



**PATRIOT ENGINEERING
and ENVIRONMENTAL, Inc.**

Engineering Value for Project Success

**REMEDIATION WORK PLAN
FORMER HOUGHLAND TOMATO CANNERY
1130 E. EASTVIEW DRIVE
FRANKLIN, INDIANA
IDEM STATE CLEANUP SITE #2013-034567
PATRIOT PROJECT NO. 21-0757-01E**

Submitted to: **INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
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Office of Land Quality, State Cleanup Program
100 N. Senate Ave., IGCN, Room 1101
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Submitted for: **HURRICANE ROAD INDUSTRIAL DEVELOPMENT LLC**
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June 18, 2021



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1.0 INTRODUCTION

Patriot Engineering and Environmental, Inc. (Patriot) was retained by Kroger Gardis & Regas LLP on behalf of Hurricane Road Industrial Development LLC (HRID) to prepare a Remediation Work Plan (RWP) for the HRID property commonly known as the former Houghland Tomato Cannery (Houghland), located at 1130 E. Eastview Drive, Franklin, Johnson County, Indiana (the Site). The Site location is depicted on Figure 1. Regulatory closure of the Site is being pursued through the Indiana Department of Environmental Management's (IDEMs) State Cleanup Program using the Remediation Closure Guide (RCG). The Site has been assigned State Cleanup ID #2013-04567. Patriot, in preparing this RWP, relied on historical soil, groundwater, and vapor data generated by previous work performed by Patriot and reported in the following documents submitted to the IDEM:

- *IDEM Required Initial Site Investigation Work Plan* (Patriot, May 10, 2013)
- *Initial Site Investigation Report* (Patriot, October 29, 2013)
- *Further Site Investigation Report* (Patriot, March 31, 2014)
- *Further Site Investigation Addendum* (Patriot, May 7, 2014)
- *Further Site Investigation* (Patriot, January 10, 2017)
- *Additional Site Investigation* (Patriot, October 19, 2017)
- *Additional Site Investigation-Vapor Intrusion Investigation* (Patriot, January 3, 2018)
- *Further Site Investigation #2* (Patriot, July 25, 2018)
- *Vapor Intrusion Investigation Report* (Patriot, October 25, 2019)
- *Further Site Investigation #3* (Patriot, December 3, 2019)
- *Status Report for Sampling Event #1 - Supplemental Vapor Intrusion Investigation* (Patriot, January 30, 2020)
- *Status Report for Sampling Event #2 - Supplemental Vapor Intrusion Investigation* (Patriot, March 31, 2020)
- *Final Report - Supplemental Vapor Intrusion Investigation* (Patriot, May 19, 2020)

- *Indoor Air Vapor Mitigation System Installation and Startup Report* (Patriot, June 4, 2020)
- *Indoor Air Mitigation Monthly Sampling - April and May 2020 Work Plan for Further Site Investigation #4* (Patriot, August 7, 2020)
- *Status Report Indoor Air Mitigation System Performance Sampling and Carbon Filter Replacement* (Patriot, October 6, 2020)
- *Final Report Supplemental Vapor Intrusion Investigation* (Patriot, October 13, 2020)
- *Status Report Indoor Air Mitigation System Performance Sampling and Carbon Filter Replacement* (Patriot, December 17, 2020)
- *Interim Report Further Site Investigation #4* (Patriot, February 17, 2021)

This RWP also includes updated groundwater analytical results obtained through March 2021.

1.1 PROJECT IDENTIFICATION

The Site is located at 1130 E. Eastview Drive on the northeast side of Franklin, Johnson County, Indiana (Figure 1). The Site is a portion of the former Houghland property, a former tomato canning operation that was subsequently divided into two properties. Mr. Robert Clawson, doing business as HRID, owns the eastern portion of the former Houghland property at 1130 Eastview Drive. Mr. Clawson leases the buildings on the property to various commercial tenants.

The ground surface of the Site is relatively flat and has concrete-paved areas around the buildings, with the remainder of the Site primarily grass and/or gravel covered. A large, wooded area comprises the northeastern part of the Site. There are six buildings on-Site, including two along the west portion of the northern property boundary, two in the central part of the Site, and two in the south-central part of the Site. The two buildings in the central portion of the Site are unoccupied. The site layout is shown in Figure 2.

According to the Franklin, Indiana, quadrangle topographic map (United States Geological Survey [USGS] 2016), the Site is located in the southwest quarter of Section 12, Township 12 North, Range 4 East in Needham Township, Johnson County, Indiana. The topography of the Site is relatively flat. The average ground surface elevation is approximately 740 feet above mean sea level.

The project contacts for the Site are:

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The Site geology consists primarily of sand from the ground surface to depths ranging from approximately 27-37 feet below grade, underlain by a hard clay that acts as an aquitard to inhibit further vertical migration of impacted groundwater. Multiple nested wells have been installed at the Site, including shallow, intermediate, and deep wells. Boring logs and well construction details for the wells are included in Attachment 1. Groundwater is encountered at approximately 15 to 20 feet below grade in the sand unit, and the groundwater flow direction is generally toward the southeast in the shallow and deep well networks. Figures 3 and 4 are recent groundwater elevation contour maps for the shallow and deep well networks, respectively.

1.2 OVERVIEW OF CURRENT CONTAMINANT CONDITIONS

1.2.1 *Discovery and Sources of Contamination*

The Site has been the subject of environmental investigation activities from 2013 through 2021. The previous investigations performed at the Site have revealed the presence of chlorinated volatile organic compounds (cVOCs) in both soil and groundwater. The specific chemicals of concern (COCs) at the Site include tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride (VC).

Shallow and deep-zone PCE impacts are limited to the western part of the Site near the existing building; however, shallow-zone TCE impacts extend off-Site to the east approximately 500 feet beyond the eastern property line. In addition, deep and intermediate-

zone TCE and cis-1,2-DCE impacts extend well off-Site to the east-northeast (approximately 1,700 feet), with the direction of migration believed to be historically controlled by a municipal water supply well field located east-northeast of the Site. Figures 5 and 6 are isoconcentration maps of PCE and TCE, respectively, in the shallow well network, while Figures 7 and 8 are isoconcentration maps of PCE and TCE, respectively, in the deep well network. Figure 9 is an isoconcentration map of cis-1,2-DCE in the deep zone. Table 1 summarizes the historical groundwater analytical data obtained at the Site.

1.2.2 Remedial Measures Taken

The remediation activities conducted at the Site include:

1. Soil excavation and groundwater treatment on the adjoining Reed Manufacturing Services (Reed) property that also extended onto the far western portion of the Site. The soil and groundwater remediation were performed in February and March 2020 by Ramboll US Consulting, Inc. (Ramboll) and were documented in a Source Area Remediation Report dated April 24, 2020 and subsequent Remedial Progress Reports dated September 15, 2020, January 22, 2021, and May 20, 2021. Ramboll's remediation activities included excavation and off-site disposal of approximately 2,500 tons of non-hazardous soil and groundwater treatment using potassium permanganate.
2. The installation and operation of an indoor air vapor mitigation system in the Crossroads Recycling building as described in the *Indoor Air Vapor Mitigation System Installation and Startup Report* (Patriot, June 4, 2020), the *Indoor Air Mitigation Monthly Sampling - April and May 2020 Work Plan for Further Site Investigation #4* (Patriot, August 7, 2020), the *Status Report Indoor Air Mitigation System Performance Sampling and Carbon Filter Replacement* (Patriot, October 6, 2020), and the *Status Report Indoor Air Mitigation System Performance Sampling and Carbon Filter Replacement* (Patriot, December 17, 2020).
3. The installation of a sub-slab depressurization system in the Crossroads Recycling building on June 15, 2021 (report pending).

1.2.3 Existing Deed Restrictions, Land Use Restrictions, or Environmental Notices

There are currently no known deed or land use restrictions or environmental notices associated with the Site.

2.0 SITE BACKGROUND AND BASELINE PROJECT ASSESSMENT

The following sections present information on the Site history, summarize previous phases of the subsurface investigation, provide details of additional groundwater sampling conducted in 2018, and provide information on the physical location and setting, constituents of concern (COCs), and potentially complete contaminant exposure pathways.

2.1 SITE DESCRIPTION

The Site includes six buildings, including two along the west portion of the northern property boundary, two unoccupied structures in the central part of the Site, and two in the south-central part of the Site (Figure 2). The area around the buildings is concrete paved and most of the remainder of the western portion of the Site is grass and/or gravel covered. A large, wooded area comprises the northeastern part of the Site.

2.1.1 Previous Investigation Activities

The Site was the subject of environmental investigation and remediation activities from 2013 through 2021, most of which are documented in the previously-listed reports which were submitted to IDEM and are available on the IDEM Virtual File Cabinet (VFC).

In March 2021, *Patriot* performed an additional groundwater sampling event, including the new paired wells installed in October-November 2020 (MW-34 through MW-49, MW-34D through MW-42D and MW-44D through MW-49D, and intermediate wells MW-46I and MW-47I). The results of the March 2021 sampling event are summarized in Table 1 and a copy of the laboratory report is included in Attachment 2. A more detailed description of the sampling event will be provided to the IDEM in the *Final Report – Further Site Investigation #4* to be submitted to the IDEM shortly.

2.2 GEOGRAPHIC INFORMATION

The political location information for the Site is:

County: Johnson
Township: 12N
Range: 4E
Section: Southwest ¼ of Section 12
Latitude: 39° 29' 40.09"
Longitude: -86 ° 02' 14.59"

The ground surface elevation at the Site is approximately 740 feet above mean sea level (MSL) and the surface topography of the Site is relatively flat as shown on Figure 1. Storm water runoff at the Site is directed off-Site through sheet water flow. The nearest major drainage feature is Hurricane Creek which flows toward the southwest approximately 1,500 to 1,200 feet east of the Site. As stated previously, the groundwater flow is generally toward the southeast.

2.3 GEOLOGIC INFORMATION

2.3.1 Regional Geology

The Site is located in the Tipton Till Plain physiographic province of Indiana, and within the East Fork White River Basin. The Tipton Till Plain is a nearly flat glacial till plain covering most of central Indiana and includes primarily thick deposits of glacial till, with erosion by post-glacial streams. The unconsolidated materials are approximately 100-150 feet thick in the Franklin area and overlie Devonian- and Mississippian-age shales (New Albany Shale).

2.3.2 Regional Hydrogeology

The primary aquifer in the Franklin area is a surficial sand-and-gravel aquifer that consists primarily of glacial outwash sand, recent stream deposits, wind-blown sand, and ice-contact stratified sand and gravel. The surficial sand-and-gravel aquifer can be up to 120 feet thick, is unconfined, and is recharged primarily from direct precipitation. Aquifer yields can approach 1,000 gallons per minute. Surface water runoff at the Site is primarily sheet flow. The edges and perimeter of the Site drain toward the property boundaries and into Hurricane Creek bordering the east edge of the Site.

A water well search was performed using the on-line database provided by the Indiana Department of Natural Resources (IDNR). A total of 150 wells were identified within an approximately two-mile radius of the Site, with the closest well located in the former Webb Well Field (currently inactive) adjacent to the northeast corner of the Site. A figure showing the locations of wells in the vicinity, which was obtained using the IDNR Water Wells Enhanced Viewer is included in Attachment 3. According to the on-line IDEM Wellhead Proximity Determinator (Attachment 3), the Site is not located within a wellhead protection area.

2.3.3 Site Geology and Hydrogeology

Copies of the geologic logs for the borings advanced at the Site by *Patriot* are included in Attachment 1. These logs were used to develop a geologic cross-section which is included as

Figure 10. Based on this information, the Site geology consists primarily of sand from the ground surface to depths ranging from approximately 27-37 feet below grade at the Site and a to a depth of over 90 feet off-site to the east. The sand is underlain by a hard clay that acts as an aquitard to inhibit further vertical migration of impacted groundwater. Groundwater is encountered at approximately 15 to 20 feet below grade in the sand unit, and the groundwater flow direction is generally toward the southeast in the shallow and deep well networks.

2.4 ECOLOGIC INFORMATION

The nearest potential ecological feature is Hurricane Creek, bordering the Site on the east. Hurricane Creek is also the closest major drainage feature.

The U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Interactive Mapper (USFWS, 2009) shows the closest nearby wetland as a Freshwater/Forested Shrub Wetland along Hurricane Creek approximately ¼-mile south of the Site (Attachment 4).

The IDNR lists 12 mollusks, three insects, one amphibian, two reptiles, 14 birds, 10 mammals, and seven vascular plants on their Johnson County threatened, endangered or rare species list (Attachment 5). Based on the location of the Site in a commercial/industrial area, it is unlikely that any of these species would be present on or near the Site.

2.5 POTENTIALLY SUSCEPTIBLE AREAS AND RECEPTORS

2.5.1 Potentially Susceptible Water Supply Sources

Water from the municipal supply (City of Franklin, which obtains its water from multiple municipal well fields) is readily available in the Site area. Per the IDEM Wellhead Proximity Determinator on-line database (Attachment 3), the Site is not located in a wellhead protection area.

The IDNR water well mapper was used to identify water supply wells at or near the Site (Attachment 3). There are no water supply wells at the Site or at any of the nearby properties, all of which is provided with potable water by the City of Franklin. A total of 150 wells were identified within an approximately two-mile radius of the Site, with the closest well located in the former Webb Well Field (currently inactive) adjacent to the northeast corner of the Site. A figure showing the locations of wells in the vicinity, which was obtained using the IDNR Water Wells Enhanced Viewer is included in Attachment 3.

2.5.2 Potentially Susceptible Geological Areas

According to the Indiana Geological Survey (IGS), the Site is not located in or near a Karst area (IGS, 2009). No other potentially susceptible geologic features, such as mined areas or fractured rock areas, are located near the Site.

2.5.3 Potentially Susceptible Human Receptors

Previous vapor intrusion investigations have shown that indoor air vapor intrusion is only occurring in the Crossroads Recycling building at the Site. Interim measures were implemented to reduce potential employee exposure to PCE and TCE at concentrations greater than the RCG Commercial/Industrial Vapor Exposure Screening Levels, including operation of an active air purifier with a carbon filter in the office area and operation of a large ventilation fan in the warehouse area. The interim measures were operated until a sub-slab depressurization system was installed on June 15, 2021. No buildings are present on the agricultural property located immediately east of the Site where groundwater impacts originating from the Site are present. As such, the inhalation exposure pathway is not complete.

Potable water at the Site is supplied by the municipal water system and no groundwater supply wells or other types of groundwater extraction are present on the Site or in the impacted off-Site area. In addition, no COC-impacts have been discovered in soil at depths less than 2 feet below grade at the Site. As such, the ingestion and dermal contact exposure pathways are not complete for routine site workers, visitors, and the general public.

2.5.4 Potentially Susceptible Ecological Areas

There are no natural areas located on-Site. Off-site ecological areas are not anticipated to be impacted since the extent of groundwater impacts has been defined.

2.6 CHEMICALS OF POTENTIAL CONCERN

COCs detected above IDEM RCG screening levels present potential threats to human health and are considered as chemicals of potential concern (COPCs) that need to be addressed in remediation plans for the Site. Based on investigation results, COPCs in the indicated media are summarized below:

Subsurface Soil	On-Site Groundwater	Off-Site Soil	Off-Site Groundwater
PCE, TCE	PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, vinyl chloride	None	PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, vinyl chloride

Attachment 5 includes information on the chemical, physical, and toxicological properties of these COPCs. Groundwater data are summarized in Table 1 and isoconcentration maps of PCE, TCE, and cis-1,2-DCE groundwater impacts are depicted on Figures 5 through 9.

2.7 POTENTIAL CONTAMINANT TRANSPORT MECHANISMS

Surface soils in unpaved areas are not impacted; therefore, surface runoff of soil contaminants is not expected to occur. Subsurface soil contaminants have the potential to leach to groundwater by infiltration. Groundwater contaminants have the potential to be transported to down-gradient locations via groundwater flow. These transport mechanisms were considered when selecting an appropriate remedial alternative for the Site.

COPCs such as PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and VC are volatile compounds that have the potential to volatilize upward through the subsurface. The potential for volatilization to the indoor air of the Site buildings is possible but has been addressed by the installation and ongoing operation of VI mitigation systems.

2.8 POTENTIAL HUMAN EXPOSURE PATHWAYS

The potentially susceptible areas discussed in Section 2.5 were evaluated in conjunction with the contaminated media, their locations and depths, potential transport mechanisms, and proposed land use to determine potentially complete human exposure pathways at the Site and surrounding properties. Potential receptors and potentially complete exposure pathways are summarized in the following table:

Potential Receptor	Potential Complete Exposure Pathways
On-Site commercial or excavation workers	Inhalation of vapors containing elevated levels of COPCs; dermal contact with impacted soils.
Off-Site commercial or excavation workers	Inhalation of vapors containing elevated levels of COPCs.

The potentially complete human exposure pathways are depicted graphically on the Conceptual Site Model (CSM) presented in Figure 11.

3.0 ADDITIONAL FIELD INVESTIGATION REQUIREMENTS

After completion of the FSI #4 and the March 2021 additional groundwater sampling, it was determined that three additional sets of paired groundwater monitoring wells (shallow and deep wells) are needed to address gaps in the groundwater quality data. Patriot is coordinating the installation of the additional well sets and will perform another round of Site-wide groundwater monitoring following installation of the wells. The paired wells will be installed in the same manner as the paired wells installed during FSI #4 and will be located on the north side of the Site between monitoring wells MW-40 and MW-28, between monitoring wells MWMW-27 and MW-40, and on the north side of the building east of monitoring well MW-10 and north of monitoring wells MW-26 and MW-38.

Due to access limitations, Patriot has only been able to obtain a limited amount of groundwater data on the adjacent agricultural property to the east. After this season's crops are harvested and prior to implementing the off-Site remediation activities, Patriot will install six additional sets of paired temporary shallow and deep wells to obtain additional information about the lateral extent of groundwater impacts. The wells will be installed in the same manner as the paired wells installed during FSI #4 except that they will not be finished with protective covers set in concrete so that they can be removed prior to the next planting season. The paired well sets will be installed between monitoring wells TMW-7D and MW-47D with two of the well sets installed along the central axis of the deep TCE plume as depicted in Figure 8, two of the well sets installed on the north or upgradient side of the depicted TCE plume, and two of the well sets installed on the south or downgradient side of the depicted TCE plume. The wells will be surveyed to establish groundwater elevations and samples will be collected from each well for VOC analysis. If the analytical results indicate that the lateral extent of the COPC plume differs significantly from that depicted in Figure 8, an RWP addendum will be prepared and submitted to IDEM.

No other additional investigation activities are warranted based on current knowledge of the environmental conditions at the Site. The results of the additional investigation will be submitted to IDEM in an FSI #4 Additional Groundwater Monitoring report.

4.0 REMEDIATION PLAN

The objective of remedial efforts is to reduce the COPC concentrations in on-Site groundwater to below the IDEM RCG Commercial/Industrial vapor intrusion from groundwater screening levels (VIGWSLs) and to demonstrate plume stability via post-remediation groundwater monitoring. This would result in a restricted Site closure using an Environmental Restrictive Covenant (ERC) to prohibit groundwater use on-Site and to restrict the property use in the impacted portions of the Site to commercial/industrial purposes. The adjacent landowner has not yet agreed to a remediation goal, but for the purposes of this RWP it is assumed that the objective of remedial efforts is to reduce the COPC concentrations in off-Site groundwater to below the IDEM RCG Residential VIGWSLs and to demonstrate plume stability via post-remediation groundwater monitoring. This would result in a restricted off-Site closure using an ERC to prohibit groundwater use on the adjacent agricultural property.

4.1 EVALUATION OF REMEDIATION ALTERNATIVES

There is usually more than one technology available to achieve remediation objectives at any given site. These alternatives are considered and compared as part of the evaluation process leading to the selection of a remedial approach. Site geologic and hydrogeologic characteristics, cleanup objectives and the contaminants targeted for remediation play a primary role in selecting the appropriate remediation strategy. The estimated time to achieve regulatory closure and potential interruptions to ongoing site activities can also play a role in the selection of an applicable remedy. Overall costs are also a factor. The following remediation technologies were evaluated with respect to these criteria.

- Groundwater Pump and Treat
- Air Sparging/Soil Vapor Extraction (AS/SVE)
- Chemical Oxidation/Enhanced Bioremediation
- Liquid Activated Carbon Application/Enhanced Bioremediation

4.1.1 Groundwater Pump and Treat

Groundwater Pump and Treat (P&T) is an ex-situ remedial technology designed to reduce concentrations of contaminants dissolved in groundwater and adsorbed to saturated soil by removing contaminated groundwater from the subsurface by pumping, and then treating the water before it is discharged. P&T is not typically an effective means of removing dissolved-phase constituents from groundwater, compared to other mechanical removal technologies

such as AS/SVE, and is primarily used only when plume control or capture is required. Most P&T systems quickly become diffusion-limited and are not cost-effective except when plume capture is necessary.

Although conventional P&T is a technically feasible remedial technology at this site, the capital costs to design, install, and operate/maintain a P&T system are impractical with respect to the anticipated benefits. Consequently, since plume capture does not appear to be critical at this point, P&T was ruled out for this Site based on high cost and treatment time.

4.1.2 Air Sparging/Soil Vapor Extraction

Air sparging (AS) is an in-situ remedial technology that reduces concentrations of volatile organic constituents that are adsorbed to soil and dissolved in groundwater. This technology involves the injection of contaminant-free air into saturated soil, enabling a phase transfer of contaminants from a dissolved state to a vapor phase that travels into the unsaturated zone. The air is then vented to the surface through soil vapor extraction (SVE) mechanisms and treated as necessary. The same SVE system not only removes the sparged vapors, it also remediates unsaturated soil by using a vacuum to create airflow through the subsurface soil. The continual flow of air results in volatilization of contaminants either from adsorbed phase or free phase and ultimate removal by the system.

The geology at this Site appears to be suitable for AS/SVE; however, the large area of impacted groundwater would make installation and operation of a plume-wide AS/SVE system cost-prohibitive. Although AS/SVE is technically feasible, it is not the most cost-effective option for this Site.

4.1.3 In-Situ Chemical Oxidation (ISCO)/Enhanced Bioremediation

In-situ chemical oxidation (ISCO) involves injection of chemicals into the subsurface to rapidly oxidize adsorbed- and dissolved-phase hydrocarbons. Various chemicals have been employed in ISCO approaches, including persulfates, percarbonates, permanganates, hydrogen peroxide, and Fenton's reagent. The high-permeability soils at the Site make ISCO a technically feasible approach to treat the "hot spots" (most highly-impacted areas) both on- and off-Site. Chemical oxidation would need to be employed in a form that does not destroy or inhibit the existing aerobic-biodegrading microbial communities.

