J | 43 | 12 | ug/Kg | 1 | ☼ | 8270D | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: SB-7 5'-7.5' (Continued) — Lab Sample ID: 500-167116-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 37 | J | 43 | 8.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 19 | J | 43 | 6.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 32 | J | 43 | 8.6 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 2.4 | | 1.1 | 0.38 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 150 | | 1.1 | 0.13 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.43 | B | 0.22 | 0.040 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 19 | | 1.1 | 0.55 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 30 | | 0.56 | 0.26 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Selenium | 1.4 | B | 1.1 | 0.66 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 2.9 | | 0.56 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Mercury | 0.12 | | 0.021 | 0.0068 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

## Client Sample ID: Methanol Blank — Lab Sample ID: 500-167116-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 19 | J | 100 | 19 | ug/Kg | 50 | ☼ | 8260B | Total/NA |

## Client Sample ID: SB-7 GW — Lab Sample ID: 500-167116-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | 0.24 | J | 0.50 | 0.15 | ug/L | 1 | | 8260B | Total/NA |
| Benzo[b]fluoranthene | 0.075 | J | 0.18 | 0.072 | ug/L | 1 | | 8270D | Total/NA |
| Chrysene | 0.084 | J | 0.18 | 0.061 | ug/L | 1 | | 8270D | Total/NA |

## Client Sample ID: SB-8 GW — Lab Sample ID: 500-167116-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | 0.32 | J | 0.50 | 0.15 | ug/L | 1 | | 8260B | Total/NA |
| 2-Methylnaphthalene | 0.20 | J | 1.7 | 0.056 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[a]anthracene | 1.2 | | 0.17 | 0.049 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[a]pyrene | 1.8 | | 0.17 | 0.085 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[b]fluoranthene | 2.1 | | 0.17 | 0.069 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 1.1 | | 0.86 | 0.32 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[k]fluoranthene | 0.65 | | 0.17 | 0.055 | ug/L | 1 | | 8270D | Total/NA |
| Chrysene | 1.5 | | 0.17 | 0.059 | ug/L | 1 | | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.24 | J | 0.26 | 0.044 | ug/L | 1 | | 8270D | Total/NA |
| Fluoranthene | 2.3 | | 0.86 | 0.39 | ug/L | 1 | | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 1.1 | | 0.17 | 0.064 | ug/L | 1 | | 8270D | Total/NA |
| Phenanthrene | 1.2 | | 0.86 | 0.26 | ug/L | 1 | | 8270D | Total/NA |
| Pyrene | 2.3 | | 0.86 | 0.37 | ug/L | 1 | | 8270D | Total/NA |

## Client Sample ID: SB-9 GW — Lab Sample ID: 500-167116-16

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | 0.19 | J | 0.50 | 0.15 | ug/L | 1 | | 8260B | Total/NA |

## Client Sample ID: SB-6 GW — Lab Sample ID: 500-167116-17

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 1.1 | J | 2.5 | 0.73 | ug/L | 5 | | 8260B | Total/NA |
| Ethylbenzene | 610 | | 2.5 | 0.92 | ug/L | 5 | | 8260B | Total/NA |
| Isopropylbenzene | 63 | | 5.0 | 1.9 | ug/L | 5 | | 8260B | Total/NA |
| Naphthalene | 220 | | 5.0 | 1.7 | ug/L | 5 | | 8260B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: SB-6 GW (Continued)

## Lab Sample ID: 500-167116-17

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| n-Butylbenzene | 52 | | 5.0 | 1.9 | ug/L | 5 | | 8260B | Total/NA |
| N-Propylbenzene | 210 | | 5.0 | 2.1 | ug/L | 5 | | 8260B | Total/NA |
| p-Isopropyltoluene | 10 | | 5.0 | 1.8 | ug/L | 5 | | 8260B | Total/NA |
| sec-Butylbenzene | 11 | | 5.0 | 2.0 | ug/L | 5 | | 8260B | Total/NA |
| Toluene | 43 | | 2.5 | 0.76 | ug/L | 5 | | 8260B | Total/NA |
| 1,3,5-Trimethylbenzene | 410 | | 5.0 | 1.3 | ug/L | 5 | | 8260B | Total/NA |
| 1,2,4-Trimethylbenzene - DL | 1700 | | 10 | 3.6 | ug/L | 10 | | 8260B | Total/NA |
| Xylenes, Total - DL | 1500 | | 10 | 2.2 | ug/L | 10 | | 8260B | Total/NA |
| Acenaphthene | 0.76 | J | 1.1 | 0.35 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[a]anthracene | 0.20 | J | 0.22 | 0.064 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[a]pyrene | 0.27 | | 0.22 | 0.11 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.20 | J | 0.22 | 0.090 | ug/L | 1 | | 8270D | Total/NA |
| Chrysene | 0.19 | J | 0.22 | 0.076 | ug/L | 1 | | 8270D | Total/NA |
| Fluorene | 0.51 | J | 1.1 | 0.27 | ug/L | 1 | | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.29 | | 0.22 | 0.084 | ug/L | 1 | | 8270D | Total/NA |
| Phenanthrene | 1.0 | J | 1.1 | 0.34 | ug/L | 1 | | 8270D | Total/NA |
| 1-Methylnaphthalene - DL | 110 | | 11 | 1.7 | ug/L | 5 | | 8270D | Total/NA |
| 2-Methylnaphthalene - DL | 190 | | 11 | 0.37 | ug/L | 5 | | 8270D | Total/NA |
| Naphthalene - DL2 | 390 | | 11 | 3.5 | ug/L | 10 | | 8270D | Total/NA |

## Client Sample ID: Trip Blank

## Lab Sample ID: 500-167116-18

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 1.7 | J | 5.0 | 1.6 | ug/L | 1 | | 8260B | Total/NA |
| Toluene | 0.33 | J | 0.50 | 0.15 | ug/L | 1 | | 8260B | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8270D | Semivolatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 7471B | Mercury (CVAA) | SW846 | TAL CHI |
| Moisture | Percent Moisture | EPA | TAL CHI |
| 3050B | Preparation, Metals | SW846 | TAL CHI |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | TAL CHI |
| 3541 | Automated Soxhlet Extraction | SW846 | TAL CHI |
| 5030B | Purge and Trap | SW846 | TAL CHI |
| 5035 | Closed System Purge and Trap | SW846 | TAL CHI |
| 7471B | Preparation, Mercury | SW846 | TAL 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:**

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

# Sample Summary

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Solid | 07/18/19 16:40 | 07/23/19 10:00 | |
| 500-167116-2 | SB-1 2'-4' | Solid | 07/18/19 10:00 | 07/23/19 10:00 | |
| 500-167116-3 | SB-6 10'-12' | Solid | 07/18/19 14:20 | 07/23/19 10:00 | |
| 500-167116-4 | SB-5 2-4 | Solid | 07/18/19 13:00 | 07/23/19 10:00 | |
| 500-167116-5 | SB-5 6-8 | Solid | 07/18/19 13:30 | 07/23/19 10:00 | |
| 500-167116-6 | SB-2 7.5'-10' | Solid | 07/18/19 10:25 | 07/23/19 10:00 | |
| 500-167116-7 | SB-3 GW | Ground Water | 07/18/19 11:05 | 07/23/19 10:00 | |
| 500-167116-8 | SB-4 GW | Ground Water | 07/18/19 12:45 | 07/23/19 10:00 | |
| 500-167116-9 | SB-4 4'-6' | Solid | 07/18/19 12:15 | 07/23/19 10:00 | |
| 500-167116-10 | SB-3 0-2.5' | Solid | 07/18/19 10:40 | 07/23/19 10:00 | |
| 500-167116-11 | SB-8 5'-7.5' | Solid | 07/18/19 15:55 | 07/23/19 10:00 | |
| 500-167116-12 | SB-7 5'-7.5' | Solid | 07/18/19 15:25 | 07/23/19 10:00 | |
| 500-167116-13 | Methanol Blank | Solid | 07/18/19 00:00 | 07/23/19 10:00 | |
| 500-167116-14 | SB-7 GW | Ground Water | 07/18/19 16:25 | 07/23/19 10:00 | |
| 500-167116-15 | SB-8 GW | Ground Water | 07/18/19 16:20 | 07/23/19 10:00 | |
| 500-167116-16 | SB-9 GW | Ground Water | 07/18/19 16:15 | 07/23/19 10:00 | |
| 500-167116-17 | SB-6 GW | Ground Water | 07/18/19 14:25 | 07/23/19 10:00 | |
| 500-167116-18 | Trip Blank | Water | 07/18/19 00:00 | 07/23/19 10:00 | |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Client Sample ID: SB-9 5'-7.5'**
**Date Collected: 07/18/19 16:40**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-1**
**Matrix: Solid**
**Percent Solids: 82.8**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <10 | | 18 | 10 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Bromobenzene | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Bromochloromethane | <31 | | 72 | 31 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Bromodichloromethane | <27 | | 72 | 27 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Bromoform | <35 | * | 72 | 35 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Bromomethane | <57 | | 220 | 57 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Carbon tetrachloride | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Chlorobenzene | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Chloroethane | <36 | | 72 | 36 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Chloroform | <27 | | 140 | 27 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Chloromethane | <23 | | 72 | 23 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 2-Chlorotoluene | <23 | | 72 | 23 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 4-Chlorotoluene | <25 | | 72 | 25 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| cis-1,2-Dichloroethene | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| cis-1,3-Dichloropropene | <30 | | 72 | 30 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Dibromochloromethane | <35 | | 72 | 35 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,2-Dibromo-3-Chloropropane | <140 | * | 360 | 140 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,2-Dibromoethane | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Dibromomethane | <19 | | 72 | 19 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,2-Dichlorobenzene | <24 | | 72 | 24 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,3-Dichlorobenzene | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,4-Dichlorobenzene | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Dichlorodifluoromethane | <48 | | 220 | 48 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,1-Dichloroethane | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,2-Dichloroethane | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,1-Dichloroethene | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,2-Dichloropropane | <31 | | 72 | 31 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,3-Dichloropropane | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 2,2-Dichloropropane | <32 | | 72 | 32 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,1-Dichloropropene | <21 | | 72 | 21 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Ethylbenzene | <13 | | 18 | 13 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Hexachlorobutadiene | <32 | | 72 | 32 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Isopropylbenzene | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Isopropyl ether | <20 | | 72 | 20 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Methylene Chloride | <120 | | 360 | 120 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Methyl tert-butyl ether | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Naphthalene | <24 | | 72 | 24 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| n-Butylbenzene | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| N-Propylbenzene | <30 | | 72 | 30 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| p-Isopropyltoluene | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| sec-Butylbenzene | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Styrene | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| tert-Butylbenzene | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,1,1,2-Tetrachloroethane | <33 | | 72 | 33 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,1,2,2-Tetrachloroethane | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Tetrachloroethene | <27 | | 72 | 27 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Toluene | <11 | | 18 | 11 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| trans-1,2-Dichloroethene | <25 | | 72 | 25 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| trans-1,3-Dichloropropene | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Client Sample ID: SB-9 5'-7.5'**
**Date Collected: 07/18/19 16:40**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-1**
**Matrix: Solid**
**Percent Solids: 82.8**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | <33 | | 72 | 33 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,2,4-Trichlorobenzene | <25 | | 72 | 25 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,1,1-Trichloroethane | <27 | | 72 | 27 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,1,2-Trichloroethane | <25 | | 72 | 25 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Trichloroethene | <12 | | 36 | 12 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Trichlorofluoromethane | <31 | | 72 | 31 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,2,3-Trichloropropane | <30 | | 140 | 30 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,2,4-Trimethylbenzene | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| 1,3,5-Trimethylbenzene | <27 | | 72 | 27 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Vinyl chloride | <19 | | 72 | 19 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |
| Xylenes, Total | <16 | | 36 | 16 | ug/Kg | ☼ | 07/18/19 16:40 | 07/26/19 12:48 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *72 - 124* | *07/18/19 16:40* | *07/26/19 12:48* | *50* |
| *Dibromofluoromethane* | *94* | | *75 - 120* | *07/18/19 16:40* | *07/26/19 12:48* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *75 - 126* | *07/18/19 16:40* | *07/26/19 12:48* | *50* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 120* | *07/18/19 16:40* | *07/26/19 12:48* | *50* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <9.6 | | 79 | 9.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| 2-Methylnaphthalene | <7.2 | | 79 | 7.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Acenaphthene | <7.1 | | 39 | 7.1 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Acenaphthylene | <5.2 | | 39 | 5.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Anthracene | <6.6 | | 39 | 6.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Benzo[a]anthracene | <5.3 | | 39 | 5.3 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Benzo[a]pyrene | <7.6 | | 39 | 7.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Benzo[b]fluoranthene | <8.5 | | 39 | 8.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Benzo[g,h,i]perylene | <13 | | 39 | 13 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Benzo[k]fluoranthene | <12 | | 39 | 12 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Chrysene | <11 | | 39 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Dibenz(a,h)anthracene | <7.6 | | 39 | 7.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| **Fluoranthene** | **10** | **J** | 39 | 7.3 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Fluorene | <5.5 | | 39 | 5.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Indeno[1,2,3-cd]pyrene | <10 | | 39 | 10 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Naphthalene | <6.0 | | 39 | 6.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| **Phenanthrene** | **6.4** | **J** | 39 | 5.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |
| Pyrene | <7.8 | | 39 | 7.8 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 11:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *78* | | *43 - 145* | *07/25/19 16:00* | *07/26/19 11:57* | *1* |
| *Nitrobenzene-d5 (Surr)* | *67* | | *37 - 147* | *07/25/19 16:00* | *07/26/19 11:57* | *1* |
| *Terphenyl-d14 (Surr)* | *105* | | *42 - 157* | *07/25/19 16:00* | *07/26/19 11:57* | *1* |

## Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.0** | | 1.1 | 0.38 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 15:47 | 1 |
| **Barium** | **100** | **F1** | 1.1 | 0.13 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 15:47 | 1 |
| **Cadmium** | **0.25** | **B** | 0.22 | 0.040 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 15:47 | 1 |
| **Chromium** | **10** | | 1.1 | 0.54 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 15:47 | 1 |

## Client Sample ID: SB-9 5'-7.5'

**Lab Sample ID: 500-167116-1**
**Date Collected: 07/18/19 16:40**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 82.8**

### Method: 6010C - Metals (ICP) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 4.5 | | 0.55 | 0.25 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 15:47 | 1 |
| Selenium | 0.70 | J B | 1.1 | 0.65 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 15:47 | 1 |
| Silver | 1.8 | | 0.55 | 0.14 | mg/Kg | ☼ | 07/24/19 15:18 | 07/26/19 11:01 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.0062 | | 0.019 | 0.0062 | mg/Kg | ☼ | 07/26/19 14:20 | 07/29/19 10:08 | 1 |

## Client Sample ID: SB-1 2'-4'

**Lab Sample ID: 500-167116-2**
**Date Collected: 07/18/19 10:00**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 77.5**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <12 | | 20 | 12 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Bromobenzene | <28 | | 79 | 28 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Bromochloromethane | <34 | | 79 | 34 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Bromodichloromethane | <29 | | 79 | 29 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Bromoform | <38 | * | 79 | 38 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Bromomethane | <63 | | 240 | 63 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Carbon tetrachloride | <30 | | 79 | 30 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Chlorobenzene | <31 | | 79 | 31 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Chloroethane | <40 | | 79 | 40 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Chloroform | <29 | | 160 | 29 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Chloromethane | <25 | | 79 | 25 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 2-Chlorotoluene | <25 | | 79 | 25 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 4-Chlorotoluene | <28 | | 79 | 28 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| cis-1,2-Dichloroethene | <32 | | 79 | 32 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| cis-1,3-Dichloropropene | <33 | | 79 | 33 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Dibromochloromethane | <39 | | 79 | 39 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,2-Dibromo-3-Chloropropane | <160 | * | 400 | 160 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,2-Dibromoethane | <31 | | 79 | 31 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Dibromomethane | <21 | | 79 | 21 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,2-Dichlorobenzene | <26 | | 79 | 26 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,3-Dichlorobenzene | <32 | | 79 | 32 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,4-Dichlorobenzene | <29 | | 79 | 29 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Dichlorodifluoromethane | <53 | | 240 | 53 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,1-Dichloroethane | <32 | | 79 | 32 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,2-Dichloroethane | <31 | | 79 | 31 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,1-Dichloroethene | <31 | | 79 | 31 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,2-Dichloropropane | <34 | | 79 | 34 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,3-Dichloropropane | <29 | | 79 | 29 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 2,2-Dichloropropane | <35 | | 79 | 35 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,1-Dichloropropene | <24 | | 79 | 24 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Ethylbenzene | <14 | | 20 | 14 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Hexachlorobutadiene | <35 | | 79 | 35 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Isopropylbenzene | <30 | | 79 | 30 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Isopropyl ether | <22 | | 79 | 22 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Methylene Chloride | <130 | | 400 | 130 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Methyl tert-butyl ether | <31 | | 79 | 31 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |

**Client Sample ID: SB-1 2'-4'**
**Date Collected: 07/18/19 10:00**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-2**
**Matrix: Solid**
**Percent Solids: 77.5**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | <26 | | 79 | 26 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| n-Butylbenzene | <31 | | 79 | 31 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| N-Propylbenzene | <33 | | 79 | 33 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| p-Isopropyltoluene | <29 | | 79 | 29 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| sec-Butylbenzene | <31 | | 79 | 31 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Styrene | <31 | | 79 | 31 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| tert-Butylbenzene | <31 | | 79 | 31 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,1,1,2-Tetrachloroethane | <37 | | 79 | 37 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,1,2,2-Tetrachloroethane | <31 | | 79 | 31 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Tetrachloroethene | <29 | | 79 | 29 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Toluene | <12 | | 20 | 12 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| trans-1,2-Dichloroethene | <28 | | 79 | 28 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| trans-1,3-Dichloropropene | <29 | | 79 | 29 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,2,3-Trichlorobenzene | <36 | | 79 | 36 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,2,4-Trichlorobenzene | <27 | | 79 | 27 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,1,1-Trichloroethane | <30 | | 79 | 30 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,1,2-Trichloroethane | <28 | | 79 | 28 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Trichloroethene | <13 | | 40 | 13 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Trichlorofluoromethane | <34 | | 79 | 34 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,2,3-Trichloropropane | <33 | | 160 | 33 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,2,4-Trimethylbenzene | <28 | | 79 | 28 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| 1,3,5-Trimethylbenzene | <30 | | 79 | 30 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Vinyl chloride | <21 | | 79 | 21 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |
| Xylenes, Total | <17 | | 40 | 17 | ug/Kg | ☼ | 07/18/19 10:00 | 07/26/19 13:13 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *72 - 124* | *07/18/19 10:00* | *07/26/19 13:13* | *50* |
| *Dibromofluoromethane* | *95* | | *75 - 120* | *07/18/19 10:00* | *07/26/19 13:13* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *75 - 126* | *07/18/19 10:00* | *07/26/19 13:13* | *50* |
| *Toluene-d8 (Surr)* | *101* | | *75 - 120* | *07/18/19 10:00* | *07/26/19 13:13* | *50* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1-Methylnaphthalene** | **11** | **J** | 86 | 10 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **2-Methylnaphthalene** | **13** | **J** | 86 | 7.8 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| Acenaphthene | <7.7 | | 42 | 7.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Acenaphthylene** | **8.5** | **J** | 42 | 5.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Anthracene** | **9.7** | **J** | 42 | 7.1 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Benzo[a]anthracene** | **65** | | 42 | 5.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Benzo[a]pyrene** | **74** | | 42 | 8.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Benzo[b]fluoranthene** | **96** | | 42 | 9.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Benzo[g,h,i]perylene** | **56** | | 42 | 14 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Benzo[k]fluoranthene** | **44** | | 42 | 13 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Chrysene** | **80** | | 42 | 12 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| Dibenz(a,h)anthracene | <8.2 | | 42 | 8.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Fluoranthene** | **130** | | 42 | 7.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| Fluorene | <6.0 | | 42 | 6.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **49** | | 42 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Naphthalene** | **9.1** | **J** | 42 | 6.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |
| **Phenanthrene** | **54** | | 42 | 5.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |

## Client Sample ID: SB-1 2'-4'

**Date Collected: 07/18/19 10:00**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-2

**Matrix: Solid**
**Percent Solids: 77.5**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Pyrene | 110 | | 42 | 8.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *75* | | *43 - 145* | *07/25/19 16:00* | *07/26/19 12:24* | *1* |
| *Nitrobenzene-d5 (Surr)* | *68* | | *37 - 147* | *07/25/19 16:00* | *07/26/19 12:24* | *1* |
| *Terphenyl-d14 (Surr)* | *99* | | *42 - 157* | *07/25/19 16:00* | *07/26/19 12:24* | *1* |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 5.5 | | 1.2 | 0.42 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:07 | 1 |
| Barium | 110 | | 1.2 | 0.14 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:07 | 1 |
| Cadmium | 0.42 | B | 0.25 | 0.044 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:07 | 1 |
| Chromium | 16 | | 1.2 | 0.61 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:07 | 1 |
| Lead | 92 | | 0.61 | 0.28 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:07 | 1 |
| Selenium | 1.3 | B | 1.2 | 0.72 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:07 | 1 |
| Silver | 2.5 | | 0.61 | 0.16 | mg/Kg | ☼ | 07/24/19 15:18 | 07/26/19 11:30 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.047 | | 0.019 | 0.0064 | mg/Kg | ☼ | 07/26/19 14:20 | 07/29/19 10:10 | 1 |

## Client Sample ID: SB-6 10'-12'

**Date Collected: 07/18/19 14:20**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-3

**Matrix: Solid**
**Percent Solids: 79.9**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <11 | | 19 | 11 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Bromobenzene | <27 | | 76 | 27 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Bromochloromethane | <32 | | 76 | 32 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Bromodichloromethane | <28 | | 76 | 28 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Bromoform | <37 | * | 76 | 37 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Bromomethane | <60 | | 230 | 60 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Carbon tetrachloride | <29 | | 76 | 29 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Chlorobenzene | <29 | | 76 | 29 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Chloroethane | <38 | | 76 | 38 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Chloroform | <28 | | 150 | 28 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Chloromethane | <24 | | 76 | 24 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 2-Chlorotoluene | <24 | | 76 | 24 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 4-Chlorotoluene | <27 | | 76 | 27 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| cis-1,2-Dichloroethene | <31 | | 76 | 31 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| cis-1,3-Dichloropropene | <32 | | 76 | 32 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Dibromochloromethane | <37 | | 76 | 37 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,2-Dibromo-3-Chloropropane | <150 | * | 380 | 150 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,2-Dibromoethane | <29 | | 76 | 29 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Dibromomethane | <20 | | 76 | 20 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,2-Dichlorobenzene | <25 | | 76 | 25 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,3-Dichlorobenzene | <30 | | 76 | 30 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,4-Dichlorobenzene | <28 | | 76 | 28 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Dichlorodifluoromethane | <51 | | 230 | 51 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,1-Dichloroethane | <31 | | 76 | 31 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Client Sample ID: SB-6 10'-12'**
**Date Collected: 07/18/19 14:20**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-3**
**Matrix: Solid**
**Percent Solids: 79.9**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | <30 | | 76 | 30 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,1-Dichloroethene | <30 | | 76 | 30 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,2-Dichloropropane | <32 | | 76 | 32 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,3-Dichloropropane | <27 | | 76 | 27 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 2,2-Dichloropropane | <34 | | 76 | 34 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,1-Dichloropropene | <23 | | 76 | 23 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| **Ethylbenzene** | **360** | | 19 | 14 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Hexachlorobutadiene | <34 | | 76 | 34 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| **Isopropylbenzene** | **38** | **J** | 76 | 29 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Isopropyl ether | <21 | | 76 | 21 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Methylene Chloride | <120 | | 380 | 120 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Methyl tert-butyl ether | <30 | | 76 | 30 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| **Naphthalene** | **270** | | 76 | 25 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| **n-Butylbenzene** | **56** | **J** | 76 | 29 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| **N-Propylbenzene** | **150** | | 76 | 31 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| p-Isopropyltoluene | <27 | | 76 | 27 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| sec-Butylbenzene | <30 | | 76 | 30 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Styrene | <29 | | 76 | 29 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| tert-Butylbenzene | <30 | | 76 | 30 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,1,1,2-Tetrachloroethane | <35 | | 76 | 35 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,1,2,2-Tetrachloroethane | <30 | | 76 | 30 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Tetrachloroethene | <28 | | 76 | 28 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| **Toluene** | **35** | | 19 | 11 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| trans-1,2-Dichloroethene | <27 | | 76 | 27 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| trans-1,3-Dichloropropene | <27 | | 76 | 27 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,2,3-Trichlorobenzene | <35 | | 76 | 35 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,2,4-Trichlorobenzene | <26 | | 76 | 26 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,1,1-Trichloroethane | <29 | | 76 | 29 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,1,2-Trichloroethane | <27 | | 76 | 27 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Trichloroethene | <12 | | 38 | 12 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Trichlorofluoromethane | <32 | | 76 | 32 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| 1,2,3-Trichloropropane | <31 | | 150 | 31 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| **1,2,4-Trimethylbenzene** | **970** | | 76 | 27 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| **1,3,5-Trimethylbenzene** | **260** | | 76 | 29 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| Vinyl chloride | <20 | | 76 | 20 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |
| **Xylenes, Total** | **920** | | 38 | 17 | ug/Kg | ☼ | 07/18/19 14:20 | 07/26/19 13:38 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *72 - 124* | *07/18/19 14:20* | *07/26/19 13:38* | *50* |
| *Dibromofluoromethane* | *94* | | *75 - 120* | *07/18/19 14:20* | *07/26/19 13:38* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *75 - 126* | *07/18/19 14:20* | *07/26/19 13:38* | *50* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 120* | *07/18/19 14:20* | *07/26/19 13:38* | *50* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1-Methylnaphthalene** | **270** | | 84 | 10 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| **2-Methylnaphthalene** | **410** | | 84 | 7.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Acenaphthene | <7.5 | | 41 | 7.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Acenaphthylene | <5.5 | | 41 | 5.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Anthracene | <6.9 | | 41 | 6.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |

## Client Sample ID: SB-6 10'-12'

**Lab Sample ID: 500-167116-3**
**Date Collected: 07/18/19 14:20**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 79.9**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | <5.6 | | 41 | 5.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Benzo[a]pyrene | <8.0 | | 41 | 8.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Benzo[b]fluoranthene | <9.0 | | 41 | 9.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Benzo[g,h,i]perylene | <13 | | 41 | 13 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Benzo[k]fluoranthene | <12 | | 41 | 12 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Chrysene | <11 | | 41 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Dibenz(a,h)anthracene | <8.0 | | 41 | 8.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Fluoranthene | <7.7 | | 41 | 7.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Fluorene | <5.8 | | 41 | 5.8 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Indeno[1,2,3-cd]pyrene | <11 | | 41 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| **Naphthalene** | **480** | | 41 | 6.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| **Phenanthrene** | **6.9** | **J** | 41 | 5.8 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |
| Pyrene | <8.3 | | 41 | 8.3 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 12:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *71* | | *43 - 145* | *07/25/19 16:00* | *07/26/19 12:51* | *1* |
| *Nitrobenzene-d5 (Surr)* | *64* | | *37 - 147* | *07/25/19 16:00* | *07/26/19 12:51* | *1* |
| *Terphenyl-d14 (Surr)* | *93* | | *42 - 157* | *07/25/19 16:00* | *07/26/19 12:51* | *1* |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.79** | **J** | 1.2 | 0.41 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:11 | 1 |
| **Barium** | **31** | | 1.2 | 0.14 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:11 | 1 |
| **Cadmium** | **0.27** | **B** | 0.24 | 0.043 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:11 | 1 |
| **Chromium** | **11** | | 1.2 | 0.60 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:11 | 1 |
| **Lead** | **5.8** | | 0.60 | 0.28 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:11 | 1 |
| **Selenium** | **1.3** | **B** | 1.2 | 0.71 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:11 | 1 |
| **Silver** | **1.5** | | 0.60 | 0.16 | mg/Kg | ☼ | 07/24/19 15:18 | 07/26/19 11:34 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.0066 | | 0.020 | 0.0066 | mg/Kg | ☼ | 07/26/19 14:20 | 07/29/19 10:12 | 1 |

## Client Sample ID: SB-5 2-4

**Lab Sample ID: 500-167116-4**
**Date Collected: 07/18/19 13:00**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 85.0**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzene** | **20** | | 16 | 9.6 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Bromobenzene | <23 | | 66 | 23 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Bromochloromethane | <28 | | 66 | 28 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Bromodichloromethane | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Bromoform | <32 | * | 66 | 32 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Bromomethane | <52 | | 200 | 52 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Carbon tetrachloride | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Chlorobenzene | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Chloroethane | <33 | | 66 | 33 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Chloroform | <24 | | 130 | 24 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Chloromethane | <21 | | 66 | 21 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 2-Chlorotoluene | <21 | | 66 | 21 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |

**Client Sample ID: SB-5 2-4**
**Date Collected: 07/18/19 13:00**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-4**
**Matrix: Solid**
**Percent Solids: 85.0**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 4-Chlorotoluene | <23 | | 66 | 23 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| cis-1,2-Dichloroethene | <27 | | 66 | 27 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| cis-1,3-Dichloropropene | <27 | | 66 | 27 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Dibromochloromethane | <32 | | 66 | 32 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,2-Dibromo-3-Chloropropane | <130 | * | 330 | 130 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,2-Dibromoethane | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Dibromomethane | <18 | | 66 | 18 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,2-Dichlorobenzene | <22 | | 66 | 22 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,3-Dichlorobenzene | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,4-Dichlorobenzene | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Dichlorodifluoromethane | <44 | | 200 | 44 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,1-Dichloroethane | <27 | | 66 | 27 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,2-Dichloroethane | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,1-Dichloroethene | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,2-Dichloropropane | <28 | | 66 | 28 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,3-Dichloropropane | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 2,2-Dichloropropane | <29 | | 66 | 29 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,1-Dichloropropene | <20 | | 66 | 20 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Ethylbenzene | <12 | | 16 | 12 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Hexachlorobutadiene | <29 | | 66 | 29 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Isopropylbenzene | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Isopropyl ether | <18 | | 66 | 18 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Methylene Chloride | <110 | | 330 | 110 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Methyl tert-butyl ether | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Naphthalene | <22 | | 66 | 22 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| n-Butylbenzene | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| N-Propylbenzene | <27 | | 66 | 27 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| p-Isopropyltoluene | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| sec-Butylbenzene | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Styrene | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| tert-Butylbenzene | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,1,1,2-Tetrachloroethane | <30 | | 66 | 30 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,1,2,2-Tetrachloroethane | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Tetrachloroethene | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Toluene | <9.7 | | 16 | 9.7 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| trans-1,2-Dichloroethene | <23 | | 66 | 23 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| trans-1,3-Dichloropropene | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,2,3-Trichlorobenzene | <30 | | 66 | 30 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,2,4-Trichlorobenzene | <23 | | 66 | 23 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,1,1-Trichloroethane | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,1,2-Trichloroethane | <23 | | 66 | 23 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Trichloroethene | <11 | | 33 | 11 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Trichlorofluoromethane | <28 | | 66 | 28 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,2,3-Trichloropropane | <27 | | 130 | 27 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,2,4-Trimethylbenzene | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,3,5-Trimethylbenzene | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Vinyl chloride | <17 | | 66 | 17 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Xylenes, Total | <14 | | 33 | 14 | ug/Kg | ☼ | 07/18/19 13:00 | 07/26/19 14:03 | 50 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-5 2-4

**Date Collected: 07/18/19 13:00**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-4

**Matrix: Solid**
**Percent Solids: 85.0**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 109 | | 72 - 124 | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Dibromofluoromethane | 93 | | 75 - 120 | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| 1,2-Dichloroethane-d4 (Surr) | 99 | | 75 - 126 | 07/18/19 13:00 | 07/26/19 14:03 | 50 |
| Toluene-d8 (Surr) | 100 | | 75 - 120 | 07/18/19 13:00 | 07/26/19 14:03 | 50 |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <9.5 | | 79 | 9.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **2-Methylnaphthalene** | **11** | **J** | 79 | 7.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| Acenaphthene | <7.0 | | 39 | 7.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Acenaphthylene** | **18** | **J** | 39 | 5.1 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Anthracene** | **36** | **J** | 39 | 6.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Benzo[a]anthracene** | **120** | | 39 | 5.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Benzo[a]pyrene** | **190** | | 39 | 7.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Benzo[b]fluoranthene** | **160** | | 39 | 8.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Benzo[g,h,i]perylene** | **130** | | 39 | 13 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Benzo[k]fluoranthene** | **180** | | 39 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Chrysene** | **260** | | 39 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Dibenz(a,h)anthracene** | **30** | **J** | 39 | 7.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Fluoranthene** | **340** | | 39 | 7.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Fluorene** | **11** | **J** | 39 | 5.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **120** | | 39 | 10 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Naphthalene** | **17** | **J** | 39 | 6.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Phenanthrene** | **170** | | 39 | 5.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| **Pyrene** | **310** | | 39 | 7.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:18 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 2-Fluorobiphenyl (Surr) | 76 | | 43 - 145 | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| Nitrobenzene-d5 (Surr) | 70 | | 37 - 147 | 07/25/19 16:00 | 07/26/19 13:18 | 1 |
| Terphenyl-d14 (Surr) | 98 | | 42 - 157 | 07/25/19 16:00 | 07/26/19 13:18 | 1 |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **5.3** | | 1.1 | 0.36 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:15 | 1 |
| **Barium** | **75** | | 1.1 | 0.12 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:15 | 1 |
| **Cadmium** | **0.87** | **B** | 0.21 | 0.038 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:15 | 1 |
| **Chromium** | **14** | | 1.1 | 0.52 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:15 | 1 |
| **Lead** | **46** | | 0.53 | 0.24 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:15 | 1 |
| **Selenium** | **0.78** | **J B** | 1.1 | 0.62 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:15 | 1 |
| **Silver** | **2.1** | | 0.53 | 0.14 | mg/Kg | ☼ | 07/24/19 15:18 | 07/26/19 11:38 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.19** | | 0.017 | 0.0057 | mg/Kg | ☼ | 07/26/19 14:20 | 07/29/19 10:14 | 1 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Client Sample ID: SB-5 6-8**
**Date Collected: 07/18/19 13:30**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-5**
**Matrix: Solid**
**Percent Solids: 85.8**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <9.6 | | 16 | 9.6 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Bromobenzene | <23 | | 66 | 23 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Bromochloromethane | <28 | | 66 | 28 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Bromodichloromethane | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Bromoform | <32 | * | 66 | 32 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Bromomethane | <52 | | 200 | 52 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Carbon tetrachloride | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Chlorobenzene | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Chloroethane | <33 | | 66 | 33 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Chloroform | <24 | | 130 | 24 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Chloromethane | <21 | | 66 | 21 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 2-Chlorotoluene | <21 | | 66 | 21 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 4-Chlorotoluene | <23 | | 66 | 23 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| cis-1,2-Dichloroethene | <27 | | 66 | 27 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| cis-1,3-Dichloropropene | <27 | | 66 | 27 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Dibromochloromethane | <32 | | 66 | 32 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,2-Dibromo-3-Chloropropane | <130 | * | 330 | 130 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,2-Dibromoethane | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Dibromomethane | <18 | | 66 | 18 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,2-Dichlorobenzene | <22 | | 66 | 22 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,3-Dichlorobenzene | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,4-Dichlorobenzene | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Dichlorodifluoromethane | <44 | | 200 | 44 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,1-Dichloroethane | <27 | | 66 | 27 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,2-Dichloroethane | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,1-Dichloroethene | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,2-Dichloropropane | <28 | | 66 | 28 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,3-Dichloropropane | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 2,2-Dichloropropane | <29 | | 66 | 29 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,1-Dichloropropene | <20 | | 66 | 20 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Ethylbenzene | <12 | | 16 | 12 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Hexachlorobutadiene | <29 | | 66 | 29 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Isopropylbenzene | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Isopropyl ether | <18 | | 66 | 18 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Methylene Chloride | <110 | | 330 | 110 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Methyl tert-butyl ether | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Naphthalene | <22 | | 66 | 22 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| n-Butylbenzene | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| N-Propylbenzene | <27 | | 66 | 27 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| p-Isopropyltoluene | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| sec-Butylbenzene | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Styrene | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| tert-Butylbenzene | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,1,1,2-Tetrachloroethane | <30 | | 66 | 30 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,1,2,2-Tetrachloroethane | <26 | | 66 | 26 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Tetrachloroethene | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Toluene | <9.7 | | 16 | 9.7 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| trans-1,2-Dichloroethene | <23 | | 66 | 23 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| trans-1,3-Dichloropropene | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-5 6-8

**Date Collected: 07/18/19 13:30**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-5

**Matrix: Solid**
**Percent Solids: 85.8**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | <30 | | 66 | 30 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,2,4-Trichlorobenzene | <23 | | 66 | 23 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,1,1-Trichloroethane | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,1,2-Trichloroethane | <23 | | 66 | 23 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Trichloroethene | <11 | | 33 | 11 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Trichlorofluoromethane | <28 | | 66 | 28 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,2,3-Trichloropropane | <27 | | 130 | 27 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,2,4-Trimethylbenzene | <24 | | 66 | 24 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| 1,3,5-Trimethylbenzene | <25 | | 66 | 25 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Vinyl chloride | <17 | | 66 | 17 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |
| Xylenes, Total | <14 | | 33 | 14 | ug/Kg | ☼ | 07/18/19 13:30 | 07/29/19 11:48 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *72 - 124* | *07/18/19 13:30* | *07/29/19 11:48* | *50* |
| *Dibromofluoromethane* | *102* | | *75 - 120* | *07/18/19 13:30* | *07/29/19 11:48* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *75 - 126* | *07/18/19 13:30* | *07/29/19 11:48* | *50* |
| *Toluene-d8 (Surr)* | *92* | | *75 - 120* | *07/18/19 13:30* | *07/29/19 11:48* | *50* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <9.4 | | 78 | 9.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| 2-Methylnaphthalene | <7.1 | | 78 | 7.1 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Acenaphthene | <7.0 | | 38 | 7.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Acenaphthylene | <5.1 | | 38 | 5.1 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Anthracene | <6.5 | | 38 | 6.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Benzo[a]anthracene | <5.2 | | 38 | 5.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Benzo[a]pyrene | <7.5 | | 38 | 7.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Benzo[b]fluoranthene | <8.4 | | 38 | 8.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Benzo[g,h,i]perylene | <12 | | 38 | 12 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Benzo[k]fluoranthene | <11 | | 38 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Chrysene | <11 | | 38 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Dibenz(a,h)anthracene | <7.5 | | 38 | 7.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Fluoranthene | <7.2 | | 38 | 7.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Fluorene | <5.4 | | 38 | 5.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Indeno[1,2,3-cd]pyrene | <10 | | 38 | 10 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Naphthalene | <6.0 | | 38 | 6.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Phenanthrene | <5.4 | | 38 | 5.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |
| Pyrene | <7.7 | | 38 | 7.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 13:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *67* | | *43 - 145* | *07/25/19 16:00* | *07/26/19 13:45* | *1* |
| *Nitrobenzene-d5 (Surr)* | *61* | | *37 - 147* | *07/25/19 16:00* | *07/26/19 13:45* | *1* |
| *Terphenyl-d14 (Surr)* | *100* | | *42 - 157* | *07/25/19 16:00* | *07/26/19 13:45* | *1* |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.9** | | 1.1 | 0.37 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:27 | 1 |
| **Barium** | **26** | | 1.1 | 0.12 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:27 | 1 |
| **Cadmium** | **0.21** | **J B** | 0.22 | 0.039 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:27 | 1 |
| **Chromium** | **9.4** | | 1.1 | 0.54 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:27 | 1 |

## Client Sample ID: SB-5 6-8

**Lab Sample ID: 500-167116-5**
**Date Collected: 07/18/19 13:30**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 85.8**

### Method: 6010C - Metals (ICP) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 3.4 | | 0.55 | 0.25 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:27 | 1 |
| Selenium | 0.85 | J B | 1.1 | 0.64 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:27 | 1 |
| Silver | 1.4 | | 0.55 | 0.14 | mg/Kg | ☼ | 07/24/19 15:18 | 07/26/19 11:42 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.0063 | | 0.019 | 0.0063 | mg/Kg | ☼ | 07/26/19 14:20 | 07/29/19 10:17 | 1 |

## Client Sample ID: SB-2 7.5'-10'

**Lab Sample ID: 500-167116-6**
**Date Collected: 07/18/19 10:25**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 88.7**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <9.1 | | 16 | 9.1 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Bromobenzene | <22 | | 63 | 22 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Bromochloromethane | <27 | | 63 | 27 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Bromodichloromethane | <23 | | 63 | 23 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Bromoform | <30 | * | 63 | 30 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Bromomethane | <50 | | 190 | 50 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Carbon tetrachloride | <24 | | 63 | 24 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Chlorobenzene | <24 | | 63 | 24 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Chloroethane | <32 | | 63 | 32 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Chloroform | <23 | | 130 | 23 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Chloromethane | <20 | | 63 | 20 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 2-Chlorotoluene | <20 | | 63 | 20 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 4-Chlorotoluene | <22 | | 63 | 22 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| cis-1,2-Dichloroethene | <26 | | 63 | 26 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| cis-1,3-Dichloropropene | <26 | | 63 | 26 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Dibromochloromethane | <31 | | 63 | 31 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,2-Dibromo-3-Chloropropane | <120 | * | 310 | 120 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,2-Dibromoethane | <24 | | 63 | 24 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Dibromomethane | <17 | | 63 | 17 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,2-Dichlorobenzene | <21 | | 63 | 21 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,3-Dichlorobenzene | <25 | | 63 | 25 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,4-Dichlorobenzene | <23 | | 63 | 23 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Dichlorodifluoromethane | <42 | | 190 | 42 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,1-Dichloroethane | <26 | | 63 | 26 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,2-Dichloroethane | <25 | | 63 | 25 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,1-Dichloroethene | <24 | | 63 | 24 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,2-Dichloropropane | <27 | | 63 | 27 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,3-Dichloropropane | <23 | | 63 | 23 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 2,2-Dichloropropane | <28 | | 63 | 28 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,1-Dichloropropene | <19 | | 63 | 19 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Ethylbenzene | <11 | | 16 | 11 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Hexachlorobutadiene | <28 | | 63 | 28 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Isopropylbenzene | <24 | | 63 | 24 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Isopropyl ether | <17 | | 63 | 17 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Methylene Chloride | <100 | | 310 | 100 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Methyl tert-butyl ether | <25 | | 63 | 25 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |

**Client Sample ID: SB-2 7.5'-10'**
**Date Collected: 07/18/19 10:25**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-6**
**Matrix: Solid**
**Percent Solids: 88.7**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | <21 | | 63 | 21 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| n-Butylbenzene | <24 | | 63 | 24 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| N-Propylbenzene | <26 | | 63 | 26 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| p-Isopropyltoluene | <23 | | 63 | 23 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| sec-Butylbenzene | <25 | | 63 | 25 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Styrene | <24 | | 63 | 24 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| tert-Butylbenzene | <25 | | 63 | 25 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,1,1,2-Tetrachloroethane | <29 | | 63 | 29 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,1,2,2-Tetrachloroethane | <25 | | 63 | 25 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Tetrachloroethene | <23 | | 63 | 23 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Toluene | <9.2 | | 16 | 9.2 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| trans-1,2-Dichloroethene | <22 | | 63 | 22 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| trans-1,3-Dichloropropene | <23 | | 63 | 23 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,2,3-Trichlorobenzene | <29 | | 63 | 29 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,2,4-Trichlorobenzene | <21 | | 63 | 21 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,1,1-Trichloroethane | <24 | | 63 | 24 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,1,2-Trichloroethane | <22 | | 63 | 22 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Trichloroethene | <10 | | 31 | 10 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Trichlorofluoromethane | <27 | | 63 | 27 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,2,3-Trichloropropane | <26 | | 130 | 26 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,2,4-Trimethylbenzene | <22 | | 63 | 22 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| 1,3,5-Trimethylbenzene | <24 | | 63 | 24 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Vinyl chloride | <16 | | 63 | 16 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |
| Xylenes, Total | <14 | | 31 | 14 | ug/Kg | ☼ | 07/18/19 10:25 | 07/26/19 15:17 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *72 - 124* | *07/18/19 10:25* | *07/26/19 15:17* | *50* |
| *Dibromofluoromethane* | *97* | | *75 - 120* | *07/18/19 10:25* | *07/26/19 15:17* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *75 - 126* | *07/18/19 10:25* | *07/26/19 15:17* | *50* |
| *Toluene-d8 (Surr)* | *101* | | *75 - 120* | *07/18/19 10:25* | *07/26/19 15:17* | *50* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <8.7 | | 72 | 8.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| 2-Methylnaphthalene | <6.5 | | 72 | 6.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Acenaphthene | <6.4 | | 35 | 6.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Acenaphthylene | <4.7 | | 35 | 4.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Anthracene | <5.9 | | 35 | 5.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Benzo[a]anthracene | <4.8 | | 35 | 4.8 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Benzo[a]pyrene | <6.9 | | 35 | 6.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Benzo[b]fluoranthene | <7.7 | | 35 | 7.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Benzo[g,h,i]perylene | <11 | | 35 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Benzo[k]fluoranthene | <10 | | 35 | 10 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Chrysene | <9.7 | | 35 | 9.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Dibenz(a,h)anthracene | <6.9 | | 35 | 6.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Fluoranthene | <6.6 | | 35 | 6.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Fluorene | <5.0 | | 35 | 5.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Indeno[1,2,3-cd]pyrene | <9.2 | | 35 | 9.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Naphthalene | <5.5 | | 35 | 5.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |
| Phenanthrene | <4.9 | | 35 | 4.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |

## Client Sample ID: SB-2 7.5'-10'

**Lab Sample ID: 500-167116-6**
**Date Collected: 07/18/19 10:25**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 88.7**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Pyrene | <7.1 | | 35 | 7.1 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *90* | | *43 - 145* | *07/25/19 16:00* | *07/26/19 14:13* | *1* |
| *Nitrobenzene-d5 (Surr)* | *80* | | *37 - 147* | *07/25/19 16:00* | *07/26/19 14:13* | *1* |
| *Terphenyl-d14 (Surr)* | *105* | | *42 - 157* | *07/25/19 16:00* | *07/26/19 14:13* | *1* |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.37 | | 1.1 | 0.37 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:31 | 1 |
| **Barium** | **9.2** | | 1.1 | 0.12 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:31 | 1 |
| **Cadmium** | **0.19** | **J B** | 0.22 | 0.039 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:31 | 1 |
| **Chromium** | **4.7** | | 1.1 | 0.54 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:31 | 1 |
| **Lead** | **2.5** | | 0.54 | 0.25 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:31 | 1 |
| Selenium | <0.64 | | 1.1 | 0.64 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:31 | 1 |
| **Silver** | **1.0** | | 0.54 | 0.14 | mg/Kg | ☼ | 07/24/19 15:18 | 07/26/19 11:46 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.0058 | | 0.017 | 0.0058 | mg/Kg | ☼ | 07/26/19 14:20 | 07/29/19 10:19 | 1 |

## Client Sample ID: SB-3 GW

**Lab Sample ID: 500-167116-7**
**Date Collected: 07/18/19 11:05**
**Matrix: Ground Water**
**Date Received: 07/23/19 10:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 07/29/19 10:48 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:48 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 10:48 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 10:48 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 07/29/19 10:48 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 07/29/19 10:48 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 10:48 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:48 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 07/29/19 10:48 | 1 |
| **Chloroform** | **0.58** | **J** | 2.0 | 0.37 | ug/L | | | 07/29/19 10:48 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 07/29/19 10:48 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 07/29/19 10:48 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 10:48 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 10:48 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 07/29/19 10:48 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:48 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:48 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 10:48 | 1 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-3 GW

**Date Collected: 07/18/19 11:05**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-7

**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:48 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 07/29/19 10:48 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 07/29/19 10:48 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 07/29/19 10:48 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:48 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 07/29/19 10:48 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 07/29/19 10:48 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:48 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 10:48 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:48 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 10:48 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:48 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 10:48 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:48 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 10:48 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 10:48 | 1 |
| **Toluene** | **0.44** | **J** | 0.50 | 0.15 | ug/L | | | 07/29/19 10:48 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 10:48 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 10:48 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 07/29/19 10:48 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:48 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 07/29/19 10:48 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 07/29/19 10:48 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 07/29/19 10:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *72 - 124* | | *07/29/19 10:48* | *1* |
| *Dibromofluoromethane* | *104* | | *75 - 120* | | *07/29/19 10:48* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *114* | | *75 - 126* | | *07/29/19 10:48* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 120* | | *07/29/19 10:48* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <0.26 | | 1.7 | 0.26 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| 2-Methylnaphthalene | <0.057 | | 1.7 | 0.057 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Acenaphthene | <0.27 | | 0.87 | 0.27 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Acenaphthylene | <0.23 | | 0.87 | 0.23 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Anthracene | <0.29 | | 0.87 | 0.29 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |

## Client Sample ID: SB-3 GW

**Date Collected: 07/18/19 11:05**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-7**
**Matrix: Ground Water**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | <0.049 | | 0.17 | 0.049 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Benzo[a]pyrene | <0.086 | | 0.17 | 0.086 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Benzo[b]fluoranthene | <0.070 | | 0.17 | 0.070 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Benzo[g,h,i]perylene | <0.33 | | 0.87 | 0.33 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Benzo[k]fluoranthene | <0.056 | | 0.17 | 0.056 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Chrysene | <0.059 | | 0.17 | 0.059 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Dibenz(a,h)anthracene | <0.044 | | 0.26 | 0.044 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Fluoranthene | <0.39 | | 0.87 | 0.39 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Fluorene | <0.21 | | 0.87 | 0.21 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.065 | | 0.17 | 0.065 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Naphthalene | <0.27 | | 0.87 | 0.27 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Phenanthrene | <0.26 | | 0.87 | 0.26 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |
| Pyrene | <0.37 | | 0.87 | 0.37 | ug/L | | 07/24/19 07:52 | 07/24/19 18:32 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *66* | | *34 - 110* | *07/24/19 07:52* | *07/24/19 18:32* | *1* |
| *Nitrobenzene-d5 (Surr)* | *72* | | *36 - 120* | *07/24/19 07:52* | *07/24/19 18:32* | *1* |
| *Terphenyl-d14 (Surr)* | *95* | | *40 - 145* | *07/24/19 07:52* | *07/24/19 18:32* | *1* |

## Client Sample ID: SB-4 GW

**Date Collected: 07/18/19 12:45**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-8**
**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 07/29/19 11:16 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:16 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 11:16 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 11:16 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 07/29/19 11:16 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 07/29/19 11:16 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 11:16 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:16 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 07/29/19 11:16 | 1 |
| **Chloroform** | **0.58** | **J** | 2.0 | 0.37 | ug/L | | | 07/29/19 11:16 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 07/29/19 11:16 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 07/29/19 11:16 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 11:16 | 1 |
| **cis-1,2-Dichloroethene** | **0.67** | **J** | 1.0 | 0.41 | ug/L | | | 07/29/19 11:16 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 07/29/19 11:16 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:16 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:16 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:16 | 1 |

**Client Sample ID: SB-4 GW**
**Date Collected: 07/18/19 12:45**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-8**
**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:16 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 07/29/19 11:16 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 07/29/19 11:16 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 07/29/19 11:16 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:16 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 07/29/19 11:16 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 07/29/19 11:16 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:16 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 11:16 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:16 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 11:16 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:16 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 11:16 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:16 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 11:16 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 11:16 | 1 |
| **Toluene** | **0.33** | **J** | 0.50 | 0.15 | ug/L | | | 07/29/19 11:16 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 11:16 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 11:16 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 07/29/19 11:16 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:16 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 07/29/19 11:16 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 07/29/19 11:16 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 07/29/19 11:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *118* | | *72 - 124* | | *07/29/19 11:16* | *1* |
| *Dibromofluoromethane* | *103* | | *75 - 120* | | *07/29/19 11:16* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *75 - 126* | | *07/29/19 11:16* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 120* | | *07/29/19 11:16* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <0.28 | | 1.9 | 0.28 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| **2-Methylnaphthalene** | **0.077** | **J** | 1.9 | 0.061 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| Acenaphthene | <0.29 | | 0.93 | 0.29 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| Acenaphthylene | <0.25 | | 0.93 | 0.25 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| Anthracene | <0.31 | | 0.93 | 0.31 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| **Benzo[a]anthracene** | **0.19** | | 0.19 | 0.053 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |

## Client Sample ID: SB-4 GW

**Date Collected: 07/18/19 12:45**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-8**
**Matrix: Ground Water**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[a]pyrene** | **0.25** | | 0.19 | 0.092 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| **Benzo[b]fluoranthene** | **0.18** | **J** | 0.19 | 0.075 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| Benzo[g,h,i]perylene | <0.35 | | 0.93 | 0.35 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| Benzo[k]fluoranthene | <0.060 | | 0.19 | 0.060 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| **Chrysene** | **0.16** | **J** | 0.19 | 0.063 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| Dibenz(a,h)anthracene | <0.047 | | 0.28 | 0.047 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| Fluoranthene | <0.42 | | 0.93 | 0.42 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| Fluorene | <0.23 | | 0.93 | 0.23 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **0.25** | | 0.19 | 0.070 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| Naphthalene | <0.29 | | 0.93 | 0.29 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| **Phenanthrene** | **0.30** | **J** | 0.93 | 0.28 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |
| Pyrene | <0.40 | | 0.93 | 0.40 | ug/L | | 07/24/19 07:52 | 07/24/19 18:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *77* | | *34 - 110* | *07/24/19 07:52* | *07/24/19 18:57* | *1* |
| *Nitrobenzene-d5 (Surr)* | *86* | | *36 - 120* | *07/24/19 07:52* | *07/24/19 18:57* | *1* |
| *Terphenyl-d14 (Surr)* | *95* | | *40 - 145* | *07/24/19 07:52* | *07/24/19 18:57* | *1* |

## Client Sample ID: SB-4 4'-6'

**Date Collected: 07/18/19 12:15**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-9**
**Matrix: Solid**
**Percent Solids: 73.9**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <13 | | 22 | 13 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Bromobenzene | <31 | | 86 | 31 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Bromochloromethane | <37 | | 86 | 37 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Bromodichloromethane | <32 | | 86 | 32 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Bromoform | <42 | * | 86 | 42 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Bromomethane | <69 | | 260 | 69 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Carbon tetrachloride | <33 | | 86 | 33 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Chlorobenzene | <33 | | 86 | 33 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Chloroethane | <43 | | 86 | 43 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Chloroform | <32 | | 170 | 32 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Chloromethane | <28 | | 86 | 28 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 2-Chlorotoluene | <27 | | 86 | 27 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 4-Chlorotoluene | <30 | | 86 | 30 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| cis-1,2-Dichloroethene | <35 | | 86 | 35 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| cis-1,3-Dichloropropene | <36 | | 86 | 36 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Dibromochloromethane | <42 | | 86 | 42 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,2-Dibromo-3-Chloropropane | <170 | * | 430 | 170 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,2-Dibromoethane | <33 | | 86 | 33 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Dibromomethane | <23 | | 86 | 23 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,2-Dichlorobenzene | <29 | | 86 | 29 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,3-Dichlorobenzene | <34 | | 86 | 34 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,4-Dichlorobenzene | <31 | | 86 | 31 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Dichlorodifluoromethane | <58 | | 260 | 58 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,1-Dichloroethane | <35 | | 86 | 35 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,2-Dichloroethane | <34 | | 86 | 34 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,1-Dichloroethene | <34 | | 86 | 34 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Client Sample ID: SB-4 4'-6'**
**Date Collected: 07/18/19 12:15**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-9**
**Matrix: Solid**
**Percent Solids: 73.9**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | <37 | | 86 | 37 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,3-Dichloropropane | <31 | | 86 | 31 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 2,2-Dichloropropane | <38 | | 86 | 38 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,1-Dichloropropene | <26 | | 86 | 26 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Ethylbenzene | <16 | | 22 | 16 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Hexachlorobutadiene | <38 | | 86 | 38 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Isopropylbenzene | <33 | | 86 | 33 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Isopropyl ether | <24 | | 86 | 24 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Methylene Chloride | <140 | | 430 | 140 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Methyl tert-butyl ether | <34 | | 86 | 34 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Naphthalene | <29 | | 86 | 29 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| n-Butylbenzene | <33 | | 86 | 33 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| N-Propylbenzene | <36 | | 86 | 36 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| p-Isopropyltoluene | <31 | | 86 | 31 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| sec-Butylbenzene | <34 | | 86 | 34 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Styrene | <33 | | 86 | 33 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| tert-Butylbenzene | <34 | | 86 | 34 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,1,1,2-Tetrachloroethane | <40 | | 86 | 40 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,1,2,2-Tetrachloroethane | <34 | | 86 | 34 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Tetrachloroethene | <32 | | 86 | 32 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Toluene | <13 | | 22 | 13 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| trans-1,2-Dichloroethene | <30 | | 86 | 30 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| trans-1,3-Dichloropropene | <31 | | 86 | 31 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,2,3-Trichlorobenzene | <39 | | 86 | 39 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,2,4-Trichlorobenzene | <29 | | 86 | 29 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,1,1-Trichloroethane | <33 | | 86 | 33 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,1,2-Trichloroethane | <30 | | 86 | 30 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Trichloroethene | <14 | | 43 | 14 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Trichlorofluoromethane | <37 | | 86 | 37 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,2,3-Trichloropropane | <36 | | 170 | 36 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,2,4-Trimethylbenzene | <31 | | 86 | 31 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| 1,3,5-Trimethylbenzene | <33 | | 86 | 33 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Vinyl chloride | <23 | | 86 | 23 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |
| Xylenes, Total | <19 | | 43 | 19 | ug/Kg | ☼ | 07/18/19 12:15 | 07/26/19 15:42 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *110* | | *72 - 124* | *07/18/19 12:15* | *07/26/19 15:42* | *50* |
| *Dibromofluoromethane* | *95* | | *75 - 120* | *07/18/19 12:15* | *07/26/19 15:42* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *75 - 126* | *07/18/19 12:15* | *07/26/19 15:42* | *50* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 120* | *07/18/19 12:15* | *07/26/19 15:42* | *50* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <10 | | 86 | 10 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| 2-Methylnaphthalene | <7.9 | | 86 | 7.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Acenaphthene | <7.7 | | 43 | 7.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Acenaphthylene | <5.6 | | 43 | 5.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Anthracene | <7.2 | | 43 | 7.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Benzo[a]anthracene | <5.8 | | 43 | 5.8 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Benzo[a]pyrene | <8.3 | | 43 | 8.3 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |

## Client Sample ID: SB-4 4'-6'

**Lab Sample ID: 500-167116-9**
**Date Collected: 07/18/19 12:15**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 73.9**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | <9.2 | | 43 | 9.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Benzo[g,h,i]perylene | <14 | | 43 | 14 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Benzo[k]fluoranthene | <13 | | 43 | 13 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Chrysene | <12 | | 43 | 12 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Dibenz(a,h)anthracene | <8.3 | | 43 | 8.3 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Fluoranthene | <7.9 | | 43 | 7.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Fluorene | <6.0 | | 43 | 6.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Indeno[1,2,3-cd]pyrene | <11 | | 43 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Naphthalene | <6.6 | | 43 | 6.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Phenanthrene | <6.0 | | 43 | 6.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |
| Pyrene | <8.5 | | 43 | 8.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 14:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *73* | | *43 - 145* | *07/25/19 16:00* | *07/26/19 14:40* | *1* |
| *Nitrobenzene-d5 (Surr)* | *64* | | *37 - 147* | *07/25/19 16:00* | *07/26/19 14:40* | *1* |
| *Terphenyl-d14 (Surr)* | *96* | | *42 - 157* | *07/25/19 16:00* | *07/26/19 14:40* | *1* |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.2** | | 1.2 | 0.42 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:35 | 1 |
| **Barium** | **110** | | 1.2 | 0.14 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:35 | 1 |
| **Cadmium** | **0.51** | **B** | 0.24 | 0.044 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:35 | 1 |
| **Chromium** | **15** | | 1.2 | 0.60 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:35 | 1 |
| **Lead** | **15** | | 0.61 | 0.28 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:35 | 1 |
| **Selenium** | **1.4** | **B** | 1.2 | 0.72 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:35 | 1 |
| **Silver** | **2.2** | | 0.61 | 0.16 | mg/Kg | ☼ | 07/24/19 15:18 | 07/26/19 11:50 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.072** | | 0.021 | 0.0071 | mg/Kg | ☼ | 07/26/19 14:20 | 07/29/19 10:21 | 1 |