Enhanced bioremediation for petroleum hydrocarbons involves injection of slow-release oxygen compounds into the impacted area to enhance long-term aerobic biodegradation of VOCs and PAHs via native microorganisms. It is seldom necessary to add aerobic bacteria to such injections, as they are almost always present in high concentrations at most sites and simply need oxygen to increase their degradation rate. If necessary, enhanced bioremediation may be useful to treat peripheral areas of the plume, and/or to “polish” residual concentrations treated by more aggressive methods.

4.1.4 Liquid Activated Carbon Adsorption/Enhanced Bioremediation

Liquid activated carbon (LAC) adsorption/enhanced bioremediation involves injection of a concentrated aqueous suspension of very fine particles (1 to 2 um) of LAC, zero-valent iron (ZVI), and electron donors that is designed to rapidly adsorb contaminants and accelerate biodegradation. The materials are suspended in water through the use of unique organic polymer dispersion chemistry and once in the subsurface behave as a colloidal biomatrix binding to the aquifer soil matrix. Once contaminants are sorbed onto the LAC matrix, biodegradation processes achieve complete remediation at an accelerated rate.

The combined effects of liquid activated carbon adsorption/enhanced bioremediation result in a fast and sustained decline of groundwater contaminant concentrations. The activated carbon particles are at least 10x smaller than regular particulate activated carbon, allowing it to be applied under low pressures and without fracturing. The LAC product has a high carbon content for more effective source zone treatment. ZVI is included to enhance abiotic degradation of COPCs, while an electron donor enhances biological reductive dichlorination of chlorinated compounds.

Based on both Patriot’s experience at similar sites, the above-described injection products will immediately sorb contaminants out of groundwater in the targeted treatment areas (up to 80-100% drop in groundwater contaminant concentrations within weeks of application), inhibiting migration while simultaneously enhancing both abiotic and biological biodegradation. This approach has a longer maximum anticipated effectiveness compared to ISCO, effectively adsorbing chlorinated VOCs to the soils for an extended/indefinite period of time. In addition, enhanced abiotic and biological biodegradation of contaminants within the biomatrix regenerates or frees up sorption sites, allowing contaminants to further partition out of the groundwater. Once in place with contaminants portioned onto its surface, the liquid AC is

colonized by contaminant-degrading bacteria, substantially increasing the rate and extent of contaminant destruction.

4.2 RECOMMENDED REMEDIATION STRATEGY

Based on the evaluation of remedial options presented in the preceding paragraphs, the most efficient, cost-effective remedial approach for this site is injection of LAC/enhanced bioremediation products in a series of barriers both on- and off-Site. These remedial techniques will be combined with plume stability monitoring, as well as the use of ERCs, as necessary, to eliminate potential exposure pathways, both currently and in the future. Details of the proposed implementation of this approach are provided in the following sections.

4.3 REMEDIAL DESIGN AND IMPLEMENTATION

4.3.1 Injection Designs

To address the residual cVOC impacts, a combined Plume Stabilization/Enhanced Bio approach will be used that includes injection of PlumeStop® Liquid Activated Carbon™ (PlumeStop), S-MicroZVI™ zero-valent iron, 3D MicroEmulsion (3DMe), and BioDechlor INNOCULUM Plus (BDI Plus), all of which are manufactured by Regenesis Bioremediation Products, Inc. (Regenesis).

PlumeStop is included in the injection to rapidly reduce the dissolved-phase plume (days/weeks versus months), inhibit further contaminant migration, and provide a long-term barrier to treat impacted groundwater that is migrating off-Site. PlumeStop is composed of very fine particles of activated carbon suspended in water through unique polymer dispersion chemistry. Once injected into the subsurface, PlumeStop behaves as a colloidal biomatrix, binding to the aquifer materials, rapidly removing dissolved-phase VOCs, and expediting permanent contaminant biodegradation.

S-MicroZVI is composed of colloidal, sulfidated zero-valent iron (ZVI) particles suspended in an aqueous medium with environmentally acceptable, proprietary dispersants. The passivation technique of sulfidation, completed through proprietary processing methods, provides unparalleled reactivity with chlorinated hydrocarbons like PCE and TCE, and increases its stability and longevity *in situ* by minimizing undesirable side-reactions. S-MicroZVI is delivered to the Site as a colloidal suspension at 40% ZVI by weight, with a particle size in the range of less than 5 microns.

3DMe is an engineered electron donor material that provides a three-stage electron donor release profile and pH-neutral chemistry and is delivered to the Site as a factory-emulsified product. 3DMe includes a patented molecular structure that provides a unique hydrophile-lipophile balance which enables maximum subsurface distribution well beyond that of conventional emulsified vegetable oils. During the first stage, free lactic acid (lactate) is immediately available and rapidly fermented to enhance reductive dechlorination. The second stage involves a controlled release of lactic acid (lactate esters and polylactate esters) that are metabolized at a more controlled rate for longer-term enhancement of reductive dechlorination. During the third and final stage, free fatty acids and fatty acid esters are converted to hydrogen over a mid- to long-range timeline, providing for an exceptionally long electron donor release profile (up to 4 years).

After injection, 3DMe rapidly distributes itself throughout the subsurface via micellar movement. During this process, microscopic colloidal aggregates (micelles) continuously promulgate from areas of high concentrations to areas of lower concentration, thus moving the 3DMe electron donor material into areas beyond those affected by the initial injection. Additionally, as a result of its unique hydrophile-lipophile balance, applications of 3DMe have not demonstrated the significant aquifer blockage that is frequently seen with conventional emulsified oil products.

BDI Plus is an enriched natural microbial consortium containing species of *dehalococcoides* sp. that was developed by Regenesis. BDI Plus stimulates the rapid and complete dechlorination of cVOCs and provides an immediate population of degraders to take advantage of the reducing conditions created by the 3DMe.

Using these products in combination provides an optimal approach whereby chlorinated VOCs will be rapidly captured on the PlumeStop colloidal biomatrix where it is then abiotically and biologically reduced by the S-MicroZVI and 3DMe/BDI Plus without the generation of excessive daughter products. All of these products have been successfully used on hundreds of similar sites.

Patriot worked with Regenesis to develop remedial designs for the on-Site and off-Site portions of the plume, which are included in Attachment 6. The proposed designs, which will be implemented in a phase approach, are as follows:

4.3.1.1 On-Site Property Boundary Barrier

For the on-site property boundary barrier, which is designed to inhibit further off-site migration of the plume, 38,000 pounds of PlumeStop, 7,500 pounds of S-MicroZVI, and 58 liters of BDI Plus injected into a total of 142 injection points spaced approximately 6 feet apart in an 850-foot long barrier. The injection interval will be from approximately 10 to 30 feet below grade. At each injection point, approximately 268 pounds (30 gallons) of PlumeStop, 56 pounds (3.7 gallons) of S-MicroZVI, and 0.4 liters of BDI will be mixed with approximately 610 gallons of water and injected under pressure using a Geoprobe. The injection event will require approximately 26 days to complete. The proposed barrier location is illustrated in the design document in Attachment 6.

4.3.1.2 On-Site Plume Treatment

After the property boundary barrier is in place, an on-site plume treatment injection will be performed that will include 5 separate barriers as shown in the design document in Attachment 6. A combined total of 28,000 pounds of 3DMe, 21,000 pounds of S-MicroZVI, and 170 liters of BDI Plus will be injected into a total of 313 injection points spaced approximately 8 feet apart within the individual barriers, whose total length is approximately 2,500 feet. The injection interval will be from approximately 10 to 30 feet below grade. At each injection point, approximately 90 pounds (11 gallons) of 3DMe, 67 pounds (4.4 gallons) of S-MicroZVI, and 0.5 liters of BDI Plus will be mixed with approximately 204 gallons of water and injected under pressure using a Geoprobe. The on-site plume treatment injection will require approximately 30 days to complete.

4.3.1.3 Off-Site Plume Treatment

After on-Site treatment has been completed, an off-Site plume treatment injection will be performed as illustrated in the design document in Attachment 6. The off-site injection will include one barrier parallel to the COPC plume and perpendicular to the direction of groundwater flow with a total length of 650 feet. The orientation of the COPC plume is due to historic pumping from the municipal Webb Wellfield located east-northeast of the Site along Hurricane Creek but the location of the remediation barrier is based on the south-southeasterly direction of groundwater flow at the adjacent property. A combined total of 20,000 pounds of 3DMe, 15,000 pounds of S-MicroZVI, and 148 liters of BDI Plus will be injected into a total of 81 injection points spaced approximately 8 feet apart within the barrier. The injection interval will be approximately 10 to 60 feet below grade. At each injection point, approximately 246 pounds (29 gallons) of 3DMe, 185 pounds (12 gallons) of S-MicroZVI, and 1.8 liters of BDI

Plus will be mixed with approximately 495 gallons of water and injected under pressure using a Geoprobe. The off-site plume treatment injection will require approximately 17 days to complete.

4.3.2 Implementation

Prior to performing the injections, a private utility locator will be utilized to mark subgrade utilities in the proposed injection area prior to initiating the work.

The PlumeStop™, S-MicroZVI, 3DMe, and BDI Plus will be injected into each point under moderate pressure using a Geoprobe® equipped with a pump optimally suited for these compounds. The products will be distributed uniformly in each injection point at varying depths, depending on the location. The injection pressure will be maintained at a level sufficient to overcome the hydraulic head, but low enough to promote a uniform radial distribution of the products around each injection point and to avoid channeling or short-circuiting in one direction.

The relatively small volumes of water injected with the products will not displace formation water in the injection areas due to the high-permeability sand unit. Therefore, migration of impacted groundwater beyond the zone of treatment is highly unlikely.

As illustrated in the design documents in Attachment 6, the property boundary barrier is designed to inhibit further off-Site and downgradient migration of impacted groundwater. Because of the injection of activated carbon, the injection area will continue to treat residual impacted groundwater as it migrates downgradient. The on-Site and off-Site plume treatment injections will only be performed after completion of the property boundary barrier and a period of groundwater monitoring to determine if the additional injection work is necessary.

4.4 HEALTH AND SAFETY PLAN

A Site-specific Health and Safety Plan (HASP) was prepared for the initial assessment and monitoring activities and will be updated for the remediation activities at the Site. The plan includes elements contained in 29 CFR 1910.120. The HASP has been and will continue to be reviewed with all field personnel prior to beginning each day's activities. Visitors to the Site during monitoring activities will also be required to review and comply with the HASP.

5.0 MONITORING/CONFIRMATION SAMPLING PLAN

This section describes the long-term monitoring plan for the Site, including soil sampling, groundwater monitoring, sample collection methods, and post remedial action confirmation sampling.

5.1 SOIL CONFIRMATION SAMPLING

The purpose of soil confirmation sampling (if necessary) is typically used to verify the effectiveness of the remediation strategy and attainment of the proposed cleanup objectives. At this Site, because of the isolated soil impacts and the focus on groundwater remediation, no soil confirmation sampling is proposed.

5.2 GROUNDWATER MONITORING

The purpose of groundwater monitoring is to verify the effectiveness of the remediation strategy and evaluate the progress of attaining the proposed cleanup objectives. Post-injection performance monitoring including only key wells in the vicinity of the injection barriers will be performed quarterly for one year following injection. If a supplemental injection appears warranted in any area, additional performance monitoring may be necessary after completion of the supplemental injection(s).

When performance monitoring is complete, quarterly plume stability monitoring will be initiated and continued for a minimum of eight quarters following the remedial injections to evaluate the success of the remedial efforts and to obtain data necessary to demonstrate plume stability for closure.

All of the monitoring wells will be gauged every quarter; however, only selected key monitoring wells in and downgradient of the treatment areas will be sampled on a quarterly basis. Upgradient and/or unimpacted/lightly impacted monitoring wells will be sampled less frequently (annually or semi-annually). In addition, samples may be obtained periodically from temporary off-Site wells installed in the agricultural field where permanent wells are not allowed by the property owner. The proposed sampling frequency for the monitoring wells at the Site is as follows:

- Quarterly: MW-11, 12, 15, 15D, 22, 22D, 23, 24, 26, 29, 29D, 30, 32, 33, 33D, 36, 37, 39, 40, 41, 41D, 42, 42D, 46I (24 wells)
- Semi-Annually: MW-25, MW-31, MW-40D (3 wells)
- Annually: MW-10, 11D, 12D, 13, 14, 16, 17, 18, 19, 20, 21, 27, 28, 34, 34D, 35, 35D, 36D, 37D, 38, 38D, 39D, 43, 44, 44D, 45, 45D, 46, 46D, 47, 47I, 47D, 48, 48D, 49, 49D (36 wells)

Groundwater samples will be collected using low-flow purging/sampling procedures in general accordance with IDEM guidance and will be analyzed for VOCs using SW-846 Method 8260. In addition, during performance monitoring, samples from selected monitoring wells in and downgradient from the treatment areas may also be analyzed for selected biodegradation-related parameters to evaluate the progress of the injections.

6.0 COMPLETION OF REMEDIAL ACTIVITIES

The goal of the groundwater remediation project is to reduce the on-Site cVOC concentrations to below commercial/industrial VIGWSLs, reduce the off-Site cVOC concentrations to below residential VIGWSLs or, if possible, to below TWSLs, and to demonstrate that the plume is stable and/or decreasing and the residual cVOC concentrations do not present an unacceptable threat to human health or the environment. This will be accomplished via the proposed remedial activities, as well as site-specific deed restrictions (and/or the use of applicable municipal or county ordinances) as necessary, and application of multiple lines of evidence demonstrating that there are no complete exposure pathways.

Upon completion of the final groundwater monitoring event, a No Further Action (NFA) request will be prepared and submitted to IDEM for review and approval. The report will include an analysis of the existing data, an evaluation of potential exposure pathways, and an evaluation of potential risks from the residual impacts. The NFA request may need to include an ERC for the Site, prohibiting groundwater use and limiting the property use to commercial/industrial purposes only. Off-Site ERCs and/or use of Environmental Restrictive Ordinances (EROs) may also be required for off-Site properties. Any proposed site-specific ERCs would be submitted to IDEM in draft form for review and approval. Upon approval of the ERC(s) by IDEM, the final ERC(s) would be recorded on the property deed.

Upon receipt of approval of the NFA request from the IDEM, the monitoring wells at the Site will be abandoned according to IDNR requirements and documentation submitted to IDEM in support of closure.

7.0 SCHEDULE

Initiation of the remedial strategy proposed in this RWP will be implemented promptly upon approval of this RWP by the IDEM. The remedial injections will require approximately 2 months to complete. Performance groundwater monitoring in accordance with the schedule in Section 5.2 will be initiated approximately 3 months following completion of the injections and will continue for one year, followed by a minimum of two years (eight consecutive quarters) of plume stability monitoring.

8.0 LIMITATIONS AND ASSUMPTIONS

As previously stated, the adjacent landowner has not yet agreed to a remediation goal, but for the purposes of this RWP it is assumed that the objective of remedial efforts is to reduce the COPC concentrations in off-Site groundwater to below the IDEM RCG residential VIGWSLs and to demonstrate plume stability via post-remediation groundwater monitoring. This would result in a restricted off-Site closure using an ERC to prohibit groundwater use on the adjacent agricultural property. If a more conservative remediation goal is required by the adjacent property owner, an addendum to this RWP will be prepared and issued to IDEM prior to implementation of the off-Site remediation.

The remediation conducted on the adjoining Reed property has not yet reduced COPC concentrations to below the IDEM RCG Commercial/Industrial VIGWSLs. In order for the remediation goals to be met at the Site, concentrations of COPCs in groundwater migrating onto the Site from the adjacent, upgradient Reed property must be reduced to below the IDEM RCG Commercial/Industrial VIGWSLs.

A limited amount of additional investigation has been proposed for both on-Site and off-Site groundwater. If the results of the investigation reveal any significant changes to the currently known groundwater conditions, an addendum to this RWP will be prepared and issued to IDEM prior to implementation of the on-Site or off-Site remediation, as appropriate.

A copy of this RWP has been provided to the consultant for the adjacent Reed property and the insurance carrier for HRID that is providing coverage for the remediation. If relevant and significant comments are received from either party, an addendum to this RWP will be prepared and issued to IDEM within three business days following receipt of such information.

9.0 REFERENCES

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U.S. Fish and Wildlife Service (USFWS). 2009. National Wetland Inventory Online Mapper. On-line address: <http://wetlandsfws.er.usgs.gov/wtlnds/launch.html>.

USGS. 2016, 7.5-Minute Topographic Map, Franklin, Indiana

TABLES

TABLE 1
COMPREHENSIVE GROUNDWATER ANALYTICAL RESULTS
Former Houghland Tomato Cannery
1130 East Eastview Drive
Franklin, Indiana
Patriot Project Number 21-0757-01E

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
MW-10	9/24/2013	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/7/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/11/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-11	3/5/2014	135	94.4	< 5.0	< 5.0	< 2.0	BRL
	9/24/2013	94.6	83.2	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	136	110	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	124	82.4	< 5.0	< 5.0	< 2.0	BRL
	6/15/2018	102	60.0	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	68.7	50.4	<5.0	<5.0	<2.0	BRL
	03/05/2019	39.6	29.5	<5.0	<5.0	<2.0	BRL
	3/29/2019	45.3	31.5	<5.0	<5.0	<2.0	BRL
	11/17/2020	110	37.5	<5.0	<5.0	<2.0	BRL
3/4/2021	NS	NS	NS	NS	NS	BRL	
MW-11D	6/15/2018	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/05/2019	7.2	<5.0	<5.0	<5.0	<2.0	BRL
	3/29/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/17/2020	<5.0	<2.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW 12	3/5/2014	< 5.0	10.3	< 5.0	< 5.0	< 2.0	BRL
	3/3/2014	< 5.0	10.3	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	42.4	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	02/05/2019	<5.0	38.8	<5.0	<5.0	<2.0	BRL
	3/7/2019	<5.0	42.0	<5.0	<5.0	<2.0	BRL
	4/1/2019	<5.0	29.9	<5.0	<5.0	<2.0	BRL
	11/17/2020	<5.0	55.3	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW 12D	02/05/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/7/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/1/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/17/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
MW-13	9/24/2013	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/5/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	11/17/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-14	9/25/2013	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/7/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/1/2019	<5.0	495	7.7	<5.0	<2.0	BRL
	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-14D	02/08/2019	<5.0	583	26.4	<5.0	<2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/1/2019	<5.0	524	11	<5.0	<2.0	BRL
	11/18/2020	<5.0	439	23.5	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-15	9/25/2013	< 5.0	26.3	< 5.0	< 5.0	< 2.0	BRL
	3/7/2014	< 5.0	16.6	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	42.3	< 5.0	< 5.0	< 2.0	BRL
	6/15/2018	< 5.0	50.3	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	<5.0	49.3	<5.0	<5.0	<2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/1/2019	<5.0	6.7	579	18.1	<2.0	BRL
	11/18/2020	<5.0	32.6	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-15D	6/15/2018	< 5.0	120	384	42.3	< 2.0	BRL
	02/08/2019	<5.0	12.3	780	53.5	<2.0	BRL
	3/6/2019	<5.0	7.8	430	17.9	<2.0	BRL
	4/1/2019	<5.0	<5.0	557	29.5	<2.0	BRL
	11/18/2020	<5.0	<5.0	588	54.2	<2.0	BRL
		3/4/2021	NS	NS	NS	NS	NS
MW-16	9/25/2013	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/7/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
		3/4/2021	NS	NS	NS	NS	NS
MW-17	9/25/2013	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/7/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
		3/4/2021	NS	NS	NS	NS	NS

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
MW-18	3/3/2014	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-19	3/3/2014	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/12/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-20	3/3/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/12/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-21	3/3/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/12/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-22	3/5/2014	8.5	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	8.4	89.5	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	9.6	86.4	< 5.0	< 5.0	< 2.0	BRL
	6/14/2018	8.9	73.9	<5.0	<5.0	<2.0	BRL
	02/08/2019	8.1	71.5	10.8	<5.0	<2.0	BRL
	3/7/2019	5.8	30	<5.0	<5.0	<2.0	BRL
	3/27/2019	6.7	30.8	<5.0	<5.0	<2.0	BRL
	11/17/2020	11.8	68.7	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-22D	6/14/2018	7.4	34.6	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	9.1	42.6	<5.0	<5.0	<2.0	BRL
	3/7/2019	13.3	43.6	<5.0	<5.0	<2.0	BRL
	3/27/2019	7.4	32.1	<5.0	<5.0	<2.0	BRL
	11/17/2020	10.5	32.8	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-23	3/3/2014	141	469	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	156	323	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	115	234	<5.0	<5.0	<2.0	BRL
	3/11/2019	15.7	21.9	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Dry - Not Sampled					
	3/4/2021	NS	NS	NS	NS	NS	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
MW-24	3/6/2014	183	65.6	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	185	52.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	167	59.0	<5.0	<5.0	<2.0	BRL
	3/12/2019	55.2	60.2	<5.0	<5.0	<2.0	BRL
	11/16/2020	64.9	35.9	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-25	3/5/2014	< 5.0	9.4	< 5.0	< 5.0	< 2.0	BRL
	11/16/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-26	3/5/2014	26.9	63.1	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	22.2	55.4	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	21.8	48.0	<5.0	<5.0	<2.0	BRL
	6/14/2018	22.3	39.8	<5.0	<5.0	<2.0	BRL
	02/05/2019	14.8	46.1	<5.0	<5.0	<2.0	BRL
	3/11/2019	12.5	35.5	<5.0	<5.0	<2.0	BRL
	03/28/2019	15.6	31	<5.0	<5.0	<2.0	BRL
	11/17/2020	27.9	47.6	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW 32 (Deep Well paired with MW-26)	8/21/2017	11.0	26.9	19.1	< 5.0	< 2.0	BRL
	6/15/2018	15.1	27.1	26.5	< 5.0	< 2.0	BRL
	02/05/2019	8.0	9.4	5.9	<5.0	<2.0	BRL
	3/11/2019	16.1	37.9	<5.0	<5.0	<2.0	BRL
	03/28/2019	15.8	29.5	<5.0	<5.0	<5.0	BRL
	11/16/2020	7.6	7.8	8.2	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-27	3/5/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/11/2019	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	11/16/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-28	3/7/2014	< 5.0	< 5.0	19.3	< 5.0	< 2.0	BRL
	8/22/2017	< 5.0	< 5.0	47.7	< 5.0	< 2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/18/2020	<5.0	<5.0	56.8	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
MW 29	3/7/2014	14.5	153	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	13.6	128	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	13.4	106	< 5.0	< 5.0	< 2.0	BRL
	6/14/2018	14.0	97.6	< 5.0	< 5.0	< 2.0	BRL
	02/05/2019	<5.0	34.5	<5.0	<5.0	<2.0	BRL
	3/7/2019	<5.0	15.7	<5.0	<5.0	<2.0	BRL
	3/27/2019	6.8	40.6	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Dry - Not Sampled					
3/4/2021	NS	NS	NS	NS	NS	BRL	
MW 29D	6/14/2018	12.9	148	33.6	< 5.0	< 2.0	BRL
	02/05/2019	13.4	149	25.7	<5.0	<2.0	BRL
	3/7/2019	14.4	124	21.2	<5.0	<2.0	BRL
	3/27/2019	9.8	106	21.4	<5.0	<2.0	BRL
	11/17/2020	7.4	75.9	90	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-30	9/1/2016	695	386	< 5.0	< 5.0	< 2.0	BRL
	8/22/2017	475	253	< 5.0	< 5.0	< 2.0	BRL
	6/15/18	520	283	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	171	173	<5.0	<5.0	<2.0	BRL
	3/11/2019	293	163	<5.0	<5.0	<2.0	BRL
	3/29/2019	444	159	<5.0	<5.0	<2.0	BRL
	11/17/2020	636	214	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-31 (Deep well paired with MW-30)	8/22/2017	5.7	<5.0	< 5.0	< 5.0	< 2.0	BRL
	6/15/2018	< 5.0	<5.0	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	<5.0	<5.0	5.4	<5.0	<2.0	BRL
	3/11/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/29/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/17/2020	13.3	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
MW 33	02/05/2019	28.9	61	<5.0	<5.0	<2.0	BRL
	3/7/2019	46.0	71.1	5.6	<5.0	<2.0	BRL
	03/28/2019	7.8	29.3	<5.0	<5.0	<2.0	BRL
	11/17/2020	28.4	56.6	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW 33D	02/05/2019	21.1	114	<5.0	<5.0	<2.0	BRL
	3/7/2019	35.4	97.3	<5.0	<5.0	<2.0	BRL
	03/28/2019	17.1	59.9	<2.0	<5.0	<2.0	BRL
	11/17/2020	24.6	68.6	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
MW-34	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-34D	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-35	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-35D	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-36	11/18/2020	11.9	39.2	<5.0	<5.0	<2.0	BRL
	03/05/2021	9.2	38.4	<5.0	<5.0	<2.0	BRL
MW-36D	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/05/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-37	11/18/2020	23.8	23.5	<5.0	<5.0	<2.0	BRL
	03/05/2021	17.8	12.6	<5.0	<5.0	<2.0	BRL
MW-37D	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/05/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-38	11/17/2020	47.6	35.1	<5.0	<5.0	<2.0	BRL
	03/04/2021	35	27.1	<5.0	<5.0	<2.0	BRL
MW-38D	11/17/2020	18.5	105	<5.0	<5.0	<2.0	BRL
	03/04/2021	13.2	99.7	<5.0	<5.0	<2.0	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
MW-39	11/18/2020	8	12.4	<5.0	<5.0	9.9	BRL
	03/04/2021	14.4	36.7	<5.0	<5.0	4.7	BRL
MW-39D	11/18/2020	<5.0	<5.0	10.9	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-40	11/18/2020	<5.0	213	401	640	4.1	BRL
	03/03/2021	<5.0	159	296	405	2.2	BRL
MW-40D	11/18/2020	<5.0	<5.0	15.5	22.1	<2.0	BRL
	03/03/2021	<5.0	<5.0	6.6	5.4	<2.0	BRL
MW-41	11/17/2020	<5.0	400	6.3	<5.0	3.3	BRL
	03/03/2021	<5.0	304	5.3	<5.0	3.5	BRL
MW-41D	11/17/2020	<5.0	277	7.1	<5.0	<2.0	BRL
	03/03/2021	<5.0	248	6.6	<5.0	<2.0	BRL
MW-42	11/17/2020	<5.0	258	<5.0	<5.0	<2.0	BRL
	03/05/2021	<5.0	131	<5.0	<5.0	<2.0	BRL
MW-42D	11/17/2020	<5.0	46.4	450	37	<2.0	BRL
	03/05/2021	<5.0	48.8	369	26.4	<2.0	BRL
MW-43	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-44	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-44D	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-45	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/03/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-45D	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/03/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
MW-46	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-46I	11/19/2020	<5.0	35.7	43.1	<5.0	<2.0	BRL
	03/02/2021	<5.0	29.7	40.5	<5.0	<2.0	BRL
MW-46D	11/19/2020	<5.0	<5.0	52.5	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	9.3	<5.0	<2.0	BRL
MW-47	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-47I	11/19/2020	<5.0	<5.0	9.9	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	6.7	<5.0	<2.0	BRL
MW-47D	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-48	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-48D	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-49	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/03/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-49D	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/03/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
TMW-1	02/06/2019	<5.0	11.2	<5.0	<5.0	<2.0	BRL
	3/8/2019	<5.0	14.9	<5.0	<5.0	<2.0	BRL
	03/26/2019	<5.0	7	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-1D	02/06/2019	<5.0	24.2	510	41.6	<2.0	BRL
	3/8/2019	<5.0	19.8	660	<5.0	<2.0	BRL
	03/26/2019	<5.0	11.9	829	41	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-2	02/06/2019	<5.0	94.1	<5.0	<5.0	<2.0	BRL
	3/8/2019	<5.0	106	<5.0	<5.0	<2.0	BRL
	03/26/2019	<5.0	73.7	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-2D	02/06/2019	<5.0	15.9	550	43.4	<2.0	BRL
	3/8/2019	<5.0	40.9	250	<5.0	<2.0	BRL
	03/26/2019	<5.0	13.7	683	49.6	2.3	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-3	02/06/2019	<5.0	30.4	<5.0	<5.0	<2.0	BRL
	3/8/2019	<5.0	37.3	<5.0	<5.0	<2.0	BRL
	03/26/2019	<5.0	25.2	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-3D	02/06/2019	<5.0	383	1060	87.5	<2.0	BRL
	3/8/2019	<5.0	152	539	<5.0	<2.0	BRL
	03/26/2019	<5.0	288	904	78.4	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
TMW-4	02/07/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/8/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/26/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-4D	02/07/2019	<5.0	9.1	437	14.5	<2.0	BRL
	03/05/2019	<5.0	7.3	270	9.8	<2.0	BRL
	03/26/2019	<5.0	10.9	395	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-5	02/08/2019	<5.0	479	<5.0	<5.0	<2.0	BRL
	03/05/2019	<5.0	311	<5.0	<5.0	<2.0	BRL
	03/26/2019	<5.0	244	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-5D	02/08/2019	<5.0	528	1560	139	<2.0	BRL
	03/05/2019	<5.0	444	1040	80.9	<2.0	BRL
	03/26/2019	<5.0	500	1220	112	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-6	02/08/2019	<5.0	14.7	24.4	<5.0	<2.0	BRL
	03/05/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/27/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		5	5	70	100	2	Varies
IDEM RCG Residential VESL's		110	9.1	NE	NE	2.1	Varies
IDEM RCG Industrial VESL's		470	38	NE	NE	35	Varies
Sample Identification	Date Collected	Analytical Results in micrograms per liter (ug/L)					
TMW-6D	02/08/2019	<5.0	<5.0	8.3	<5.0	<2.0	BRL
	03/05/2019	<5.0	<5.0	5.2	<5.0	<2.0	BRL
	03/27/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-7	02/07/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/05/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/27/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL
TMW-7D	02/07/2019	<5.0	<5.0	780	38.2	<2.0	BRL
	03/05/2019	<5.0	19.2	246	14.2	<2.0	BRL
	03/27/2019	<5.0	<5.0	943	46	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	03/03/2021	NS	NS	NS	NS	NS	BRL

Notes

BOLD	= Constituent detected above Laboratory Reporting Limit
BOLD	= Constituent detected above IDEM RCG Residential TWSL's
BOLD	= Constituent detected above IDEM RCG Residential VESL's
BOLD	= Constituent detected above IDEM RCG Industrial VESL's

NE = No Screening Level Established for Constituent

BRL - Below Laboratory Reporting Limit

NS=Not Sampled

FIGURES

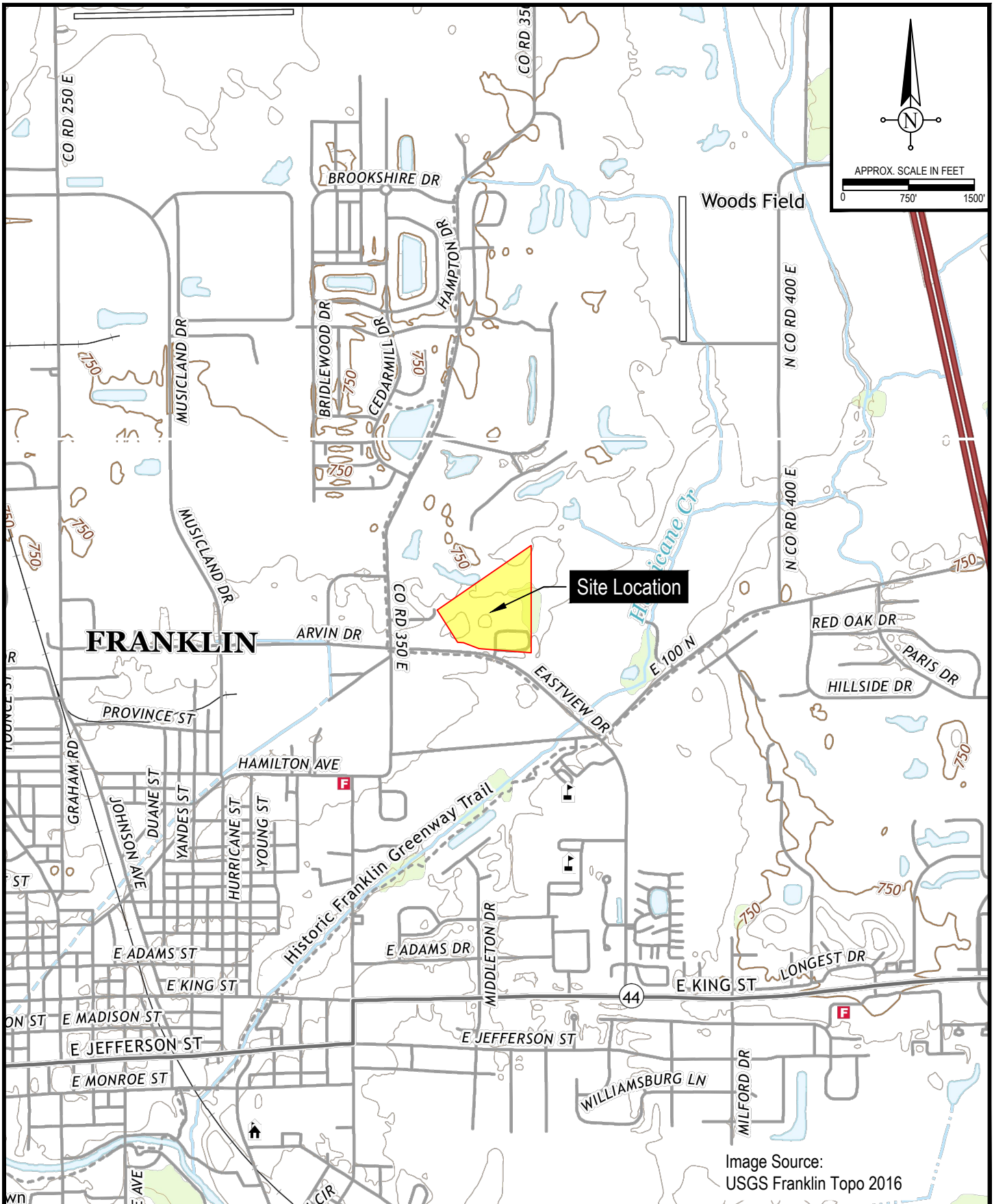


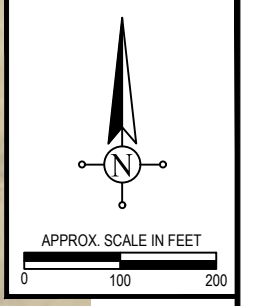
Image Source:
USGS Franklin Topo 2016



**Patriot Engineering &
Environmental, Inc.**

Project: Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	
Project Number 20-0963-01E	Drawn By: J. DuMond
Date: August 7, 2020	Approved: M. Casper
	DWG: 20-0963-01_Ph2

Figure 1
Site Location Map



Patriot Engineering &
Environmental, Inc.

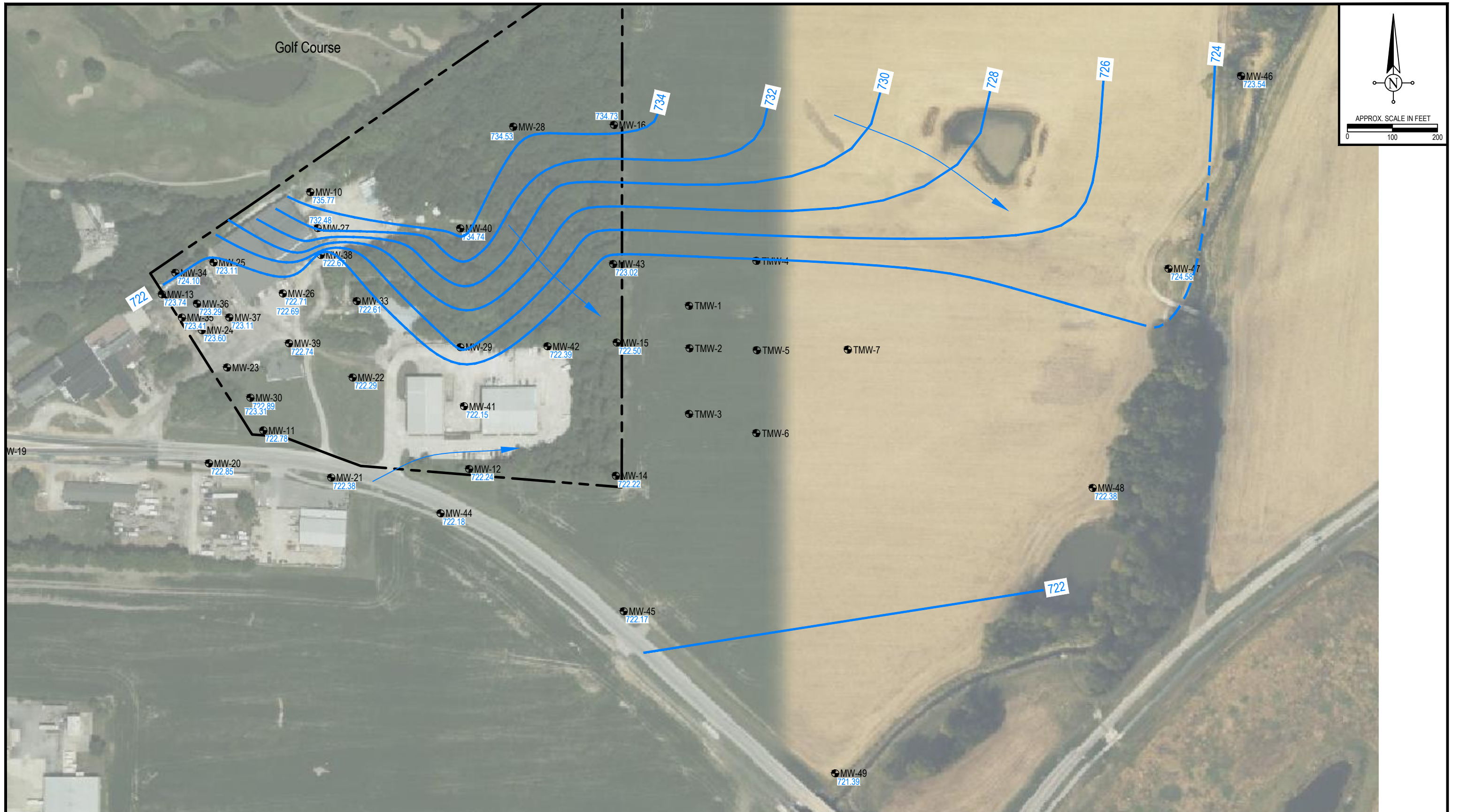
LEGEND

- Site Boundary
- Patriot Monitoring Well Location

Project: Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Project Number 20-0963-01E	Drawn By: J. DuMond
Date: January 4, 2021	Approved: J. Cody
	DWG: 20-0963-01_FS14

Figure 2
Site Layout Map

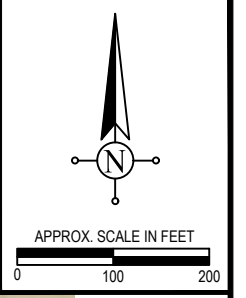
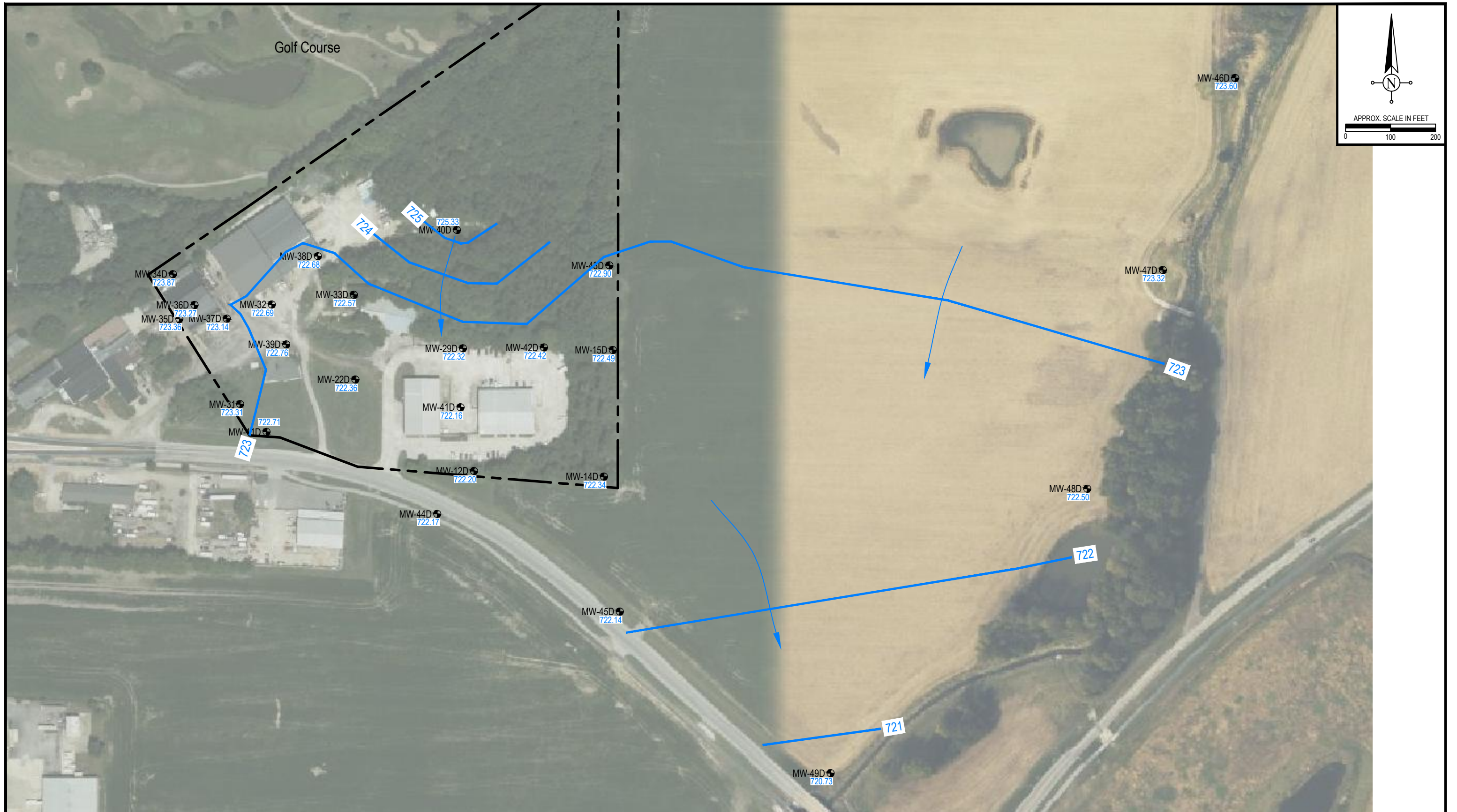


LEGEND	
	Site Boundary
	Patriot Monitoring Well Location
	Groundwater Elevation (ft.)
	Groundwater Elevation Contour Line
	Inferred Groundwater Contour Line
	Groundwater Flow Direction

Project: Former Houghland Tomato Cannery FSI #4
 1130 E. Eastview Drive
 Franklin, Indiana
 IDEM Identification No. 2013-34567

Project Number 20-0963-01E	Drawn By: J. DuMond
Date: June 18, 2021	Approved: J. Cody
	DWG: 20-0963-01_FSI4

Figure 3
 Shallow Potentiometric
 Surface Map
 March 1, 2021



LEGEND

- Site Boundary
- Patriot Monitoring Well Location
- Groundwater Elevation (ft.)
- 719 Groundwater Elevation Contour Line
- Groundwater Flow Direction

Project: Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	
Project Number 20-0963-01E	Drawn By: J. DuMond
Date: June 18, 2021	Approved: J. Cody
	DWG: 20-0963-01_FS14

Figure 4
Deep Potentiometric Surface
Map
March 1, 2021



* = Data from Temporary Monitoring Wells TMW-1 through 7 collected between 3/05/2019 and 3/08/2019



LEGEND

- Site Boundary
- Patriot Monitoring Well Location
- 423** PCE Concentration (µg/L)
- ND** Not Detected
- NS** Not Sampled

- Area where contaminant exceeds IDEM RCG Residential TWSL for PCE (5 µg/L)
- Area where contaminant exceeds IDEM RCG Residential VESL for PCE (110 µg/L)
- Area where contaminant exceeds IDEM RCG Industrial VESL for PCE (470 µg/L)

Project: Former Houghland Tomato Cannery FSI #4
 1130 E. Eastview Drive
 Franklin, Indiana
 IDEM Identification No. 2013-34567

Project Number 20-0963-01E	Drawn By: J. DuMond
Date: January 11, 2021	Approved: J. Cody
	DWG: 20-0963-01_FS14

Figure 5
 Shallow PCE Plume Map
 November 2020*



* = Data from Temporary Monitoring Wells TMW-1 through 7 collected between 3/05/2019 and 3/08/2019



LEGEND

- Site Boundary
- Patriot Monitoring Well Location
- 423** TCE Concentration (µg/L)
- ND** Not Detected
- NS** Not Sampled

- Area where contaminant exceeds IDEM RCG Residential TWSEL for TCE (5 µg/L)
- Area where contaminant exceeds IDEM RCG Residential VESL for TCE (9.1 µg/L)
- Area where contaminant exceeds IDEM RCG Industrial VESL for TCE (38 µg/L)

Project: Former Houghland Tomato Cannery FSI #4
 1130 E. Eastview Drive
 Franklin, Indiana
 IDEM Identification No. 2013-34567