## Client Sample ID: SB-3 0-2.5'

**Lab Sample ID: 500-167116-10**
**Date Collected: 07/18/19 10:40**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 80.0**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <11 | | 19 | 11 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Bromobenzene | <27 | | 75 | 27 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Bromochloromethane | <32 | | 75 | 32 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Bromodichloromethane | <28 | | 75 | 28 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Bromoform | <36 | * | 75 | 36 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Bromomethane | <59 | | 220 | 59 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Carbon tetrachloride | <29 | | 75 | 29 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Chlorobenzene | <29 | | 75 | 29 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Chloroethane | <38 | | 75 | 38 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Chloroform | <28 | | 150 | 28 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Chloromethane | <24 | | 75 | 24 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 2-Chlorotoluene | <23 | | 75 | 23 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 4-Chlorotoluene | <26 | | 75 | 26 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| cis-1,2-Dichloroethene | <30 | | 75 | 30 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |

**Client Sample ID: SB-3 0-2.5'**
**Date Collected: 07/18/19 10:40**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-10**
**Matrix: Solid**
**Percent Solids: 80.0**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | <31 | | 75 | 31 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Dibromochloromethane | <36 | | 75 | 36 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,2-Dibromo-3-Chloropropane | <150 | * | 370 | 150 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,2-Dibromoethane | <29 | | 75 | 29 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Dibromomethane | <20 | | 75 | 20 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,2-Dichlorobenzene | <25 | | 75 | 25 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,3-Dichlorobenzene | <30 | | 75 | 30 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,4-Dichlorobenzene | <27 | | 75 | 27 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Dichlorodifluoromethane | <50 | | 220 | 50 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,1-Dichloroethane | <31 | | 75 | 31 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,2-Dichloroethane | <29 | | 75 | 29 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,1-Dichloroethene | <29 | | 75 | 29 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,2-Dichloropropane | <32 | | 75 | 32 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,3-Dichloropropane | <27 | | 75 | 27 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 2,2-Dichloropropane | <33 | | 75 | 33 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,1-Dichloropropene | <22 | | 75 | 22 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Ethylbenzene | <14 | | 19 | 14 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Hexachlorobutadiene | <33 | | 75 | 33 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Isopropylbenzene | <29 | | 75 | 29 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Isopropyl ether | <21 | | 75 | 21 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Methylene Chloride | <120 | | 370 | 120 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Methyl tert-butyl ether | <29 | | 75 | 29 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Naphthalene | <25 | | 75 | 25 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| n-Butylbenzene | <29 | | 75 | 29 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| N-Propylbenzene | <31 | | 75 | 31 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| p-Isopropyltoluene | <27 | | 75 | 27 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| sec-Butylbenzene | <30 | | 75 | 30 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Styrene | <29 | | 75 | 29 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| tert-Butylbenzene | <30 | | 75 | 30 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,1,1,2-Tetrachloroethane | <34 | | 75 | 34 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,1,2,2-Tetrachloroethane | <30 | | 75 | 30 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Tetrachloroethene | <28 | | 75 | 28 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Toluene | <11 | | 19 | 11 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| trans-1,2-Dichloroethene | <26 | | 75 | 26 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| trans-1,3-Dichloropropene | <27 | | 75 | 27 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,2,3-Trichlorobenzene | <34 | | 75 | 34 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,2,4-Trichlorobenzene | <26 | | 75 | 26 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,1,1-Trichloroethane | <28 | | 75 | 28 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,1,2-Trichloroethane | <26 | | 75 | 26 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Trichloroethene | <12 | | 37 | 12 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Trichlorofluoromethane | <32 | | 75 | 32 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,2,3-Trichloropropane | <31 | | 150 | 31 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,2,4-Trimethylbenzene | <27 | | 75 | 27 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| 1,3,5-Trimethylbenzene | <28 | | 75 | 28 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Vinyl chloride | <20 | | 75 | 20 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Xylenes, Total | <16 | | 37 | 16 | ug/Kg | ☼ | 07/18/19 10:40 | 07/26/19 16:07 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *72 - 124* | *07/18/19 10:40* | *07/26/19 16:07* | *50* |
| *Dibromofluoromethane* | *96* | | *75 - 120* | *07/18/19 10:40* | *07/26/19 16:07* | *50* |

## Client Sample ID: SB-3 0-2.5'

**Lab Sample ID: 500-167116-10**
**Date Collected: 07/18/19 10:40**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 80.0**

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

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 101 | | 75 - 126 | 07/18/19 10:40 | 07/26/19 16:07 | 50 |
| Toluene-d8 (Surr) | 99 | | 75 - 120 | 07/18/19 10:40 | 07/26/19 16:07 | 50 |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 39 | J | 83 | 10 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| 2-Methylnaphthalene | 43 | J | 83 | 7.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Acenaphthene | 26 | J | 41 | 7.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Acenaphthylene | 69 | | 41 | 5.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Anthracene | 140 | | 41 | 6.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Benzo[a]anthracene | 890 | | 41 | 5.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Benzo[a]pyrene | 1000 | | 41 | 8.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Benzo[b]fluoranthene | 1300 | | 41 | 8.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Benzo[g,h,i]perylene | 580 | | 41 | 13 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Benzo[k]fluoranthene | 380 | | 41 | 12 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Chrysene | 950 | | 41 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Dibenz(a,h)anthracene | 210 | | 41 | 7.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Fluoranthene | 1800 | | 41 | 7.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Fluorene | 28 | J | 41 | 5.8 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Indeno[1,2,3-cd]pyrene | 540 | | 41 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Naphthalene | 31 | J | 41 | 6.3 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Phenanthrene | 610 | | 41 | 5.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Pyrene | 1500 | | 41 | 8.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 12:31 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 2-Fluorobiphenyl (Surr) | 80 | | 43 - 145 | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Nitrobenzene-d5 (Surr) | 65 | | 37 - 147 | 07/25/19 16:00 | 07/29/19 12:31 | 1 |
| Terphenyl-d14 (Surr) | 108 | | 42 - 157 | 07/25/19 16:00 | 07/29/19 12:31 | 1 |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 7.0 | | 1.1 | 0.39 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:39 | 1 |
| Barium | 160 | | 1.1 | 0.13 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:39 | 1 |
| Cadmium | 0.74 | B | 0.23 | 0.041 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:39 | 1 |
| Chromium | 13 | | 1.1 | 0.56 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:39 | 1 |
| Lead | 480 | | 0.56 | 0.26 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:39 | 1 |
| Selenium | <0.66 | | 1.1 | 0.66 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:39 | 1 |
| Silver | 2.3 | | 0.56 | 0.15 | mg/Kg | ☼ | 07/24/19 15:18 | 07/26/19 11:54 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.11 | | 0.020 | 0.0065 | mg/Kg | ☼ | 07/26/19 14:20 | 07/29/19 10:23 | 1 |

## Client Sample ID: SB-8 5'-7.5'

**Lab Sample ID: 500-167116-11**
**Date Collected: 07/18/19 15:55**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 82.0**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <10 | | 18 | 10 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Client Sample ID: SB-8 5'-7.5'**
**Date Collected: 07/18/19 15:55**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-11**
**Matrix: Solid**
**Percent Solids: 82.0**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Bromochloromethane | <31 | | 72 | 31 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Bromodichloromethane | <27 | | 72 | 27 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Bromoform | <35 | * | 72 | 35 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Bromomethane | <57 | | 210 | 57 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Carbon tetrachloride | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Chlorobenzene | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Chloroethane | <36 | | 72 | 36 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Chloroform | <27 | | 140 | 27 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Chloromethane | <23 | | 72 | 23 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 2-Chlorotoluene | <22 | | 72 | 22 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 4-Chlorotoluene | <25 | | 72 | 25 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| cis-1,2-Dichloroethene | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| cis-1,3-Dichloropropene | <30 | | 72 | 30 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Dibromochloromethane | <35 | | 72 | 35 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,2-Dibromo-3-Chloropropane | <140 | * | 360 | 140 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,2-Dibromoethane | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Dibromomethane | <19 | | 72 | 19 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,2-Dichlorobenzene | <24 | | 72 | 24 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,3-Dichlorobenzene | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,4-Dichlorobenzene | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Dichlorodifluoromethane | <48 | | 210 | 48 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,1-Dichloroethane | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,2-Dichloroethane | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,1-Dichloroethene | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,2-Dichloropropane | <31 | | 72 | 31 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,3-Dichloropropane | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 2,2-Dichloropropane | <32 | | 72 | 32 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,1-Dichloropropene | <21 | | 72 | 21 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Ethylbenzene | <13 | | 18 | 13 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Hexachlorobutadiene | <32 | | 72 | 32 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Isopropylbenzene | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Isopropyl ether | <20 | | 72 | 20 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Methylene Chloride | <120 | | 360 | 120 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Methyl tert-butyl ether | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| **Naphthalene** | **27** | **J** | 72 | 24 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| n-Butylbenzene | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| N-Propylbenzene | <30 | | 72 | 30 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| p-Isopropyltoluene | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| sec-Butylbenzene | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Styrene | <28 | | 72 | 28 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| tert-Butylbenzene | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,1,1,2-Tetrachloroethane | <33 | | 72 | 33 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,1,2,2-Tetrachloroethane | <29 | | 72 | 29 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Tetrachloroethene | <27 | | 72 | 27 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Toluene | <11 | | 18 | 11 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| trans-1,2-Dichloroethene | <25 | | 72 | 25 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| trans-1,3-Dichloropropene | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,2,3-Trichlorobenzene | <33 | | 72 | 33 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |

**Client Sample ID: SB-8 5'-7.5'**
**Date Collected: 07/18/19 15:55**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-11**
**Matrix: Solid**
**Percent Solids: 82.0**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | <25 | | 72 | 25 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,1,1-Trichloroethane | <27 | | 72 | 27 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,1,2-Trichloroethane | <25 | | 72 | 25 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Trichloroethene | <12 | | 36 | 12 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Trichlorofluoromethane | <31 | | 72 | 31 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,2,3-Trichloropropane | <30 | | 140 | 30 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,2,4-Trimethylbenzene | <26 | | 72 | 26 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| 1,3,5-Trimethylbenzene | <27 | | 72 | 27 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| Vinyl chloride | <19 | | 72 | 19 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |
| **Xylenes, Total** | **41** | | 36 | 16 | ug/Kg | ☼ | 07/18/19 15:55 | 07/26/19 16:32 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *72 - 124* | *07/18/19 15:55* | *07/26/19 16:32* | *50* |
| *Dibromofluoromethane* | *98* | | *75 - 120* | *07/18/19 15:55* | *07/26/19 16:32* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *75 - 126* | *07/18/19 15:55* | *07/26/19 16:32* | *50* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 120* | *07/18/19 15:55* | *07/26/19 16:32* | *50* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1-Methylnaphthalene** | **20** | **J** | 79 | 9.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **2-Methylnaphthalene** | **30** | **J** | 79 | 7.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Acenaphthene** | **11** | **J** | 39 | 7.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Acenaphthylene** | **18** | **J** | 39 | 5.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Anthracene** | **52** | | 39 | 6.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Benzo[a]anthracene** | **280** | | 39 | 5.3 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Benzo[a]pyrene** | **310** | | 39 | 7.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Benzo[b]fluoranthene** | **420** | | 39 | 8.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Benzo[g,h,i]perylene** | **210** | | 39 | 13 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Benzo[k]fluoranthene** | **140** | | 39 | 12 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Chrysene** | **340** | | 39 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Dibenz(a,h)anthracene** | **50** | | 39 | 7.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Fluoranthene** | **690** | | 39 | 7.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Fluorene** | **15** | **J** | 39 | 5.5 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **170** | | 39 | 10 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Naphthalene** | **16** | **J** | 39 | 6.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Phenanthrene** | **310** | | 39 | 5.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |
| **Pyrene** | **520** | | 39 | 7.8 | ug/Kg | ☼ | 07/25/19 16:00 | 07/29/19 13:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *71* | | *43 - 145* | *07/25/19 16:00* | *07/29/19 13:01* | *1* |
| *Nitrobenzene-d5 (Surr)* | *61* | | *37 - 147* | *07/25/19 16:00* | *07/29/19 13:01* | *1* |
| *Terphenyl-d14 (Surr)* | *90* | | *42 - 157* | *07/25/19 16:00* | *07/29/19 13:01* | *1* |

## Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.0** | | 1.0 | 0.35 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:43 | 1 |
| **Barium** | **96** | | 1.0 | 0.12 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:43 | 1 |
| **Cadmium** | **0.44** | **B** | 0.21 | 0.037 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:43 | 1 |
| **Chromium** | **13** | | 1.0 | 0.51 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:43 | 1 |
| **Lead** | **28** | | 0.52 | 0.24 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:43 | 1 |

## Client Sample ID: SB-8 5'-7.5'

**Lab Sample ID: 500-167116-11**
**Date Collected: 07/18/19 15:55**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 82.0**

### Method: 6010C - Metals (ICP) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Selenium | 1.2 | B | 1.0 | 0.61 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:43 | 1 |
| Silver | 2.4 | | 0.52 | 0.13 | mg/Kg | ☼ | 07/24/19 15:18 | 07/26/19 11:58 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.44 | | 0.019 | 0.0063 | mg/Kg | ☼ | 07/26/19 14:20 | 07/29/19 10:25 | 1 |

## Client Sample ID: SB-7 5'-7.5'

**Lab Sample ID: 500-167116-12**
**Date Collected: 07/18/19 15:25**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 75.2**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <12 | | 21 | 12 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Bromobenzene | <30 | | 83 | 30 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Bromochloromethane | <36 | | 83 | 36 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Bromodichloromethane | <31 | | 83 | 31 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Bromoform | <40 | * | 83 | 40 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Bromomethane | <66 | | 250 | 66 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Carbon tetrachloride | <32 | | 83 | 32 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Chlorobenzene | <32 | | 83 | 32 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Chloroethane | <42 | | 83 | 42 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Chloroform | <31 | | 170 | 31 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Chloromethane | <27 | | 83 | 27 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 2-Chlorotoluene | <26 | | 83 | 26 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 4-Chlorotoluene | <29 | | 83 | 29 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| cis-1,2-Dichloroethene | <34 | | 83 | 34 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| cis-1,3-Dichloropropene | <35 | | 83 | 35 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Dibromochloromethane | <41 | | 83 | 41 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,2-Dibromo-3-Chloropropane | <170 | * | 420 | 170 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,2-Dibromoethane | <32 | | 83 | 32 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Dibromomethane | <22 | | 83 | 22 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,2-Dichlorobenzene | <28 | | 83 | 28 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,3-Dichlorobenzene | <33 | | 83 | 33 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,4-Dichlorobenzene | <30 | | 83 | 30 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Dichlorodifluoromethane | <56 | | 250 | 56 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,1-Dichloroethane | <34 | | 83 | 34 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,2-Dichloroethane | <33 | | 83 | 33 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,1-Dichloroethene | <32 | | 83 | 32 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,2-Dichloropropane | <36 | | 83 | 36 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,3-Dichloropropane | <30 | | 83 | 30 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 2,2-Dichloropropane | <37 | | 83 | 37 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,1-Dichloropropene | <25 | | 83 | 25 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Ethylbenzene | <15 | | 21 | 15 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Hexachlorobutadiene | <37 | | 83 | 37 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Isopropylbenzene | <32 | | 83 | 32 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Isopropyl ether | <23 | | 83 | 23 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Methylene Chloride | <140 | | 420 | 140 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Methyl tert-butyl ether | <33 | | 83 | 33 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Naphthalene | <28 | | 83 | 28 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Client Sample ID: SB-7 5'-7.5'**
**Date Collected: 07/18/19 15:25**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-12**
**Matrix: Solid**
**Percent Solids: 75.2**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| n-Butylbenzene | <32 | | 83 | 32 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| N-Propylbenzene | <34 | | 83 | 34 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| p-Isopropyltoluene | <30 | | 83 | 30 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| sec-Butylbenzene | <33 | | 83 | 33 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Styrene | <32 | | 83 | 32 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| tert-Butylbenzene | <33 | | 83 | 33 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,1,1,2-Tetrachloroethane | <38 | | 83 | 38 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,1,2,2-Tetrachloroethane | <33 | | 83 | 33 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Tetrachloroethene | <31 | | 83 | 31 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Toluene | <12 | | 21 | 12 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| trans-1,2-Dichloroethene | <29 | | 83 | 29 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| trans-1,3-Dichloropropene | <30 | | 83 | 30 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,2,3-Trichlorobenzene | <38 | | 83 | 38 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,2,4-Trichlorobenzene | <28 | | 83 | 28 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,1,1-Trichloroethane | <32 | | 83 | 32 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,1,2-Trichloroethane | <29 | | 83 | 29 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Trichloroethene | <14 | | 42 | 14 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Trichlorofluoromethane | <36 | | 83 | 36 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,2,3-Trichloropropane | <34 | | 170 | 34 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,2,4-Trimethylbenzene | <30 | | 83 | 30 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| 1,3,5-Trimethylbenzene | <32 | | 83 | 32 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Vinyl chloride | <22 | | 83 | 22 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |
| Xylenes, Total | <18 | | 42 | 18 | ug/Kg | ☼ | 07/18/19 15:25 | 07/26/19 16:58 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *72 - 124* | *07/18/19 15:25* | *07/26/19 16:58* | *50* |
| *Dibromofluoromethane* | *100* | | *75 - 120* | *07/18/19 15:25* | *07/26/19 16:58* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *75 - 126* | *07/18/19 15:25* | *07/26/19 16:58* | *50* |
| *Toluene-d8 (Surr)* | *96* | | *75 - 120* | *07/18/19 15:25* | *07/26/19 16:58* | *50* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <11 | | 87 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| 2-Methylnaphthalene | <7.9 | | 87 | 7.9 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Acenaphthene | <7.8 | | 43 | 7.8 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Acenaphthylene | <5.7 | | 43 | 5.7 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Anthracene | <7.2 | | 43 | 7.2 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Benzo[a]anthracene | <5.8 | | 43 | 5.8 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| **Benzo[a]pyrene** | **13** | **J** | 43 | 8.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| **Benzo[b]fluoranthene** | **23** | **J** | 43 | 9.3 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Benzo[g,h,i]perylene | <14 | | 43 | 14 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Benzo[k]fluoranthene | <13 | | 43 | 13 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| **Chrysene** | **27** | **J** | 43 | 12 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Dibenz(a,h)anthracene | <8.4 | | 43 | 8.4 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| **Fluoranthene** | **37** | **J** | 43 | 8.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Fluorene | <6.1 | | 43 | 6.1 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Indeno[1,2,3-cd]pyrene | <11 | | 43 | 11 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Naphthalene | <6.6 | | 43 | 6.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| **Phenanthrene** | **19** | **J** | 43 | 6.0 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| **Pyrene** | **32** | **J** | 43 | 8.6 | ug/Kg | ☼ | 07/25/19 16:00 | 07/26/19 16:30 | 1 |

## Client Sample ID: SB-7 5'-7.5'

**Lab Sample ID: 500-167116-12**
**Date Collected: 07/18/19 15:25**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 75.2**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 2-Fluorobiphenyl (Surr) | 76 | | 43 - 145 | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Nitrobenzene-d5 (Surr) | 73 | | 37 - 147 | 07/25/19 16:00 | 07/26/19 16:30 | 1 |
| Terphenyl-d14 (Surr) | 97 | | 42 - 157 | 07/25/19 16:00 | 07/26/19 16:30 | 1 |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 2.4 | | 1.1 | 0.38 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:47 | 1 |
| Barium | 150 | | 1.1 | 0.13 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:47 | 1 |
| Cadmium | 0.43 | B | 0.22 | 0.040 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:47 | 1 |
| Chromium | 19 | | 1.1 | 0.55 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:47 | 1 |
| Lead | 30 | | 0.56 | 0.26 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:47 | 1 |
| Selenium | 1.4 | B | 1.1 | 0.66 | mg/Kg | ☼ | 07/24/19 15:18 | 07/25/19 16:47 | 1 |
| Silver | 2.9 | | 0.56 | 0.14 | mg/Kg | ☼ | 07/24/19 15:18 | 07/26/19 12:02 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.12 | | 0.021 | 0.0068 | mg/Kg | ☼ | 07/26/19 14:20 | 07/29/19 10:43 | 1 |

## Client Sample ID: Methanol Blank

**Lab Sample ID: 500-167116-13**
**Date Collected: 07/18/19 00:00**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 100.0**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <7.3 | | 13 | 7.3 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Bromobenzene | <18 | | 50 | 18 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Bromochloromethane | <21 | | 50 | 21 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Bromodichloromethane | <19 | | 50 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Bromoform | <24 | * | 50 | 24 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Bromomethane | <40 | | 150 | 40 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Carbon tetrachloride | <19 | | 50 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Chlorobenzene | <19 | | 50 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Chloroethane | <25 | | 50 | 25 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Chloroform | 19 | J | 100 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Chloromethane | <16 | | 50 | 16 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 2-Chlorotoluene | <16 | | 50 | 16 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 4-Chlorotoluene | <18 | | 50 | 18 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| cis-1,2-Dichloroethene | <20 | | 50 | 20 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| cis-1,3-Dichloropropene | <21 | | 50 | 21 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Dibromochloromethane | <24 | | 50 | 24 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,2-Dibromo-3-Chloropropane | <100 | * | 250 | 100 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,2-Dibromoethane | <19 | | 50 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Dibromomethane | <14 | | 50 | 14 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,2-Dichlorobenzene | <17 | | 50 | 17 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,3-Dichlorobenzene | <20 | | 50 | 20 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,4-Dichlorobenzene | <18 | | 50 | 18 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Dichlorodifluoromethane | <34 | | 150 | 34 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,1-Dichloroethane | <21 | | 50 | 21 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,2-Dichloroethane | <20 | | 50 | 20 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,1-Dichloroethene | <20 | | 50 | 20 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,2-Dichloropropane | <21 | | 50 | 21 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |

## Client Sample ID: Methanol Blank

**Lab Sample ID: 500-167116-13**

**Date Collected: 07/18/19 00:00**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 100.0**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichloropropane | <18 | | 50 | 18 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 2,2-Dichloropropane | <22 | | 50 | 22 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,1-Dichloropropene | <15 | | 50 | 15 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Ethylbenzene | <9.2 | | 13 | 9.2 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Hexachlorobutadiene | <22 | | 50 | 22 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Isopropylbenzene | <19 | | 50 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Isopropyl ether | <14 | | 50 | 14 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Methylene Chloride | <82 | | 250 | 82 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Methyl tert-butyl ether | <20 | | 50 | 20 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Naphthalene | <17 | | 50 | 17 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| n-Butylbenzene | <19 | | 50 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| N-Propylbenzene | <21 | | 50 | 21 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| p-Isopropyltoluene | <18 | | 50 | 18 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| sec-Butylbenzene | <20 | | 50 | 20 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Styrene | <19 | | 50 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| tert-Butylbenzene | <20 | | 50 | 20 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,1,1,2-Tetrachloroethane | <23 | | 50 | 23 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,1,2,2-Tetrachloroethane | <20 | | 50 | 20 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Tetrachloroethene | <19 | | 50 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Toluene | <7.4 | | 13 | 7.4 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| trans-1,2-Dichloroethene | <18 | | 50 | 18 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| trans-1,3-Dichloropropene | <18 | | 50 | 18 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,2,3-Trichlorobenzene | <23 | | 50 | 23 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,2,4-Trichlorobenzene | <17 | | 50 | 17 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,1,1-Trichloroethane | <19 | | 50 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,1,2-Trichloroethane | <18 | | 50 | 18 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Trichloroethene | <8.2 | | 25 | 8.2 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Trichlorofluoromethane | <21 | | 50 | 21 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,2,3-Trichloropropane | <21 | | 100 | 21 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,2,4-Trimethylbenzene | <18 | | 50 | 18 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| 1,3,5-Trimethylbenzene | <19 | | 50 | 19 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Vinyl chloride | <13 | | 50 | 13 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |
| Xylenes, Total | <11 | | 25 | 11 | ug/Kg | ☼ | 07/18/19 00:00 | 07/26/19 17:23 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *110* | | *72 - 124* | *07/18/19 00:00* | *07/26/19 17:23* | *50* |
| *Dibromofluoromethane* | *96* | | *75 - 120* | *07/18/19 00:00* | *07/26/19 17:23* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *75 - 126* | *07/18/19 00:00* | *07/26/19 17:23* | *50* |
| *Toluene-d8 (Surr)* | *96* | | *75 - 120* | *07/18/19 00:00* | *07/26/19 17:23* | *50* |

## Client Sample ID: SB-7 GW

**Lab Sample ID: 500-167116-14**

**Date Collected: 07/18/19 16:25**
**Matrix: Ground Water**
**Date Received: 07/23/19 10:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 07/29/19 11:44 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:44 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 11:44 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 11:44 | 1 |

**Client Sample ID: SB-7 GW**
**Date Collected: 07/18/19 16:25**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-14**
**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 07/29/19 11:44 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 07/29/19 11:44 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 11:44 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:44 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 07/29/19 11:44 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 07/29/19 11:44 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 07/29/19 11:44 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 07/29/19 11:44 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 11:44 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 11:44 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 07/29/19 11:44 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:44 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:44 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:44 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 07/29/19 11:44 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 07/29/19 11:44 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 07/29/19 11:44 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:44 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 07/29/19 11:44 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 07/29/19 11:44 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:44 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 11:44 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:44 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 11:44 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:44 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 11:44 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 11:44 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 11:44 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 11:44 | 1 |
| **Toluene** | **0.24** | **J** | 0.50 | 0.15 | ug/L | | | 07/29/19 11:44 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 11:44 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 11:44 | 1 |

## Client Sample ID: SB-7 GW

**Date Collected: 07/18/19 16:25**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-14

**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 07/29/19 11:44 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 11:44 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 07/29/19 11:44 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 07/29/19 11:44 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 07/29/19 11:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *72 - 124* | | *07/29/19 11:44* | *1* |
| *Dibromofluoromethane* | *105* | | *75 - 120* | | *07/29/19 11:44* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *114* | | *75 - 126* | | *07/29/19 11:44* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 120* | | *07/29/19 11:44* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <0.27 | | 1.8 | 0.27 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| 2-Methylnaphthalene | <0.058 | | 1.8 | 0.058 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Acenaphthene | <0.28 | | 0.89 | 0.28 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Acenaphthylene | <0.24 | | 0.89 | 0.24 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Anthracene | <0.30 | | 0.89 | 0.30 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Benzo[a]anthracene | <0.051 | | 0.18 | 0.051 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Benzo[a]pyrene | <0.088 | | 0.18 | 0.088 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| **Benzo[b]fluoranthene** | **0.075** | **J** | 0.18 | 0.072 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Benzo[g,h,i]perylene | <0.33 | | 0.89 | 0.33 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Benzo[k]fluoranthene | <0.057 | | 0.18 | 0.057 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| **Chrysene** | **0.084** | **J** | 0.18 | 0.061 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Dibenz(a,h)anthracene | <0.045 | | 0.27 | 0.045 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Fluoranthene | <0.40 | | 0.89 | 0.40 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Fluorene | <0.22 | | 0.89 | 0.22 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.067 | | 0.18 | 0.067 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Naphthalene | <0.28 | | 0.89 | 0.28 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Phenanthrene | <0.27 | | 0.89 | 0.27 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |
| Pyrene | <0.38 | | 0.89 | 0.38 | ug/L | | 07/24/19 07:52 | 07/25/19 20:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *74* | | *34 - 110* | *07/24/19 07:52* | *07/25/19 20:50* | *1* |
| *Nitrobenzene-d5 (Surr)* | *80* | | *36 - 120* | *07/24/19 07:52* | *07/25/19 20:50* | *1* |
| *Terphenyl-d14 (Surr)* | *101* | | *40 - 145* | *07/24/19 07:52* | *07/25/19 20:50* | *1* |

## Client Sample ID: SB-8 GW

**Date Collected: 07/18/19 16:20**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-15

**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 07/29/19 12:12 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:12 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 12:12 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 12:12 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 07/29/19 12:12 | 1 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Client Sample ID: SB-8 GW**
**Date Collected: 07/18/19 16:20**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-15**
**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 07/29/19 12:12 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 12:12 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:12 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 07/29/19 12:12 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 07/29/19 12:12 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 07/29/19 12:12 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 07/29/19 12:12 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 12:12 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 12:12 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 07/29/19 12:12 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:12 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:12 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:12 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 07/29/19 12:12 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 07/29/19 12:12 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 07/29/19 12:12 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:12 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 07/29/19 12:12 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 07/29/19 12:12 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:12 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 12:12 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:12 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 12:12 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:12 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 12:12 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:12 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 12:12 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 12:12 | 1 |
| **Toluene** | **0.32** | **J** | 0.50 | 0.15 | ug/L | | | 07/29/19 12:12 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 12:12 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 12:12 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 07/29/19 12:12 | 1 |