Project Number 20-0963-01E	Drawn By: J. DuMond
Date: January 11, 2021	Approved: J. Cody
	DWG: 20-0963-01_FSI4

Figure 6
 Shallow TCE Plume Map
 November 2020*



* = Data from Temporary Monitoring Wells TMW-1 through 7 collected between 3/05/2019 and 3/08/2019



LEGEND

- Site Boundary
- Patriot Monitoring Well Location
- 423** PCE Concentration (µg/L)
- ND** Not Detected
- NS** Not Sampled

- Area where contaminant exceeds IDEM RCG Residential TWSL for PCE (5 µg/L)
- Area where contaminant exceeds IDEM RCG Residential VESL for PCE (110 µg/L)
- Area where contaminant exceeds IDEM RCG Industrial VESL for PCE (470 µg/L)

Project: Former Houghland Tomato Cannery FSI #4
 1130 E. Eastview Drive
 Franklin, Indiana
 IDEM Identification No. 2013-34567

Project Number 20-0963-01E	Drawn By: J. DuMond
Date: January 11, 2021	Approved: J. Cody
	DWG: 20-0963-01_FS14

Figure 7
 Deep PCE Plume Map
 November 2020*



* = Data from Temporary Monitoring Wells TMW-1 through 7 collected between 3/05/2019 and 3/08/2019



LEGEND

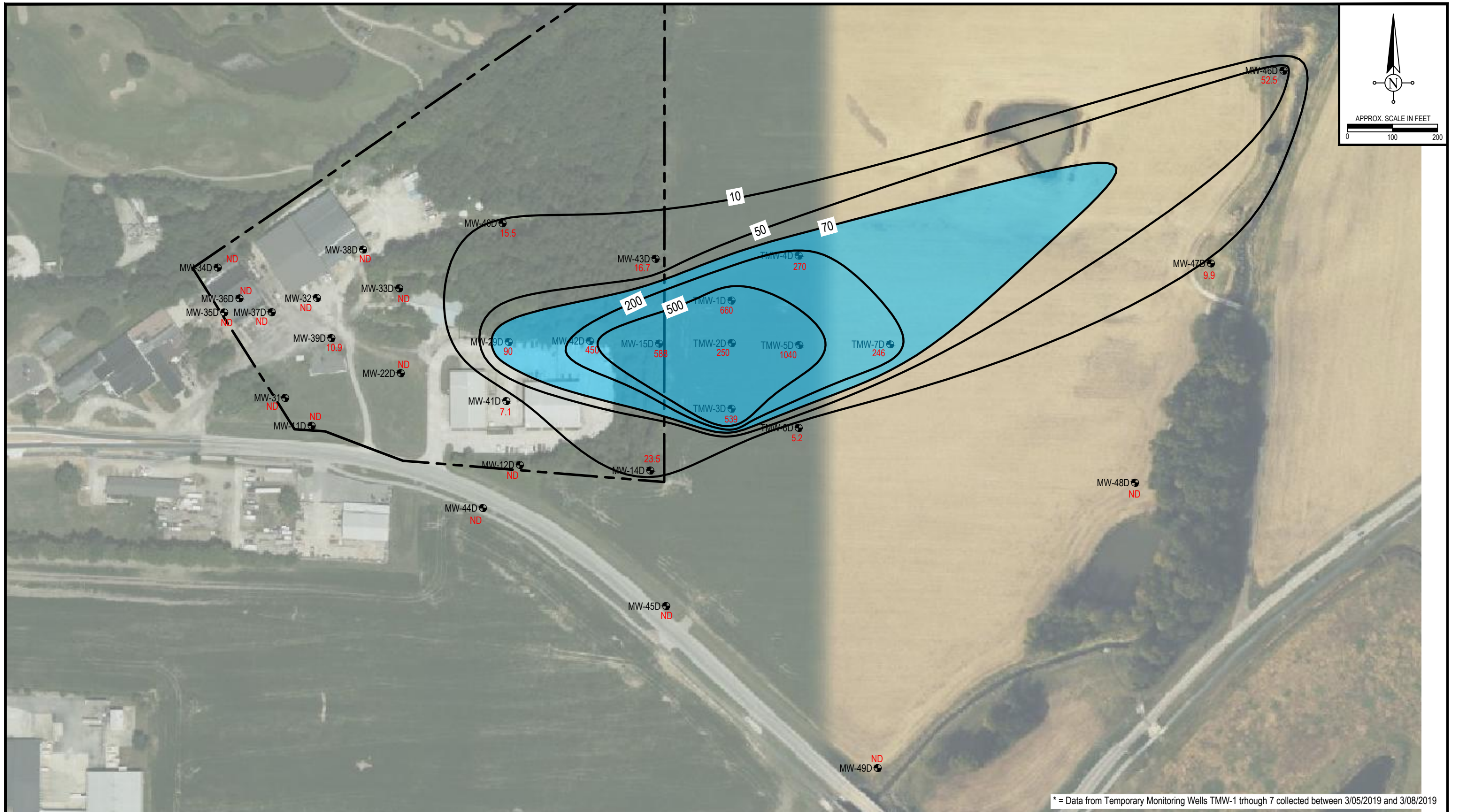
- Site Boundary
- Patriot Monitoring Well Location
- 423** TCE Concentration (µg/L)
- ND** Not Detected
- NS** Not Sampled

- Area where contaminant exceeds IDEM RCG Residential TWSL for TCE (5 µg/L)
- Area where contaminant exceeds IDEM RCG Residential VESL for TCE (9.1 µg/L)
- Area where contaminant exceeds IDEM RCG Industrial VESL for TCE (38 µg/L)

Project: Former Houghland Tomato Cannery FSI #4
 1130 E. Eastview Drive
 Franklin, Indiana
 IDEM Identification No. 2013-34567

Project Number 20-0963-01E	Drawn By: J. DuMond
Date: January 11, 2021	Approved: J. Cody
	DWG: 20-0963-01_FSI4

Figure 8
 Deep TCE Plume Map
 November 2020*



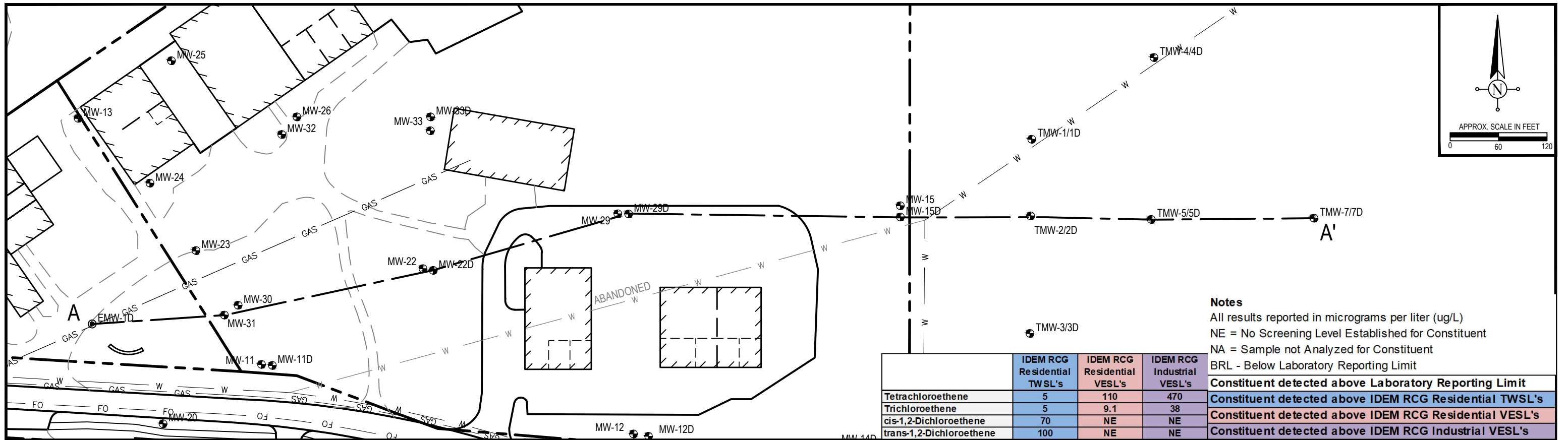
* = Data from Temporary Monitoring Wells TMW-1 through 7 collected between 3/05/2019 and 3/08/2019



LEGEND	
	Site Boundary
	Patriot Monitoring Well Location
423	cis-1,2-DCE Concentration (µg/L)
ND	Not Detected
	Area where contaminant exceeds IDEM RCG Residential TWSL for cis-1,2-DCE (70 µg/L)

Project: Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	
Project Number 20-0963-01E	Drawn By: J. DuMond
Date: January 11, 2021	Approved: J. Cody
	DWG: 20-0963-01_FS14

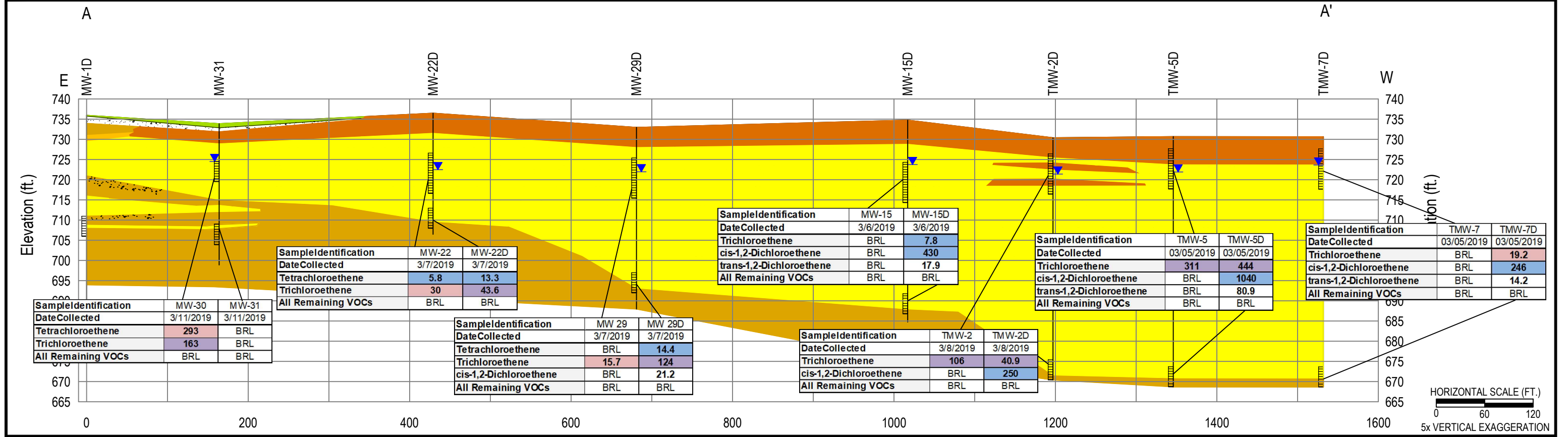
Figure 9
Deep cis-1,2-DCE Plume Map
November 2020*



Notes
 All results reported in micrograms per liter (ug/L)
 NE = No Screening Level Established for Constituent
 NA = Sample not Analyzed for Constituent
 BRL - Below Laboratory Reporting Limit

	IDEM RCG Residential TWSL's	IDEM RCG Residential VESL's	IDEM RCG Industrial VESL's
Tetrachloroethene	5	110	470
Trichloroethene	5	9.1	38
cis-1,2-Dichloroethene	70	NE	NE
trans-1,2-Dichloroethene	100	NE	NE

Constituent detected above Laboratory Reporting Limit
Constituent detected above IDEM RCG Residential TWSL's
Constituent detected above IDEM RCG Residential VESL's
Constituent detected above IDEM RCG Industrial VESL's



LEGEND

- Patriot Monitoring Well
- Environ Monitoring Well
- Cross Section Location
- Topsoil
- Fill
- Silt
- Sand
- Clayey Sand
- Clay
- Clayey Gravel
- Water Level
- Well Screen

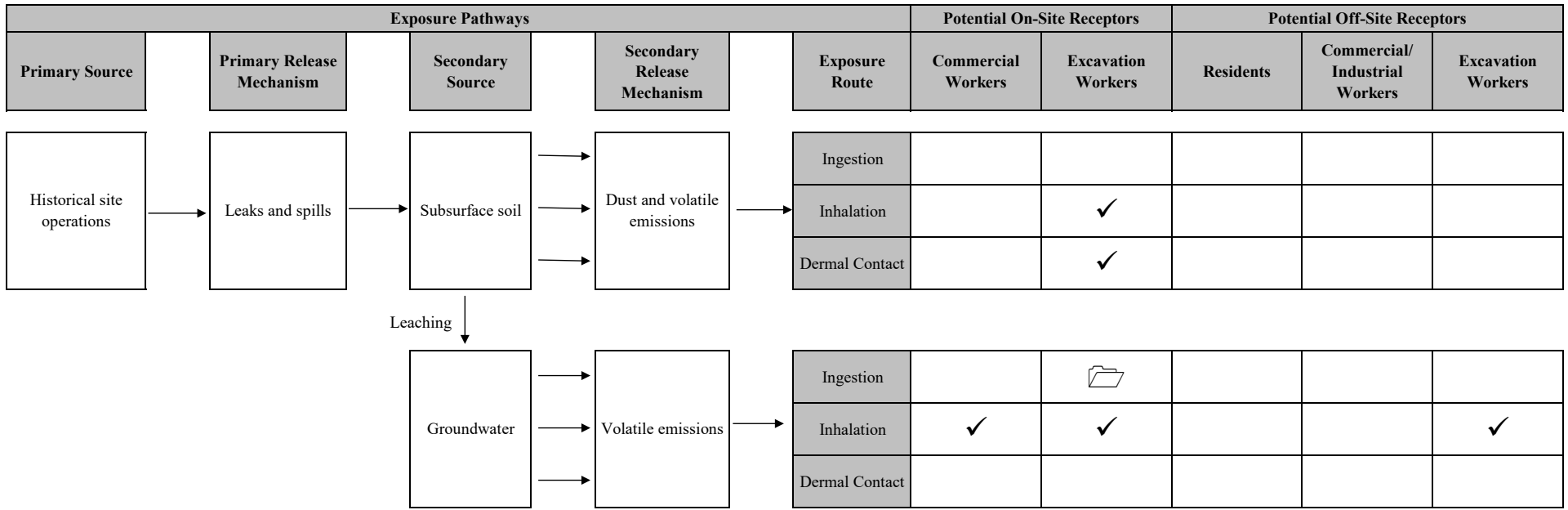
Project: Former Houghland Tomato Cannery FSI #3
 1130 East Riverview Drive
 Franklin, Indiana
 IDEM Identification No. 2013-42015

Project Number: 19-0096-01
 Date: July 11, 2019

Drawn By: J. DuMond
 Approved: J. Cody
 DWG: 19-0096-01_cs

Figure 10
 Cross Section East-West A-A'

Figure 8
Conceptual Site Model for Human Health Risks
Former Houghland Tomato Cannery Site
1130 E. Eastview Street
Franklin, Indiana
IDEM State Cleanup ID #2013-42-015
Patriot Project No. 21-0757-01E



✓ Potentially complete exposure pathway
 + Currently complete exposure pathway

ATTACHMENT 1

Geologic Logs & Well Construction Details



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LOG OF BORING B-1

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana

Project No. : 20-0963-01E
Boring Date : 10/28/2020
Hole Diameter : 2 inches
Drilling Method : Geoprobe Direct Push
Sampling Method : N/A

Company Rep. : Patriot Drilling
Northing Coord. : N/A
Easting Coord. : N/A
Survey By : N/A
Logged By : J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
			DESCRIPTION					
0			Brown, moist, stiff, non plastic, SILT			80%	0.0	
	ML						0.0	
5			Brown, moist, loose, fine grained, SAND			80%	0.0	
	SW						0.0	Sample B-1 (7-9') collected
	SW		Brown, wet, loose, fine grained, SAND				0.0	
10			Boring terminated at 10 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)					



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LOG OF BORING B-2

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana

Project No. : 20-0963-01E
Boring Date : 10/28/2020
Hole Diameter : 2 inches
Drilling Method : Geoprobe Direct Push
Sampling Method : N/A

Company Rep. : Patriot Drilling
Northing Coord. : N/A
Easting Coord. : N/A
Survey By : N/A
Logged By : J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
			DESCRIPTION					
0	ML		Brown, moist, stiff, non plastic, SILT		90%	0.0	0.0	Sample B-2 (7-8') collected
5			Brown, moist, medium stiff, SILT with SAND					
10	ML		Brown, saturated, medium stiff, SILT with SAND		80%	0.0		
15	SW		Brown, saturated, loose, fine grained, SAND					
20	CL		Gray, high plasticity, CLAY, with silt		80%	0.0		
25	SW		Brown, saturated, loose, SAND					
30	CL		Brown, moist, stiff, CLAY, with silt		90%	0.0		
35	SW		Brown, saturated, loose, medium to coarse grained, SAND, w/trace coarse gravel					
40	CL		Gray, moist, stiff, CLAY		90%	0.0		
45	SW		Brown, saturated, loose, medium to coarse grained, SAND					
Boring terminated at 25 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)								



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LOG OF BORING B-3

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/28/2020	Northing Coord.	: N/A
	Hole Diameter	: 2 inches	Easting Coord.	: N/A
	Drilling Method	: Geoprobe Direct Push	Survey By	: N/A
	Sampling Method	: N/A	Logged By	: J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
DESCRIPTION								
0	ML		Brown, moist, medium stiff, low plasticity, SILT, w/trace sand			80%	0.0	Sample B-3 (3-5') collected
5			Brown, moist, medium stiff, low plasticity, SILT, with sand			80%	0.0	
10	SW		Brown, saturated, loose, fine grained, SAND				0.0	
Boring terminated at 10 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)								



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LOG OF BORING B-4

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana

Project No. : 20-0963-01E
Boring Date : 10/28/2020
Hole Diameter : 2 inches
Drilling Method : Geoprobe Direct Push
Sampling Method : N/A

Company Rep. : Patriot Drilling
Northing Coord. : N/A
Easting Coord. : N/A
Survey By : N/A
Logged By : J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
			DESCRIPTION					
0			FILL MATERIAL Black glass, gravel & slag				0.0	
	F36					80%		
			Brown, moist, stiff, low plasticity, SILT				0.0	
	ML							
5			Brown, saturated, SILT with SAND and medium to coarse gravel				0.0	
								Sample B-4 (7-9') collected
	ML					70%		
							0.0	
10	Boring terminated at 10 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)							



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LOG OF BORING B-5

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana	Project No. : 20-0963-01E	Company Rep. : Patriot Drilling
	Boring Date : 10/28/2020	Northing Coord. : N/A
	Hole Diameter : 2 inches	Easting Coord. : N/A
	Drilling Method : Geoprobe Direct Push	Survey By : N/A
	Sampling Method : N/A	Logged By : J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
			DESCRIPTION					

0			FILL MATERIAL slag, glass and gravel					
	F36					70%	0.0	
			Brown, moist, loose, fine grained, SAND				0.0	
5	SW							Sample B-5 (5-6') collected
			Brown, soft, non plastic, SILT, with sand				0.0	
	ML					65%		

10 Boring terminated at 10 ft bgs
Note: TPV = Total Photoionizable Vapors in parts per million (PPM)



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LOG OF BORING B-6

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana

Project No. : 20-0963-01E
Boring Date : 10/28/2020
Hole Diameter : 2 inches
Drilling Method : Geoprobe Direct Push
Sampling Method : N/A

Company Rep. : Patriot Drilling
Northing Coord. : N/A
Easting Coord. : N/A
Survey By : N/A
Logged By : J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
			DESCRIPTION					
0			FILL MATERIAL slag, glass and gravel					Sample B-6 (0-2') collected
F36						60%	0.0	
			Brown, moist, loose, SAND and substantial coarse gravel				0.0	
SW								
5			Brown, moist, loose, SAND, with substantial coarse gravel					
						40%	0.0	
							0.0	
SW								
10			Boring terminated at 10 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)					



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LOG OF BORING B-7

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/28/2020	Northing Coord.	: N/A
	Hole Diameter	: 2 inches	Easting Coord.	: N/A
	Drilling Method	: Geoprobe Direct Push	Survey By	: N/A
	Sampling Method	: N/A	Logged By	: J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
			DESCRIPTION					

0			FILL MATERIAL Black slag, glass					
F36						70%	0.0	
			Brown, stiff, low plasticity, SILT with SAND				0.0	
5	ML						0.0	
			Brown, moist, loose, fine grained, SAND			75%	0.0	Sample B-7 (7-8') collected
	SW							
10			Boring terminated at 10 ft bgs					

Note: TPV = Total Photoionizable Vapors in parts per million (PPM)



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LOG OF BORING B-12

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/29/2020	Northing Coord.	: N/A
	Hole Diameter	: 2 inches	Easting Coord.	: N/A
	Drilling Method	: Geoprobe Direct Push	Survey By	: N/A
	Sampling Method	: N/A	Logged By	: J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
			DESCRIPTION					
0	CG		CONCRETE					
			FILL MATERIAL, brick, coarse gravel				40%	0.0
	F36							0.0
5			Brown, moist, loose, fine grained, SAND				20%	0.0
	SW							0.0

Sample B-12 (5-7') collected

Boring terminated at 10 ft bgs
Note: TPV = Total Photoionizable Vapors in parts per million (PPM)



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LOG OF BORING B-13

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Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana

Project No. : 20-0963-01E
Boring Date : 10/29/2020
Hole Diameter : 2 inches
Drilling Method : Geoprobe Direct Push
Sampling Method : N/A

Company Rep. : Patriot Drilling
Northing Coord. : N/A
Easting Coord. : N/A
Survey By : N/A
Logged By : J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
			DESCRIPTION					
0	CG		CONCRETE					There was a 3 ft. void beneath the concrete slab. PI reading of 450 ppm inside void. Potential pit encountered. concrete slab at 15 ft.
			NO RECOVERY			0%		
5								
10						0%		

Boring terminated at 10 ft bgs
Note: TPV = Total Photoionizable Vapors in parts per million (PPM)



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LOG OF BORING B-14

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Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/29/2020	Northing Coord.	: N/A
	Hole Diameter	: 2 inches	Easting Coord.	: N/A
	Drilling Method	: Geoprobe Direct Push	Survey By	: N/A
	Sampling Method	: N/A	Logged By	: J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
DESCRIPTION								

0	CG	[Patterned Box]	CONCRETE					PID Reading of 44 ppm in open bore hole.
			NO RECOVERY			5%	0.0	
5	SW	[Patterned Box]	Brown, moist, loose, fine grained, SAND					Sample B-14 (8-10') collected
					60%	2.4	4.0	
10			Boring terminated at 10 ft bgs		▼			Groundwater sample B-14 collected

Note: TPV = Total Photoionizable Vapors in parts per million (PPM)



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LOG OF BORING B-15

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/29/2020	Northing Coord.	: N/A
	Hole Diameter	: 2 inches	Easting Coord.	: N/A
	Drilling Method	: Geoprobe Direct Push	Survey By	: N/A
	Sampling Method	: N/A	Logged By	: J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
DESCRIPTION								
0			Brown, moist, medium stiff, low plasticity, SILT, with sand				0.0	Sample B-15 (4-5') collected
	ML					40%	0.0	
5			Brown, moist, loose, fine grained, SAND				0.0	Groundwater sample B-15 collected
	SW					40%	0.0	
10	Boring terminated at 10 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)							



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LOG OF BORING B-16

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Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/28/2020	Northing Coord.	: N/A
	Hole Diameter	: 2 inches	Easting Coord.	: N/A
	Drilling Method	: Geoprobe Direct Push	Survey By	: N/A
	Sampling Method	: N/A	Logged By	: J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
DESCRIPTION								
0	CG		CONCRETE					
	GW		GRAVEL				0.0	
			Brown, moist, loose, fine grained, SAND			40%	0.0	
5	SW						0.0	Sample B-16 (7-9') collected
						60%	0.0	Groundwater sample B-16 collected

Boring terminated at 10 ft bgs
Note: TPV = Total Photoionizable Vapors in parts per million (PPM)



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LOG OF BORING B-17

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Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana

Project No. : 20-0963-01E
Boring Date : 10/29/2020
Hole Diameter : 2 inches
Drilling Method : Geoprobe Direct Push
Sampling Method : N/A

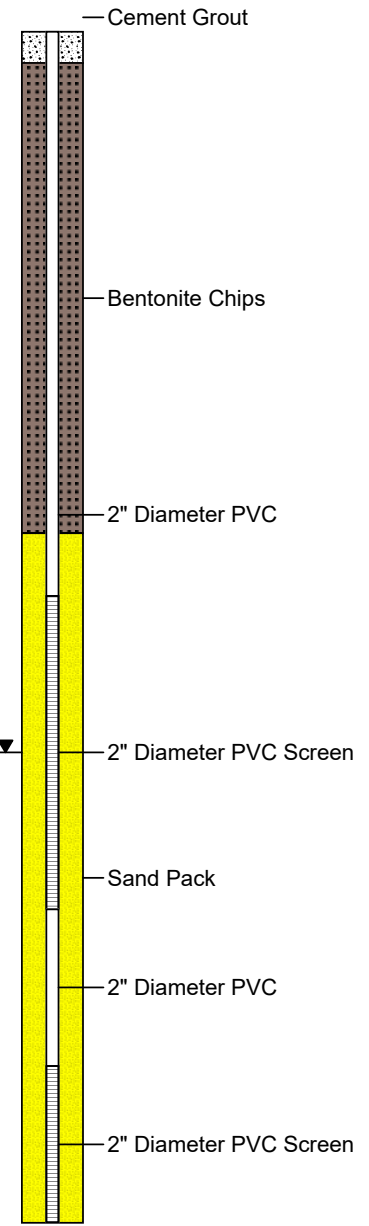
Company Rep. : Patriot Drilling
Northing Coord. : N/A
Easting Coord. : N/A
Survey By : N/A
Logged By : J. Cody

Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
			DESCRIPTION					
0	CG		CONCRETE			0%		
			NO RECOVERY					
5	SW		Brown, moist, loose, fine to medium grained, SAND			40%	0.0	Sample B-17 (7-9') collected
								0.0
10	Boring terminated at 10 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)							

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No. : 20-0963-01E	Company Rep. : Patriot Drilling
	Boring Date : 11/11/2020	Logged By : M. Runyon
	Hole Diameter : 2 inches	
	Drilling Method : DPT/HSA	
	Sampling Method : N/A	

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		REMARKS
					TPV	
0	CG		CONCRETE			
0 - 5			Brown, moist, loose, fine grained, SAND	30%	0.0	
5 - 15	SW		Brown, moist, loose, SAND, and substantial medium to coarse gravel	40%	0.0	
15 - 23			Brown, moist, loose, SAND, and substantial medium to coarse gravel	60%	0.0	
23 - 27	SW		Brown, moist, loose, SAND, and substantial medium to coarse gravel	40%	0.0	
27 - 30			Brown, moist, loose, SAND, and substantial medium to coarse gravel	40%	0.0	
30 - 35	SW		Brown, saturated, loose, SAND, and substantial medium to coarse gravel	50%	0.0	
35 - 38			Brown, saturated, loose, SAND, and substantial medium to coarse gravel	50%	0.0	
38 - 40			Boring terminated at 38 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)	50%	0.0	

Well: B-17
Elev.:





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LOG OF BORING B-18

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Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/29/2020	Northing Coord.	: N/A
	Hole Diameter	: 2 inches	Easting Coord.	: N/A
	Drilling Method	: Geoprobe Direct Push	Survey By	: N/A
	Sampling Method	: N/A	Logged By	: J. Cody


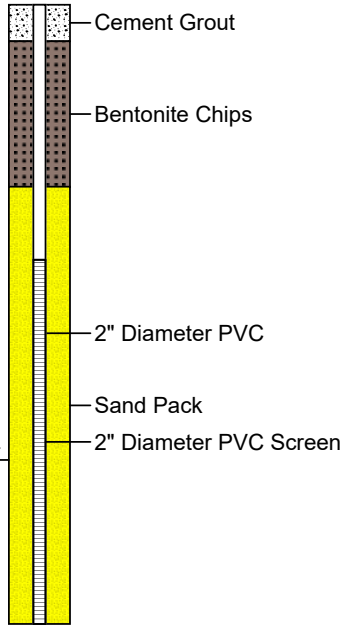




Depth in Feet	USCS	GRAPHIC	Water Levels		WATER LEVEL	RECOVERY	TPV	REMARKS
			▼ During Drilling	▽ After Completion				
DESCRIPTION								

0	CG		CONCRETE					
			NO RECOVERY				0.0	
5						0%		
						5%		Sample B-18 (8-10') collected
10								














Boring refusal at 12 ft bgs
Note: TPV = Total Photoionizable Vapors in parts per million (PPM)

15

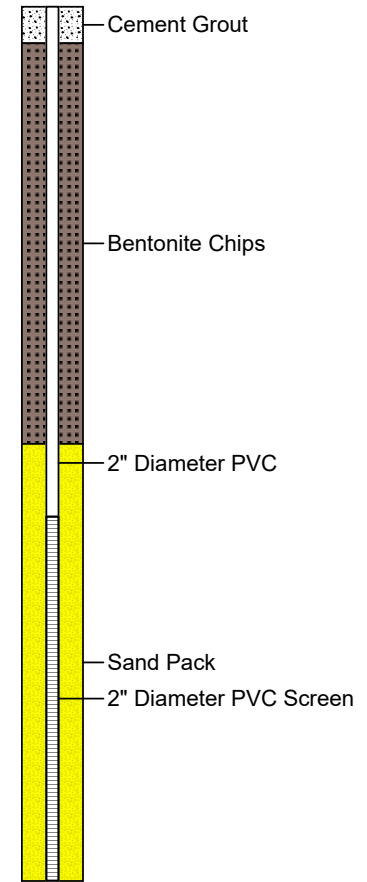
Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No. : 20-0963-01E	Company Rep. : Patriot Drilling
	Boring Date : 11/03/2020	Logged By : M. Runyon
	Hole Diameter : 2 inches	
	Drilling Method : DPT/HSA	
	Sampling Method : N/A	

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-34 Elev.:
0	CO		TOPSOIL				
			Brown, moist, medium stiff, non plastic, SILT, w/little coarse sand	70%	0.0		
					0.0		
5	ML						
			Brown, moist, medium dense, fine grained, SAND	80%	0.0		
					0.0		
10	SW						
			Brown and gray, saturated, medium dense, fine grained, SILTY SAND	70%	0.0		
			Brown, saturated, loose, fine grained, SAND, w/little small gravel		0.4		
			Brown, saturated, medium dense, fine to coarse grained, SAND, w/small to large gravel	50%	0.2		
					0.2		
20			Gray, saturated, loose, fine to coarse grained, SAND, w/some small to large gravel	40%	0.1		
					0.3		
25	SW						
					0.4	Sample NW-1 (26-28') collected	
					0.5		
30	CL		Gray, moist, hard, CLAY, w/little coarse sand	50%	0.2		
			Boring terminated at 30 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)				
35							

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/11/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		


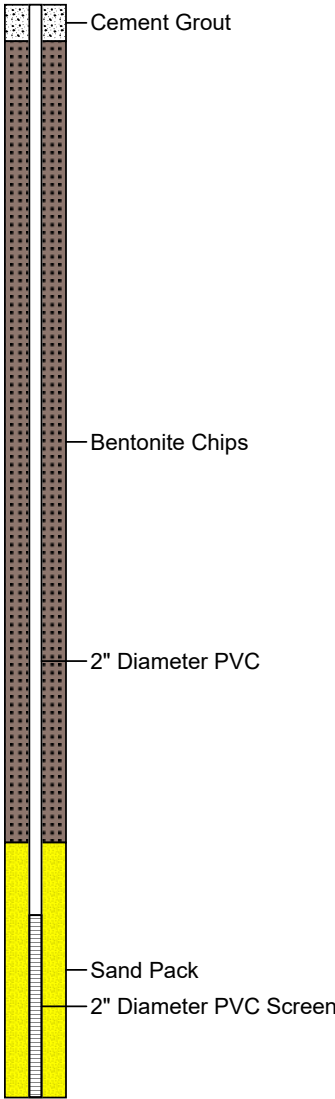









Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS
0	CO		TOPSOIL			
	SC		Brown, moist, medium stiff, high plasticity, SANDY CLAY	40%	0.0	
5	SC		Brown, moist, soft, high plasticity, SANDY CLAY		0.0	
	SW		Brown, moist, dense, fine grained, SAND	60%	0.0	
	SW		Brown, moist, dense, fine grained, SAND		0.0	
10	SC		Dark brown, moist, soft, high plasticity, SANDY CLAY		0.0	
	SW		Brown, moist, dense, fine grained, SAND	50%	0.4	
15	SW				0.7	
	SW		Brown, saturated, medium dense, fine grained, SAND	70%	1.0	Sample NW-2 (17-19') collected
20	SW		Brown, saturated, loose, fine to coarse grained, SAND, w/some small to large gravel	80%	0.1	
25	SW				0.0	
	SW			50%	0.0	
30	CL		Gray, slightly moist, medium stiff, CLAY, w/little coarse sand and small gravel			
35			Boring terminated at 33 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)			

Well: MW-35
Elev.:



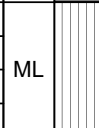


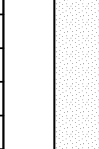
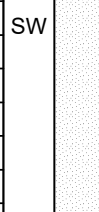
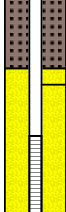

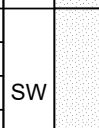
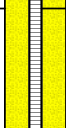













LOG OF BORING MW-35D

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/11/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		









Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-35D Elev.:
0	CO		TOPSOIL				
	SC		Brown, moist, medium stiff, high plasticity, SANDY CLAY	40%	0.0		
					0.0		
5	SC		Brown, moist, soft, high plasticity, SANDY CLAY		0.0		
	SW		Brown, moist, dense, fine grained, SAND	60%	0.0		
	SW		Brown, moist, dense, fine grained, SAND		0.0		
					0.0		
10	SC		Dark brown, moist, soft, high plasticity, SANDY CLAY	50%	0.0		
			Brown, moist, dense, fine grained, SAND		0.0		
					0.4		
15	SW			70%	0.7		
					1.0	Sample NW-2 (17-19') collected	
20	SW		Brown, saturated, medium dense, fine grained, SAND	80%	0.0		
			Brown, saturated, loose, fine to coarse grained, SAND, w/some small to large gravel		0.1		
					0.0		
25	SW			50%	0.0		
					0.0		
30	CL		Gray, slightly moist, medium stiff, CLAY, w/little coarse sand and small gravel		0.0		
35			Boring terminated at 33 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)				

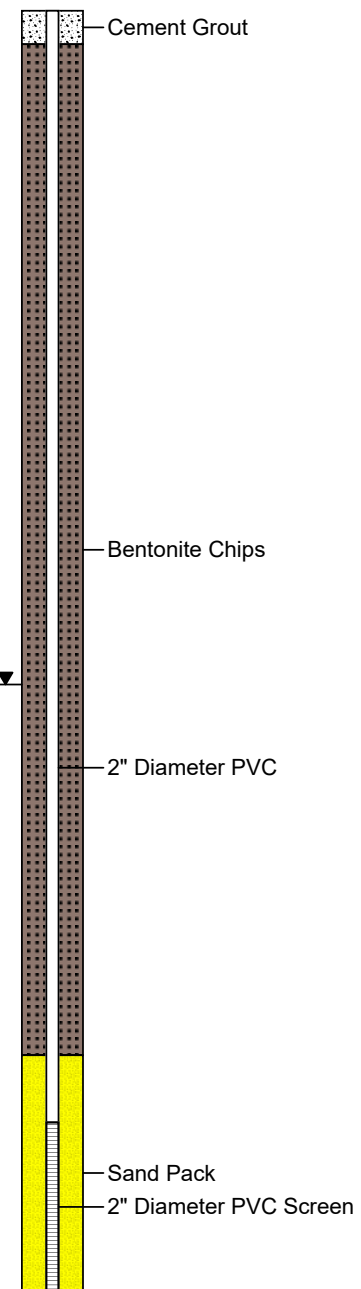
Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/11/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-37 Elev.:
0	CO		TOPSOIL	80%	0.0		
	ML		Brown, moist, medium stiff, non plastic, SILT		0.0		
5	SM		Brown, moist, soft, non plastic, SANDY SILT	40%	0.0		
			Light brown, moist, medium dense, fine grained, SAND		0.0		
10	SW		Brown, moist, medium dense, fine to coarse grained, SAND, w/little small to coarse gravel	70%	1.2	Sample NW-4 (13-15') collected	
					60%		
15	SW		Brown, saturated, loose, fine to coarse grained, SAND	40%	3.2		
					60%		
20	SW		Brown, saturated, loose, fine to coarse grained, SAND, w/some small to large gravel	60%	0.9		
					60%		
25	SW		Gray, moist, hard, high plasticity, CLAY, w/little coarse sand	30%	4.6		
					30%		
30	SW		Gray, moist, hard, high plasticity, CLAY, w/little coarse sand	70%	4.4		
					70%		
35	CL		Gray, moist, hard, high plasticity, CLAY, w/little coarse sand				
40			Boring terminated at 38 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)				






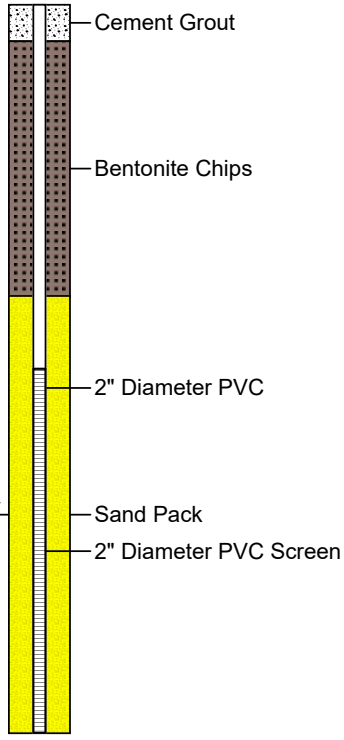






LOG OF BORING MW-37D

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/11/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-37D Elev.:
0	CO		TOPSOIL				
			Brown, moist, medium stiff, non plastic, SILT	80%	0.0		
	ML				0.0		
5	SM		Brown, moist, soft, non plastic, SANDY SILT		0.0		
			Light brown, moist, medium dense, fine grained, SAND	40%	0.0		
					0.0		
10	SW			70%	1.2		
					73.5	Sample NW-4 (13-15') collected	
15					5.7		
	SW		Brown, moist, medium dense, fine to coarse grained, SAND, w/little small to coarse gravel	60%	3.2		
20	SW		Brown, saturated, loose, fine to coarse grained, SAND	40%	3.0		
					0.9		
25			Brown, saturated, loose, fine to coarse grained, SAND, w/some small to large gravel	60%	6.0		
					4.6		
30	SW			30%	1.4		
					4.4		
35					4.7		
	CL		Gray, moist, hard, high plasticity, CLAY, w/little coarse sand	70%	4.7		
40			Boring terminated at 38 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)				














Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No. : 20-0963-01E	Company Rep. : Patriot Drilling
	Boring Date : 11/03/2020	Logged By : M. Runyon
	Hole Diameter : 2 inches	
	Drilling Method : DPT/HSA	
	Sampling Method : N/A	

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-38 Elev.:
0	CO		TOPSOIL				
0 - 5	ML		Brown, moist, soft, non plastic, SILT, w/little sand and large gravel	20%	0.0		
5 - 10	CL		Brown, moist, medium stiff, high plasticity, CLAY	80%	0.1		
10 - 15	CL		Brown, moist, soft, medium plasticity, CLAY, w/some fine sand		0.2		
15 - 20	SW		Brown, moist, loose, fine grained, SAND	70%	0.4	Sample NW-5 (12-14') collected	
20 - 25	SW		Brown, saturated, loose, fine to medium grained, SAND		0.5		
25 - 30	SW		Brown, saturated, loose, fine to coarse grained, SAND, w/some small to large gravel	70%	0.4		
30 - 35	SW		Brown, saturated, medium dense, fine to medium grained, SAND, w/little small gravel	70%	0.7		
35 - 40	SW		Gray, saturated, dense, fine to coarse grained, SAND, w/little small gravel		0.5		
40 - 45	SW		Gray, saturated, medium dense, fine to medium grained, SAND, w/some small to large gravel	60%	0.6		
45 - 50	CL		Gray, moist, hard, CLAY, w/little coarse sand		0.0		
Boring terminated at 30 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)							

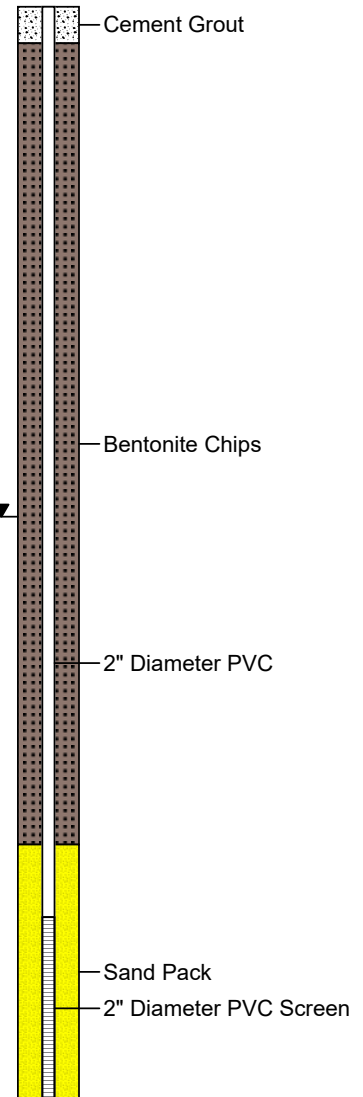
LOG OF BORING MW-38D

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/03/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS
0	CO		TOPSOIL			
0 - 5	ML		Brown, moist, soft, non plastic, SILT, w/little sand and large gravel	20%	0.0	
5 - 10	CL		Brown, moist, medium stiff, high plasticity, CLAY	80%	0.1	
10 - 15	CL		Brown, moist, soft, medium plasticity, CLAY, w/some fine sand		0.2	
15 - 20	SW		Brown, moist, loose, fine grained, SAND	70%	0.4	Sample NW-5 (12-14') collected
20 - 25	SW		Brown, saturated, loose, fine to medium grained, SAND		0.5	
25 - 30	SW		Brown, saturated, loose, fine to coarse grained, SAND, w/some small to large gravel	70%	0.4	
30 - 35	SW		Brown, saturated, medium dense, fine to medium grained, SAND, w/little small gravel	70%	0.7	
35 - 40	SW		Gray, saturated, dense, fine to coarse grained, SAND, w/little small gravel		0.9	
40 - 45	SW		Gray, saturated, medium dense, fine to medium grained, SAND, w/some small to large gravel	60%	0.6	
45 - 50	CL		Gray, moist, hard, CLAY, w/little coarse sand		0.0	

Boring terminated at 30 ft bgs
Note: TPV = Total Photoionizable Vapors in parts per million (PPM)

Well: MW-38D
Elev.:





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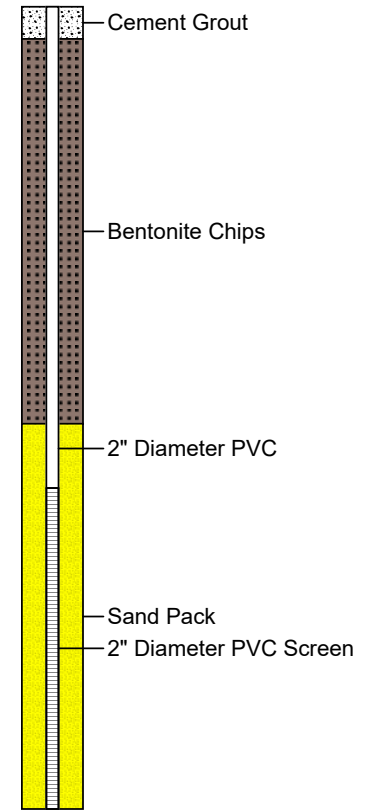
LOG OF BORING MW-39

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/03/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		REMARKS	
					TPV		
0	ML		Brown, moist, medium stiff, low plasticity, SILT	60%	0.0		
					0.0		
5	SW		Brown, moist, loose, fine grained, SAND	60%	0.0		
					0.0		
10					50%		0.0
15	SW		Brown, saturated, loose, fine grained, SAND	70%	0.0	Sample NW-6 (20-22') collected	
20					60%		0.0
25	SW		Brown, saturated, loose, medium to coarse grained, SAND, w/trace gravel	50%	0.0		
					50%		0.0
30					50%		0.0
35	CL		Gray, stiff, CLAY	50%	0.0		
40					50%		0.0

Well: MW-39
Elev.:



Boring terminated at 40 ft bgs
Note: TPV = Total Photoionizable Vapors
in parts per million (PPM)