## Client Sample ID: SB-8 GW

**Date Collected: 07/18/19 16:20**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-15

**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:12 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 07/29/19 12:12 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 07/29/19 12:12 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 07/29/19 12:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *118* | | *72 - 124* | | *07/29/19 12:12* | *1* |
| *Dibromofluoromethane* | *104* | | *75 - 120* | | *07/29/19 12:12* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *114* | | *75 - 126* | | *07/29/19 12:12* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 120* | | *07/29/19 12:12* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <0.26 | | 1.7 | 0.26 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **2-Methylnaphthalene** | **0.20** | **J** | 1.7 | 0.056 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| Acenaphthene | <0.27 | | 0.86 | 0.27 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| Acenaphthylene | <0.23 | | 0.86 | 0.23 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| Anthracene | <0.29 | | 0.86 | 0.29 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Benzo[a]anthracene** | **1.2** | | 0.17 | 0.049 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Benzo[a]pyrene** | **1.8** | | 0.17 | 0.085 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Benzo[b]fluoranthene** | **2.1** | | 0.17 | 0.069 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Benzo[g,h,i]perylene** | **1.1** | | 0.86 | 0.32 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Benzo[k]fluoranthene** | **0.65** | | 0.17 | 0.055 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Chrysene** | **1.5** | | 0.17 | 0.059 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Dibenz(a,h)anthracene** | **0.24** | **J** | 0.26 | 0.044 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Fluoranthene** | **2.3** | | 0.86 | 0.39 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| Fluorene | <0.21 | | 0.86 | 0.21 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **1.1** | | 0.17 | 0.064 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| Naphthalene | <0.27 | | 0.86 | 0.27 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Phenanthrene** | **1.2** | | 0.86 | 0.26 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |
| **Pyrene** | **2.3** | | 0.86 | 0.37 | ug/L | | 07/24/19 07:52 | 07/25/19 21:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *62* | | *34 - 110* | *07/24/19 07:52* | *07/25/19 21:16* | *1* |
| *Nitrobenzene-d5 (Surr)* | *70* | | *36 - 120* | *07/24/19 07:52* | *07/25/19 21:16* | *1* |
| *Terphenyl-d14 (Surr)* | *43* | | *40 - 145* | *07/24/19 07:52* | *07/25/19 21:16* | *1* |

## Client Sample ID: SB-9 GW

**Date Collected: 07/18/19 16:15**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-16

**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 07/29/19 12:39 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:39 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 12:39 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 12:39 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 07/29/19 12:39 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 07/29/19 12:39 | 1 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Client Sample ID: SB-9 GW**
**Date Collected: 07/18/19 16:15**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-16**
**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 12:39 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:39 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 07/29/19 12:39 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 07/29/19 12:39 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 07/29/19 12:39 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 07/29/19 12:39 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 12:39 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 12:39 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 07/29/19 12:39 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:39 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:39 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:39 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 07/29/19 12:39 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 07/29/19 12:39 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 07/29/19 12:39 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:39 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 07/29/19 12:39 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 07/29/19 12:39 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:39 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 12:39 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:39 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 12:39 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:39 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 12:39 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 12:39 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 12:39 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 12:39 | 1 |
| **Toluene** | **0.19** | **J** | 0.50 | 0.15 | ug/L | | | 07/29/19 12:39 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 12:39 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 12:39 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 07/29/19 12:39 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 12:39 | 1 |

## Client Sample ID: SB-9 GW

**Date Collected: 07/18/19 16:15**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-16

**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 12:39 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 07/29/19 12:39 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 07/29/19 12:39 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 07/29/19 12:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *119* | | *72 - 124* | | *07/29/19 12:39* | *1* |
| *Dibromofluoromethane* | *103* | | *75 - 120* | | *07/29/19 12:39* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *113* | | *75 - 126* | | *07/29/19 12:39* | *1* |
| *Toluene-d8 (Surr)* | *93* | | *75 - 120* | | *07/29/19 12:39* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <0.28 | | 1.9 | 0.28 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| 2-Methylnaphthalene | <0.061 | | 1.9 | 0.061 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Acenaphthene | <0.29 | | 0.93 | 0.29 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Acenaphthylene | <0.25 | | 0.93 | 0.25 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Anthracene | <0.31 | | 0.93 | 0.31 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Benzo[a]anthracene | <0.053 | | 0.19 | 0.053 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Benzo[a]pyrene | <0.092 | | 0.19 | 0.092 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Benzo[b]fluoranthene | <0.075 | | 0.19 | 0.075 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Benzo[g,h,i]perylene | <0.35 | | 0.93 | 0.35 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Benzo[k]fluoranthene | <0.060 | | 0.19 | 0.060 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Chrysene | <0.064 | | 0.19 | 0.064 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Dibenz(a,h)anthracene | <0.047 | | 0.28 | 0.047 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Fluoranthene | <0.42 | | 0.93 | 0.42 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Fluorene | <0.23 | | 0.93 | 0.23 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.070 | | 0.19 | 0.070 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Naphthalene | <0.29 | | 0.93 | 0.29 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Phenanthrene | <0.28 | | 0.93 | 0.28 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |
| Pyrene | <0.40 | | 0.93 | 0.40 | ug/L | | 07/24/19 07:52 | 07/24/19 19:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *61* | | *34 - 110* | *07/24/19 07:52* | *07/24/19 19:22* | *1* |
| *Nitrobenzene-d5 (Surr)* | *64* | | *36 - 120* | *07/24/19 07:52* | *07/24/19 19:22* | *1* |
| *Terphenyl-d14 (Surr)* | *94* | | *40 - 145* | *07/24/19 07:52* | *07/24/19 19:22* | *1* |

## Client Sample ID: SB-6 GW

**Date Collected: 07/18/19 14:25**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-17

**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzene** | **1.1** | **J** | 2.5 | 0.73 | ug/L | | | 07/30/19 13:05 | 5 |
| Bromobenzene | <1.8 | | 5.0 | 1.8 | ug/L | | | 07/30/19 13:05 | 5 |
| Bromochloromethane | <2.1 | | 5.0 | 2.1 | ug/L | | | 07/30/19 13:05 | 5 |
| Bromodichloromethane | <1.9 | | 5.0 | 1.9 | ug/L | | | 07/30/19 13:05 | 5 |
| Bromoform | <2.4 | | 5.0 | 2.4 | ug/L | | | 07/30/19 13:05 | 5 |
| Bromomethane | <4.0 | | 15 | 4.0 | ug/L | | | 07/30/19 13:05 | 5 |
| Carbon tetrachloride | <1.9 | | 5.0 | 1.9 | ug/L | | | 07/30/19 13:05 | 5 |

**Client Sample ID: SB-6 GW**
**Date Collected: 07/18/19 14:25**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-17**
**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chlorobenzene | <1.9 | | 5.0 | 1.9 | ug/L | | | 07/30/19 13:05 | 5 |
| Chloroethane | <2.5 | | 5.0 | 2.5 | ug/L | | | 07/30/19 13:05 | 5 |
| Chloroform | <1.9 | | 10 | 1.9 | ug/L | | | 07/30/19 13:05 | 5 |
| Chloromethane | <1.6 | | 5.0 | 1.6 | ug/L | | | 07/30/19 13:05 | 5 |
| 2-Chlorotoluene | <1.6 | | 5.0 | 1.6 | ug/L | | | 07/30/19 13:05 | 5 |
| 4-Chlorotoluene | <1.7 | | 5.0 | 1.7 | ug/L | | | 07/30/19 13:05 | 5 |
| cis-1,2-Dichloroethene | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/30/19 13:05 | 5 |
| cis-1,3-Dichloropropene | <2.1 | | 5.0 | 2.1 | ug/L | | | 07/30/19 13:05 | 5 |
| Dibromochloromethane | <2.4 | | 5.0 | 2.4 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,2-Dibromo-3-Chloropropane | <10 | | 25 | 10 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,2-Dibromoethane | <1.9 | | 5.0 | 1.9 | ug/L | | | 07/30/19 13:05 | 5 |
| Dibromomethane | <1.4 | | 5.0 | 1.4 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,2-Dichlorobenzene | <1.7 | | 5.0 | 1.7 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,3-Dichlorobenzene | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,4-Dichlorobenzene | <1.8 | | 5.0 | 1.8 | ug/L | | | 07/30/19 13:05 | 5 |
| Dichlorodifluoromethane | <3.4 | | 15 | 3.4 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,1-Dichloroethane | <2.1 | | 5.0 | 2.1 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,2-Dichloroethane | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,1-Dichloroethene | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,2-Dichloropropane | <2.1 | | 5.0 | 2.1 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,3-Dichloropropane | <1.8 | | 5.0 | 1.8 | ug/L | | | 07/30/19 13:05 | 5 |
| 2,2-Dichloropropane | <2.2 | | 5.0 | 2.2 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,1-Dichloropropene | <1.5 | | 5.0 | 1.5 | ug/L | | | 07/30/19 13:05 | 5 |
| **Ethylbenzene** | **610** | | 2.5 | 0.92 | ug/L | | | 07/30/19 13:05 | 5 |
| Hexachlorobutadiene | <2.2 | | 5.0 | 2.2 | ug/L | | | 07/30/19 13:05 | 5 |
| **Isopropylbenzene** | **63** | | 5.0 | 1.9 | ug/L | | | 07/30/19 13:05 | 5 |
| Isopropyl ether | <1.4 | | 5.0 | 1.4 | ug/L | | | 07/30/19 13:05 | 5 |
| Methylene Chloride | <8.2 | | 25 | 8.2 | ug/L | | | 07/30/19 13:05 | 5 |
| Methyl tert-butyl ether | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/30/19 13:05 | 5 |
| **Naphthalene** | **220** | | 5.0 | 1.7 | ug/L | | | 07/30/19 13:05 | 5 |
| **n-Butylbenzene** | **52** | | 5.0 | 1.9 | ug/L | | | 07/30/19 13:05 | 5 |
| **N-Propylbenzene** | **210** | | 5.0 | 2.1 | ug/L | | | 07/30/19 13:05 | 5 |
| **p-Isopropyltoluene** | **10** | | 5.0 | 1.8 | ug/L | | | 07/30/19 13:05 | 5 |
| **sec-Butylbenzene** | **11** | | 5.0 | 2.0 | ug/L | | | 07/30/19 13:05 | 5 |
| Styrene | <1.9 | | 5.0 | 1.9 | ug/L | | | 07/30/19 13:05 | 5 |
| tert-Butylbenzene | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,1,1,2-Tetrachloroethane | <2.3 | | 5.0 | 2.3 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,1,2,2-Tetrachloroethane | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/30/19 13:05 | 5 |
| Tetrachloroethene | <1.9 | | 5.0 | 1.9 | ug/L | | | 07/30/19 13:05 | 5 |
| **Toluene** | **43** | | 2.5 | 0.76 | ug/L | | | 07/30/19 13:05 | 5 |
| trans-1,2-Dichloroethene | <1.7 | | 5.0 | 1.7 | ug/L | | | 07/30/19 13:05 | 5 |
| trans-1,3-Dichloropropene | <1.8 | | 5.0 | 1.8 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,2,3-Trichlorobenzene | <2.3 | | 5.0 | 2.3 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,2,4-Trichlorobenzene | <1.7 | | 5.0 | 1.7 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,1,1-Trichloroethane | <1.9 | | 5.0 | 1.9 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,1,2-Trichloroethane | <1.8 | | 5.0 | 1.8 | ug/L | | | 07/30/19 13:05 | 5 |
| Trichloroethene | <0.82 | | 2.5 | 0.82 | ug/L | | | 07/30/19 13:05 | 5 |
| Trichlorofluoromethane | <2.1 | | 5.0 | 2.1 | ug/L | | | 07/30/19 13:05 | 5 |
| 1,2,3-Trichloropropane | <2.1 | | 10 | 2.1 | ug/L | | | 07/30/19 13:05 | 5 |

## Client Sample ID: SB-6 GW

**Date Collected: 07/18/19 14:25**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-17

**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,3,5-Trimethylbenzene** | **410** | | 5.0 | 1.3 | ug/L | | | 07/30/19 13:05 | 5 |
| Vinyl chloride | <1.0 | | 5.0 | 1.0 | ug/L | | | 07/30/19 13:05 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *72 - 124* | | *07/30/19 13:05* | *5* |
| *Dibromofluoromethane* | *98* | | *75 - 120* | | *07/30/19 13:05* | *5* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *75 - 126* | | *07/30/19 13:05* | *5* |
| *Toluene-d8 (Surr)* | *96* | | *75 - 120* | | *07/30/19 13:05* | *5* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,2,4-Trimethylbenzene** | **1700** | | 10 | 3.6 | ug/L | | | 07/29/19 13:07 | 10 |
| **Xylenes, Total** | **1500** | | 10 | 2.2 | ug/L | | | 07/29/19 13:07 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *72 - 124* | | *07/29/19 13:07* | *10* |
| *Dibromofluoromethane* | *92* | | *75 - 120* | | *07/29/19 13:07* | *10* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *75 - 126* | | *07/29/19 13:07* | *10* |
| *Toluene-d8 (Surr)* | *102* | | *75 - 120* | | *07/29/19 13:07* | *10* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acenaphthene** | **0.76** | **J** | 1.1 | 0.35 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| Acenaphthylene | <0.30 | | 1.1 | 0.30 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| Anthracene | <0.37 | | 1.1 | 0.37 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| **Benzo[a]anthracene** | **0.20** | **J** | 0.22 | 0.064 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| **Benzo[a]pyrene** | **0.27** | | 0.22 | 0.11 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| **Benzo[b]fluoranthene** | **0.20** | **J** | 0.22 | 0.090 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| Benzo[g,h,i]perylene | <0.42 | | 1.1 | 0.42 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| Benzo[k]fluoranthene | <0.072 | | 0.22 | 0.072 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| **Chrysene** | **0.19** | **J** | 0.22 | 0.076 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| Dibenz(a,h)anthracene | <0.057 | | 0.34 | 0.057 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| Fluoranthene | <0.51 | | 1.1 | 0.51 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| **Fluorene** | **0.51** | **J** | 1.1 | 0.27 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **0.29** | | 0.22 | 0.084 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| **Phenanthrene** | **1.0** | **J** | 1.1 | 0.34 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |
| Pyrene | <0.48 | | 1.1 | 0.48 | ug/L | | 07/24/19 07:52 | 07/24/19 19:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *78* | | *34 - 110* | *07/24/19 07:52* | *07/24/19 19:47* | *1* |
| *Nitrobenzene-d5 (Surr)* | *79* | | *36 - 120* | *07/24/19 07:52* | *07/24/19 19:47* | *1* |
| *Terphenyl-d14 (Surr)* | *94* | | *40 - 145* | *07/24/19 07:52* | *07/24/19 19:47* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1-Methylnaphthalene** | **110** | | 11 | 1.7 | ug/L | | 07/24/19 07:52 | 07/26/19 00:45 | 5 |
| **2-Methylnaphthalene** | **190** | | 11 | 0.37 | ug/L | | 07/24/19 07:52 | 07/26/19 00:45 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *85* | | *34 - 110* | *07/24/19 07:52* | *07/26/19 00:45* | *5* |
| *Nitrobenzene-d5 (Surr)* | *99* | | *36 - 120* | *07/24/19 07:52* | *07/26/19 00:45* | *5* |

## Client Sample ID: SB-6 GW

**Lab Sample ID: 500-167116-17**

**Date Collected: 07/18/19 14:25**

**Matrix: Ground Water**

**Date Received: 07/23/19 10:00**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Terphenyl-d14 (Surr)* | *108* | | *40 - 145* | *07/24/19 07:52* | *07/26/19 00:45* | *5* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 390 | | 11 | 3.5 | ug/L | | 07/24/19 07:52 | 07/26/19 18:17 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *85* | | *34 - 110* | *07/24/19 07:52* | *07/26/19 18:17* | *10* |
| *Nitrobenzene-d5 (Surr)* | *122* | *X* | *36 - 120* | *07/24/19 07:52* | *07/26/19 18:17* | *10* |
| *Terphenyl-d14 (Surr)* | *108* | | *40 - 145* | *07/24/19 07:52* | *07/26/19 18:17* | *10* |

## Client Sample ID: Trip Blank

**Lab Sample ID: 500-167116-18**

**Date Collected: 07/18/19 00:00**

**Matrix: Water**

**Date Received: 07/23/19 10:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 07/29/19 10:20 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:20 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 10:20 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 10:20 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 07/29/19 10:20 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 07/29/19 10:20 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 10:20 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:20 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 07/29/19 10:20 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 07/29/19 10:20 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 07/29/19 10:20 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 07/29/19 10:20 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 10:20 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 10:20 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 07/29/19 10:20 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:20 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:20 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:20 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 07/29/19 10:20 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 07/29/19 10:20 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 07/29/19 10:20 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:20 | 1 |

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Client Sample ID: Trip Blank**
**Date Collected: 07/18/19 00:00**
**Date Received: 07/23/19 10:00**

**Lab Sample ID: 500-167116-18**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 07/29/19 10:20 | 1 |
| **Methylene Chloride** | **1.7** | **J** | 5.0 | 1.6 | ug/L | | | 07/29/19 10:20 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:20 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 10:20 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:20 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 10:20 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:20 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 10:20 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 10:20 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 10:20 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 10:20 | 1 |
| **Toluene** | **0.33** | **J** | 0.50 | 0.15 | ug/L | | | 07/29/19 10:20 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 10:20 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 10:20 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 07/29/19 10:20 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 10:20 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 07/29/19 10:20 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 07/29/19 10:20 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 07/29/19 10:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *72 - 124* | | *07/29/19 10:20* | *1* |
| *Dibromofluoromethane* | *102* | | *75 - 120* | | *07/29/19 10:20* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *75 - 126* | | *07/29/19 10:20* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 120* | | *07/29/19 10:20* | *1* |

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### GC/MS Semi 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. |
| X | Surrogate is outside control limits |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| B | Compound was found in the blank and sample. |
| F1 | MS and/or MSD Recovery is outside acceptance limits. |
| F3 | Duplicate RPD exceeds the control limit |
| 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 |
| 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) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| 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) |

## GC/MS VOA

### Prep Batch: 496279

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Total/NA | Solid | 5035 | |
| 500-167116-2 | SB-1 2'-4' | Total/NA | Solid | 5035 | |
| 500-167116-3 | SB-6 10'-12' | Total/NA | Solid | 5035 | |
| 500-167116-4 | SB-5 2-4 | Total/NA | Solid | 5035 | |
| 500-167116-5 | SB-5 6-8 | Total/NA | Solid | 5035 | |
| 500-167116-6 | SB-2 7.5'-10' | Total/NA | Solid | 5035 | |
| 500-167116-9 | SB-4 4'-6' | Total/NA | Solid | 5035 | |
| 500-167116-10 | SB-3 0-2.5' | Total/NA | Solid | 5035 | |
| 500-167116-11 | SB-8 5'-7.5' | Total/NA | Solid | 5035 | |
| 500-167116-12 | SB-7 5'-7.5' | Total/NA | Solid | 5035 | |
| 500-167116-13 | Methanol Blank | Total/NA | Solid | 5035 | |
| LB3 500-496279/20-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 500-496279/21-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| 500-167116-12 MS | SB-7 5'-7.5' | Total/NA | Solid | 5035 | |
| 500-167116-12 MSD | SB-7 5'-7.5' | Total/NA | Solid | 5035 | |

### Analysis Batch: 496740

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Total/NA | Solid | 8260B | 496279 |
| 500-167116-2 | SB-1 2'-4' | Total/NA | Solid | 8260B | 496279 |
| 500-167116-3 | SB-6 10'-12' | Total/NA | Solid | 8260B | 496279 |
| 500-167116-4 | SB-5 2-4 | Total/NA | Solid | 8260B | 496279 |
| 500-167116-6 | SB-2 7.5'-10' | Total/NA | Solid | 8260B | 496279 |
| 500-167116-9 | SB-4 4'-6' | Total/NA | Solid | 8260B | 496279 |
| 500-167116-10 | SB-3 0-2.5' | Total/NA | Solid | 8260B | 496279 |
| 500-167116-11 | SB-8 5'-7.5' | Total/NA | Solid | 8260B | 496279 |
| 500-167116-12 | SB-7 5'-7.5' | Total/NA | Solid | 8260B | 496279 |
| 500-167116-13 | Methanol Blank | Total/NA | Solid | 8260B | 496279 |
| MB 500-496740/6 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-496740/4 | Lab Control Sample | Total/NA | Solid | 8260B | |
| 500-167116-12 MS | SB-7 5'-7.5' | Total/NA | Solid | 8260B | 496279 |
| 500-167116-12 MSD | SB-7 5'-7.5' | Total/NA | Solid | 8260B | 496279 |

### Analysis Batch: 496764

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LB3 500-496279/20-A | Method Blank | Total/NA | Solid | 8260B | 496279 |
| MB 500-496764/6 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-496279/21-A | Lab Control Sample | Total/NA | Solid | 8260B | 496279 |
| LCS 500-496764/4 | Lab Control Sample | Total/NA | Solid | 8260B | |

### Analysis Batch: 497051

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-5 | SB-5 6-8 | Total/NA | Solid | 8260B | 496279 |
| MB 500-497051/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-497051/5 | Lab Control Sample | Total/NA | Solid | 8260B | |

### Analysis Batch: 497053

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-7 | SB-3 GW | Total/NA | Ground Water | 8260B | |
| 500-167116-8 | SB-4 GW | Total/NA | Ground Water | 8260B | |
| 500-167116-14 | SB-7 GW | Total/NA | Ground Water | 8260B | |

## GC/MS VOA (Continued)

### Analysis Batch: 497053 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-15 | SB-8 GW | Total/NA | Ground Water | 8260B | |
| 500-167116-16 | SB-9 GW | Total/NA | Ground Water | 8260B | |
| 500-167116-17 - DL | SB-6 GW | Total/NA | Ground Water | 8260B | |
| 500-167116-18 | Trip Blank | Total/NA | Water | 8260B | |
| MB 500-497053/6 | Method Blank | Total/NA | Water | 8260B | |
| LCS 500-497053/4 | Lab Control Sample | Total/NA | Water | 8260B | |

### Analysis Batch: 497254

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-17 | SB-6 GW | Total/NA | Ground Water | 8260B | |
| MB 500-497254/7 | Method Blank | Total/NA | Water | 8260B | |
| LCS 500-497254/5 | Lab Control Sample | Total/NA | Water | 8260B | |

## GC/MS Semi VOA

### Prep Batch: 496304

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-7 | SB-3 GW | Total/NA | Ground Water | 3510C | |
| 500-167116-8 | SB-4 GW | Total/NA | Ground Water | 3510C | |
| 500-167116-14 | SB-7 GW | Total/NA | Ground Water | 3510C | |
| 500-167116-15 | SB-8 GW | Total/NA | Ground Water | 3510C | |
| 500-167116-16 | SB-9 GW | Total/NA | Ground Water | 3510C | |
| 500-167116-17 - DL2 | SB-6 GW | Total/NA | Ground Water | 3510C | |
| 500-167116-17 | SB-6 GW | Total/NA | Ground Water | 3510C | |
| 500-167116-17 - DL | SB-6 GW | Total/NA | Ground Water | 3510C | |
| MB 500-496304/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 500-496304/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| LCSD 500-496304/3-A | Lab Control Sample Dup | Total/NA | Water | 3510C | |

### Analysis Batch: 496405

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-7 | SB-3 GW | Total/NA | Ground Water | 8270D | 496304 |
| 500-167116-8 | SB-4 GW | Total/NA | Ground Water | 8270D | 496304 |
| 500-167116-16 | SB-9 GW | Total/NA | Ground Water | 8270D | 496304 |
| 500-167116-17 | SB-6 GW | Total/NA | Ground Water | 8270D | 496304 |
| MB 500-496304/1-A | Method Blank | Total/NA | Water | 8270D | 496304 |
| LCS 500-496304/2-A | Lab Control Sample | Total/NA | Water | 8270D | 496304 |
| LCSD 500-496304/3-A | Lab Control Sample Dup | Total/NA | Water | 8270D | 496304 |

### Analysis Batch: 496666

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-14 | SB-7 GW | Total/NA | Ground Water | 8270D | 496304 |
| 500-167116-15 | SB-8 GW | Total/NA | Ground Water | 8270D | 496304 |
| 500-167116-17 - DL | SB-6 GW | Total/NA | Ground Water | 8270D | 496304 |

### Prep Batch: 496676

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Total/NA | Solid | 3541 | |
| 500-167116-2 | SB-1 2'-4' | Total/NA | Solid | 3541 | |
| 500-167116-3 | SB-6 10'-12' | Total/NA | Solid | 3541 | |
| 500-167116-4 | SB-5 2-4 | Total/NA | Solid | 3541 | |

## GC/MS Semi VOA (Continued)

### Prep Batch: 496676 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-5 | SB-5 6-8 | Total/NA | Solid | 3541 | |
| 500-167116-6 | SB-2 7.5'-10' | Total/NA | Solid | 3541 | |
| 500-167116-9 | SB-4 4'-6' | Total/NA | Solid | 3541 | |
| 500-167116-10 | SB-3 0-2.5' | Total/NA | Solid | 3541 | |
| 500-167116-11 | SB-8 5'-7.5' | Total/NA | Solid | 3541 | |
| 500-167116-12 | SB-7 5'-7.5' | Total/NA | Solid | 3541 | |
| MB 500-496676/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 500-496676/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |
| 500-167116-5 MS | SB-5 6-8 | Total/NA | Solid | 3541 | |
| 500-167116-5 MSD | SB-5 6-8 | Total/NA | Solid | 3541 | |

### Analysis Batch: 496773

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-17 - DL2 | SB-6 GW | Total/NA | Ground Water | 8270D | 496304 |

### Analysis Batch: 496779

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 500-496676/1-A | Method Blank | Total/NA | Solid | 8270D | 496676 |
| LCS 500-496676/2-A | Lab Control Sample | Total/NA | Solid | 8270D | 496676 |

### Analysis Batch: 496797

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Total/NA | Solid | 8270D | 496676 |
| 500-167116-2 | SB-1 2'-4' | Total/NA | Solid | 8270D | 496676 |
| 500-167116-3 | SB-6 10'-12' | Total/NA | Solid | 8270D | 496676 |
| 500-167116-4 | SB-5 2-4 | Total/NA | Solid | 8270D | 496676 |
| 500-167116-5 | SB-5 6-8 | Total/NA | Solid | 8270D | 496676 |
| 500-167116-6 | SB-2 7.5'-10' | Total/NA | Solid | 8270D | 496676 |
| 500-167116-9 | SB-4 4'-6' | Total/NA | Solid | 8270D | 496676 |
| 500-167116-12 | SB-7 5'-7.5' | Total/NA | Solid | 8270D | 496676 |
| 500-167116-5 MS | SB-5 6-8 | Total/NA | Solid | 8270D | 496676 |
| 500-167116-5 MSD | SB-5 6-8 | Total/NA | Solid | 8270D | 496676 |

### Analysis Batch: 497120

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-10 | SB-3 0-2.5' | Total/NA | Solid | 8270D | 496676 |
| 500-167116-11 | SB-8 5'-7.5' | Total/NA | Solid | 8270D | 496676 |

## Metals

### Prep Batch: 496443

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Total/NA | Solid | 3050B | |
| 500-167116-2 | SB-1 2'-4' | Total/NA | Solid | 3050B | |
| 500-167116-3 | SB-6 10'-12' | Total/NA | Solid | 3050B | |
| 500-167116-4 | SB-5 2-4 | Total/NA | Solid | 3050B | |
| 500-167116-5 | SB-5 6-8 | Total/NA | Solid | 3050B | |
| 500-167116-6 | SB-2 7.5'-10' | Total/NA | Solid | 3050B | |
| 500-167116-9 | SB-4 4'-6' | Total/NA | Solid | 3050B | |
| 500-167116-10 | SB-3 0-2.5' | Total/NA | Solid | 3050B | |
| 500-167116-11 | SB-8 5'-7.5' | Total/NA | Solid | 3050B | |

## Metals (Continued)

### Prep Batch: 496443 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-12 | SB-7 5'-7.5' | Total/NA | Solid | 3050B | |
| MB 500-496443/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 500-496443/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| 500-167116-1 MS | SB-9 5'-7.5' | Total/NA | Solid | 3050B | |
| 500-167116-1 MSD | SB-9 5'-7.5' | Total/NA | Solid | 3050B | |
| 500-167116-1 DU | SB-9 5'-7.5' | Total/NA | Solid | 3050B | |

### Analysis Batch: 496747

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-2 | SB-1 2'-4' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-3 | SB-6 10'-12' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-4 | SB-5 2-4 | Total/NA | Solid | 6010C | 496443 |
| 500-167116-5 | SB-5 6-8 | Total/NA | Solid | 6010C | 496443 |
| 500-167116-6 | SB-2 7.5'-10' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-9 | SB-4 4'-6' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-10 | SB-3 0-2.5' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-11 | SB-8 5'-7.5' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-12 | SB-7 5'-7.5' | Total/NA | Solid | 6010C | 496443 |
| MB 500-496443/1-A | Method Blank | Total/NA | Solid | 6010C | 496443 |
| LCS 500-496443/2-A | Lab Control Sample | Total/NA | Solid | 6010C | 496443 |
| 500-167116-1 MS | SB-9 5'-7.5' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-1 MSD | SB-9 5'-7.5' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-1 DU | SB-9 5'-7.5' | Total/NA | Solid | 6010C | 496443 |

### Prep Batch: 496835

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Total/NA | Solid | 7471B | |
| 500-167116-2 | SB-1 2'-4' | Total/NA | Solid | 7471B | |
| 500-167116-3 | SB-6 10'-12' | Total/NA | Solid | 7471B | |
| 500-167116-4 | SB-5 2-4 | Total/NA | Solid | 7471B | |
| 500-167116-5 | SB-5 6-8 | Total/NA | Solid | 7471B | |
| 500-167116-6 | SB-2 7.5'-10' | Total/NA | Solid | 7471B | |
| 500-167116-9 | SB-4 4'-6' | Total/NA | Solid | 7471B | |
| 500-167116-10 | SB-3 0-2.5' | Total/NA | Solid | 7471B | |
| 500-167116-11 | SB-8 5'-7.5' | Total/NA | Solid | 7471B | |
| 500-167116-12 | SB-7 5'-7.5' | Total/NA | Solid | 7471B | |
| MB 500-496835/12-A | Method Blank | Total/NA | Solid | 7471B | |
| LCS 500-496835/13-A | Lab Control Sample | Total/NA | Solid | 7471B | |
| 500-167116-11 MS | SB-8 5'-7.5' | Total/NA | Solid | 7471B | |
| 500-167116-11 MSD | SB-8 5'-7.5' | Total/NA | Solid | 7471B | |
| 500-167116-11 DU | SB-8 5'-7.5' | Total/NA | Solid | 7471B | |