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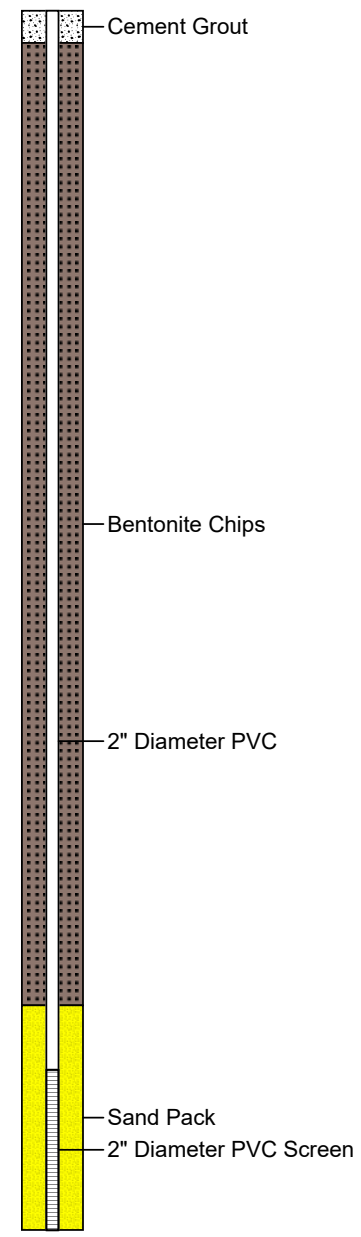
LOG OF BORING MW-39D

(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/03/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		REMARKS	
					TPV		
0	ML		Brown, moist, medium stiff, low plasticity, SILT	60%	0.0		
					0.0		
5	SW		Brown, moist, loose, fine grained, SAND	60%	0.0		
					0.0		
10					50%		0.0
15	SW		Brown, saturated, loose, fine grained, SAND	70%	0.0	Sample NW-6 (20-22') collected	
20					60%		0.0
25	SW		Brown, saturated, loose, medium to coarse grained, SAND, w/trace gravel	50%	0.0		
					50%		0.0
30					50%		0.0
35	CL		Gray, stiff, CLAY	50%	0.0		
40					50%		0.0






Well: MW-39D
Elev.:



Boring terminated at 40 ft bgs
Note: TPV = Total Photoionizable Vapors
in parts per million (PPM)

LOG OF BORING MW-40D

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No. : 20-0963-01E	Company Rep. : Patriot Drilling
	Boring Date : 10/28/2020	Logged By : V. Shah
	Hole Diameter : 2 inches	
	Drilling Method : DPT/HSA	
	Sampling Method : N/A	

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-40D Elev.:
0	SW		Brown, moist, loose, fine to medium grained, SAND, w/trace gravel	60%	0.0		 Cement Grout
					0.0		
5	SW		Brown, moist, very loose, fine grained, SAND	80%	0.0		 Bentonite Chips
					0.0		
10	SW		Brown, wet, very loose, fine grained, SAND	80%	0.0	Sample NW-7D (12-14') collected	 2" Diameter PVC
					0.0		
15	SW		Gray, moist, fine to medium grained, SAND, w/trace gravel	80%	0.0		 Sand Pack
					0.0		
20	SW		Gray, wet, medium dense, SAND, w/trace gravel and some silt	80%	0.8		 2" Diameter PVC Screen
					2.3		
25	SW		Gray, wet, stiff, medium plasticity, CLAY	90%	1.7		
					0.7		
30	CL		Gray, wet, stiff, medium plasticity, CLAY	95%	0.5		
					0.0		
35	Boring terminated at 35 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)						

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/02/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

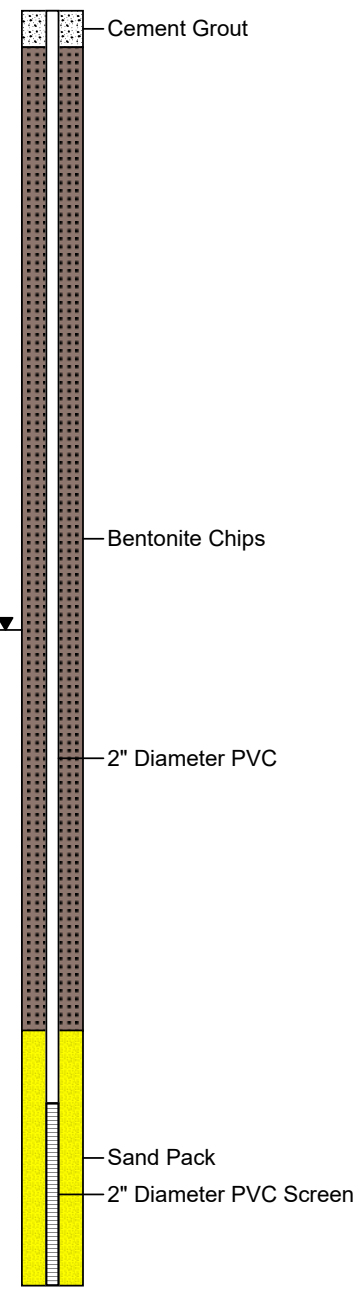
Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-41 Elev.:
0	CG		CONCRETE				
	SW		Brown, moist, loose, fine to coarse grained, SAND, w/little large gravel	100%	0.5		
	SM		Brown, moist, medium dense, SILTY SAND		0.8		
	CL		Dark brown, moist, stiff, medium plasticity, CLAY		1.1		
5	SW		Brown, moist, medium dense, fine to coarse grained, SAND, w/little large gravel	100%	1.5		
	ML		Brown, moist, medium stiff, non plastic, SILT, w/little coarse sand		1.8		
10	SM		Brown, moist, loose, fine to coarse grained, SAND	100%	1.8		
	SW		Brown, moist, loose, fine to coarse grained, SAND	100%	3.5		
15					4.2		
			Brown, saturated, medium dense, fine to coarse grained, SAND, w/trace small to gravel	60%	4.0		
20					7.4		
				70%	3.6	Sample NW-8 (22-24') collected	
					7.7		
25	SW				6.8		
				70%	6.1		
					7.5		
30					1.5		
				70%	1.0		
35	CL		Gray, moist, hard, CLAY, w/little coarse sand and small gravel		1.0		

Boring terminated at 35 ft bgs
Note: TPV = Total Photoionizable Vapors in parts per million (PPM)

LOG OF BORING MW-41D

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/02/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-41D Elev.:
0	CG		CONCRETE				
	SW		Brown, moist, loose, fine to coarse grained, SAND, w/little large gravel	100%	0.5		
	SM		Brown, moist, medium dense, SILTY SAND		0.8		
	CL		Dark brown, moist, stiff, medium plasticity, CLAY		1.1		
5	SW		Brown, moist, medium dense, fine to coarse grained, SAND, w/little large gravel	100%	1.5		
	ML		Brown, moist, medium stiff, non plastic, SILT, w/little coarse sand		1.8		
10	SM		Brown, moist, loose, fine to coarse grained, SAND		1.8		
	SW		Brown, moist, loose, fine to coarse grained, SAND	100%	3.5		
15	SW		Brown, saturated, medium dense, fine to coarse grained, SAND, w/trace small to gravel	60%	4.0		
					7.4		
20					3.6	Sample NW-8 (22-24') collected	
					7.7		
25	SW			70%	6.8		
					6.1		
30					7.5		
					1.5		
					1.0		
35	CL		Gray, moist, hard, CLAY, w/little coarse sand and small gravel		1.0		



Boring terminated at 35 ft bgs
Note: TPV = Total Photoionizable Vapors in parts per million (PPM)



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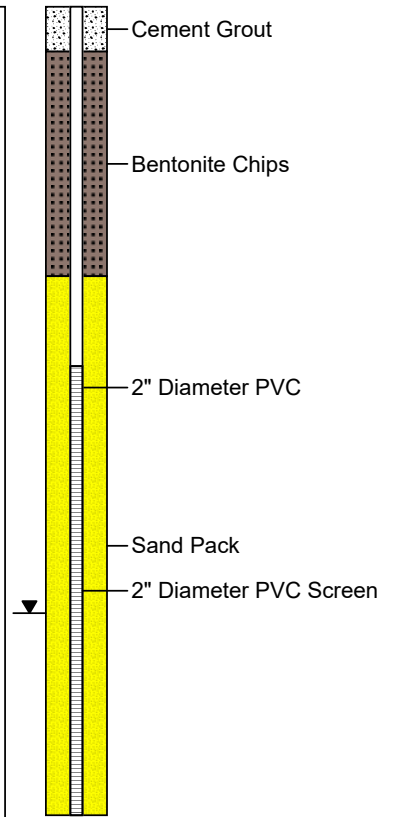
LOG OF BORING MW-42

(Page 1 of 2)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/30/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS
0	CG		CONCRETE			
	ML		Dark brown, moist, soft, low plasticity, SILT, w/trace large gravel	70%	0.5	
	ML		Brown, slightly moist, stiff, non plastic, SILT, w/some coarse sand		1.3	
5	CL		Dark brown, moist, soft, high plasticity, CLAY		1.1	
	ML		Brown, moist, stiff, non plastic, SILT, w/little coarse sand	100%	0.9	
	SW		Brown, moist, loose, fine to coarse grained, SAND, w/some small to large gravel		1.2	
10	SW		Brown, moist, loose, fine to coarse grained, SAND, w/trace small gravel	60%	0.9	
	SW		Brown, saturated, loose, fine to coarse grained, SAND		1.1	
15	SW		Brown, wet, medium dense, fine to coarse grained, SAND, w/little small gravel	80%	3.0	
	SW				3.6	
20					5.5	
	SW			70%	3.4	
	SW				2.9	
25					6.7	
30				0%		

Well: MW-42
Elev.:





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LOG OF BORING MW-42

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Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/30/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-42 Elev.:
30			Brown, wet, medium dense, fine to coarse grained, SAND, w/little small gravel			Sample NW-9 (30-32') collected	
				60%	7.4		
					6.6		
35					5.1		
				50%	4.3		
					6.4		
40	SW				4.5		
				50%	5.1		
					3.9		
				50%	4.2		
45				4.6			
				2.1			
				70%	1.6		
50			Green, moist, hard, CLAY, w/little coarse sand				
	CL						
55	Boring terminated at 55 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)						
60							



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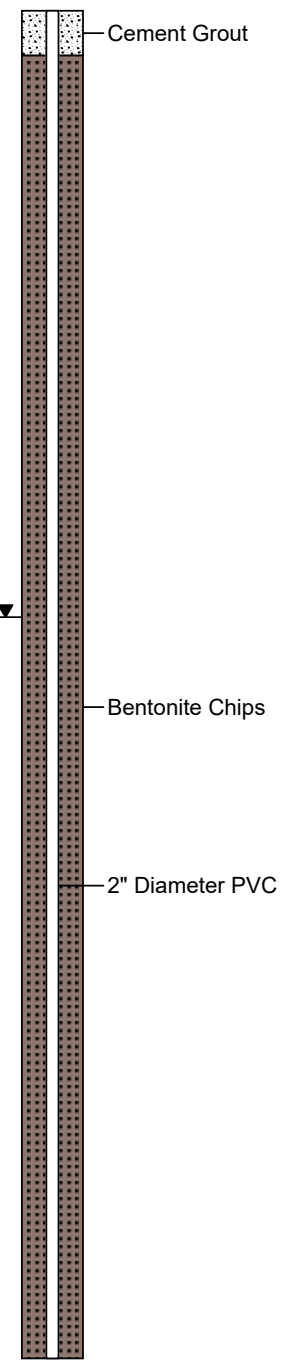
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LOG OF BORING MW-42D

(Page 1 of 2)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/30/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-42D Elev.:
0	CG		CONCRETE				
	ML		Dark brown, moist, soft, low plasticity, SILT, w/trace large gravel	70%	0.5		
	ML		Brown, slightly moist, stiff, non plastic, SILT, w/some coarse sand		1.3		
5	CL		Dark brown, moist, soft, high plasticity, CLAY		1.1		
	ML		Brown, moist, stiff, non plastic, SILT, w/little coarse sand	100%	0.9		
	SW		Brown, moist, loose, fine to coarse grained, SAND, w/some small to large gravel		1.2		
10	SW		Brown, moist, loose, fine to coarse grained, SAND, w/trace small gravel	60%	0.9		
	SW		Brown, saturated, loose, fine to coarse grained, SAND		1.1		
15	SW		Brown, wet, medium dense, fine to coarse grained, SAND, w/little small gravel	80%	3.0		
	SW				3.6		
20	SW			70%	5.5		
	SW				3.4		
25	SW			70%	2.9		
	SW				6.7		
30				0%			





Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Project No. : 20-0963-01E
Boring Date : 10/30/2020
Hole Diameter : 2 inches
Drilling Method : DPT/HSA
Sampling Method : N/A

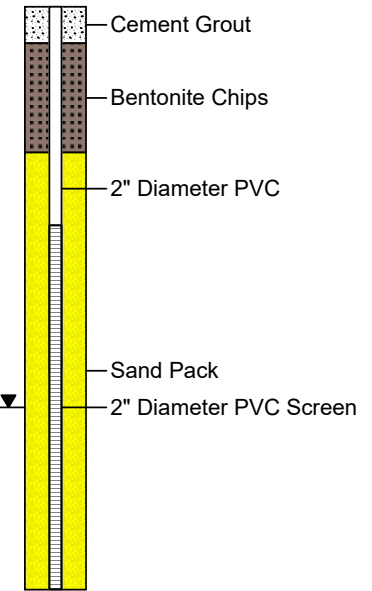
Company Rep. : Patriot Drilling
Logged By : M. Runyon

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-42D Elev.:
30			Brown, wet, medium dense, fine to coarse grained, SAND, w/little small gravel	60%	7.4	Sample NW-9 (30-32') collected	
		6.6					
35				50%	5.1		
		4.3					
40	SW			50%	6.4		
		4.5					
45				50%	5.1		
		3.9					
50				70%	4.2		
		4.6					
55	CL		Green, moist, hard, CLAY, w/little coarse sand		2.1		
					1.6		
60			Boring terminated at 55 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)				

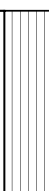
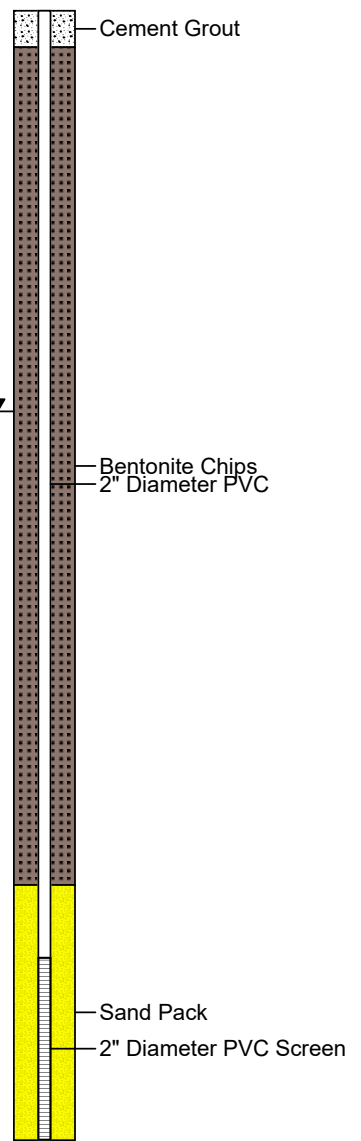











Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No. : 20-0963-01E	Company Rep. : Patriot Drilling
	Boring Date : 10/28/2020	Logged By : M. Runyon
	Hole Diameter : 2 inches	
	Drilling Method : DPT/HSA	
	Sampling Method : N/A	

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS
0			Brown, moist, soft, low plasticity, SILT		0.0	
	ML			80%	0.0	
5			Brown, moist, soft, low plasticity, SANDY SILT		0.6	
	SM					
			Gray, moist, loose, fine grained, SAND	80%	0.6	
	SW				0.3	
10			Brown and gray, moist, soft, low plasticity, SANDY SILT		0.5	
	SM			100%	0.8	
			Gray, saturated, loose, fine grained, SAND		0.8	
	SW				0.6	
15			Gray, moist, loose, fine to coarse grained, SAND	100%	0.9	
	SW				1.1	
20			Gray, moist, fine to coarse grained, SAND, w/little small gravel		1.2	
	SW			60%	1.0	
			Gray, moist, medium dense, fine grained, SAND		1.0	
	SW				1.2	
25			Gray, moist, dense, fine to coarse grained, SAND, w/little small gravel		0.9	
	SW			60%	0.9	
			Gray, saturated, medium dense, fine to coarse grained, SAND, w/some small to large gravel		0.9	Sample NW-10 (20-22') collected
30			Gray, moist, hard, high plasticity, CLAY, w/trace coarse sand		0.9	
	CL					
			Boring terminated at 31 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)			
35						

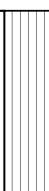
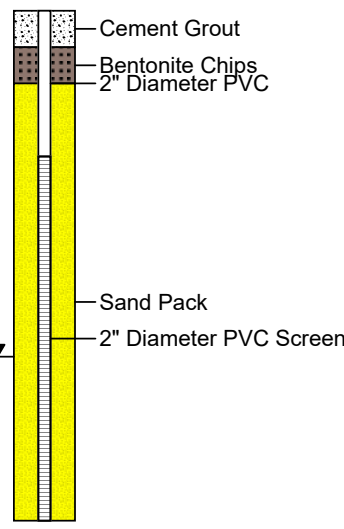

Well: MW-43
Elev.:



Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/28/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		


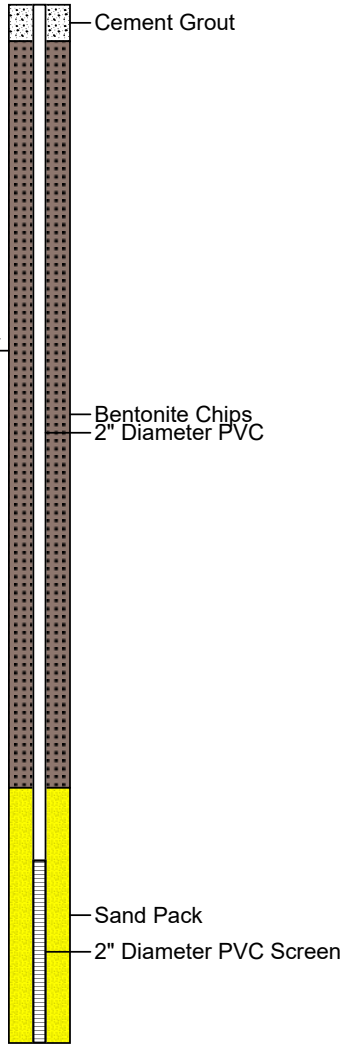

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-43D Elev.:
0	ML		Brown, moist, soft, low plasticity, SILT	80%	0.0		 <p>Cement Grout</p> <p>Bentonite Chips 2" Diameter PVC</p> <p>Sand Pack 2" Diameter PVC Screen</p>
5	SM		Brown, moist, soft, low plasticity, SANDY SILT	80%	0.6		
	SW		Gray, moist, loose, fine grained, SAND		0.6		
10	SM		Brown and gray, moist, soft, low plasticity, SANDY SILT	100%	0.5		
	SW		Gray, saturated, loose, fine grained, SAND		0.8		
15	SW		Gray, moist, loose, fine to coarse grained, SAND	100%	0.9		
20	SW		Gray, moist, fine to coarse grained, SAND, w/little small gravel		1.1		
	SW		Gray, moist, medium dense, fine grained, SAND	60%	1.0		
	SW		Gray, moist, dense, fine to coarse grained, SAND, w/little small gravel		1.2		
25	SW		Gray, saturated, medium dense, fine to coarse grained, SAND, w/some small to large gravel	60%	1.2	Sample NW-10 (20-22') collected	
	SW				0.9		
30	CL		Gray, moist, hard, high plasticity, CLAY, w/trace coarse sand		0.9		
35			Boring terminated at 31 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)				

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/30/2020	Logged By	: D. Lam
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-44 Elev.:
0	ML		Brown, moist, medium stiff, CLAYEY SILT, w/trace coarse sand	60%	0.5	Sample NW-11 (9') collected	
5			SM	Brown, dry, medium dense, medium to coarse grained, SAND with SILT and trace gravel	60%		
10	SM	Brown, saturated, medium dense, fine grained, SILTY SAND	40%	0.0			
15	SM	Brown, saturated, medium dense, fine to coarse grained, SILTY SAND	40%	0.0			
20	SM	Brown, saturated, dense, fine to coarse grained, SILTY SAND	50%	0.0			
25	CL		Dark gray, dry, hard, CLAY, w/trace coarse sand	40%	0.0		
30			Boring terminated at 29 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)				
35							

LOG OF BORING MW-44D

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/30/2020	Logged By	: D. Lam
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

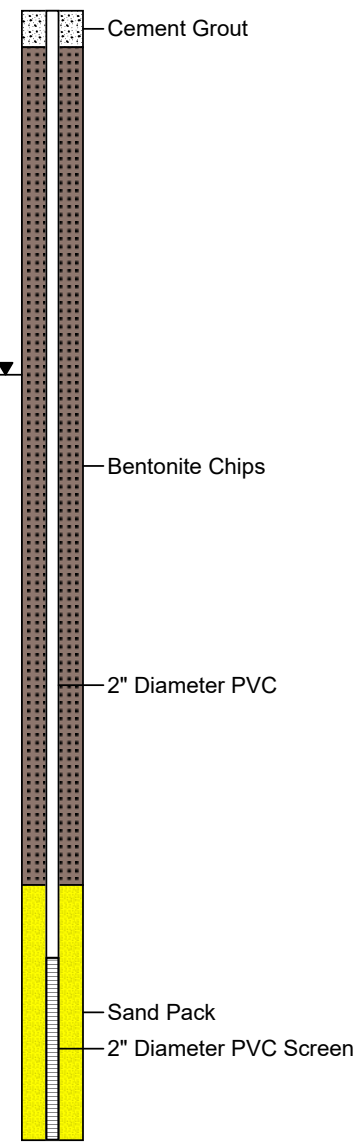
Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-44D Elev.:
0	ML		Brown, moist, medium stiff, CLAYEY SILT, w/trace coarse sand	60%	0.5	Sample NW-11 (9') collected	
5			SM	Brown, dry, medium dense, medium to coarse grained, SAND with SILT and trace gravel	60%		
10	SM	Brown, saturated, medium dense, fine grained, SILTY SAND	40%	0.0			
15	SM	Brown, saturated, medium dense, fine to coarse grained, SILTY SAND	40%	0.0			
20	SM	Brown, saturated, dense, fine to coarse grained, SILTY SAND	50%	0.0			
25	CL		Dark gray, dry, hard, CLAY, w/trace coarse sand	40%	0.0		
30			Boring terminated at 29 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)				
35							

LOG OF BORING MW-45D


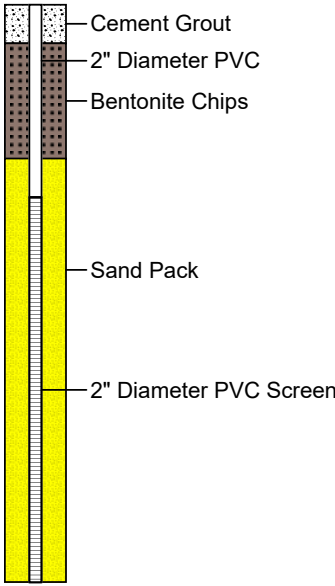





(Page 1 of 1)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 10/30/2020	Logged By	: D. Lam
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-45D Elev.:	
0			Brown, dry, soft, SANDY SILT, w/trace gravel	80%	0.0			
5	SM							
			Brown, dry, loose, fine grained, SAND, w/trace gravel	70%	0.0	Sample NW-12 (9') collected		
10	SW							
			Brown, saturated, loose to medium dense, medium grained, SAND, w/trace gravel	50%	0.0			
15	SW							
			Brown, saturated, medium dense to loose, medium to coarse grained, SAND, w/trace silt and gravel	45%	0.0			
20	SW							
			Light brown, saturated, dense, coarse grained, SAND, w/trace silt	40%	0.0			
25	SW							
				40%				
30	CL		Dark gray, dry, hard, CLAY, w/trace coarse grained sand					
35			Boring terminated at 31 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)					



Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/06/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-46 Elev.:
0	CO		TOPSOIL				
	GW		Gray, moist, loose, small to large GRAVEL w/some sand	60%	0.0		
	CL		Gray and brown, moist, medium stiff, high plasticity, CLAY, w/little small gravel		0.0		
5	SW		Brown, moist, loose, fine to coarse grained, SAND	60%	0.0	Sample NW-13 (7-9') collected	
					0.0		
10			Gray, saturated, loose, medium to coarse grained, SAND, w/some small to large gravel	50%	0.0		
					0.0		
15	SW			50%	0.0		
					0.0		
20				20%	0.0		
					0.0		
25			Gray, moist, medium dense, medium to coarse grained, SAND, w/trace gravel	50%	0.0		
					0.0		
30	SW			50%	0.0		
					0.0		
35					0.0		



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LOG OF BORING MW-46

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Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/06/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		TPV	REMARKS
35	SW		Gray, moist, medium dense, medium to coarse grained, SAND, w/trace gravel	50%	0.0	0.0	Well: MW-46 Elev.:
40			Gray, moist, medium dense, medium to coarse grained, SAND				
45	SW		Gray, saturated, medium dense, medium to coarse grained, SAND, w/some small to large gravel	50%	0.0	0.0	
50				40%	0.1	0.0	
55				30%	0.0	0.0	
60				20%	0.0	0.0	
65	SW			50%	0.0	0.0	
70				40%	0.4	0.4	



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LOG OF BORING MW-46

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Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Project No. : 20-0963-01E
Boring Date : 11/06/2020
Hole Diameter : 2 inches
Drilling Method : DPT/HSA
Sampling Method : N/A

Company Rep. : Patriot Drilling
Logged By : M. Runyon

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		REMARKS
					TPV	
70			Gray, saturated, medium dense, medium to coarse grained, SAND, w/some small to large gravel	50%	0.0	Well: MW-46 Elev.:
					0.0	
75				30%	0.0	
					0.0	
80				20%	0.0	
					0.0	
85	SW			50%	0.0	
					0.0	
90				50%	0.0	
					0.0	
95			70%			
	CL			Gray, moist, stiff, high plasticity, CLAY		
	ML		Dark brown, moist, hard, non plastic, SILT			
100	Boring terminated at 100 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)					
105						



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LOG OF BORING MW-46D

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Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/06/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-46D Elev.:
0	CO		TOPSOIL				
	GW		Gray, moist, loose, small to large GRAVEL w/some sand	60%	0.0		
	CL		Gray and brown, moist, medium stiff, high plasticity, CLAY, w/little small gravel		0.0		
5	SW		Brown, moist, loose, fine to coarse grained, SAND	60%	0.0	Sample NW-13 (7-9') collected	
			Gray, saturated, loose, medium to coarse grained, SAND, w/some small to large gravel	50%	0.0		
				50%	0.0		
				50%	0.0		
				20%	0.0		
25	SW		Gray, moist, medium dense, medium to coarse grained, SAND, w/trace gravel	50%	0.0		
				50%	0.0		
30	SW			50%	0.0		
				50%	0.0		
35							



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LOG OF BORING MW-46D

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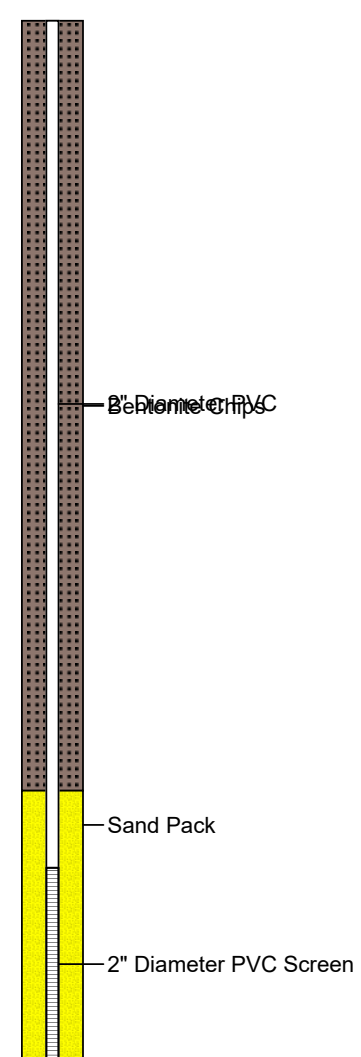


Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Project No. : 20-0963-01E
Boring Date : 11/06/2020
Hole Diameter : 2 inches
Drilling Method : DPT/HSA
Sampling Method : N/A

Company Rep. : Patriot Drilling
Logged By : M. Runyon

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		REMARKS	
					TPV		
35	SW		Gray, moist, medium dense, medium to coarse grained, SAND, w/trace gravel	50%	0.0		
40			Gray, moist, medium dense, medium to coarse grained, SAND		0.0		
45	SW		Gray, saturated, medium dense, medium to coarse grained, SAND, w/some small to large gravel	40%	0.1		
50					0.0		
55					0.0		
60					0.0		
65	SW			20%	0.0		
70					0.0		
				40%	0.4		

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/06/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		REMARKS
					TPV	
70			Gray, saturated, medium dense, medium to coarse grained, SAND, w/some small to large gravel	50%	0.0	Well: MW-46D Elev.: 
75		30%		0.0		
80		20%		0.0		
85	SW			50%	0.0	
90				50%	0.0	
95				50%	0.0	
	CL		Gray, moist, stiff, high plasticity, CLAY	70%		
	ML		Dark brown, moist, hard, non plastic, SILT			
100	Boring terminated at 100 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)					
105						



LOG OF BORING MW-46I

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Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/06/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-46I Elev.:
0	CO		TOPSOIL				
	GW		Gray, moist, loose, small to large GRAVEL w/some sand	60%	0.0		
	CL		Gray and brown, moist, medium stiff, high plasticity, CLAY, w/little small gravel		0.0		
5	SW		Brown, moist, loose, fine to coarse grained, SAND	60%	0.0	Sample NW-13 (7-9') collected	
			Gray, saturated, loose, medium to coarse grained, SAND, w/some small to large gravel	50%	0.0		
10				50%	0.0		
15	SW			50%	0.0		
20				20%	0.0		
25			Gray, moist, medium dense, medium to coarse grained, SAND, w/trace gravel	50%	0.0		
30	SW			50%	0.0		
35					0.0		



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Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Project No. : 20-0963-01E
Boring Date : 11/06/2020
Hole Diameter : 2 inches
Drilling Method : DPT/HSA
Sampling Method : N/A

Company Rep. : Patriot Drilling
Logged By : M. Runyon

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		REMARKS
					TPV	
35	SW		Gray, moist, medium dense, medium to coarse grained, SAND, w/trace gravel	50%	0.0	<p>Well: MW-46I Elev.:</p>
40			Gray, moist, medium dense, medium to coarse grained, SAND		0.0	
45	SW		Gray, saturated, medium dense, medium to coarse grained, SAND, w/some small to large gravel	40%	0.1	
50					0.0	
55					0.0	
60					0.0	
65	SW			20%	0.0	
70					0.4	



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LOG OF BORING MW-46I

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Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

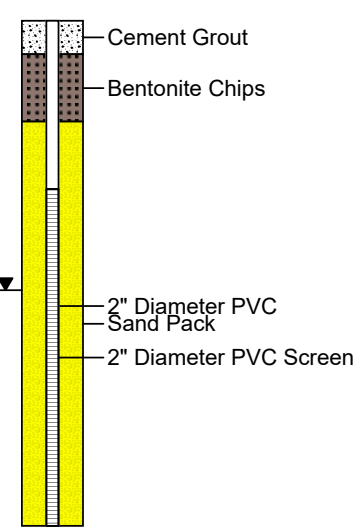
Project No. : 20-0963-01E
Boring Date : 11/06/2020
Hole Diameter : 2 inches
Drilling Method : DPT/HSA
Sampling Method : N/A

Company Rep. : Patriot Drilling
Logged By : M. Runyon

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		REMARKS
					TPV	
70	SW		Gray, saturated, medium dense, medium to coarse grained, SAND, w/some small to large gravel	50%	0.0	
75				30%	0.0	
80				20%	0.0	
85				50%	0.0	
90				50%	0.0	
95				50%	0.0	
				70%	0.0	
	CL		Gray, moist, stiff, high plasticity, CLAY			
	ML		Dark brown, moist, hard, non plastic, SILT			
100	Boring terminated at 100 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)					
105						

Well: MW-46I
Elev.:

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/04/2020	Logged By	: J. Cody
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		REMARKS
					TPV	
0			Brown, moist, soft, medium plasticity, SILT	40%	0.0	Well: MW-47 Elev.: 
5	ML				0.0	
				80%	0.0	
10			Gray, saturated, loose, SAND		0.0	
				60%	0.0	
15	SW				0.0	
				60%	0.0	
20			Brown, saturated, loose, medium to coarse grained, SAND		0.0	
				50%	0.0	
25					0.0	
				30%	0.0	
30	SW				0.0	
				30%	0.0	
35					0.0	
				50%	0.0	
40	SW		Brown, saturated, soft, fine grained, SAND		0.0	
				50%	0.0	

Sample NW-14 (23-25') collected



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LOG OF BORING MW-47

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Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Project No. : 20-0963-01E
Boring Date : 11/04/2020
Hole Diameter : 2 inches
Drilling Method : DPT/HSA
Sampling Method : N/A

Company Rep. : Patriot Drilling
Logged By : J. Cody

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		TPV	REMARKS
40	SW		Brown, saturated, soft, fine grained, SAND			0.0	Well: MW-47 Elev.:
				50%	0.0		
45							
				40%	0.0		
50							
				40%	0.0		
55							
				50%	0.0		
60							
				50%	0.0		
65							
70	CL		Gray, stiff, high plasticity, CLAY	50%	0.0		
	Boring terminated at 70 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)						
75							
80							



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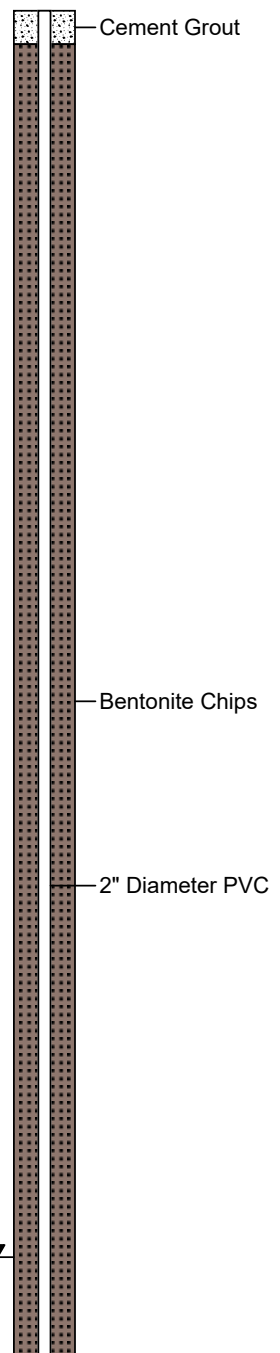
LOG OF BORING MW-47D

(Page 1 of 2)

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/04/2020	Logged By	: J. Cody
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		REMARKS
					TPV	
0			Brown, moist, soft, medium plasticity, SILT		0.0	Well: MW-47D Elev.:
5	ML			40%	0.0	
					0.0	
			Gray, saturated, loose, SAND	80%	0.0	
10					0.0	
					0.0	
					0.0	
15	SW			60%	0.0	
					0.0	
					0.0	
20			Brown, saturated, loose, medium to coarse grained, SAND	50%	0.0	
					0.0	
25					0.0	
					0.0	
					0.0	
30	SW			30%	0.0	
					0.0	
					0.0	
35					0.0	
					0.0	
					0.0	
40	SW		Brown, saturated, soft, fine grained, SAND	50%	0.0	

Sample NW-14 (23-25')
collected





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LOG OF BORING MW-47D

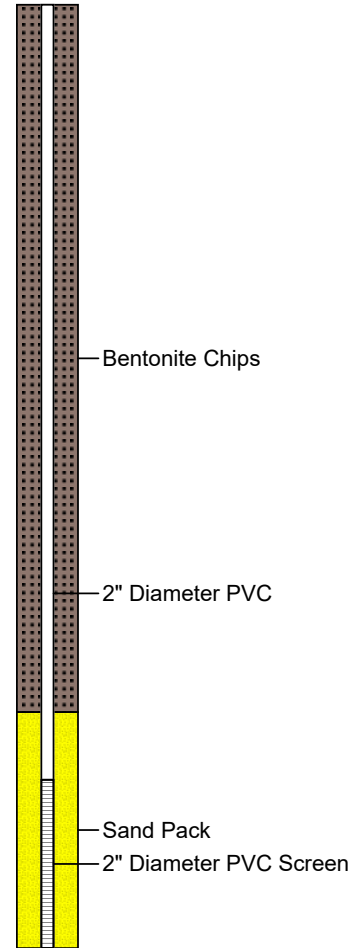
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Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567


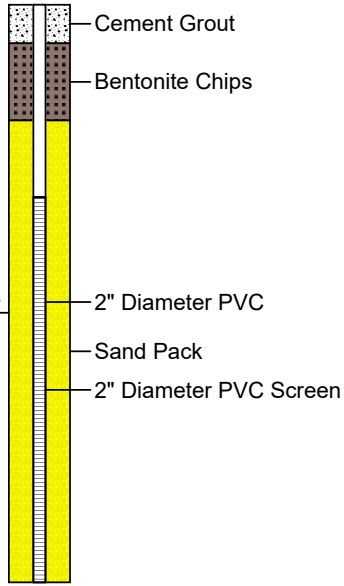













Project No. : 20-0963-01E
Boring Date : 11/04/2020
Hole Diameter : 2 inches
Drilling Method : DPT/HSA
Sampling Method : N/A

Company Rep. : Patriot Drilling
Logged By : J. Cody

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY		TPV	REMARKS
40	SW		Brown, saturated, soft, fine grained, SAND	50%	0.0		Well: MW-47D Elev.:
45				40%	0.0		
50				40%	0.0		
55				50%	0.0		
60				50%	0.0		
65				50%	0.0		
70	CL		Gray, stiff, high plasticity, CLAY	50%	0.0		
Boring terminated at 70 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)							
75							
80							



Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/04/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-48 Elev.:
0	CO		TOPSOIL				
0.4	ML		Brown, moist, medium stiff, non plastic, SILT, w/trace coarse sand	80%	0.4		
5	SW		Brown, moist, loose, fine to coarse grained, SAND, w/some small and large gravel	60%	0.3		
10	SW		Brown, saturated, loose, medium to coarse grained, SAND, w/some small to large gravel	60%	0.0		
15	SW		Gray, saturated, medium dense, medium to coarse grained, SAND, w/little small gravel	70%	0.9		
20	ML		Gray, moist, stiff, low plasticity, SILT, w/trace coarse gravel	80%	0.4		
25	ML		Gray, moist, stiff, SILT, w/trace sand and small to large gravel	100%	0.9		
30	ML		Gray, moist, stiff, SILT, w/trace coarse sand	100%	1.3		
30	SW		Gray, moist, stiff, SILT, w/trace coarse sand	100%	1.5	Sample NW-15 (24-26') collected	
30	SW		Gray, saturated, loose, fine to coarse grained, SAND	100%	1.7		
30	ML		Gray, moist, stiff, SILT, w/trace coarse sand	100%	1.2		
30	ML		Gray, moist, stiff, SILT, w/trace coarse sand	90%	1.6		
35	SW		Gray, saturated, loose, fine to coarse grained, SAND, w/some small gravel	90%	0.4		
35	SW		Gray, saturated, loose, fine to coarse grained, SAND, w/some small gravel	90%	0.2		
















Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/04/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

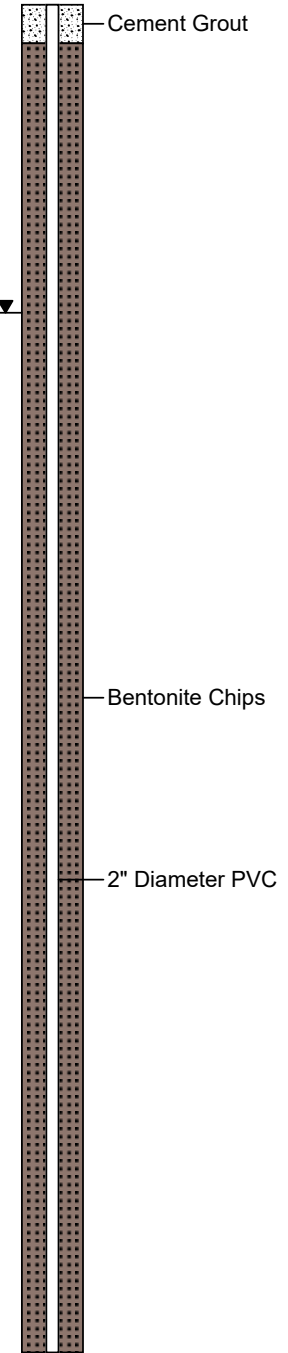
Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS
35	SW		Gray, saturated, loose, fine grained, SAND	60%	0.9	
					0.4	
40	SW		Gray, saturated, medium dense, fine to coarse grained, SAND, w/some small gravel	70%	0.2	
	SW		Gray, saturated, medium dense, fine to coarse grained, SAND, w/some small gravel		0.4	
	ML		Gray, moist, stiff, low plasticity, SILT, w/little coarse sand and small gravel		0.4	
45	SW		Gray, saturated, loose, fine to medium grained, SAND	80%	0.2	
	ML		Gray, moist, hard, low plasticity, w/little coarse sand and small gravel		0.3	
50	SW		Gray, saturated, dense, fine grained, SAND	80%	0.3	
	ML		Gray, moist, hard, low plasticity, SILT, w/little coarse sand and small gravel		0.4	
	SM		Gray, saturated, dense, fine grained, SILTY SAND		0.3	
55	CL		Gray, saturated, soft, high plasticity, CLAY, w/little fine sand	20%	0.0	
					0.0	
60					0.0	
Boring terminated at 60 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)						
65						
70						

Well: MW-48
Elev.:

LOG OF BORING MW-48D


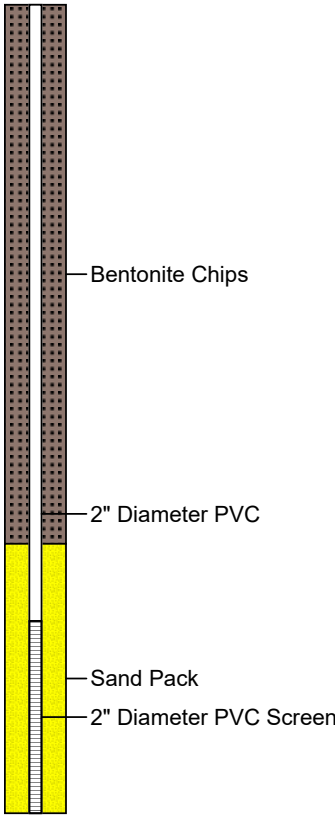








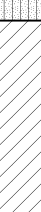
Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/04/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-48D Elev.:
0	CO		TOPSOIL				
0.4	ML		Brown, moist, medium stiff, non plastic, SILT, w/trace coarse sand	80%	0.4		
5	SW		Brown, moist, loose, fine to coarse grained, SAND, w/some small and large gravel	60%	0.3		
10	SW		Brown, saturated, loose, medium to coarse grained, SAND, w/some small to large gravel	70%	0.0		
15	SW		Gray, saturated, medium dense, medium to coarse grained, SAND, w/little small gravel	80%	0.9		
20	ML		Gray, moist, stiff, low plasticity, SILT, w/trace coarse gravel	80%	0.4		
25	ML		Gray, moist, stiff, SILT, w/trace sand and small to large gravel	100%	0.2		
30	ML		Gray, moist, stiff, SILT, w/trace coarse sand	100%	1.3		
30	SW		Gray, saturated, loose, fine to coarse grained, SAND	100%	1.5	Sample NW-15 (24-26') collected	
30	ML		Gray, moist, stiff, SILT, w/trace coarse sand	100%	1.2		
35	SW		Gray, saturated, loose, fine to coarse grained, SAND, w/some small gravel	90%	1.6		
35	ML		Gray, moist, stiff, SILT, w/trace coarse sand	90%	0.4		
35	SW		Gray, saturated, loose, fine to coarse grained, SAND, w/some small gravel	90%	0.2		

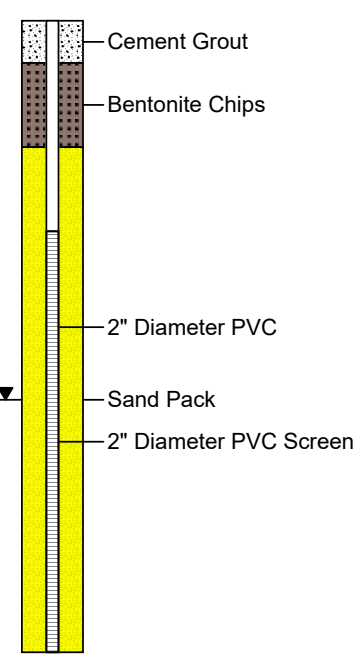


LOG OF BORING MW-48D












Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No.	: 20-0963-01E	Company Rep.	: Patriot Drilling
	Boring Date	: 11/04/2020	Logged By	: M. Runyon
	Hole Diameter	: 2 inches		
	Drilling Method	: DPT/HSA		
	Sampling Method	: N/A		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-48D Elev.:
35	SW		Gray, saturated, loose, fine grained, SAND	60%	0.9		
40	SW		Gray, saturated, medium dense, fine to coarse grained, SAND, w/some small gravel		0.4		
	SW		Gray, saturated, medium dense, fine to coarse grained, SAND, w/some small gravel	70%	0.2		
	ML		Gray, moist, stiff, low plasticity, SILT, w/little coarse sand and small gravel		0.4		
45	SW		Gray, saturated, loose, fine to medium grained, SAND	80%	0.4		
	ML		Gray, moist, hard, low plasticity, w/little coarse sand and small gravel		0.3		
50	SW		Gray, saturated, dense, fine grained, SAND	80%	0.3		
	ML		Gray, moist, hard, low plasticity, SILT, w/little coarse sand and small gravel		0.4		
	SM		Gray, saturated, dense, fine grained, SILTY SAND	20%	0.3		
55	CL		Gray, saturated, soft, high plasticity, CLAY, w/little fine sand		0.0		
60			Boring terminated at 60 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)		0.0		
65					0.0		
70					0.0		