### Analysis Batch: 496876

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-2 | SB-1 2'-4' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-3 | SB-6 10'-12' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-4 | SB-5 2-4 | Total/NA | Solid | 6010C | 496443 |
| 500-167116-5 | SB-5 6-8 | Total/NA | Solid | 6010C | 496443 |
| 500-167116-6 | SB-2 7.5'-10' | Total/NA | Solid | 6010C | 496443 |

## Metals (Continued)

### Analysis Batch: 496876 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-9 | SB-4 4'-6' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-10 | SB-3 0-2.5' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-11 | SB-8 5'-7.5' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-12 | SB-7 5'-7.5' | Total/NA | Solid | 6010C | 496443 |
| MB 500-496443/1-A | Method Blank | Total/NA | Solid | 6010C | 496443 |
| LCS 500-496443/2-A | Lab Control Sample | Total/NA | Solid | 6010C | 496443 |
| 500-167116-1 MS | SB-9 5'-7.5' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-1 MSD | SB-9 5'-7.5' | Total/NA | Solid | 6010C | 496443 |
| 500-167116-1 DU | SB-9 5'-7.5' | Total/NA | Solid | 6010C | 496443 |

### Analysis Batch: 497145

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Total/NA | Solid | 7471B | 496835 |
| 500-167116-2 | SB-1 2'-4' | Total/NA | Solid | 7471B | 496835 |
| 500-167116-3 | SB-6 10'-12' | Total/NA | Solid | 7471B | 496835 |
| 500-167116-4 | SB-5 2-4 | Total/NA | Solid | 7471B | 496835 |
| 500-167116-5 | SB-5 6-8 | Total/NA | Solid | 7471B | 496835 |
| 500-167116-6 | SB-2 7.5'-10' | Total/NA | Solid | 7471B | 496835 |
| 500-167116-9 | SB-4 4'-6' | Total/NA | Solid | 7471B | 496835 |
| 500-167116-10 | SB-3 0-2.5' | Total/NA | Solid | 7471B | 496835 |
| 500-167116-11 | SB-8 5'-7.5' | Total/NA | Solid | 7471B | 496835 |
| 500-167116-12 | SB-7 5'-7.5' | Total/NA | Solid | 7471B | 496835 |
| MB 500-496835/12-A | Method Blank | Total/NA | Solid | 7471B | 496835 |
| LCS 500-496835/13-A | Lab Control Sample | Total/NA | Solid | 7471B | 496835 |
| 500-167116-11 MS | SB-8 5'-7.5' | Total/NA | Solid | 7471B | 496835 |
| 500-167116-11 MSD | SB-8 5'-7.5' | Total/NA | Solid | 7471B | 496835 |
| 500-167116-11 DU | SB-8 5'-7.5' | Total/NA | Solid | 7471B | 496835 |

## General Chemistry

### Analysis Batch: 496387

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-167116-1 | SB-9 5'-7.5' | Total/NA | Solid | Moisture | |
| 500-167116-2 | SB-1 2'-4' | Total/NA | Solid | Moisture | |
| 500-167116-3 | SB-6 10'-12' | Total/NA | Solid | Moisture | |
| 500-167116-4 | SB-5 2-4 | Total/NA | Solid | Moisture | |
| 500-167116-5 | SB-5 6-8 | Total/NA | Solid | Moisture | |
| 500-167116-6 | SB-2 7.5'-10' | Total/NA | Solid | Moisture | |
| 500-167116-9 | SB-4 4'-6' | Total/NA | Solid | Moisture | |
| 500-167116-10 | SB-3 0-2.5' | Total/NA | Solid | Moisture | |
| 500-167116-11 | SB-8 5'-7.5' | Total/NA | Solid | Moisture | |
| 500-167116-12 | SB-7 5'-7.5' | Total/NA | Solid | Moisture | |
| 500-167116-13 | Methanol Blank | Total/NA | Solid | Moisture | |
| 500-167116-12 DU | SB-7 5'-7.5' | Total/NA | Solid | Moisture | |

# Surrogate Summary

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

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

### Matrix: Ground Water

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | BFB (72-124) | DBFM (75-120) | DCA (75-126) | TOL (75-120) |
| 500-167116-7 | SB-3 GW | 111 | 104 | 114 | 100 |
| 500-167116-8 | SB-4 GW | 118 | 103 | 110 | 94 |
| 500-167116-14 | SB-7 GW | 112 | 105 | 114 | 99 |
| 500-167116-15 | SB-8 GW | 118 | 104 | 114 | 94 |
| 500-167116-16 | SB-9 GW | 119 | 103 | 113 | 93 |
| 500-167116-17 - DL | SB-6 GW | 112 | 92 | 100 | 102 |
| 500-167116-17 | SB-6 GW | 108 | 98 | 100 | 96 |

**Surrogate Legend**

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

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

### Matrix: Solid

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | BFB (72-124) | DBFM (75-120) | DCA (75-126) | TOL (75-120) |
| 500-167116-1 | SB-9 5'-7.5' | 111 | 94 | 99 | 98 |
| 500-167116-2 | SB-1 2'-4' | 107 | 95 | 99 | 101 |
| 500-167116-3 | SB-6 10'-12' | 108 | 94 | 99 | 99 |
| 500-167116-4 | SB-5 2-4 | 109 | 93 | 99 | 100 |
| 500-167116-5 | SB-5 6-8 | 107 | 102 | 103 | 92 |
| 500-167116-6 | SB-2 7.5'-10' | 111 | 97 | 100 | 101 |
| 500-167116-9 | SB-4 4'-6' | 110 | 95 | 103 | 98 |
| 500-167116-10 | SB-3 0-2.5' | 112 | 96 | 101 | 99 |
| 500-167116-11 | SB-8 5'-7.5' | 109 | 98 | 105 | 98 |
| 500-167116-12 | SB-7 5'-7.5' | 107 | 100 | 102 | 96 |
| 500-167116-12 MS | SB-7 5'-7.5' | 99 | 103 | 103 | 99 |
| 500-167116-12 MSD | SB-7 5'-7.5' | 105 | 100 | 100 | 99 |
| 500-167116-13 | Methanol Blank | 110 | 96 | 102 | 96 |
| LB3 500-496279/20-A | Method Blank | 94 | 102 | 101 | 98 |
| LCS 500-496279/21-A | Lab Control Sample | 95 | 108 | 105 | 94 |
| LCS 500-496740/4 | Lab Control Sample | 102 | 95 | 95 | 103 |
| LCS 500-496764/4 | Lab Control Sample | 95 | 108 | 104 | 96 |
| LCS 500-497051/5 | Lab Control Sample | 103 | 100 | 96 | 94 |
| MB 500-496740/6 | Method Blank | 108 | 97 | 100 | 99 |
| MB 500-496764/6 | Method Blank | 93 | 106 | 106 | 95 |
| MB 500-497051/7 | Method Blank | 107 | 100 | 101 | 95 |

**Surrogate Legend**

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

# Surrogate Summary

Client: SCS Engineers
Job ID: 500-167116-1
Project/Site: Messner Bldg - 25219155

## Method: 8260B - Volatile Organic Compounds (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) |
| 500-167116-18 | Trip Blank | 111 | 102 | 110 | 94 |
| LCS 500-497053/4 | Lab Control Sample | 108 | 96 | 104 | 102 |
| LCS 500-497254/5 | Lab Control Sample | 100 | 103 | 97 | 98 |
| MB 500-497053/6 | Method Blank | 114 | 104 | 113 | 89 |
| MB 500-497254/7 | Method Blank | 110 | 100 | 101 | 93 |

**Surrogate Legend**

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

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Matrix: Ground Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | FBP | NBZ | TPHL |
| Lab Sample ID | Client Sample ID | (34-110) | (36-120) | (40-145) |
| 500-167116-7 | SB-3 GW | 66 | 72 | 95 |
| 500-167116-8 | SB-4 GW | 77 | 86 | 95 |
| 500-167116-14 | SB-7 GW | 74 | 80 | 101 |
| 500-167116-15 | SB-8 GW | 62 | 70 | 43 |
| 500-167116-16 | SB-9 GW | 61 | 64 | 94 |
| 500-167116-17 | SB-6 GW | 78 | 79 | 94 |
| 500-167116-17 - DL | SB-6 GW | 85 | 99 | 108 |
| 500-167116-17 - DL2 | SB-6 GW | 85 | 122 X | 108 |

**Surrogate Legend**

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

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

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | FBP | NBZ | TPHL |
| Lab Sample ID | Client Sample ID | (43-145) | (37-147) | (42-157) |
| 500-167116-1 | SB-9 5'-7.5' | 78 | 67 | 105 |
| 500-167116-2 | SB-1 2'-4' | 75 | 68 | 99 |
| 500-167116-3 | SB-6 10'-12' | 71 | 64 | 93 |
| 500-167116-4 | SB-5 2-4 | 76 | 70 | 98 |
| 500-167116-5 | SB-5 6-8 | 67 | 61 | 100 |
| 500-167116-5 MS | SB-5 6-8 | 77 | 71 | 96 |
| 500-167116-5 MSD | SB-5 6-8 | 80 | 78 | 104 |
| 500-167116-6 | SB-2 7.5'-10' | 90 | 80 | 105 |
| 500-167116-9 | SB-4 4'-6' | 73 | 64 | 96 |
| 500-167116-10 | SB-3 0-2.5' | 80 | 65 | 108 |
| 500-167116-11 | SB-8 5'-7.5' | 71 | 61 | 90 |
| 500-167116-12 | SB-7 5'-7.5' | 76 | 73 | 97 |
| LCS 500-496676/2-A | Lab Control Sample | 86 | 88 | 98 |
| MB 500-496676/1-A | Method Blank | 83 | 83 | 102 |

# Surrogate Summary

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

**Surrogate Legend**

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

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

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | FBP | NBZ | TPHL |
| Lab Sample ID | Client Sample ID | (34-110) | (36-120) | (40-145) |
| LCS 500-496304/2-A | Lab Control Sample | 74 | 83 | 116 |
| LCSD 500-496304/3-A | Lab Control Sample Dup | 74 | 78 | 109 |
| MB 500-496304/1-A | Method Blank | 66 | 72 | 115 |

**Surrogate Legend**

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

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

**Lab Sample ID: LB3 500-496279/20-A**
**Matrix: Solid**
**Analysis Batch: 496764**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 496279**

| Analyte | LB3 Result | LB3 Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <7.3 | | 13 | 7.3 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Bromobenzene | <18 | | 50 | 18 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Bromochloromethane | <21 | | 50 | 21 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Bromodichloromethane | <19 | | 50 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Bromoform | <24 | | 50 | 24 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Bromomethane | <40 | | 150 | 40 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Carbon tetrachloride | <19 | | 50 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Chlorobenzene | <19 | | 50 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Chloroethane | <25 | | 50 | 25 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Chloroform | <19 | | 100 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Chloromethane | <16 | | 50 | 16 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 2-Chlorotoluene | <16 | | 50 | 16 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 4-Chlorotoluene | <18 | | 50 | 18 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| cis-1,2-Dichloroethene | <20 | | 50 | 20 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| cis-1,3-Dichloropropene | <21 | | 50 | 21 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Dibromochloromethane | <24 | | 50 | 24 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,2-Dibromo-3-Chloropropane | <100 | | 250 | 100 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,2-Dibromoethane | <19 | | 50 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Dibromomethane | <14 | | 50 | 14 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,2-Dichlorobenzene | <17 | | 50 | 17 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,3-Dichlorobenzene | <20 | | 50 | 20 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,4-Dichlorobenzene | <18 | | 50 | 18 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Dichlorodifluoromethane | <34 | | 150 | 34 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,1-Dichloroethane | <21 | | 50 | 21 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,2-Dichloroethane | <20 | | 50 | 20 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,1-Dichloroethene | <20 | | 50 | 20 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,2-Dichloropropane | <21 | | 50 | 21 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,3-Dichloropropane | <18 | | 50 | 18 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 2,2-Dichloropropane | <22 | | 50 | 22 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,1-Dichloropropene | <15 | | 50 | 15 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Ethylbenzene | <9.2 | | 13 | 9.2 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Hexachlorobutadiene | <22 | | 50 | 22 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Isopropylbenzene | <19 | | 50 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Isopropyl ether | <14 | | 50 | 14 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Methylene Chloride | <82 | | 250 | 82 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Methyl tert-butyl ether | <20 | | 50 | 20 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Naphthalene | <17 | | 50 | 17 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| n-Butylbenzene | <19 | | 50 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| N-Propylbenzene | <21 | | 50 | 21 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| p-Isopropyltoluene | <18 | | 50 | 18 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| sec-Butylbenzene | <20 | | 50 | 20 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Styrene | <19 | | 50 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| tert-Butylbenzene | <20 | | 50 | 20 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,1,1,2-Tetrachloroethane | <23 | | 50 | 23 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,1,2,2-Tetrachloroethane | <20 | | 50 | 20 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Tetrachloroethene | <19 | | 50 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Toluene | <7.4 | | 13 | 7.4 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| trans-1,2-Dichloroethene | <18 | | 50 | 18 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |

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

**Lab Sample ID: LB3 500-496279/20-A**
**Matrix: Solid**
**Analysis Batch: 496764**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 496279**

| Analyte | LB3 Result | LB3 Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | <18 | | 50 | 18 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,2,3-Trichlorobenzene | <23 | | 50 | 23 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,2,4-Trichlorobenzene | <17 | | 50 | 17 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,1,1-Trichloroethane | <19 | | 50 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,1,2-Trichloroethane | <18 | | 50 | 18 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Trichloroethene | <8.2 | | 25 | 8.2 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Trichlorofluoromethane | <21 | | 50 | 21 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,2,3-Trichloropropane | <21 | | 100 | 21 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,2,4-Trimethylbenzene | <18 | | 50 | 18 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| 1,3,5-Trimethylbenzene | <19 | | 50 | 19 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Vinyl chloride | <13 | | 50 | 13 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |
| Xylenes, Total | <11 | | 25 | 11 | ug/Kg | | 07/24/19 00:05 | 07/26/19 11:00 | 50 |

| *Surrogate* | *LB3 %Recovery* | *LB3 Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *94* | | *72 - 124* | *07/24/19 00:05* | *07/26/19 11:00* | *50* |
| *Dibromofluoromethane* | *102* | | *75 - 120* | *07/24/19 00:05* | *07/26/19 11:00* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *75 - 126* | *07/24/19 00:05* | *07/26/19 11:00* | *50* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 120* | *07/24/19 00:05* | *07/26/19 11:00* | *50* |

**Lab Sample ID: LCS 500-496279/21-A**
**Matrix: Solid**
**Analysis Batch: 496764**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 496279**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 2500 | 2450 | | ug/Kg | | 98 | 70 - 120 |
| Bromobenzene | 2500 | 2510 | | ug/Kg | | 100 | 70 - 122 |
| Bromochloromethane | 2500 | 2770 | | ug/Kg | | 111 | 65 - 122 |
| Bromodichloromethane | 2500 | 2670 | | ug/Kg | | 107 | 69 - 120 |
| Bromoform | 2500 | 3500 | * | ug/Kg | | 140 | 56 - 132 |
| Bromomethane | 2500 | 2050 | | ug/Kg | | 82 | 40 - 152 |
| Carbon tetrachloride | 2500 | 2690 | | ug/Kg | | 107 | 59 - 133 |
| Chlorobenzene | 2500 | 2420 | | ug/Kg | | 97 | 70 - 120 |
| Chloroethane | 2500 | 1870 | | ug/Kg | | 75 | 48 - 136 |
| Chloroform | 2500 | 2400 | | ug/Kg | | 96 | 70 - 120 |
| Chloromethane | 2500 | 1840 | | ug/Kg | | 73 | 56 - 152 |
| 2-Chlorotoluene | 2500 | 2390 | | ug/Kg | | 96 | 70 - 125 |
| 4-Chlorotoluene | 2500 | 2370 | | ug/Kg | | 95 | 68 - 124 |
| cis-1,2-Dichloroethene | 2500 | 2530 | | ug/Kg | | 101 | 70 - 125 |
| cis-1,3-Dichloropropene | 2500 | 2530 | | ug/Kg | | 101 | 64 - 127 |
| Dibromochloromethane | 2500 | 2910 | | ug/Kg | | 116 | 68 - 125 |
| 1,2-Dibromo-3-Chloropropane | 2500 | 3350 | * | ug/Kg | | 134 | 56 - 123 |
| 1,2-Dibromoethane | 2500 | 2670 | | ug/Kg | | 107 | 70 - 125 |
| Dibromomethane | 2500 | 2960 | | ug/Kg | | 118 | 70 - 120 |
| 1,2-Dichlorobenzene | 2500 | 2430 | | ug/Kg | | 97 | 70 - 125 |
| 1,3-Dichlorobenzene | 2500 | 2360 | | ug/Kg | | 95 | 70 - 125 |
| 1,4-Dichlorobenzene | 2500 | 2390 | | ug/Kg | | 96 | 70 - 120 |
| Dichlorodifluoromethane | 2500 | 1200 | | ug/Kg | | 48 | 40 - 159 |
| 1,1-Dichloroethane | 2500 | 2360 | | ug/Kg | | 94 | 70 - 125 |

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

**Lab Sample ID: LCS 500-496279/21-A**
**Matrix: Solid**
**Analysis Batch: 496764**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 496279**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | 2500 | 2570 | | ug/Kg | | 103 | 68 - 127 |
| 1,1-Dichloroethene | 2500 | 2250 | | ug/Kg | | 90 | 67 - 122 |
| 1,2-Dichloropropane | 2500 | 2480 | | ug/Kg | | 99 | 67 - 130 |
| 1,3-Dichloropropane | 2500 | 2800 | | ug/Kg | | 112 | 62 - 136 |
| 2,2-Dichloropropane | 2500 | 2220 | | ug/Kg | | 89 | 58 - 139 |
| 1,1-Dichloropropene | 2500 | 2380 | | ug/Kg | | 95 | 70 - 121 |
| Ethylbenzene | 2500 | 2350 | | ug/Kg | | 94 | 70 - 123 |
| Hexachlorobutadiene | 2500 | 1890 | | ug/Kg | | 75 | 51 - 150 |
| Isopropylbenzene | 2500 | 2240 | | ug/Kg | | 90 | 70 - 126 |
| Methylene Chloride | 2500 | 2580 | | ug/Kg | | 103 | 69 - 125 |
| Methyl tert-butyl ether | 2500 | 2750 | | ug/Kg | | 110 | 55 - 123 |
| Naphthalene | 2500 | 2660 | | ug/Kg | | 106 | 53 - 144 |
| n-Butylbenzene | 2500 | 2200 | | ug/Kg | | 88 | 68 - 125 |
| N-Propylbenzene | 2500 | 2300 | | ug/Kg | | 92 | 69 - 127 |
| p-Isopropyltoluene | 2500 | 2180 | | ug/Kg | | 87 | 70 - 125 |
| sec-Butylbenzene | 2500 | 2210 | | ug/Kg | | 88 | 70 - 123 |
| Styrene | 2500 | 2430 | | ug/Kg | | 97 | 70 - 120 |
| tert-Butylbenzene | 2500 | 2160 | | ug/Kg | | 86 | 70 - 121 |
| 1,1,1,2-Tetrachloroethane | 2500 | 2690 | | ug/Kg | | 108 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 2500 | 2940 | | ug/Kg | | 118 | 62 - 140 |
| Tetrachloroethene | 2500 | 2140 | | ug/Kg | | 86 | 70 - 128 |
| Toluene | 2500 | 2230 | | ug/Kg | | 89 | 70 - 125 |
| trans-1,2-Dichloroethene | 2500 | 2400 | | ug/Kg | | 96 | 70 - 125 |
| trans-1,3-Dichloropropene | 2500 | 2630 | | ug/Kg | | 105 | 62 - 128 |
| 1,2,3-Trichlorobenzene | 2500 | 2290 | | ug/Kg | | 92 | 51 - 145 |
| 1,2,4-Trichlorobenzene | 2500 | 2210 | | ug/Kg | | 88 | 57 - 137 |
| 1,1,1-Trichloroethane | 2500 | 2370 | | ug/Kg | | 95 | 70 - 125 |
| 1,1,2-Trichloroethane | 2500 | 2650 | | ug/Kg | | 106 | 71 - 130 |
| Trichloroethene | 2500 | 2420 | | ug/Kg | | 97 | 70 - 125 |
| Trichlorofluoromethane | 2500 | 2180 | | ug/Kg | | 87 | 55 - 128 |
| 1,2,3-Trichloropropane | 2500 | 2960 | | ug/Kg | | 118 | 50 - 133 |
| 1,2,4-Trimethylbenzene | 2500 | 2250 | | ug/Kg | | 90 | 70 - 123 |
| 1,3,5-Trimethylbenzene | 2500 | 2240 | | ug/Kg | | 89 | 70 - 123 |
| Vinyl chloride | 2500 | 1770 | | ug/Kg | | 71 | 64 - 126 |
| Xylenes, Total | 5000 | 4780 | | ug/Kg | | 96 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *95* | | *72 - 124* |
| *Dibromofluoromethane* | *108* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 120* |

**Lab Sample ID: 500-167116-12 MS**
**Matrix: Solid**
**Analysis Batch: 496740**

**Client Sample ID: SB-7 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496279**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <12 | | 83.1 | 76.4 | | ug/Kg | ☼ | 92 | 70 - 120 |

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

**Lab Sample ID: 500-167116-12 MS**
**Matrix: Solid**
**Analysis Batch: 496740**

**Client Sample ID: SB-7 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496279**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | <30 | | 83.1 | 74.3 | | ug/Kg | ☼ | 89 | 70 - 122 |
| Bromochloromethane | <36 | | 83.1 | 84.2 | | ug/Kg | ☼ | 101 | 65 - 122 |
| Bromodichloromethane | <31 | | 83.1 | 75.3 | | ug/Kg | ☼ | 91 | 69 - 120 |
| Bromoform | <40 | * | 83.1 | 76.2 | | ug/Kg | ☼ | 92 | 56 - 132 |
| Bromomethane | <66 | | 83.1 | 69.6 | | ug/Kg | ☼ | 84 | 40 - 152 |
| Carbon tetrachloride | <32 | | 83.1 | 82.3 | | ug/Kg | ☼ | 99 | 59 - 133 |
| Chlorobenzene | <32 | | 83.1 | 76.6 | | ug/Kg | ☼ | 92 | 70 - 120 |
| Chloroethane | <42 | | 83.1 | 68.1 | | ug/Kg | ☼ | 82 | 48 - 136 |
| Chloroform | <31 | | 83.1 | 79.5 | | ug/Kg | ☼ | 96 | 70 - 120 |
| Chloromethane | <27 | | 83.1 | 72.9 | | ug/Kg | ☼ | 88 | 56 - 152 |
| 2-Chlorotoluene | <26 | | 83.1 | 76.5 | | ug/Kg | ☼ | 92 | 70 - 125 |
| 4-Chlorotoluene | <29 | | 83.1 | 76.0 | | ug/Kg | ☼ | 91 | 68 - 124 |
| cis-1,2-Dichloroethene | <34 | | 83.1 | 79.1 | | ug/Kg | ☼ | 95 | 70 - 125 |
| cis-1,3-Dichloropropene | <35 | | 83.1 | 73.0 | | ug/Kg | ☼ | 88 | 64 - 127 |
| Dibromochloromethane | <41 | | 83.1 | 76.7 | | ug/Kg | ☼ | 92 | 68 - 125 |
| 1,2-Dibromo-3-Chloropropane | <170 | * | 83.1 | 67.2 | | ug/Kg | ☼ | 81 | 56 - 123 |
| 1,2-Dibromoethane | <32 | | 83.1 | 77.3 | | ug/Kg | ☼ | 93 | 70 - 125 |
| Dibromomethane | <22 | | 83.1 | 78.4 | | ug/Kg | ☼ | 94 | 70 - 120 |
| 1,2-Dichlorobenzene | <28 | | 83.1 | 78.2 | | ug/Kg | ☼ | 94 | 70 - 125 |
| 1,3-Dichlorobenzene | <33 | | 83.1 | 77.7 | | ug/Kg | ☼ | 93 | 70 - 125 |
| 1,4-Dichlorobenzene | <30 | | 83.1 | 76.6 | | ug/Kg | ☼ | 92 | 70 - 120 |
| Dichlorodifluoromethane | <56 | | 83.1 | 68.8 | | ug/Kg | ☼ | 83 | 40 - 159 |
| 1,1-Dichloroethane | <34 | | 83.1 | 80.3 | | ug/Kg | ☼ | 97 | 70 - 125 |
| 1,2-Dichloroethane | <33 | | 83.1 | 79.4 | | ug/Kg | ☼ | 95 | 68 - 127 |
| 1,1-Dichloroethene | <32 | | 83.1 | 76.3 | | ug/Kg | ☼ | 92 | 67 - 122 |
| 1,2-Dichloropropane | <36 | | 83.1 | 76.4 | | ug/Kg | ☼ | 92 | 67 - 130 |
| 1,3-Dichloropropane | <30 | | 83.1 | 75.9 | | ug/Kg | ☼ | 91 | 62 - 136 |
| 2,2-Dichloropropane | <37 | | 83.1 | 85.0 | | ug/Kg | ☼ | 102 | 58 - 139 |
| 1,1-Dichloropropene | <25 | | 83.1 | 79.6 | | ug/Kg | ☼ | 96 | 70 - 121 |
| Ethylbenzene | <15 | | 83.1 | 78.8 | | ug/Kg | ☼ | 95 | 70 - 123 |
| Hexachlorobutadiene | <37 | | 83.1 | 78.5 | | ug/Kg | ☼ | 94 | 51 - 150 |
| Isopropylbenzene | <32 | | 83.1 | 77.6 | | ug/Kg | ☼ | 93 | 70 - 126 |
| Methylene Chloride | <140 | | 83.1 | 78.7 | | ug/Kg | ☼ | 95 | 69 - 125 |
| Methyl tert-butyl ether | <33 | | 83.1 | 79.9 | | ug/Kg | ☼ | 96 | 55 - 123 |
| Naphthalene | <28 | | 83.1 | 77.8 | | ug/Kg | ☼ | 94 | 53 - 144 |
| n-Butylbenzene | <32 | | 83.1 | 80.6 | | ug/Kg | ☼ | 97 | 68 - 125 |
| N-Propylbenzene | <34 | | 83.1 | 76.0 | | ug/Kg | ☼ | 91 | 69 - 127 |
| p-Isopropyltoluene | <30 | | 83.1 | 80.1 | | ug/Kg | ☼ | 96 | 70 - 125 |
| sec-Butylbenzene | <33 | | 83.1 | 79.4 | | ug/Kg | ☼ | 95 | 70 - 123 |
| Styrene | <32 | | 83.1 | 78.5 | | ug/Kg | ☼ | 94 | 70 - 120 |
| tert-Butylbenzene | <33 | | 83.1 | 79.7 | | ug/Kg | ☼ | 96 | 70 - 121 |
| 1,1,1,2-Tetrachloroethane | <38 | | 83.1 | 82.0 | | ug/Kg | ☼ | 99 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | <33 | | 83.1 | 77.3 | | ug/Kg | ☼ | 93 | 62 - 140 |
| Tetrachloroethene | <31 | | 83.1 | 77.0 | | ug/Kg | ☼ | 93 | 70 - 128 |
| Toluene | <12 | | 83.1 | 73.5 | | ug/Kg | ☼ | 88 | 70 - 125 |
| trans-1,2-Dichloroethene | <29 | | 83.1 | 79.5 | | ug/Kg | ☼ | 96 | 70 - 125 |
| trans-1,3-Dichloropropene | <30 | | 83.1 | 72.6 | | ug/Kg | ☼ | 87 | 62 - 128 |
| 1,2,3-Trichlorobenzene | <38 | | 83.1 | 73.0 | | ug/Kg | ☼ | 88 | 51 - 145 |
| 1,2,4-Trichlorobenzene | <28 | | 83.1 | 72.7 | | ug/Kg | ☼ | 87 | 57 - 137 |

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

**Lab Sample ID: 500-167116-12 MS**
**Matrix: Solid**
**Analysis Batch: 496740**

**Client Sample ID: SB-7 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496279**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | <32 | | 83.1 | 84.1 | | ug/Kg | ☼ | 101 | 70 - 125 |
| 1,1,2-Trichloroethane | <29 | | 83.1 | 73.6 | | ug/Kg | ☼ | 88 | 71 - 130 |
| Trichloroethene | <14 | | 83.1 | 76.6 | | ug/Kg | ☼ | 92 | 70 - 125 |
| Trichlorofluoromethane | <36 | | 83.1 | 68.6 | | ug/Kg | ☼ | 83 | 55 - 128 |
| 1,2,3-Trichloropropane | <34 | | 83.1 | 73.1 | | ug/Kg | ☼ | 88 | 50 - 133 |
| 1,2,4-Trimethylbenzene | <30 | | 83.1 | 77.2 | | ug/Kg | ☼ | 93 | 70 - 123 |
| 1,3,5-Trimethylbenzene | <32 | | 83.1 | 78.4 | | ug/Kg | ☼ | 94 | 70 - 123 |
| Vinyl chloride | <22 | | 83.1 | 74.1 | | ug/Kg | ☼ | 89 | 64 - 126 |
| Xylenes, Total | <18 | | 166 | 156 | | ug/Kg | ☼ | 94 | 70 - 125 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *72 - 124* |
| *Dibromofluoromethane* | *103* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 120* |