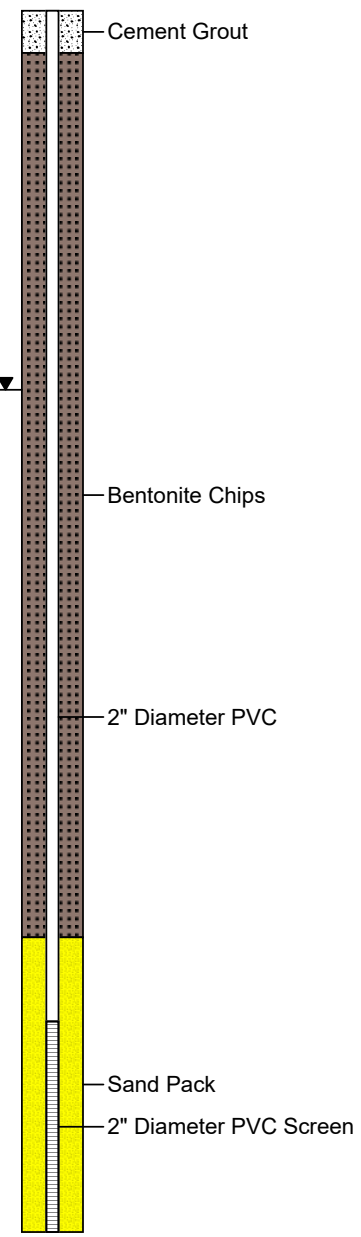
Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No. : 20-0963-01E	Company Rep. : Patriot Drilling
	Boring Date : 11/10/2020	Logged By : M. Runyon
	Hole Diameter : 2 inches	
	Drilling Method : DPT/HSA	
	Sampling Method : N/A	

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS	Well: MW-49 Elev.:
0	ML		Brown, moist, medium stiff, low plasticity, SILT, w/little small gravel	40%	0.0		
5	SW		Brown, moist, loose, fine to coarse grained, SAND, w/some small gravel	60%	0.3		
	SW		Brown, moist, loose, fine to coarse grained, SAND, w/some small to large gravel		0.1		
10	SW		Brown, saturated, loose, medium to coarse grained, SAND, w/some small to large gravel	50%	0.2		
	SW		Gray, saturated, loose, medium to coarse grained, SAND, w/some small to large gravel		0.5		
15	CL		Gray, moist, very stiff, high plasticity, CLAY, w/little coarse sand	90%	0.6		
20	SC		Gray, saturated, dense, fine grained, CLAYEY SAND		2.3	Sample NW-16 (18-20') collected	
25	CL		Gray, moist, very stiff, high plasticity, CLAY, w/little coarse sand and small gravel	90%	0.6		
	SW		Gray, saturated, loose, medium to coarse grained, SAND, w/little small to large gravel		1.1		
30	CL		Gray, moist, hard, high plasticity, CLAY	0.7	0.4		
Boring terminated at 30 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)							

Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	Project No. : 20-0963-01E	Company Rep. : Patriot Drilling
	Boring Date : 11/10/2020	Logged By : M. Runyon
	Hole Diameter : 2 inches	
	Drilling Method : DPT/HSA	
	Sampling Method : N/A	

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	RECOVERY	TPV	REMARKS
0	ML		Brown, moist, medium stiff, low plasticity, SILT, w/little small gravel	40%	0.0	
5	SW		Brown, moist, loose, fine to coarse grained, SAND, w/some small gravel	60%	0.3	
	SW		Brown, moist, loose, fine to coarse grained, SAND, w/some small to large gravel		0.1	
10	SW		Brown, saturated, loose, medium to coarse grained, SAND, w/some small to large gravel	50%	0.2	
15	SW		Gray, saturated, loose, medium to coarse grained, SAND, w/some small to large gravel	50%	0.0	
20	CL		Gray, moist, very stiff, high plasticity, CLAY, w/little coarse sand	90%	0.5	
	CL		Gray, moist, very stiff, high plasticity, CLAY, w/little coarse sand and small gravel	90%	0.6	Sample NW-16 (18-20') collected
25	SC		Gray, saturated, dense, fine grained, CLAYEY SAND	90%	2.3	
	CL		Gray, moist, very stiff, high plasticity, CLAY, w/little coarse sand and small gravel	90%	0.6	
	SW		Gray, saturated, loose, medium to coarse grained, SAND, w/little small to large gravel	90%	1.1	
30	CL		Gray, moist, hard, high plasticity, CLAY	90%	0.7	
	SW		Gray, saturated, loose, medium to coarse grained, SAND, w/little small to large gravel	90%	0.4	
	CL		Gray, moist, hard, high plasticity, CLAY	90%	0.4	

Well: MW-49D
Elev.:



Boring terminated at 30 ft bgs
Note: TPV = Total Photoionizable Vapors
in parts per million (PPM)

ATTACHMENT 2

Laboratory Reports – March 2021 GW Sampling

March 17, 2021

Mr. James Cody
Patriot Engineering
6150 E 75th St
Indianapolis, IN 46250

RE: Project: Houghland Canning FSI #4
Pace Project No.: 50281332

Dear Mr. Cody:

Enclosed are the analytical results for sample(s) received by the laboratory between March 04, 2021 and March 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Tina Sayer
tina.sayer@pacelabs.com
(317)228-3100
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50281332001	MW-40	Water	03/03/21 17:55	03/04/21 09:20
50281332002	MW-40D	Water	03/03/21 17:15	03/04/21 09:20
50281332003	MW-41	Water	03/03/21 16:25	03/04/21 09:20
50281332004	MW-41D	Water	03/03/21 15:35	03/04/21 09:20
50281332005	MW-44	Water	03/03/21 14:30	03/04/21 09:20
50281332006	MW-44D	Water	03/03/21 13:55	03/04/21 09:20
50281332007	MW-45	Water	03/03/21 12:45	03/04/21 09:20
50281332008	MW-45D	Water	03/03/21 12:10	03/04/21 09:20
50281332009	MW-46	Water	03/02/21 13:15	03/04/21 09:20
50281332010	MW-46I	Water	03/02/21 12:10	03/04/21 09:20
50281332011	MW-46D	Water	03/02/21 11:25	03/04/21 09:20
50281332012	MW-47	Water	03/02/21 16:05	03/04/21 09:20
50281332013	MW-47I	Water	03/02/21 15:35	03/04/21 09:20
50281332014	MW-47D	Water	03/02/21 14:05	03/04/21 09:20
50281332015	MW-48	Water	03/02/21 17:10	03/04/21 09:20
50281332016	MW-48D	Water	03/02/21 16:40	03/04/21 09:20
50281332017	MW-49	Water	03/03/21 11:25	03/04/21 09:20
50281332018	MW-49D	Water	03/03/21 10:35	03/04/21 09:20
50281332019	Dup-1	Water	03/02/21 08:00	03/04/21 09:20
50281332020	Trip Blank	Water	03/02/21 08:00	03/04/21 09:20
50281482001	MW-34	Water	03/04/21 16:25	03/05/21 15:55
50281482002	MW-34D	Water	03/04/21 15:45	03/05/21 15:55
50281482003	MW-35	Water	03/04/21 17:45	03/05/21 15:55
50281482004	MW-35D	Water	03/04/21 17:10	03/05/21 15:55
50281482005	MW-36	Water	03/05/21 12:10	03/05/21 15:55
50281482006	MW-36D	Water	03/05/21 11:30	03/05/21 15:55
50281482007	MW-37	Water	03/05/21 13:50	03/05/21 15:55
50281482008	MW-37D	Water	03/05/21 12:55	03/05/21 15:55
50281482009	MW-38	Water	03/04/21 13:25	03/05/21 15:55
50281482010	MW-38D	Water	03/04/21 12:45	03/05/21 15:55
50281482011	MW-39	Water	03/04/21 15:05	03/05/21 15:55
50281482012	MW-39D	Water	03/04/21 14:20	03/05/21 15:55
50281482013	MW-42	Water	03/05/21 10:35	03/05/21 15:55
50281482014	MW-42D	Water	03/05/21 10:00	03/05/21 15:55
50281482015	MW-43	Water	03/04/21 11:50	03/05/21 15:55
50281482016	MW-43D	Water	03/04/21 11:00	03/05/21 15:55
50281482017	Dup-2	Water	03/05/21 08:00	03/05/21 15:55

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SAMPLE SUMMARY

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50281482018	Trip Blank	Water	03/04/21 08:00	03/05/21 15:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50281332001	MW-40	EPA 5030/8260	ALA	75	PASI-I
50281332002	MW-40D	EPA 5030/8260	ALA	75	PASI-I
50281332003	MW-41	EPA 5030/8260	ALA	75	PASI-I
50281332004	MW-41D	EPA 5030/8260	ALA	75	PASI-I
50281332005	MW-44	EPA 5030/8260	ALA	75	PASI-I
50281332006	MW-44D	EPA 5030/8260	ALA	75	PASI-I
50281332007	MW-45	EPA 5030/8260	ALA	75	PASI-I
50281332008	MW-45D	EPA 5030/8260	ALA	75	PASI-I
50281332009	MW-46	EPA 5030/8260	ALA	75	PASI-I
50281332010	MW-46I	EPA 5030/8260	ALA	75	PASI-I
50281332011	MW-46D	EPA 5030/8260	ALA	75	PASI-I
50281332012	MW-47	EPA 5030/8260	ALA	75	PASI-I
50281332013	MW-47I	EPA 5030/8260	ALA	75	PASI-I
50281332014	MW-47D	EPA 5030/8260	ALA	75	PASI-I
50281332015	MW-48	EPA 5030/8260	ALA	75	PASI-I
50281332016	MW-48D	EPA 5030/8260	ALA	75	PASI-I
50281332017	MW-49	EPA 5030/8260	ALA	75	PASI-I
50281332018	MW-49D	EPA 5030/8260	ALA	75	PASI-I
50281332019	Dup-1	EPA 5030/8260	ALA	75	PASI-I
50281332020	Trip Blank	EPA 5030/8260	ALA	75	PASI-I
50281482001	MW-34	EPA 5030/8260	LKC	75	PASI-I
50281482002	MW-34D	EPA 5030/8260	LKC	75	PASI-I
50281482003	MW-35	EPA 5030/8260	LKC	75	PASI-I
50281482004	MW-35D	EPA 5030/8260	LKC	75	PASI-I
50281482005	MW-36	EPA 5030/8260	LKC	75	PASI-I
50281482006	MW-36D	EPA 5030/8260	LKC	75	PASI-I
50281482007	MW-37	EPA 5030/8260	LKC	75	PASI-I
50281482008	MW-37D	EPA 5030/8260	LKC	75	PASI-I
50281482009	MW-38	EPA 5030/8260	LKC	75	PASI-I
50281482010	MW-38D	EPA 5030/8260	LKC	75	PASI-I
50281482011	MW-39	EPA 5030/8260	LKC	75	PASI-I
50281482012	MW-39D	EPA 5030/8260	LKC	75	PASI-I
50281482013	MW-42	EPA 5030/8260	LKC	75	PASI-I
50281482014	MW-42D	EPA 5030/8260	LKC	75	PASI-I
50281482015	MW-43	EPA 5030/8260	LKC	75	PASI-I
50281482016	MW-43D	EPA 5030/8260	LKC	75	PASI-I
50281482017	Dup-2	EPA 5030/8260	LKC	75	PASI-I

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SAMPLE ANALYTE COUNT

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50281482018	Trip Blank	EPA 5030/8260	LKC	75	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50281332001	MW-40					
EPA 5030/8260	cis-1,2-Dichloroethene	296	ug/L	50.0	03/12/21 10:51	
EPA 5030/8260	trans-1,2-Dichloroethene	405	ug/L	50.0	03/12/21 10:51	
EPA 5030/8260	Trichloroethene	159	ug/L	5.0	03/12/21 10:22	
EPA 5030/8260	Vinyl chloride	2.2	ug/L	2.0	03/12/21 10:22	
50281332002	MW-40D					
EPA 5030/8260	cis-1,2-Dichloroethene	6.6	ug/L	5.0	03/12/21 11:20	
EPA 5030/8260	trans-1,2-Dichloroethene	5.4	ug/L	5.0	03/12/21 11:20	
50281332003	MW-41					
EPA 5030/8260	cis-1,2-Dichloroethene	5.3	ug/L	5.0	03/12/21 11:49	
EPA 5030/8260	Trichloroethene	304	ug/L	50.0	03/12/21 17:36	
EPA 5030/8260	Vinyl chloride	3.5	ug/L	2.0	03/12/21 11:49	
50281332004	MW-41D					
EPA 5030/8260	cis-1,2-Dichloroethene	6.6	ug/L	5.0	03/12/21 12:18	
EPA 5030/8260	Trichloroethene	248	ug/L	5.0	03/12/21 12:18	
50281332010	MW-46I					
EPA 5030/8260	cis-1,2-Dichloroethene	40.5	ug/L	5.0	03/12/21 19:04	
EPA 5030/8260	Trichloroethene	29.7	ug/L	5.0	03/12/21 19:04	
50281332011	MW-46D					
EPA 5030/8260	cis-1,2-Dichloroethene	9.3	ug/L	5.0	03/12/21 19:33	
50281332013	MW-47I					
EPA 5030/8260	cis-1,2-Dichloroethene	6.7	ug/L	5.0	03/12/21 20:31	
50281332019	Dup-1					
EPA 5030/8260	cis-1,2-Dichloroethene	9.0	ug/L	5.0	03/13/21 01:08	
50281482005	MW-36					
EPA 5030/8260	Tetrachloroethene	9.2	ug/L	5.0	03/16/21 03:21	
EPA 5030/8260	Trichloroethene	38.4	ug/L	5.0	03/16/21 03:21	
50281482007	MW-37					
EPA 5030/8260	Tetrachloroethene	17.8	ug/L	5.0	03/16/21 04:28	
EPA 5030/8260	Trichloroethene	12.6	ug/L	5.0	03/16/21 04:28	
50281482009	MW-38					
EPA 5030/8260	Tetrachloroethene	35.0	ug/L	5.0	03/16/21 05:35	
EPA 5030/8260	Trichloroethene	27.1	ug/L	5.0	03/16/21 05:35	
50281482010	MW-38D					
EPA 5030/8260	Tetrachloroethene	13.2	ug/L	5.0	03/16/21 06:09	
EPA 5030/8260	Trichloroethene	99.7	ug/L	5.0	03/16/21 06:09	
50281482011	MW-39					
EPA 5030/8260	Tetrachloroethene	14.4	ug/L	5.0	03/16/21 06:42	
EPA 5030/8260	Trichloroethene	36.7	ug/L	5.0	03/16/21 06:42	
EPA 5030/8260	Vinyl chloride	4.7	ug/L	2.0	03/16/21 17:04	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50281482013	MW-42					
EPA 5030/8260	Trichloroethene	131	ug/L	5.0	03/16/21 14:29	
50281482014	MW-42D					
EPA 5030/8260	cis-1,2-Dichloroethene	369	ug/L	50.0	03/16/21 17:16	M1
EPA 5030/8260	trans-1,2-Dichloroethene	26.4	ug/L	5.0	03/16/21 07:49	
EPA 5030/8260	Trichloroethene	48.8	ug/L	5.0	03/16/21 07:49	
50281482016	MW-43D					
EPA 5030/8260	cis-1,2-Dichloroethene	10.7	ug/L	5.0	03/16/21 15:36	
50281482017	Dup-2					
EPA 5030/8260	Tetrachloroethene	10.1	ug/L	5.0	03/16/21 16:09	
EPA 5030/8260	Trichloroethene	38.6	ug/L	5.0	03/16/21 16:09	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-40	Lab ID: 50281332001	Collected: 03/03/21 17:55	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 10:22	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 10:22	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 10:22	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 10:22	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 10:22	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 10:22	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 10:22	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 10:22	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 10:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 10:22	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 10:22	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 10:22	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 10:22	98-06-6	L1
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 10:22	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 10:22	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 10:22	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 10:22	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 10:22	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 10:22	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 10:22	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 10:22	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 10:22	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 10:22	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 10:22	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 10:22	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 10:22	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 10:22	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 10:22	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 10:22	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 10:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 10:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 10:22	75-35-4	
cis-1,2-Dichloroethene	296	ug/L	50.0	10		03/12/21 10:51	156-59-2	
trans-1,2-Dichloroethene	405	ug/L	50.0	10		03/12/21 10:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 10:22	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 10:22	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 10:22	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 10:22	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 10:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 10:22	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 10:22	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 10:22	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 10:22	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 10:22	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 10:22	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 10:22	74-88-4	L1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-40	Lab ID: 50281332001	Collected: 03/03/21 17:55	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 10:22	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 10:22	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 10:22	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 10:22	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 10:22	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 10:22	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 10:22	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 10:22	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 10:22	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 10:22	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 10:22	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 10:22	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 10:22	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 10:22	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 10:22	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 10:22	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 10:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 10:22	79-00-5	
Trichloroethene	159	ug/L	5.0	1		03/12/21 10:22	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 10:22	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 10:22	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 10:22	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 10:22	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 10:22	108-05-4	
Vinyl chloride	2.2	ug/L	2.0	1		03/12/21 10:22	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 10:22	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	75-120	1		03/12/21 10:22	1868-53-7	
4-Bromofluorobenzene (S)	98	%	85-116	1		03/12/21 10:22	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/12/21 10:22	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-40D	Lab ID: 50281332002	Collected: 03/03/21 17:15	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 11:20	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 11:20	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 11:20	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 11:20	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 11:20	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 11:20	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 11:20	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 11:20	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 11:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 11:20	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 11:20	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 11:20	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 11:20	98-06-6	L1
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 11:20	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 11:20	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 11:20	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 11:20	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 11:20	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 11:20	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 11:20	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 11:20	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 11:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 11:20	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 11:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 11:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 11:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 11:20	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 11:20	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 11:20	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 11:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 11:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 11:20	75-35-4	
cis-1,2-Dichloroethene	6.6	ug/L	5.0	1		03/12/21 11:20	156-59-2	
trans-1,2-Dichloroethene	5.4	ug/L	5.0	1		03/12/21 11:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 11:20	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 11:20	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 11:20	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 11:20	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 11:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 11:20	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 11:20	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 11:20	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 11:20	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 11:20	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 11:20	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 11:20	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-40D	Lab ID: 50281332002	Collected: 03/03/21 17:15	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 11:20	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 11:20	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 11:20	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 11:20	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 11:20	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 11:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 11:20	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 11:20	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 11:20	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 11:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 11:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 11:20	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 11:20	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 11:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 11:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 11:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 11:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 11:20	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/12/21 11:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 11:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 11:20	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 11:20	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 11:20	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 11:20	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 11:20	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 11:20	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/12/21 11:20	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/12/21 11:20	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/12/21 11:20	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-41	Lab ID: 50281332003	Collected: 03/03/21 16:25	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 11:49	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 11:49	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 11:49	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 11:49	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 11:49	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 11:49	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 11:49	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 11:49	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 11:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 11:49	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 11:49	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 11:49	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 11:49	98-06-6	L1
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 11:49	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 11:49	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 11:49	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 11:49	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 11:49	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 11:49	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 11:49	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 11:49	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 11:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 11:49	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 11:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 11:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 11:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 11:49	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 11:49	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 11:49	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 11:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 11:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 11:49	75-35-4	
cis-1,2-Dichloroethene	5.3	ug/L	5.0	1		03/12/21 11:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 11:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 11:49	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 11:49	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 11:49	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 11:49	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 11:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 11:49	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 11:49	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 11:49	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 11:49	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 11:49	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 11:49	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 11:49	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-41	Lab ID: 50281332003	Collected: 03/03/21 16:25	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 11:49	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 11:49	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 11:49	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 11:49	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 11:49	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 11:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 11:49	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 11:49	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 11:49	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 11:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 11:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 11:49	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 11:49	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 11:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 11:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 11:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 11:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 11:49	79-00-5	
Trichloroethene	304	ug/L	50.0	10		03/12/21 17:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 11:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 11:49	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 11:49	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 11:49	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 11:49	108-05-4	
Vinyl chloride	3.5	ug/L	2.0	1		03/12/21 11:49	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 11:49	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%	75-120	1		03/12/21 11:49	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/12/21 11:49	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/12/21 11:49	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-41D	Lab ID: 50281332004	Collected: 03/03/21 15:35	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 12:18	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 12:18	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 12:18	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 12:18	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 12:18	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 12:18	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 12:18	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 12:18	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 12:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 12:18	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 12:18	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 12:18	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 12:18	98-06-6	L1
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 12:18	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 12:18	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 12:18	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 12:18	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 12:18	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 12:18	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 12:18	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 12:18	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 12:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 12:18	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 12:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 12:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 12:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 12:18	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 12:18	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 12:18	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 12:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 12:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 12:18	75-35-4	
cis-1,2-Dichloroethene	6.6	ug/L	5.0	1		03/12/21 12:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 12:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 12:18	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 12:18	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 12:18	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 12:18	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 12:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 12:18	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 12:18	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 12:18	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 12:18	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 12:18	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 12:18	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 12:18	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-41D	Lab ID: 50281332004	Collected: 03/03/21 15:35	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 12:18	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 12:18	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 12:18	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 12:18	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 12:18	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 12:18	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 12:18	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 12:18	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 12:18	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 12:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 12:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 12:18	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 12:18	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 12:18	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 12:18	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 12:18	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 12:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 12:18	79-00-5	
Trichloroethene	248	ug/L	5.0	1		03/12/21 12:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 12:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 12:18	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 12:18	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 12:18	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 12:18	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 12:18	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 12:18	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	75-120	1		03/12/21 12:18	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/12/21 12:18	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/12/21 12:18	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-44	Lab ID: 50281332005	Collected: 03/03/21 14:30	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 12:47	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 12:47	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 12:47	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 12:47	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 12:47	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 12:47	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 12:47	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 12:47	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 12:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 12:47	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 12:47	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 12:47	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 12:47	98-06-6	L1
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 12:47	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 12:47	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 12:47	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 12:47	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 12:47	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 12:47	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 12:47	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 12:47	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 12:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 12:47	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 12:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 12:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 12:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 12:47	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 12:47	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 12:47	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 12:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 12:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 12:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 12:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 12:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 12:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 12:47	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 12:47	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 12:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 12:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 12:47	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 12:47	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