**Lab Sample ID: 500-167116-12 MSD**
**Matrix: Solid**
**Analysis Batch: 496740**

**Client Sample ID: SB-7 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496279**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <12 | | 83.1 | 78.7 | | ug/Kg | ☼ | 95 | 70 - 120 | 3 | 30 |
| Bromobenzene | <30 | | 83.1 | 79.0 | | ug/Kg | ☼ | 95 | 70 - 122 | 6 | 30 |
| Bromochloromethane | <36 | | 83.1 | 81.0 | | ug/Kg | ☼ | 97 | 65 - 122 | 4 | 30 |
| Bromodichloromethane | <31 | | 83.1 | 77.2 | | ug/Kg | ☼ | 93 | 69 - 120 | 2 | 30 |
| Bromoform | <40 | * | 83.1 | 78.7 | | ug/Kg | ☼ | 95 | 56 - 132 | 3 | 30 |
| Bromomethane | <66 | | 83.1 | 79.7 | | ug/Kg | ☼ | 96 | 40 - 152 | 14 | 30 |
| Carbon tetrachloride | <32 | | 83.1 | 83.0 | | ug/Kg | ☼ | 100 | 59 - 133 | 1 | 30 |
| Chlorobenzene | <32 | | 83.1 | 80.1 | | ug/Kg | ☼ | 96 | 70 - 120 | 4 | 30 |
| Chloroethane | <42 | | 83.1 | 80.1 | | ug/Kg | ☼ | 96 | 48 - 136 | 16 | 30 |
| Chloroform | <31 | | 83.1 | 77.9 | | ug/Kg | ☼ | 94 | 70 - 120 | 2 | 30 |
| Chloromethane | <27 | | 83.1 | 85.8 | | ug/Kg | ☼ | 103 | 56 - 152 | 16 | 30 |
| 2-Chlorotoluene | <26 | | 83.1 | 79.8 | | ug/Kg | ☼ | 96 | 70 - 125 | 4 | 30 |
| 4-Chlorotoluene | <29 | | 83.1 | 80.4 | | ug/Kg | ☼ | 97 | 68 - 124 | 6 | 30 |
| cis-1,2-Dichloroethene | <34 | | 83.1 | 78.7 | | ug/Kg | ☼ | 95 | 70 - 125 | 0 | 30 |
| cis-1,3-Dichloropropene | <35 | | 83.1 | 76.0 | | ug/Kg | ☼ | 91 | 64 - 127 | 4 | 30 |
| Dibromochloromethane | <41 | | 83.1 | 76.4 | | ug/Kg | ☼ | 92 | 68 - 125 | 0 | 30 |
| 1,2-Dibromo-3-Chloropropane | <170 | * | 83.1 | 70.4 | | ug/Kg | ☼ | 85 | 56 - 123 | 5 | 30 |
| 1,2-Dibromoethane | <32 | | 83.1 | 77.4 | | ug/Kg | ☼ | 93 | 70 - 125 | 0 | 30 |
| Dibromomethane | <22 | | 83.1 | 78.7 | | ug/Kg | ☼ | 95 | 70 - 120 | 0 | 30 |
| 1,2-Dichlorobenzene | <28 | | 83.1 | 79.5 | | ug/Kg | ☼ | 96 | 70 - 125 | 2 | 30 |
| 1,3-Dichlorobenzene | <33 | | 83.1 | 80.1 | | ug/Kg | ☼ | 96 | 70 - 125 | 3 | 30 |
| 1,4-Dichlorobenzene | <30 | | 83.1 | 77.8 | | ug/Kg | ☼ | 94 | 70 - 120 | 2 | 30 |
| Dichlorodifluoromethane | <56 | | 83.1 | 81.1 | | ug/Kg | ☼ | 98 | 40 - 159 | 17 | 30 |
| 1,1-Dichloroethane | <34 | | 83.1 | 79.1 | | ug/Kg | ☼ | 95 | 70 - 125 | 2 | 30 |
| 1,2-Dichloroethane | <33 | | 83.1 | 79.5 | | ug/Kg | ☼ | 96 | 68 - 127 | 0 | 30 |
| 1,1-Dichloroethene | <32 | | 83.1 | 76.3 | | ug/Kg | ☼ | 92 | 67 - 122 | 0 | 30 |
| 1,2-Dichloropropane | <36 | | 83.1 | 79.5 | | ug/Kg | ☼ | 96 | 67 - 130 | 4 | 30 |

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

**Lab Sample ID: 500-167116-12 MSD**
**Matrix: Solid**
**Analysis Batch: 496740**

**Client Sample ID: SB-7 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496279**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichloropropane | <30 | | 83.1 | 77.3 | | ug/Kg | ☼ | 93 | 62 - 136 | 2 | 30 |
| 2,2-Dichloropropane | <37 | | 83.1 | 86.5 | | ug/Kg | ☼ | 104 | 58 - 139 | 2 | 30 |
| 1,1-Dichloropropene | <25 | | 83.1 | 80.4 | | ug/Kg | ☼ | 97 | 70 - 121 | 1 | 30 |
| Ethylbenzene | <15 | | 83.1 | 83.0 | | ug/Kg | ☼ | 100 | 70 - 123 | 5 | 30 |
| Hexachlorobutadiene | <37 | | 83.1 | 80.7 | | ug/Kg | ☼ | 97 | 51 - 150 | 3 | 30 |
| Isopropylbenzene | <32 | | 83.1 | 80.3 | | ug/Kg | ☼ | 97 | 70 - 126 | 3 | 30 |
| Methylene Chloride | <140 | | 83.1 | 79.0 | | ug/Kg | ☼ | 95 | 69 - 125 | 0 | 30 |
| Methyl tert-butyl ether | <33 | | 83.1 | 79.8 | | ug/Kg | ☼ | 96 | 55 - 123 | 0 | 30 |
| Naphthalene | <28 | | 83.1 | 77.0 | | ug/Kg | ☼ | 93 | 53 - 144 | 1 | 30 |
| n-Butylbenzene | <32 | | 83.1 | 82.4 | | ug/Kg | ☼ | 99 | 68 - 125 | 2 | 30 |
| N-Propylbenzene | <34 | | 83.1 | 81.0 | | ug/Kg | ☼ | 97 | 69 - 127 | 6 | 30 |
| p-Isopropyltoluene | <30 | | 83.1 | 82.0 | | ug/Kg | ☼ | 99 | 70 - 125 | 2 | 30 |
| sec-Butylbenzene | <33 | | 83.1 | 82.6 | | ug/Kg | ☼ | 99 | 70 - 123 | 4 | 30 |
| Styrene | <32 | | 83.1 | 82.2 | | ug/Kg | ☼ | 99 | 70 - 120 | 4 | 30 |
| tert-Butylbenzene | <33 | | 83.1 | 80.9 | | ug/Kg | ☼ | 97 | 70 - 121 | 1 | 30 |
| 1,1,1,2-Tetrachloroethane | <38 | | 83.1 | 80.7 | | ug/Kg | ☼ | 97 | 70 - 125 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | <33 | | 83.1 | 77.9 | | ug/Kg | ☼ | 94 | 62 - 140 | 1 | 30 |
| Tetrachloroethene | <31 | | 83.1 | 79.5 | | ug/Kg | ☼ | 96 | 70 - 128 | 3 | 30 |
| Toluene | <12 | | 83.1 | 75.7 | | ug/Kg | ☼ | 91 | 70 - 125 | 3 | 30 |
| trans-1,2-Dichloroethene | <29 | | 83.1 | 79.3 | | ug/Kg | ☼ | 95 | 70 - 125 | 0 | 30 |
| trans-1,3-Dichloropropene | <30 | | 83.1 | 73.5 | | ug/Kg | ☼ | 88 | 62 - 128 | 1 | 30 |
| 1,2,3-Trichlorobenzene | <38 | | 83.1 | 76.4 | | ug/Kg | ☼ | 92 | 51 - 145 | 5 | 30 |
| 1,2,4-Trichlorobenzene | <28 | | 83.1 | 74.8 | | ug/Kg | ☼ | 90 | 57 - 137 | 3 | 30 |
| 1,1,1-Trichloroethane | <32 | | 83.1 | 84.6 | | ug/Kg | ☼ | 102 | 70 - 125 | 1 | 30 |
| 1,1,2-Trichloroethane | <29 | | 83.1 | 73.6 | | ug/Kg | ☼ | 88 | 71 - 130 | 0 | 30 |
| Trichloroethene | <14 | | 83.1 | 78.2 | | ug/Kg | ☼ | 94 | 70 - 125 | 2 | 30 |
| Trichlorofluoromethane | <36 | | 83.1 | 80.2 | | ug/Kg | ☼ | 96 | 55 - 128 | 16 | 30 |
| 1,2,3-Trichloropropane | <34 | | 83.1 | 77.6 | | ug/Kg | ☼ | 93 | 50 - 133 | 6 | 30 |
| 1,2,4-Trimethylbenzene | <30 | | 83.1 | 80.3 | | ug/Kg | ☼ | 97 | 70 - 123 | 4 | 30 |
| 1,3,5-Trimethylbenzene | <32 | | 83.1 | 80.6 | | ug/Kg | ☼ | 97 | 70 - 123 | 3 | 30 |
| Vinyl chloride | <22 | | 83.1 | 85.6 | | ug/Kg | ☼ | 103 | 64 - 126 | 14 | 30 |
| Xylenes, Total | <18 | | 166 | 160 | | ug/Kg | ☼ | 96 | 70 - 125 | 2 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *72 - 124* |
| *Dibromofluoromethane* | *100* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 120* |

**Lab Sample ID: MB 500-496740/6**
**Matrix: Solid**
**Analysis Batch: 496740**

**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 | | 0.25 | 0.15 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 07/26/19 10:43 | 1 |

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

**Lab Sample ID: MB 500-496740/6**
**Matrix: Solid**
**Analysis Batch: 496740**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Chloroethane | <0.50 | | 1.0 | 0.50 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 07/26/19 10:43 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 07/26/19 10:43 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Ethylbenzene | <0.18 | | 0.25 | 0.18 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Isopropylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Naphthalene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 07/26/19 10:43 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:43 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 07/26/19 10:43 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:43 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:43 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Toluene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 07/26/19 10:43 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 07/26/19 10:43 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 07/26/19 10:43 | 1 |

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

**Lab Sample ID: MB 500-496740/6**
**Matrix: Solid**
**Analysis Batch: 496740**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:43 | 1 |
| 1,3,5-Trimethylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Vinyl chloride | <0.26 | | 1.0 | 0.26 | ug/Kg | | | 07/26/19 10:43 | 1 |
| Xylenes, Total | <0.22 | | 0.50 | 0.22 | ug/Kg | | | 07/26/19 10:43 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *72 - 124* | | *07/26/19 10:43* | *1* |
| *Dibromofluoromethane* | *97* | | *75 - 120* | | *07/26/19 10:43* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *75 - 126* | | *07/26/19 10:43* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 120* | | *07/26/19 10:43* | *1* |

**Lab Sample ID: LCS 500-496740/4**
**Matrix: Solid**
**Analysis Batch: 496740**

**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 | 43.2 | | ug/Kg | | 86 | 70 - 120 |
| Bromobenzene | 50.0 | 43.7 | | ug/Kg | | 87 | 70 - 122 |
| Bromochloromethane | 50.0 | 43.4 | | ug/Kg | | 87 | 65 - 122 |
| Bromodichloromethane | 50.0 | 42.7 | | ug/Kg | | 85 | 69 - 120 |
| Bromoform | 50.0 | 40.9 | | ug/Kg | | 82 | 56 - 132 |
| Bromomethane | 50.0 | 44.8 | | ug/Kg | | 90 | 40 - 152 |
| Carbon tetrachloride | 50.0 | 48.1 | | ug/Kg | | 96 | 59 - 133 |
| Chlorobenzene | 50.0 | 44.4 | | ug/Kg | | 89 | 70 - 120 |
| Chloroethane | 50.0 | 45.5 | | ug/Kg | | 91 | 48 - 136 |
| Chloroform | 50.0 | 42.6 | | ug/Kg | | 85 | 70 - 120 |
| Chloromethane | 50.0 | 47.3 | | ug/Kg | | 95 | 56 - 152 |
| 2-Chlorotoluene | 50.0 | 45.6 | | ug/Kg | | 91 | 70 - 125 |
| 4-Chlorotoluene | 50.0 | 45.8 | | ug/Kg | | 92 | 68 - 124 |
| cis-1,2-Dichloroethene | 50.0 | 43.2 | | ug/Kg | | 86 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 43.6 | | ug/Kg | | 87 | 64 - 127 |
| Dibromochloromethane | 50.0 | 42.9 | | ug/Kg | | 86 | 68 - 125 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 38.0 | | ug/Kg | | 76 | 56 - 123 |
| 1,2-Dibromoethane | 50.0 | 42.2 | | ug/Kg | | 84 | 70 - 125 |
| Dibromomethane | 50.0 | 43.1 | | ug/Kg | | 86 | 70 - 120 |
| 1,2-Dichlorobenzene | 50.0 | 44.0 | | ug/Kg | | 88 | 70 - 125 |
| 1,3-Dichlorobenzene | 50.0 | 45.5 | | ug/Kg | | 91 | 70 - 125 |
| 1,4-Dichlorobenzene | 50.0 | 44.8 | | ug/Kg | | 90 | 70 - 120 |
| Dichlorodifluoromethane | 50.0 | 46.1 | | ug/Kg | | 92 | 40 - 159 |
| 1,1-Dichloroethane | 50.0 | 43.9 | | ug/Kg | | 88 | 70 - 125 |
| 1,2-Dichloroethane | 50.0 | 42.7 | | ug/Kg | | 85 | 68 - 127 |
| 1,1-Dichloroethene | 50.0 | 44.3 | | ug/Kg | | 89 | 67 - 122 |
| 1,2-Dichloropropane | 50.0 | 43.4 | | ug/Kg | | 87 | 67 - 130 |
| 1,3-Dichloropropane | 50.0 | 43.1 | | ug/Kg | | 86 | 62 - 136 |
| 2,2-Dichloropropane | 50.0 | 50.9 | | ug/Kg | | 102 | 58 - 139 |

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

**Lab Sample ID: LCS 500-496740/4**
**Matrix: Solid**
**Analysis Batch: 496740**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 50.0 | 45.5 | | ug/Kg | | 91 | 70 - 121 |
| Ethylbenzene | 50.0 | 48.7 | | ug/Kg | | 97 | 70 - 123 |
| Hexachlorobutadiene | 50.0 | 48.0 | | ug/Kg | | 96 | 51 - 150 |
| Isopropylbenzene | 50.0 | 47.5 | | ug/Kg | | 95 | 70 - 126 |
| Methylene Chloride | 50.0 | 42.7 | | ug/Kg | | 85 | 69 - 125 |
| Methyl tert-butyl ether | 50.0 | 41.5 | | ug/Kg | | 83 | 55 - 123 |
| Naphthalene | 50.0 | 42.5 | | ug/Kg | | 85 | 53 - 144 |
| n-Butylbenzene | 50.0 | 50.4 | | ug/Kg | | 101 | 68 - 125 |
| N-Propylbenzene | 50.0 | 47.8 | | ug/Kg | | 96 | 69 - 127 |
| p-Isopropyltoluene | 50.0 | 48.6 | | ug/Kg | | 97 | 70 - 125 |
| sec-Butylbenzene | 50.0 | 48.4 | | ug/Kg | | 97 | 70 - 123 |
| Styrene | 50.0 | 44.9 | | ug/Kg | | 90 | 70 - 120 |
| tert-Butylbenzene | 50.0 | 47.0 | | ug/Kg | | 94 | 70 - 121 |
| 1,1,1,2-Tetrachloroethane | 50.0 | 43.0 | | ug/Kg | | 86 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 42.7 | | ug/Kg | | 85 | 62 - 140 |
| Tetrachloroethene | 50.0 | 48.3 | | ug/Kg | | 97 | 70 - 128 |
| Toluene | 50.0 | 44.1 | | ug/Kg | | 88 | 70 - 125 |
| trans-1,2-Dichloroethene | 50.0 | 44.9 | | ug/Kg | | 90 | 70 - 125 |
| trans-1,3-Dichloropropene | 50.0 | 42.1 | | ug/Kg | | 84 | 62 - 128 |
| 1,2,3-Trichlorobenzene | 50.0 | 42.8 | | ug/Kg | | 86 | 51 - 145 |
| 1,2,4-Trichlorobenzene | 50.0 | 44.5 | | ug/Kg | | 89 | 57 - 137 |
| 1,1,1-Trichloroethane | 50.0 | 49.1 | | ug/Kg | | 98 | 70 - 125 |
| 1,1,2-Trichloroethane | 50.0 | 42.0 | | ug/Kg | | 84 | 71 - 130 |
| Trichloroethene | 50.0 | 45.4 | | ug/Kg | | 91 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 45.9 | | ug/Kg | | 92 | 55 - 128 |
| 1,2,3-Trichloropropane | 50.0 | 41.3 | | ug/Kg | | 83 | 50 - 133 |
| 1,2,4-Trimethylbenzene | 50.0 | 45.9 | | ug/Kg | | 92 | 70 - 123 |
| 1,3,5-Trimethylbenzene | 50.0 | 46.9 | | ug/Kg | | 94 | 70 - 123 |
| Vinyl chloride | 50.0 | 49.2 | | ug/Kg | | 98 | 64 - 126 |
| Xylenes, Total | 100 | 90.4 | | ug/Kg | | 90 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *72 - 124* |
| *Dibromofluoromethane* | *95* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *103* | | *75 - 120* |

**Lab Sample ID: MB 500-496764/6**
**Matrix: Solid**
**Analysis Batch: 496764**

**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 | | 0.25 | 0.15 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/Kg | | | 07/26/19 10:33 | 1 |

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

**Lab Sample ID: MB 500-496764/6**
**Matrix: Solid**
**Analysis Batch: 496764**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Chloroethane | <0.50 | | 1.0 | 0.50 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 07/26/19 10:33 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 07/26/19 10:33 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Ethylbenzene | <0.18 | | 0.25 | 0.18 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Isopropylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Naphthalene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 07/26/19 10:33 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:33 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 07/26/19 10:33 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:33 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/26/19 10:33 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Toluene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 07/26/19 10:33 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 07/26/19 10:33 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 07/26/19 10:33 | 1 |

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

**Lab Sample ID: MB 500-496764/6**
**Matrix: Solid**
**Analysis Batch: 496764**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/26/19 10:33 | 1 |
| 1,3,5-Trimethylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Vinyl chloride | <0.26 | | 1.0 | 0.26 | ug/Kg | | | 07/26/19 10:33 | 1 |
| Xylenes, Total | <0.22 | | 0.50 | 0.22 | ug/Kg | | | 07/26/19 10:33 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *93* | | *72 - 124* | | *07/26/19 10:33* | *1* |
| *Dibromofluoromethane* | *106* | | *75 - 120* | | *07/26/19 10:33* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *75 - 126* | | *07/26/19 10:33* | *1* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* | | *07/26/19 10:33* | *1* |

**Lab Sample ID: LCS 500-496764/4**
**Matrix: Solid**
**Analysis Batch: 496764**

**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 | 49.3 | | ug/Kg | | 99 | 70 - 120 |
| Bromobenzene | 50.0 | 48.6 | | ug/Kg | | 97 | 70 - 122 |
| Bromochloromethane | 50.0 | 53.5 | | ug/Kg | | 107 | 65 - 122 |
| Bromodichloromethane | 50.0 | 52.8 | | ug/Kg | | 106 | 69 - 120 |
| Bromoform | 50.0 | 74.7 | * | ug/Kg | | 149 | 56 - 132 |
| Bromomethane | 50.0 | 47.1 | | ug/Kg | | 94 | 40 - 152 |
| Carbon tetrachloride | 50.0 | 63.1 | | ug/Kg | | 126 | 59 - 133 |
| Chlorobenzene | 50.0 | 49.5 | | ug/Kg | | 99 | 70 - 120 |
| Chloroethane | 50.0 | 40.5 | | ug/Kg | | 81 | 48 - 136 |
| Chloroform | 50.0 | 48.3 | | ug/Kg | | 97 | 70 - 120 |
| Chloromethane | 50.0 | 43.5 | | ug/Kg | | 87 | 56 - 152 |
| 2-Chlorotoluene | 50.0 | 48.6 | | ug/Kg | | 97 | 70 - 125 |
| 4-Chlorotoluene | 50.0 | 48.8 | | ug/Kg | | 98 | 68 - 124 |
| cis-1,2-Dichloroethene | 50.0 | 50.2 | | ug/Kg | | 100 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 51.2 | | ug/Kg | | 102 | 64 - 127 |
| Dibromochloromethane | 50.0 | 60.3 | | ug/Kg | | 121 | 68 - 125 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 69.0 | * | ug/Kg | | 138 | 56 - 123 |
| 1,2-Dibromoethane | 50.0 | 55.0 | | ug/Kg | | 110 | 70 - 125 |
| Dibromomethane | 50.0 | 57.2 | | ug/Kg | | 114 | 70 - 120 |
| 1,2-Dichlorobenzene | 50.0 | 48.7 | | ug/Kg | | 97 | 70 - 125 |
| 1,3-Dichlorobenzene | 50.0 | 48.4 | | ug/Kg | | 97 | 70 - 125 |
| 1,4-Dichlorobenzene | 50.0 | 49.4 | | ug/Kg | | 99 | 70 - 120 |
| Dichlorodifluoromethane | 50.0 | 46.2 | | ug/Kg | | 92 | 40 - 159 |
| 1,1-Dichloroethane | 50.0 | 47.1 | | ug/Kg | | 94 | 70 - 125 |
| 1,2-Dichloroethane | 50.0 | 50.5 | | ug/Kg | | 101 | 68 - 127 |
| 1,1-Dichloroethene | 50.0 | 49.4 | | ug/Kg | | 99 | 67 - 122 |
| 1,2-Dichloropropane | 50.0 | 49.8 | | ug/Kg | | 100 | 67 - 130 |
| 1,3-Dichloropropane | 50.0 | 55.5 | | ug/Kg | | 111 | 62 - 136 |
| 2,2-Dichloropropane | 50.0 | 51.3 | | ug/Kg | | 103 | 58 - 139 |
| 1,1-Dichloropropene | 50.0 | 52.6 | | ug/Kg | | 105 | 70 - 121 |
| Ethylbenzene | 50.0 | 50.8 | | ug/Kg | | 102 | 70 - 123 |

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

**Lab Sample ID: LCS 500-496764/4**
**Matrix: Solid**
**Analysis Batch: 496764**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | 50.0 | 43.7 | | ug/Kg | | 87 | 51 - 150 |
| Isopropylbenzene | 50.0 | 47.4 | | ug/Kg | | 95 | 70 - 126 |
| Methylene Chloride | 50.0 | 48.5 | | ug/Kg | | 97 | 69 - 125 |
| Methyl tert-butyl ether | 50.0 | 53.8 | | ug/Kg | | 108 | 55 - 123 |
| Naphthalene | 50.0 | 51.0 | | ug/Kg | | 102 | 53 - 144 |
| n-Butylbenzene | 50.0 | 49.2 | | ug/Kg | | 98 | 68 - 125 |
| N-Propylbenzene | 50.0 | 49.4 | | ug/Kg | | 99 | 69 - 127 |
| p-Isopropyltoluene | 50.0 | 48.1 | | ug/Kg | | 96 | 70 - 125 |
| sec-Butylbenzene | 50.0 | 48.0 | | ug/Kg | | 96 | 70 - 123 |
| Styrene | 50.0 | 50.1 | | ug/Kg | | 100 | 70 - 120 |
| tert-Butylbenzene | 50.0 | 45.9 | | ug/Kg | | 92 | 70 - 121 |
| 1,1,1,2-Tetrachloroethane | 50.0 | 56.4 | | ug/Kg | | 113 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 57.6 | | ug/Kg | | 115 | 62 - 140 |
| Tetrachloroethene | 50.0 | 50.3 | | ug/Kg | | 101 | 70 - 128 |
| Toluene | 50.0 | 47.9 | | ug/Kg | | 96 | 70 - 125 |
| trans-1,2-Dichloroethene | 50.0 | 50.4 | | ug/Kg | | 101 | 70 - 125 |
| trans-1,3-Dichloropropene | 50.0 | 54.8 | | ug/Kg | | 110 | 62 - 128 |
| 1,2,3-Trichlorobenzene | 50.0 | 46.8 | | ug/Kg | | 94 | 51 - 145 |
| 1,2,4-Trichlorobenzene | 50.0 | 46.4 | | ug/Kg | | 93 | 57 - 137 |
| 1,1,1-Trichloroethane | 50.0 | 52.5 | | ug/Kg | | 105 | 70 - 125 |
| 1,1,2-Trichloroethane | 50.0 | 53.7 | | ug/Kg | | 107 | 71 - 130 |
| Trichloroethene | 50.0 | 51.4 | | ug/Kg | | 103 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 55.1 | | ug/Kg | | 110 | 55 - 128 |
| 1,2,3-Trichloropropane | 50.0 | 60.7 | | ug/Kg | | 121 | 50 - 133 |
| 1,2,4-Trimethylbenzene | 50.0 | 46.5 | | ug/Kg | | 93 | 70 - 123 |
| 1,3,5-Trimethylbenzene | 50.0 | 47.1 | | ug/Kg | | 94 | 70 - 123 |
| Vinyl chloride | 50.0 | 46.4 | | ug/Kg | | 93 | 64 - 126 |
| Xylenes, Total | 100 | 100 | | ug/Kg | | 100 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *95* | | *72 - 124* |
| *Dibromofluoromethane* | *108* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *96* | | *75 - 120* |

**Lab Sample ID: MB 500-497051/7**
**Matrix: Solid**
**Analysis Batch: 497051**

**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 | | 0.25 | 0.15 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/29/19 10:07 | 1 |

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

**Lab Sample ID: MB 500-497051/7**
**Matrix: Solid**
**Analysis Batch: 497051**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | <0.50 | | 1.0 | 0.50 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 07/29/19 10:07 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 07/29/19 10:07 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Ethylbenzene | <0.18 | | 0.25 | 0.18 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Isopropylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Naphthalene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 07/29/19 10:07 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/29/19 10:07 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 07/29/19 10:07 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/29/19 10:07 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 07/29/19 10:07 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Toluene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 07/29/19 10:07 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 07/29/19 10:07 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/Kg | | | 07/29/19 10:07 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 07/29/19 10:07 | 1 |

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

**Lab Sample ID: MB 500-497051/7**
**Matrix: Solid**
**Analysis Batch: 497051**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3,5-Trimethylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Vinyl chloride | <0.26 | | 1.0 | 0.26 | ug/Kg | | | 07/29/19 10:07 | 1 |
| Xylenes, Total | <0.22 | | 0.50 | 0.22 | ug/Kg | | | 07/29/19 10:07 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *72 - 124* | | *07/29/19 10:07* | *1* |
| *Dibromofluoromethane* | *100* | | *75 - 120* | | *07/29/19 10:07* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *75 - 126* | | *07/29/19 10:07* | *1* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* | | *07/29/19 10:07* | *1* |

**Lab Sample ID: LCS 500-497051/5**
**Matrix: Solid**
**Analysis Batch: 497051**

**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 | 45.6 | | ug/Kg | | 91 | 70 - 120 |
| Bromobenzene | 50.0 | 44.9 | | ug/Kg | | 90 | 70 - 122 |
| Bromochloromethane | 50.0 | 48.7 | | ug/Kg | | 97 | 65 - 122 |
| Bromodichloromethane | 50.0 | 44.5 | | ug/Kg | | 89 | 69 - 120 |
| Bromoform | 50.0 | 42.0 | | ug/Kg | | 84 | 56 - 132 |
| Bromomethane | 50.0 | 44.5 | | ug/Kg | | 89 | 40 - 152 |
| Carbon tetrachloride | 50.0 | 53.1 | | ug/Kg | | 106 | 59 - 133 |
| Chlorobenzene | 50.0 | 46.0 | | ug/Kg | | 92 | 70 - 120 |
| Chloroethane | 50.0 | 48.6 | | ug/Kg | | 97 | 48 - 136 |
| Chloroform | 50.0 | 47.2 | | ug/Kg | | 94 | 70 - 120 |
| Chloromethane | 50.0 | 51.6 | | ug/Kg | | 103 | 56 - 152 |
| 2-Chlorotoluene | 50.0 | 47.4 | | ug/Kg | | 95 | 70 - 125 |
| 4-Chlorotoluene | 50.0 | 46.6 | | ug/Kg | | 93 | 68 - 124 |
| cis-1,2-Dichloroethene | 50.0 | 48.7 | | ug/Kg | | 97 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 40.4 | | ug/Kg | | 81 | 64 - 127 |
| Dibromochloromethane | 50.0 | 42.7 | | ug/Kg | | 85 | 68 - 125 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 38.9 | | ug/Kg | | 78 | 56 - 123 |
| 1,2-Dibromoethane | 50.0 | 43.2 | | ug/Kg | | 86 | 70 - 125 |
| Dibromomethane | 50.0 | 46.7 | | ug/Kg | | 93 | 70 - 120 |
| 1,2-Dichlorobenzene | 50.0 | 45.7 | | ug/Kg | | 91 | 70 - 125 |
| 1,3-Dichlorobenzene | 50.0 | 46.6 | | ug/Kg | | 93 | 70 - 125 |
| 1,4-Dichlorobenzene | 50.0 | 45.3 | | ug/Kg | | 91 | 70 - 120 |
| Dichlorodifluoromethane | 50.0 | 46.2 | | ug/Kg | | 92 | 40 - 159 |
| 1,1-Dichloroethane | 50.0 | 50.1 | | ug/Kg | | 100 | 70 - 125 |
| 1,2-Dichloroethane | 50.0 | 44.4 | | ug/Kg | | 89 | 68 - 127 |
| 1,1-Dichloroethene | 50.0 | 49.1 | | ug/Kg | | 98 | 67 - 122 |
| 1,2-Dichloropropane | 50.0 | 46.7 | | ug/Kg | | 93 | 67 - 130 |
| 1,3-Dichloropropane | 50.0 | 42.4 | | ug/Kg | | 85 | 62 - 136 |
| 2,2-Dichloropropane | 50.0 | 58.2 | | ug/Kg | | 116 | 58 - 139 |
| 1,1-Dichloropropene | 50.0 | 47.2 | | ug/Kg | | 94 | 70 - 121 |
| Ethylbenzene | 50.0 | 48.6 | | ug/Kg | | 97 | 70 - 123 |
| Hexachlorobutadiene | 50.0 | 49.1 | | ug/Kg | | 98 | 51 - 150 |
| Isopropylbenzene | 50.0 | 47.1 | | ug/Kg | | 94 | 70 - 126 |

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

**Lab Sample ID: LCS 500-497051/5**
**Matrix: Solid**
**Analysis Batch: 497051**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Methylene Chloride | 50.0 | 47.9 | | ug/Kg | | 96 | 69 - 125 |
| Methyl tert-butyl ether | 50.0 | 48.4 | | ug/Kg | | 97 | 55 - 123 |
| Naphthalene | 50.0 | 43.6 | | ug/Kg | | 87 | 53 - 144 |
| n-Butylbenzene | 50.0 | 50.2 | | ug/Kg | | 100 | 68 - 125 |
| N-Propylbenzene | 50.0 | 48.3 | | ug/Kg | | 97 | 69 - 127 |
| p-Isopropyltoluene | 50.0 | 49.0 | | ug/Kg | | 98 | 70 - 125 |
| sec-Butylbenzene | 50.0 | 48.4 | | ug/Kg | | 97 | 70 - 123 |
| Styrene | 50.0 | 46.6 | | ug/Kg | | 93 | 70 - 120 |
| tert-Butylbenzene | 50.0 | 46.8 | | ug/Kg | | 94 | 70 - 121 |
| 1,1,1,2-Tetrachloroethane | 50.0 | 43.4 | | ug/Kg | | 87 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 42.0 | | ug/Kg | | 84 | 62 - 140 |
| Tetrachloroethene | 50.0 | 45.4 | | ug/Kg | | 91 | 70 - 128 |
| Toluene | 50.0 | 42.3 | | ug/Kg | | 85 | 70 - 125 |
| trans-1,2-Dichloroethene | 50.0 | 51.4 | | ug/Kg | | 103 | 70 - 125 |
| trans-1,3-Dichloropropene | 50.0 | 41.5 | | ug/Kg | | 83 | 62 - 128 |
| 1,2,3-Trichlorobenzene | 50.0 | 44.2 | | ug/Kg | | 88 | 51 - 145 |
| 1,2,4-Trichlorobenzene | 50.0 | 46.6 | | ug/Kg | | 93 | 57 - 137 |
| 1,1,1-Trichloroethane | 50.0 | 55.5 | | ug/Kg | | 111 | 70 - 125 |
| 1,1,2-Trichloroethane | 50.0 | 39.6 | | ug/Kg | | 79 | 71 - 130 |
| Trichloroethene | 50.0 | 46.0 | | ug/Kg | | 92 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 48.3 | | ug/Kg | | 97 | 55 - 128 |
| 1,2,3-Trichloropropane | 50.0 | 43.2 | | ug/Kg | | 86 | 50 - 133 |
| 1,2,4-Trimethylbenzene | 50.0 | 47.1 | | ug/Kg | | 94 | 70 - 123 |
| 1,3,5-Trimethylbenzene | 50.0 | 47.6 | | ug/Kg | | 95 | 70 - 123 |
| Vinyl chloride | 50.0 | 51.1 | | ug/Kg | | 102 | 64 - 126 |
| Xylenes, Total | 100 | 92.1 | | ug/Kg | | 92 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *72 - 124* |
| *Dibromofluoromethane* | *100* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 120* |

**Lab Sample ID: MB 500-497053/6**
**Matrix: Water**
**Analysis Batch: 497053**

**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 | | | 07/29/19 09:53 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 09:53 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 09:53 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 09:53 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 07/29/19 09:53 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 07/29/19 09:53 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 09:53 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 09:53 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 07/29/19 09:53 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 07/29/19 09:53 | 1 |

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

**Lab Sample ID: MB 500-497053/6**
**Matrix: Water**
**Analysis Batch: 497053**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 07/29/19 09:53 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 07/29/19 09:53 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 09:53 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 09:53 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 07/29/19 09:53 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 09:53 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 09:53 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 09:53 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 07/29/19 09:53 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 07/29/19 09:53 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 07/29/19 09:53 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 09:53 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 07/29/19 09:53 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 07/29/19 09:53 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 09:53 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 09:53 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 09:53 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/29/19 09:53 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 09:53 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 09:53 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/29/19 09:53 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/29/19 09:53 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/29/19 09:53 | 1 |
| Toluene | <0.15 | | 0.50 | 0.15 | ug/L | | | 07/29/19 09:53 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 09:53 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/29/19 09:53 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 07/29/19 09:53 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/29/19 09:53 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 07/29/19 09:53 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 07/29/19 09:53 | 1 |

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

**Lab Sample ID: MB 500-497053/6**
**Matrix: Water**
**Analysis Batch: 497053**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 07/29/19 09:53 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *72 - 124* | | *07/29/19 09:53* | *1* |
| *Dibromofluoromethane* | *104* | | *75 - 120* | | *07/29/19 09:53* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *113* | | *75 - 126* | | *07/29/19 09:53* | *1* |
| *Toluene-d8 (Surr)* | *89* | | *75 - 120* | | *07/29/19 09:53* | *1* |

**Lab Sample ID: LCS 500-497053/4**
**Matrix: Water**
**Analysis Batch: 497053**

**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 | 45.9 | | ug/L | | 92 | 70 - 120 |
| Bromobenzene | 50.0 | 48.8 | | ug/L | | 98 | 70 - 122 |
| Bromochloromethane | 50.0 | 48.7 | | ug/L | | 97 | 65 - 122 |
| Bromodichloromethane | 50.0 | 50.5 | | ug/L | | 101 | 69 - 120 |
| Bromoform | 50.0 | 52.1 | | ug/L | | 104 | 56 - 132 |
| Bromomethane | 50.0 | 26.7 | | ug/L | | 53 | 40 - 152 |
| Carbon tetrachloride | 50.0 | 45.7 | | ug/L | | 91 | 59 - 133 |
| Chlorobenzene | 50.0 | 48.8 | | ug/L | | 98 | 70 - 120 |
| Chloroethane | 50.0 | 44.8 | | ug/L | | 90 | 48 - 136 |
| Chloroform | 50.0 | 47.1 | | ug/L | | 94 | 70 - 120 |
| Chloromethane | 50.0 | 40.7 | | ug/L | | 81 | 56 - 152 |
| 2-Chlorotoluene | 50.0 | 51.0 | | ug/L | | 102 | 70 - 125 |
| 4-Chlorotoluene | 50.0 | 50.2 | | ug/L | | 100 | 68 - 124 |
| cis-1,2-Dichloroethene | 50.0 | 49.6 | | ug/L | | 99 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 53.1 | | ug/L | | 106 | 64 - 127 |
| Dibromochloromethane | 50.0 | 50.3 | | ug/L | | 101 | 68 - 125 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 55.4 | | ug/L | | 111 | 56 - 123 |
| 1,2-Dibromoethane | 50.0 | 52.1 | | ug/L | | 104 | 70 - 125 |
| Dibromomethane | 50.0 | 47.7 | | ug/L | | 95 | 70 - 120 |
| 1,2-Dichlorobenzene | 50.0 | 47.5 | | ug/L | | 95 | 70 - 125 |
| 1,3-Dichlorobenzene | 50.0 | 48.8 | | ug/L | | 98 | 70 - 125 |
| 1,4-Dichlorobenzene | 50.0 | 46.5 | | ug/L | | 93 | 70 - 120 |
| Dichlorodifluoromethane | 50.0 | 44.7 | | ug/L | | 89 | 40 - 159 |
| 1,1-Dichloroethane | 50.0 | 51.0 | | ug/L | | 102 | 70 - 125 |
| 1,2-Dichloroethane | 50.0 | 51.4 | | ug/L | | 103 | 68 - 127 |
| 1,1-Dichloroethene | 50.0 | 51.4 | | ug/L | | 103 | 67 - 122 |
| 1,2-Dichloropropane | 50.0 | 50.1 | | ug/L | | 100 | 67 - 130 |
| 1,3-Dichloropropane | 50.0 | 52.9 | | ug/L | | 106 | 62 - 136 |
| 2,2-Dichloropropane | 50.0 | 43.8 | | ug/L | | 88 | 58 - 139 |
| 1,1-Dichloropropene | 50.0 | 48.7 | | ug/L | | 97 | 70 - 121 |
| Ethylbenzene | 50.0 | 51.2 | | ug/L | | 102 | 70 - 123 |
| Hexachlorobutadiene | 50.0 | 62.5 | | ug/L | | 125 | 51 - 150 |
| Isopropylbenzene | 50.0 | 48.8 | | ug/L | | 98 | 70 - 126 |
| Methylene Chloride | 50.0 | 51.2 | | ug/L | | 102 | 69 - 125 |
| Methyl tert-butyl ether | 50.0 | 45.4 | | ug/L | | 91 | 55 - 123 |

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

**Lab Sample ID: LCS 500-497053/4**
**Matrix: Water**
**Analysis Batch: 497053**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Naphthalene | 50.0 | 51.6 | | ug/L | | 103 | 53 - 144 |
| n-Butylbenzene | 50.0 | 50.3 | | ug/L | | 101 | 68 - 125 |
| N-Propylbenzene | 50.0 | 50.2 | | ug/L | | 100 | 69 - 127 |
| p-Isopropyltoluene | 50.0 | 48.5 | | ug/L | | 97 | 70 - 125 |
| sec-Butylbenzene | 50.0 | 49.1 | | ug/L | | 98 | 70 - 123 |
| Styrene | 50.0 | 47.3 | | ug/L | | 95 | 70 - 120 |
| tert-Butylbenzene | 50.0 | 48.7 | | ug/L | | 97 | 70 - 121 |
| 1,1,1,2-Tetrachloroethane | 50.0 | 48.0 | | ug/L | | 96 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 50.4 | | ug/L | | 101 | 62 - 140 |
| Tetrachloroethene | 50.0 | 52.0 | | ug/L | | 104 | 70 - 128 |
| Toluene | 50.0 | 50.3 | | ug/L | | 101 | 70 - 125 |
| trans-1,2-Dichloroethene | 50.0 | 51.4 | | ug/L | | 103 | 70 - 125 |
| trans-1,3-Dichloropropene | 50.0 | 52.5 | | ug/L | | 105 | 62 - 128 |
| 1,2,3-Trichlorobenzene | 50.0 | 57.7 | | ug/L | | 115 | 51 - 145 |
| 1,2,4-Trichlorobenzene | 50.0 | 53.2 | | ug/L | | 106 | 57 - 137 |
| 1,1,1-Trichloroethane | 50.0 | 46.9 | | ug/L | | 94 | 70 - 125 |
| 1,1,2-Trichloroethane | 50.0 | 51.3 | | ug/L | | 103 | 71 - 130 |
| Trichloroethene | 50.0 | 46.4 | | ug/L | | 93 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 46.0 | | ug/L | | 92 | 55 - 128 |
| 1,2,3-Trichloropropane | 50.0 | 55.2 | | ug/L | | 110 | 50 - 133 |
| 1,2,4-Trimethylbenzene | 50.0 | 48.9 | | ug/L | | 98 | 70 - 123 |
| 1,3,5-Trimethylbenzene | 50.0 | 48.0 | | ug/L | | 96 | 70 - 123 |
| Vinyl chloride | 50.0 | 44.4 | | ug/L | | 89 | 64 - 126 |
| Xylenes, Total | 100 | 100 | | ug/L | | 100 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *72 - 124* |
| *Dibromofluoromethane* | *96* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *102* | | *75 - 120* |

**Lab Sample ID: MB 500-497254/7**
**Matrix: Water**
**Analysis Batch: 497254**

**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 | | | 07/30/19 11:25 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/30/19 11:25 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/30/19 11:25 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/30/19 11:25 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 07/30/19 11:25 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 07/30/19 11:25 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/30/19 11:25 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/30/19 11:25 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 07/30/19 11:25 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 07/30/19 11:25 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 07/30/19 11:25 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 07/30/19 11:25 | 1 |

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

**Lab Sample ID: MB 500-497254/7**
**Matrix: Water**
**Analysis Batch: 497254**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/30/19 11:25 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/30/19 11:25 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 07/30/19 11:25 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/30/19 11:25 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/30/19 11:25 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/30/19 11:25 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 07/30/19 11:25 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 07/30/19 11:25 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 07/30/19 11:25 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/30/19 11:25 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 07/30/19 11:25 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 07/30/19 11:25 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/30/19 11:25 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/30/19 11:25 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/30/19 11:25 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 07/30/19 11:25 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/30/19 11:25 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/30/19 11:25 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 07/30/19 11:25 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 07/30/19 11:25 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 07/30/19 11:25 | 1 |
| Toluene | <0.15 | | 0.50 | 0.15 | ug/L | | | 07/30/19 11:25 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/30/19 11:25 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 07/30/19 11:25 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 07/30/19 11:25 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 07/30/19 11:25 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 07/30/19 11:25 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 07/30/19 11:25 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 07/30/19 11:25 | 1 |

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

**Lab Sample ID: MB 500-497254/7**
**Matrix: Water**
**Analysis Batch: 497254**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 110 | | 72 - 124 | | 07/30/19 11:25 | 1 |
| Dibromofluoromethane | 100 | | 75 - 120 | | 07/30/19 11:25 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | 75 - 126 | | 07/30/19 11:25 | 1 |
| Toluene-d8 (Surr) | 93 | | 75 - 120 | | 07/30/19 11:25 | 1 |

**Lab Sample ID: LCS 500-497254/5**
**Matrix: Water**
**Analysis Batch: 497254**

**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 | 46.7 | | ug/L | | 93 | 70 - 120 |
| Bromobenzene | 50.0 | 45.1 | | ug/L | | 90 | 70 - 122 |
| Bromochloromethane | 50.0 | 49.9 | | ug/L | | 100 | 65 - 122 |
| Bromodichloromethane | 50.0 | 43.6 | | ug/L | | 87 | 69 - 120 |
| Bromoform | 50.0 | 43.9 | | ug/L | | 88 | 56 - 132 |
| Bromomethane | 50.0 | 43.2 | | ug/L | | 86 | 40 - 152 |
| Carbon tetrachloride | 50.0 | 52.8 | | ug/L | | 106 | 59 - 133 |
| Chlorobenzene | 50.0 | 46.6 | | ug/L | | 93 | 70 - 120 |
| Chloroethane | 50.0 | 48.0 | | ug/L | | 96 | 48 - 136 |
| Chloroform | 50.0 | 48.0 | | ug/L | | 96 | 70 - 120 |
| Chloromethane | 50.0 | 54.4 | | ug/L | | 109 | 56 - 152 |
| 2-Chlorotoluene | 50.0 | 47.2 | | ug/L | | 94 | 70 - 125 |
| 4-Chlorotoluene | 50.0 | 47.0 | | ug/L | | 94 | 68 - 124 |
| cis-1,2-Dichloroethene | 50.0 | 49.8 | | ug/L | | 100 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 42.6 | | ug/L | | 85 | 64 - 127 |
| Dibromochloromethane | 50.0 | 43.2 | | ug/L | | 86 | 68 - 125 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 38.6 | | ug/L | | 77 | 56 - 123 |
| 1,2-Dibromoethane | 50.0 | 44.5 | | ug/L | | 89 | 70 - 125 |
| Dibromomethane | 50.0 | 45.0 | | ug/L | | 90 | 70 - 120 |
| 1,2-Dichlorobenzene | 50.0 | 47.0 | | ug/L | | 94 | 70 - 125 |
| 1,3-Dichlorobenzene | 50.0 | 47.4 | | ug/L | | 95 | 70 - 125 |
| 1,4-Dichlorobenzene | 50.0 | 46.5 | | ug/L | | 93 | 70 - 120 |
| Dichlorodifluoromethane | 50.0 | 48.5 | | ug/L | | 97 | 40 - 159 |
| 1,1-Dichloroethane | 50.0 | 51.3 | | ug/L | | 103 | 70 - 125 |
| 1,2-Dichloroethane | 50.0 | 45.8 | | ug/L | | 92 | 68 - 127 |
| 1,1-Dichloroethene | 50.0 | 51.6 | | ug/L | | 103 | 67 - 122 |
| 1,2-Dichloropropane | 50.0 | 46.3 | | ug/L | | 93 | 67 - 130 |
| 1,3-Dichloropropane | 50.0 | 43.0 | | ug/L | | 86 | 62 - 136 |
| 2,2-Dichloropropane | 50.0 | 56.8 | | ug/L | | 114 | 58 - 139 |
| 1,1-Dichloropropene | 50.0 | 49.3 | | ug/L | | 99 | 70 - 121 |
| Ethylbenzene | 50.0 | 49.3 | | ug/L | | 99 | 70 - 123 |
| Hexachlorobutadiene | 50.0 | 49.4 | | ug/L | | 99 | 51 - 150 |
| Isopropylbenzene | 50.0 | 47.3 | | ug/L | | 95 | 70 - 126 |
| Methylene Chloride | 50.0 | 49.2 | | ug/L | | 98 | 69 - 125 |
| Methyl tert-butyl ether | 50.0 | 48.0 | | ug/L | | 96 | 55 - 123 |
| Naphthalene | 50.0 | 44.5 | | ug/L | | 89 | 53 - 144 |
| n-Butylbenzene | 50.0 | 51.3 | | ug/L | | 103 | 68 - 125 |
| N-Propylbenzene | 50.0 | 47.7 | | ug/L | | 95 | 69 - 127 |

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

**Lab Sample ID: LCS 500-497254/5**
**Matrix: Water**
**Analysis Batch: 497254**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| p-Isopropyltoluene | 50.0 | 50.5 | | ug/L | | 101 | 70 - 125 |
| sec-Butylbenzene | 50.0 | 49.6 | | ug/L | | 99 | 70 - 123 |
| Styrene | 50.0 | 48.4 | | ug/L | | 97 | 70 - 120 |
| tert-Butylbenzene | 50.0 | 48.0 | | ug/L | | 96 | 70 - 121 |
| 1,1,1,2-Tetrachloroethane | 50.0 | 47.7 | | ug/L | | 95 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 43.5 | | ug/L | | 87 | 62 - 140 |
| Tetrachloroethene | 50.0 | 48.2 | | ug/L | | 96 | 70 - 128 |
| Toluene | 50.0 | 44.7 | | ug/L | | 89 | 70 - 125 |
| trans-1,2-Dichloroethene | 50.0 | 51.7 | | ug/L | | 103 | 70 - 125 |
| trans-1,3-Dichloropropene | 50.0 | 42.0 | | ug/L | | 84 | 62 - 128 |
| 1,2,3-Trichlorobenzene | 50.0 | 44.4 | | ug/L | | 89 | 51 - 145 |
| 1,2,4-Trichlorobenzene | 50.0 | 46.4 | | ug/L | | 93 | 57 - 137 |
| 1,1,1-Trichloroethane | 50.0 | 53.3 | | ug/L | | 107 | 70 - 125 |
| 1,1,2-Trichloroethane | 50.0 | 41.3 | | ug/L | | 83 | 71 - 130 |
| Trichloroethene | 50.0 | 46.9 | | ug/L | | 94 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 50.7 | | ug/L | | 101 | 55 - 128 |
| 1,2,3-Trichloropropane | 50.0 | 43.5 | | ug/L | | 87 | 50 - 133 |
| 1,2,4-Trimethylbenzene | 50.0 | 48.0 | | ug/L | | 96 | 70 - 123 |
| 1,3,5-Trimethylbenzene | 50.0 | 48.7 | | ug/L | | 97 | 70 - 123 |
| Vinyl chloride | 50.0 | 53.8 | | ug/L | | 108 | 64 - 126 |
| Xylenes, Total | 100 | 95.6 | | ug/L | | 96 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *72 - 124* |
| *Dibromofluoromethane* | *103* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 120* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-496304/1-A**
**Matrix: Water**
**Analysis Batch: 496405**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 496304**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <0.24 | | 1.6 | 0.24 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| 2-Methylnaphthalene | <0.052 | | 1.6 | 0.052 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Acenaphthene | <0.25 | | 0.80 | 0.25 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Acenaphthylene | <0.21 | | 0.80 | 0.21 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Anthracene | <0.27 | | 0.80 | 0.27 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Benzo[a]anthracene | <0.045 | | 0.16 | 0.045 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Benzo[a]pyrene | <0.079 | | 0.16 | 0.079 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Benzo[b]fluoranthene | <0.065 | | 0.16 | 0.065 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Benzo[g,h,i]perylene | <0.30 | | 0.80 | 0.30 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Benzo[k]fluoranthene | <0.051 | | 0.16 | 0.051 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Chrysene | <0.055 | | 0.16 | 0.055 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Dibenz(a,h)anthracene | <0.041 | | 0.24 | 0.041 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Fluoranthene | <0.36 | | 0.80 | 0.36 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Fluorene | <0.20 | | 0.80 | 0.20 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-496304/1-A**
**Matrix: Water**
**Analysis Batch: 496405**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 496304**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Indeno[1,2,3-cd]pyrene | <0.060 | | 0.16 | 0.060 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Naphthalene | <0.25 | | 0.80 | 0.25 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Phenanthrene | <0.24 | | 0.80 | 0.24 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |
| Pyrene | <0.34 | | 0.80 | 0.34 | ug/L | | 07/24/19 07:52 | 07/24/19 17:42 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *66* | | *34 - 110* | *07/24/19 07:52* | *07/24/19 17:42* | *1* |
| *Nitrobenzene-d5 (Surr)* | *72* | | *36 - 120* | *07/24/19 07:52* | *07/24/19 17:42* | *1* |
| *Terphenyl-d14 (Surr)* | *115* | | *40 - 145* | *07/24/19 07:52* | *07/24/19 17:42* | *1* |

**Lab Sample ID: LCS 500-496304/2-A**
**Matrix: Water**
**Analysis Batch: 496405**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 496304**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 32.0 | 21.6 | | ug/L | | 67 | 38 - 110 |
| 2-Methylnaphthalene | 32.0 | 20.8 | | ug/L | | 65 | 34 - 110 |
| Acenaphthene | 32.0 | 25.7 | | ug/L | | 80 | 46 - 110 |
| Acenaphthylene | 32.0 | 24.6 | | ug/L | | 77 | 47 - 113 |
| Anthracene | 32.0 | 30.0 | | ug/L | | 94 | 67 - 118 |
| Benzo[a]anthracene | 32.0 | 36.0 | | ug/L | | 113 | 70 - 126 |
| Benzo[a]pyrene | 32.0 | 31.8 | | ug/L | | 99 | 70 - 135 |
| Benzo[b]fluoranthene | 32.0 | 35.9 | | ug/L | | 112 | 69 - 136 |
| Benzo[g,h,i]perylene | 32.0 | 33.1 | | ug/L | | 104 | 70 - 135 |
| Benzo[k]fluoranthene | 32.0 | 33.7 | | ug/L | | 105 | 70 - 133 |
| Chrysene | 32.0 | 33.9 | | ug/L | | 106 | 68 - 129 |
| Dibenz(a,h)anthracene | 32.0 | 34.8 | | ug/L | | 109 | 70 - 134 |
| Fluoranthene | 32.0 | 31.8 | | ug/L | | 99 | 68 - 126 |
| Fluorene | 32.0 | 26.7 | | ug/L | | 84 | 53 - 120 |
| Indeno[1,2,3-cd]pyrene | 32.0 | 31.5 | | ug/L | | 98 | 65 - 133 |
| Naphthalene | 32.0 | 20.2 | | ug/L | | 63 | 36 - 110 |
| Phenanthrene | 32.0 | 29.4 | | ug/L | | 92 | 65 - 120 |
| Pyrene | 32.0 | 34.9 | | ug/L | | 109 | 70 - 126 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *74* | | *34 - 110* |
| *Nitrobenzene-d5 (Surr)* | *83* | | *36 - 120* |
| *Terphenyl-d14 (Surr)* | *116* | | *40 - 145* |

**Lab Sample ID: LCSD 500-496304/3-A**
**Matrix: Water**
**Analysis Batch: 496405**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 496304**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 32.0 | 20.2 | | ug/L | | 63 | 38 - 110 | 6 | 20 |
| 2-Methylnaphthalene | 32.0 | 19.9 | | ug/L | | 62 | 34 - 110 | 4 | 20 |
| Acenaphthene | 32.0 | 24.4 | | ug/L | | 76 | 46 - 110 | 5 | 20 |
| Acenaphthylene | 32.0 | 24.1 | | ug/L | | 75 | 47 - 113 | 2 | 20 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 500-496304/3-A**
**Matrix: Water**
**Analysis Batch: 496405**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 496304**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Anthracene | | | 32.0 | 29.7 | | ug/L | | 93 | 67 - 118 | 1 | 20 |
| Benzo[a]anthracene | | | 32.0 | 34.7 | | ug/L | | 109 | 70 - 126 | 4 | 20 |
| Benzo[a]pyrene | | | 32.0 | 31.5 | | ug/L | | 98 | 70 - 135 | 1 | 20 |
| Benzo[b]fluoranthene | | | 32.0 | 33.4 | | ug/L | | 104 | 69 - 136 | 7 | 20 |
| Benzo[g,h,i]perylene | | | 32.0 | 32.8 | | ug/L | | 102 | 70 - 135 | 1 | 20 |
| Benzo[k]fluoranthene | | | 32.0 | 32.7 | | ug/L | | 102 | 70 - 133 | 3 | 20 |
| Chrysene | | | 32.0 | 33.0 | | ug/L | | 103 | 68 - 129 | 3 | 20 |
| Dibenz(a,h)anthracene | | | 32.0 | 34.6 | | ug/L | | 108 | 70 - 134 | 1 | 20 |
| Fluoranthene | | | 32.0 | 30.9 | | ug/L | | 96 | 68 - 126 | 3 | 20 |
| Fluorene | | | 32.0 | 25.3 | | ug/L | | 79 | 53 - 120 | 6 | 20 |
| Indeno[1,2,3-cd]pyrene | | | 32.0 | 31.3 | | ug/L | | 98 | 65 - 133 | 1 | 20 |
| Naphthalene | | | 32.0 | 19.0 | | ug/L | | 59 | 36 - 110 | 6 | 20 |
| Phenanthrene | | | 32.0 | 28.6 | | ug/L | | 89 | 65 - 120 | 3 | 20 |
| Pyrene | | | 32.0 | 33.3 | | ug/L | | 104 | 70 - 126 | 4 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *74* | | *34 - 110* |
| *Nitrobenzene-d5 (Surr)* | *78* | | *36 - 120* |
| *Terphenyl-d14 (Surr)* | *109* | | *40 - 145* |

**Lab Sample ID: MB 500-496676/1-A**
**Matrix: Solid**
**Analysis Batch: 496779**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 496676**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <8.1 | | 67 | 8.1 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| 2-Methylnaphthalene | <6.1 | | 67 | 6.1 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Acenaphthene | <6.0 | | 33 | 6.0 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Acenaphthylene | <4.4 | | 33 | 4.4 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Anthracene | <5.6 | | 33 | 5.6 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Benzo[a]anthracene | <4.5 | | 33 | 4.5 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Benzo[a]pyrene | <6.4 | | 33 | 6.4 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Benzo[b]fluoranthene | <7.2 | | 33 | 7.2 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Benzo[g,h,i]perylene | <11 | | 33 | 11 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Benzo[k]fluoranthene | <9.8 | | 33 | 9.8 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Chrysene | <9.1 | | 33 | 9.1 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Dibenz(a,h)anthracene | <6.4 | | 33 | 6.4 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Fluoranthene | <6.2 | | 33 | 6.2 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Fluorene | <4.7 | | 33 | 4.7 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Indeno[1,2,3-cd]pyrene | <8.6 | | 33 | 8.6 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Naphthalene | <5.1 | | 33 | 5.1 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Phenanthrene | <4.6 | | 33 | 4.6 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |
| Pyrene | <6.6 | | 33 | 6.6 | ug/Kg | | 07/25/19 16:00 | 07/26/19 14:07 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *83* | | *43 - 145* | *07/25/19 16:00* | *07/26/19 14:07* | *1* |
| *Nitrobenzene-d5 (Surr)* | *83* | | *37 - 147* | *07/25/19 16:00* | *07/26/19 14:07* | *1* |
| *Terphenyl-d14 (Surr)* | *102* | | *42 - 157* | *07/25/19 16:00* | *07/26/19 14:07* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: LCS 500-496676/2-A**
**Matrix: Solid**
**Analysis Batch: 496779**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 496676**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 1330 | 1110 | | ug/Kg | | 83 | 68 - 111 |
| 2-Methylnaphthalene | 1330 | 1080 | | ug/Kg | | 81 | 69 - 112 |
| Acenaphthene | 1330 | 1170 | | ug/Kg | | 87 | 65 - 124 |
| Acenaphthylene | 1330 | 1200 | | ug/Kg | | 90 | 68 - 120 |
| Anthracene | 1330 | 1250 | | ug/Kg | | 94 | 70 - 114 |
| Benzo[a]anthracene | 1330 | 1310 | | ug/Kg | | 98 | 67 - 122 |
| Benzo[a]pyrene | 1330 | 1310 | | ug/Kg | | 98 | 65 - 133 |
| Benzo[b]fluoranthene | 1330 | 1170 | | ug/Kg | | 88 | 69 - 129 |
| Benzo[g,h,i]perylene | 1330 | 1280 | | ug/Kg | | 96 | 72 - 131 |
| Benzo[k]fluoranthene | 1330 | 1260 | | ug/Kg | | 95 | 68 - 127 |
| Chrysene | 1330 | 1280 | | ug/Kg | | 96 | 63 - 120 |
| Dibenz(a,h)anthracene | 1330 | 1310 | | ug/Kg | | 98 | 64 - 131 |
| Fluoranthene | 1330 | 1190 | | ug/Kg | | 90 | 62 - 120 |
| Fluorene | 1330 | 1130 | | ug/Kg | | 85 | 62 - 120 |
| Indeno[1,2,3-cd]pyrene | 1330 | 1320 | | ug/Kg | | 99 | 68 - 130 |
| Naphthalene | 1330 | 1170 | | ug/Kg | | 88 | 63 - 110 |
| Phenanthrene | 1330 | 1190 | | ug/Kg | | 90 | 62 - 120 |
| Pyrene | 1330 | 1290 | | ug/Kg | | 97 | 61 - 128 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl (Surr)* | *86* | | *43 - 145* |
| *Nitrobenzene-d5 (Surr)* | *88* | | *37 - 147* |
| *Terphenyl-d14 (Surr)* | *98* | | *42 - 157* |

**Lab Sample ID: 500-167116-5 MS**
**Matrix: Solid**
**Analysis Batch: 496797**

**Client Sample ID: SB-5 6-8**
**Prep Type: Total/NA**
**Prep Batch: 496676**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <9.4 | | 1530 | 1280 | | ug/Kg | ☼ | 84 | 68 - 111 |
| 2-Methylnaphthalene | <7.1 | | 1530 | 1310 | | ug/Kg | ☼ | 86 | 69 - 112 |
| Acenaphthene | <7.0 | | 1530 | 1280 | | ug/Kg | ☼ | 83 | 65 - 124 |
| Acenaphthylene | <5.1 | | 1530 | 1310 | | ug/Kg | ☼ | 86 | 68 - 120 |
| Anthracene | <6.5 | | 1530 | 1450 | | ug/Kg | ☼ | 95 | 70 - 114 |
| Benzo[a]anthracene | <5.2 | | 1530 | 1500 | | ug/Kg | ☼ | 98 | 67 - 122 |
| Benzo[a]pyrene | <7.5 | | 1530 | 1450 | | ug/Kg | ☼ | 95 | 65 - 133 |
| Benzo[b]fluoranthene | <8.4 | | 1530 | 1390 | | ug/Kg | ☼ | 91 | 69 - 129 |
| Benzo[g,h,i]perylene | <12 | | 1530 | 1550 | | ug/Kg | ☼ | 102 | 72 - 131 |
| Benzo[k]fluoranthene | <11 | | 1530 | 1520 | | ug/Kg | ☼ | 100 | 68 - 127 |
| Chrysene | <11 | | 1530 | 1560 | | ug/Kg | ☼ | 102 | 63 - 120 |
| Dibenz(a,h)anthracene | <7.5 | | 1530 | 1620 | | ug/Kg | ☼ | 106 | 64 - 131 |
| Fluoranthene | <7.2 | | 1530 | 1460 | | ug/Kg | ☼ | 96 | 62 - 120 |
| Fluorene | <5.4 | | 1530 | 1270 | | ug/Kg | ☼ | 83 | 62 - 120 |
| Indeno[1,2,3-cd]pyrene | <10 | | 1530 | 1620 | | ug/Kg | ☼ | 106 | 68 - 130 |
| Naphthalene | <6.0 | | 1530 | 1210 | | ug/Kg | ☼ | 79 | 63 - 110 |
| Phenanthrene | <5.4 | | 1530 | 1390 | | ug/Kg | ☼ | 91 | 62 - 120 |
| Pyrene | <7.7 | | 1530 | 1480 | | ug/Kg | ☼ | 97 | 61 - 128 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-167116-5 MS**
**Matrix: Solid**
**Analysis Batch: 496797**

**Client Sample ID: SB-5 6-8**
**Prep Type: Total/NA**
**Prep Batch: 496676**

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 2-Fluorobiphenyl (Surr) | 77 | | 43 - 145 |
| Nitrobenzene-d5 (Surr) | 71 | | 37 - 147 |
| Terphenyl-d14 (Surr) | 96 | | 42 - 157 |

**Lab Sample ID: 500-167116-5 MSD**
**Matrix: Solid**
**Analysis Batch: 496797**

**Client Sample ID: SB-5 6-8**
**Prep Type: Total/NA**
**Prep Batch: 496676**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <9.4 | | 1540 | 1340 | | ug/Kg | ☼ | 87 | 68 - 111 | 4 | 30 |
| 2-Methylnaphthalene | <7.1 | | 1540 | 1390 | | ug/Kg | ☼ | 90 | 69 - 112 | 6 | 30 |
| Acenaphthene | <7.0 | | 1540 | 1380 | | ug/Kg | ☼ | 90 | 65 - 124 | 8 | 30 |
| Acenaphthylene | <5.1 | | 1540 | 1360 | | ug/Kg | ☼ | 88 | 68 - 120 | 4 | 30 |
| Anthracene | <6.5 | | 1540 | 1530 | | ug/Kg | ☼ | 99 | 70 - 114 | 5 | 30 |
| Benzo[a]anthracene | <5.2 | | 1540 | 1590 | | ug/Kg | ☼ | 103 | 67 - 122 | 6 | 30 |
| Benzo[a]pyrene | <7.5 | | 1540 | 1580 | | ug/Kg | ☼ | 103 | 65 - 133 | 9 | 30 |
| Benzo[b]fluoranthene | <8.4 | | 1540 | 1520 | | ug/Kg | ☼ | 98 | 69 - 129 | 8 | 30 |
| Benzo[g,h,i]perylene | <12 | | 1540 | 1690 | | ug/Kg | ☼ | 110 | 72 - 131 | 8 | 30 |
| Benzo[k]fluoranthene | <11 | | 1540 | 1590 | | ug/Kg | ☼ | 103 | 68 - 127 | 4 | 30 |
| Chrysene | <11 | | 1540 | 1600 | | ug/Kg | ☼ | 104 | 63 - 120 | 2 | 30 |
| Dibenz(a,h)anthracene | <7.5 | | 1540 | 1720 | | ug/Kg | ☼ | 111 | 64 - 131 | 6 | 30 |
| Fluoranthene | <7.2 | | 1540 | 1550 | | ug/Kg | ☼ | 101 | 62 - 120 | 6 | 30 |
| Fluorene | <5.4 | | 1540 | 1370 | | ug/Kg | ☼ | 89 | 62 - 120 | 8 | 30 |
| Indeno[1,2,3-cd]pyrene | <10 | | 1540 | 1730 | | ug/Kg | ☼ | 112 | 68 - 130 | 7 | 30 |
| Naphthalene | <6.0 | | 1540 | 1300 | | ug/Kg | ☼ | 85 | 63 - 110 | 7 | 30 |
| Phenanthrene | <5.4 | | 1540 | 1490 | | ug/Kg | ☼ | 97 | 62 - 120 | 7 | 30 |
| Pyrene | <7.7 | | 1540 | 1570 | | ug/Kg | ☼ | 102 | 61 - 128 | 6 | 30 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 2-Fluorobiphenyl (Surr) | 80 | | 43 - 145 |
| Nitrobenzene-d5 (Surr) | 78 | | 37 - 147 |
| Terphenyl-d14 (Surr) | 104 | | 42 - 157 |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-496443/1-A**
**Matrix: Solid**
**Analysis Batch: 496747**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.34 | | 1.0 | 0.34 | mg/Kg | | 07/24/19 15:18 | 07/25/19 15:26 | 1 |
| Barium | <0.11 | | 1.0 | 0.11 | mg/Kg | | 07/24/19 15:18 | 07/25/19 15:26 | 1 |
| Cadmium | 0.0674 | J | 0.20 | 0.036 | mg/Kg | | 07/24/19 15:18 | 07/25/19 15:26 | 1 |
| Chromium | <0.50 | | 1.0 | 0.50 | mg/Kg | | 07/24/19 15:18 | 07/25/19 15:26 | 1 |
| Lead | <0.23 | | 0.50 | 0.23 | mg/Kg | | 07/24/19 15:18 | 07/25/19 15:26 | 1 |
| Selenium | 0.611 | J | 1.0 | 0.59 | mg/Kg | | 07/24/19 15:18 | 07/25/19 15:26 | 1 |

## Method: 6010C - Metals (ICP) (Continued)

**Lab Sample ID: MB 500-496443/1-A**
**Matrix: Solid**
**Analysis Batch: 496876**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Silver | <0.13 | | 0.50 | 0.13 | mg/Kg | | 07/24/19 15:18 | 07/26/19 10:53 | 1 |

**Lab Sample ID: LCS 500-496443/2-A**
**Matrix: Solid**
**Analysis Batch: 496747**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 10.0 | 8.88 | | mg/Kg | | 89 | 80 - 120 |
| Barium | 200 | 192 | | mg/Kg | | 96 | 80 - 120 |
| Cadmium | 5.00 | 4.58 | | mg/Kg | | 92 | 80 - 120 |
| Chromium | 20.0 | 18.8 | | mg/Kg | | 94 | 80 - 120 |
| Lead | 10.0 | 8.76 | | mg/Kg | | 88 | 80 - 120 |
| Selenium | 10.0 | 8.72 | | mg/Kg | | 87 | 80 - 120 |

**Lab Sample ID: LCS 500-496443/2-A**
**Matrix: Solid**
**Analysis Batch: 496876**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Silver | 5.00 | 4.51 | | mg/Kg | | 90 | 80 - 120 |

**Lab Sample ID: 500-167116-1 MS**
**Matrix: Solid**
**Analysis Batch: 496747**

**Client Sample ID: SB-9 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 4.0 | | 11.1 | 13.7 | | mg/Kg | ☼ | 87 | 75 - 125 |
| Barium | 100 | F1 | 222 | 309 | | mg/Kg | ☼ | 93 | 75 - 125 |
| Cadmium | 0.25 | B | 5.54 | 5.43 | | mg/Kg | ☼ | 93 | 75 - 125 |
| Chromium | 10 | | 22.2 | 31.7 | | mg/Kg | ☼ | 97 | 75 - 125 |
| Lead | 4.5 | | 11.1 | 15.1 | | mg/Kg | ☼ | 95 | 75 - 125 |
| Selenium | 0.70 | J B | 11.1 | 9.76 | | mg/Kg | ☼ | 82 | 75 - 125 |

**Lab Sample ID: 500-167116-1 MS**
**Matrix: Solid**
**Analysis Batch: 496876**

**Client Sample ID: SB-9 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Silver | 1.8 | | 5.54 | 6.79 | | mg/Kg | ☼ | 90 | 75 - 125 |

**Lab Sample ID: 500-167116-1 MSD**
**Matrix: Solid**
**Analysis Batch: 496747**

**Client Sample ID: SB-9 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 4.0 | | 10.5 | 14.6 | | mg/Kg | ☼ | 101 | 75 - 125 | 6 | 20 |
| Barium | 100 | F1 | 210 | 377 | F1 | mg/Kg | ☼ | 131 | 75 - 125 | 20 | 20 |
| Cadmium | 0.25 | B | 5.24 | 4.99 | | mg/Kg | ☼ | 91 | 75 - 125 | 8 | 20 |
| Chromium | 10 | | 21.0 | 31.0 | | mg/Kg | ☼ | 99 | 75 - 125 | 2 | 20 |
| Lead | 4.5 | | 10.5 | 15.2 | | mg/Kg | ☼ | 102 | 75 - 125 | 1 | 20 |

## Method: 6010C - Metals (ICP) (Continued)

**Lab Sample ID: 500-167116-1 MSD**
**Matrix: Solid**
**Analysis Batch: 496747**

**Client Sample ID: SB-9 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 0.70 | J B | 10.5 | 9.42 | | mg/Kg | ☼ | 83 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-167116-1 MSD**
**Matrix: Solid**
**Analysis Batch: 496876**

**Client Sample ID: SB-9 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silver | 1.8 | | 5.24 | 6.50 | | mg/Kg | ☼ | 90 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-167116-1 DU**
**Matrix: Solid**
**Analysis Batch: 496747**

**Client Sample ID: SB-9 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 4.0 | | 4.24 | | mg/Kg | ☼ | 5 | 20 |
| Barium | 100 | F1 | 81.5 | F3 | mg/Kg | ☼ | 23 | 20 |
| Cadmium | 0.25 | B | 0.261 | | mg/Kg | ☼ | 4 | 20 |
| Chromium | 10 | | 9.87 | | mg/Kg | ☼ | 4 | 20 |
| Lead | 4.5 | | 4.42 | | mg/Kg | ☼ | 2 | 20 |
| Selenium | 0.70 | J B | <0.66 | | mg/Kg | ☼ | NC | 20 |

**Lab Sample ID: 500-167116-1 DU**
**Matrix: Solid**
**Analysis Batch: 496876**

**Client Sample ID: SB-9 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496443**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Silver | 1.8 | | 1.64 | | mg/Kg | ☼ | 8 | 20 |

## Method: 7471B - Mercury (CVAA)

**Lab Sample ID: MB 500-496835/12-A**
**Matrix: Solid**
**Analysis Batch: 497145**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 496835**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.0056 | | 0.017 | 0.0056 | mg/Kg | | 07/26/19 14:20 | 07/29/19 10:00 | 1 |

**Lab Sample ID: LCS 500-496835/13-A**
**Matrix: Solid**
**Analysis Batch: 497145**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 496835**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.167 | 0.159 | | mg/Kg | | 96 | 80 - 120 |

**Lab Sample ID: 500-167116-11 MS**
**Matrix: Solid**
**Analysis Batch: 497145**

**Client Sample ID: SB-8 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496835**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.44 | | 0.0937 | 0.529 | 4 | mg/Kg | ☼ | 101 | 75 - 125 |

## Method: 7471B - Mercury (CVAA) (Continued)

**Lab Sample ID: 500-167116-11 MSD**
**Matrix: Solid**
**Analysis Batch: 497145**

**Client Sample ID: SB-8 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496835**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.44 | | 0.0940 | 0.531 | 4 | mg/Kg | ☼ | 102 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-167116-11 DU**
**Matrix: Solid**
**Analysis Batch: 497145**

**Client Sample ID: SB-8 5'-7.5'**
**Prep Type: Total/NA**
**Prep Batch: 496835**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.44 | | | 0.386 | | mg/Kg | ☼ | | | 12 | 20 |

# Lab Chronicle

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-9 5'-7.5'
**Date Collected: 07/18/19 16:40**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-1
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 10:58 | LWN | TAL CHI |

## Client Sample ID: SB-9 5'-7.5'
**Date Collected: 07/18/19 16:40**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-1
**Matrix: Solid**
**Percent Solids: 82.8**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 16:40 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 496740 | 07/26/19 12:48 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 496676 | 07/25/19 16:00 | JP1 | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496797 | 07/26/19 11:57 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496747 | 07/25/19 15:47 | JEF | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496876 | 07/26/19 11:01 | JEF | TAL CHI |
| Total/NA | Prep | 7471B | | | 496835 | 07/26/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 497145 | 07/29/19 10:08 | MJG | TAL CHI |

## Client Sample ID: SB-1 2'-4'
**Date Collected: 07/18/19 10:00**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-2
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 10:58 | LWN | TAL CHI |

## Client Sample ID: SB-1 2'-4'
**Date Collected: 07/18/19 10:00**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-2
**Matrix: Solid**
**Percent Solids: 77.5**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 10:00 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 496740 | 07/26/19 13:13 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 496676 | 07/25/19 16:00 | JP1 | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496797 | 07/26/19 12:24 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496747 | 07/25/19 16:07 | JEF | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496876 | 07/26/19 11:30 | JEF | TAL CHI |
| Total/NA | Prep | 7471B | | | 496835 | 07/26/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 497145 | 07/29/19 10:10 | MJG | TAL CHI |

# Lab Chronicle

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-6 10'-12'
**Date Collected: 07/18/19 14:20**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-3
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 10:58 | LWN | TAL CHI |

## Client Sample ID: SB-6 10'-12'
**Date Collected: 07/18/19 14:20**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-3
**Matrix: Solid**
**Percent Solids: 79.9**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 14:20 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 496740 | 07/26/19 13:38 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 496676 | 07/25/19 16:00 | JP1 | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496797 | 07/26/19 12:51 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496747 | 07/25/19 16:11 | JEF | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496876 | 07/26/19 11:34 | JEF | TAL CHI |
| Total/NA | Prep | 7471B | | | 496835 | 07/26/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 497145 | 07/29/19 10:12 | MJG | TAL CHI |

## Client Sample ID: SB-5 2-4
**Date Collected: 07/18/19 13:00**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-4
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 10:58 | LWN | TAL CHI |

## Client Sample ID: SB-5 2-4
**Date Collected: 07/18/19 13:00**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-4
**Matrix: Solid**
**Percent Solids: 85.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 13:00 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 496740 | 07/26/19 14:03 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 496676 | 07/25/19 16:00 | JP1 | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496797 | 07/26/19 13:18 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496747 | 07/25/19 16:15 | JEF | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496876 | 07/26/19 11:38 | JEF | TAL CHI |
| Total/NA | Prep | 7471B | | | 496835 | 07/26/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 497145 | 07/29/19 10:14 | MJG | TAL CHI |

# Lab Chronicle

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-5 6-8

**Lab Sample ID: 500-167116-5**
**Date Collected: 07/18/19 13:30**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 10:58 | LWN | TAL CHI |

## Client Sample ID: SB-5 6-8

**Lab Sample ID: 500-167116-5**
**Date Collected: 07/18/19 13:30**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 85.8**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 13:30 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 497051 | 07/29/19 11:48 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 496676 | 07/25/19 16:00 | JP1 | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496797 | 07/26/19 13:45 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496747 | 07/25/19 16:27 | JEF | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496876 | 07/26/19 11:42 | JEF | TAL CHI |
| Total/NA | Prep | 7471B | | | 496835 | 07/26/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 497145 | 07/29/19 10:17 | MJG | TAL CHI |

## Client Sample ID: SB-2 7.5'-10'

**Lab Sample ID: 500-167116-6**
**Date Collected: 07/18/19 10:25**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 10:58 | LWN | TAL CHI |

## Client Sample ID: SB-2 7.5'-10'

**Lab Sample ID: 500-167116-6**
**Date Collected: 07/18/19 10:25**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 88.7**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 10:25 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 496740 | 07/26/19 15:17 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 496676 | 07/25/19 16:00 | JP1 | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496797 | 07/26/19 14:13 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496747 | 07/25/19 16:31 | JEF | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496876 | 07/26/19 11:46 | JEF | TAL CHI |
| Total/NA | Prep | 7471B | | | 496835 | 07/26/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 497145 | 07/29/19 10:19 | MJG | TAL CHI |

# Lab Chronicle

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-3 GW
**Date Collected: 07/18/19 11:05**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-7
**Matrix: Ground Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 497053 | 07/29/19 10:48 | JDD | TAL CHI |
| Total/NA | Prep | 3510C | | | 496304 | 07/24/19 07:52 | JVD | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496405 | 07/24/19 18:32 | AJD | TAL CHI |

## Client Sample ID: SB-4 GW
**Date Collected: 07/18/19 12:45**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-8
**Matrix: Ground Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 497053 | 07/29/19 11:16 | JDD | TAL CHI |
| Total/NA | Prep | 3510C | | | 496304 | 07/24/19 07:52 | JVD | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496405 | 07/24/19 18:57 | AJD | TAL CHI |

## Client Sample ID: SB-4 4'-6'
**Date Collected: 07/18/19 12:15**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-9
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 10:58 | LWN | TAL CHI |

## Client Sample ID: SB-4 4'-6'
**Date Collected: 07/18/19 12:15**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-9
**Matrix: Solid**
**Percent Solids: 73.9**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 12:15 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 496740 | 07/26/19 15:42 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 496676 | 07/25/19 16:00 | JP1 | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496797 | 07/26/19 14:40 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496747 | 07/25/19 16:35 | JEF | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496876 | 07/26/19 11:50 | JEF | TAL CHI |
| Total/NA | Prep | 7471B | | | 496835 | 07/26/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 497145 | 07/29/19 10:21 | MJG | TAL CHI |

## Client Sample ID: SB-3 0-2.5'
**Date Collected: 07/18/19 10:40**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-10
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 10:58 | LWN | TAL CHI |

# Lab Chronicle

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-3 0-2.5'
**Date Collected: 07/18/19 10:40**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-10
**Matrix: Solid**
**Percent Solids: 80.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 10:40 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 496740 | 07/26/19 16:07 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 496676 | 07/25/19 16:00 | JP1 | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 497120 | 07/29/19 12:31 | STW | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496747 | 07/25/19 16:39 | JEF | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496876 | 07/26/19 11:54 | JEF | TAL CHI |
| Total/NA | Prep | 7471B | | | 496835 | 07/26/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 497145 | 07/29/19 10:23 | MJG | TAL CHI |

## Client Sample ID: SB-8 5'-7.5'
**Date Collected: 07/18/19 15:55**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-11
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 10:58 | LWN | TAL CHI |

## Client Sample ID: SB-8 5'-7.5'
**Date Collected: 07/18/19 15:55**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-11
**Matrix: Solid**
**Percent Solids: 82.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 15:55 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 496740 | 07/26/19 16:32 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 496676 | 07/25/19 16:00 | JP1 | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 497120 | 07/29/19 13:01 | STW | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496747 | 07/25/19 16:43 | JEF | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496876 | 07/26/19 11:58 | JEF | TAL CHI |
| Total/NA | Prep | 7471B | | | 496835 | 07/26/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 497145 | 07/29/19 10:25 | MJG | TAL CHI |

## Client Sample ID: SB-7 5'-7.5'
**Date Collected: 07/18/19 15:25**
**Date Received: 07/23/19 10:00**

## Lab Sample ID: 500-167116-12
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 10:58 | LWN | TAL CHI |

# Lab Chronicle

Client: SCS Engineers
Project/Site: Messner Bldg - 25219155

Job ID: 500-167116-1

## Client Sample ID: SB-7 5'-7.5'

**Lab Sample ID: 500-167116-12**
**Date Collected: 07/18/19 15:25**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 75.2**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 15:25 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 496740 | 07/26/19 16:58 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 496676 | 07/25/19 16:00 | JP1 | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496797 | 07/26/19 16:30 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496747 | 07/25/19 16:47 | JEF | TAL CHI |
| Total/NA | Prep | 3050B | | | 496443 | 07/24/19 15:18 | BDE | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 496876 | 07/26/19 12:02 | JEF | TAL CHI |
| Total/NA | Prep | 7471B | | | 496835 | 07/26/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 497145 | 07/29/19 10:43 | MJG | TAL CHI |

## Client Sample ID: Methanol Blank

**Lab Sample ID: 500-167116-13**
**Date Collected: 07/18/19 00:00**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 496387 | 07/24/19 11:08 | LWN | TAL CHI |

## Client Sample ID: Methanol Blank

**Lab Sample ID: 500-167116-13**
**Date Collected: 07/18/19 00:00**
**Matrix: Solid**
**Date Received: 07/23/19 10:00**
**Percent Solids: 100.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 496279 | 07/18/19 00:00 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 496740 | 07/26/19 17:23 | PMF | TAL CHI |

## Client Sample ID: SB-7 GW

**Lab Sample ID: 500-167116-14**
**Date Collected: 07/18/19 16:25**
**Matrix: Ground Water**
**Date Received: 07/23/19 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 497053 | 07/29/19 11:44 | JDD | TAL CHI |
| Total/NA | Prep | 3510C | | | 496304 | 07/24/19 07:52 | JVD | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496666 | 07/25/19 20:50 | AJD | TAL CHI |

## Client Sample ID: SB-8 GW

**Lab Sample ID: 500-167116-15**
**Date Collected: 07/18/19 16:20**
**Matrix: Ground Water**
**Date Received: 07/23/19 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 497053 | 07/29/19 12:12 | JDD | TAL CHI |
| Total/NA | Prep | 3510C | | | 496304 | 07/24/19 07:52 | JVD | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496666 | 07/25/19 21:16 | AJD | TAL CHI |

# Lab Chronicle

Client: SCS Engineers
Job ID: 500-167116-1
Project/Site: Messner Bldg - 25219155

## Client Sample ID: SB-9 GW
**Lab Sample ID: 500-167116-16**
**Date Collected: 07/18/19 16:15**
**Matrix: Ground Water**
**Date Received: 07/23/19 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 497053 | 07/29/19 12:39 | JDD | TAL CHI |
| Total/NA | Prep | 3510C | | | 496304 | 07/24/19 07:52 | JVD | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496405 | 07/24/19 19:22 | AJD | TAL CHI |

## Client Sample ID: SB-6 GW
**Lab Sample ID: 500-167116-17**
**Date Collected: 07/18/19 14:25**
**Matrix: Ground Water**
**Date Received: 07/23/19 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 5 | 497254 | 07/30/19 13:05 | PMF | TAL CHI |
| Total/NA | Analysis | 8260B | DL | 10 | 497053 | 07/29/19 13:07 | JDD | TAL CHI |
| Total/NA | Prep | 3510C | DL2 | | 496304 | 07/24/19 07:52 | JVD | TAL CHI |
| Total/NA | Analysis | 8270D | DL2 | 10 | 496773 | 07/26/19 18:17 | STW | TAL CHI |
| Total/NA | Prep | 3510C | | | 496304 | 07/24/19 07:52 | JVD | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 496405 | 07/24/19 19:47 | AJD | TAL CHI |
| Total/NA | Prep | 3510C | DL | | 496304 | 07/24/19 07:52 | JVD | TAL CHI |
| Total/NA | Analysis | 8270D | DL | 5 | 496666 | 07/26/19 00:45 | AJD | TAL CHI |

## Client Sample ID: Trip Blank
**Lab Sample ID: 500-167116-18**
**Date Collected: 07/18/19 00:00**
**Matrix: Water**
**Date Received: 07/23/19 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 497053 | 07/29/19 10:20 | JDD | TAL CHI |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: SCS Engineers
Job ID: 500-167116-1
Project/Site: Messner Bldg - 25219155

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 999580010 | 08-31-19 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.534

500-167116 COC

(optional)

Report To
Contact: Robert Langdon
Company: SCS Engineers
Address: 2830 Dairy Dr
Address: Madison, WI 53718
Phone:
Fax:
E-Mail: rlangdon@scsengineers.com

(optional)

Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-167116

Chain of Custody Number:

Page 1 of 3

Temperature °C of Cooler: 4.1, 1.6 → 3.1, 0.6 → 2.1

| Client | Client Project # |
|---|---|
| SCS Engineers | 25219155 |
| Project Name | Parameter |
| Messner Bldg & Associated Properties | |
| Project Location/State | Lab Project # |
| WI | |
| Sampler | Lab PM |
| Nicole Kron | |

Preservative: methanol | none | none

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | VOCs | PAH | Metals RCRA 8 | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | SB-9 5'-7.5' | 7/18/19 | 1640 | 3 | Soil | X | X | X | | | | | | |
| 2 | | SB-1 2'-4' | | 1000 | 3 | | X | X | X | | | | | | |
| 3 | | SB-6 10'-12' | | 1420 | | | X | X | X | | | | | | |
| 4 | | SB-5 2-4 | | 1300 | | | X | X | X | | | | | | |
| 5 | | SB-5 6-8 | | 1350 | | | X | X | X | | | | | | |
| 6 | | SB-2 7.5'-10' | 7/18/19 | 1025 | 3 | Soil | X | X | X | | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| | SCS | 940 | 7-22-19 | | TA-Mil | 7/23/19 | 1000 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier
Shipped Fed Ex
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500 (1209)

7/31/2019

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact: Robert Langdon
Company: SCS
Address:
Address:
Phone:
Fax:
E-Mail: rlangdon@scsengineers.com

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-167116

Chain of Custody Number:

Page 2 of 3

Temperature °C of Cooler:

Client: ~~Messner Bldg~~ SCS Engineers
Client Project #: 25219155
Project Name: Mesaner Bldg & Associates Propert.
Project Location/State: WI
Lab Project #:
Sampler: Nicole Kron
Lab PM:

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | HCL | None | methanol | None | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | VOCs | PAH | VOCs | metals (RCRA 8) | | | | | | |
| 7 | | SB-3 GW | 7/18/19 | 1105 | 5 | GW | | X | X | | | | | | | | |
| 8 | | SB-21 GW | | 1245 | 5 | GW | | X | X | | | | | | | | |
| 9 | | SB-4 4'-6' | | 1215 | 3 | Soil | | | X | X | X | | | | | | |
| 10 | | SB-3 0-2.5' | | 1040 | 3 | Soil | | | X | X | X | | | | | | |
| 11 | | SB-8 5'-7.5' | | 1555 | 3 | | | | X | X | X | | | | | | |
| 12 | | SB-7 5-7.5' | 7/18/19 | 1525 | 3 | Soil | | | X | X | X | | | | | | |
| 13 | | Methanol Blank | | — | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | ~~Methanol Blank~~ NDIC | | ✓ | | | | | | X | | | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| | SCS | 940 | 7-22-19 | | TA CHI | 7/23/19 | 1000 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier
Shipped Fed X
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-509 (1209)

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact: Rob Langdon
Company: SCS Engineers
Address:
Address:
Phone:
Fax:
E-Mail: rlangdon@scsengineers

(optional)
Bill To Rob Langdon
Contact: SCS Engineers
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-161116
Chain of Custody Number:
Page 3 of 3
Temperature °C of Cooler:

Client: SCS Engineers ~~Messner~~ | Client Project #: 25219155
Project Name: Messner Bldg
Project Location/State: WI | Lab Project #:
Sampler: Nicole Kron | Lab PM:

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | Parameter | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | HCL | (8) | Methanol | metals | | | | | | |
| | | | | | | | VOCs | PAHs | VOCs | | | | | | | |
| 14 | | SB-7 GW | 7/18/19 | 1625 | 5 | GW | X | X | | | | | | | | |
| 15 | | SB-8 GW | 7/18/19 | 1620 | ↑ | ↑ | X | X | | | | | | | | |
| 16 | | SB-9 GW | 7/18/19 | 1615 | ↓ | ↓ | X | X | | | | | | | | |
| 17 | | SB-6 GW | 7/18/19 | 1425 | 5 | GW | X | X | | | | | | | | |
| 18 | | Trip Blank | — | — | 1 | W | X | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| | SCS | 7.22.19 | 940 | | TA-ORL | 7/23/19 | 1000 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier
Shipped FedEx
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500 (1209)

7/31/2019

# Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 500-167116-1

**Login Number: 167116**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, 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 | 4.1,3.1,2.1 |
| 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"). | False | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |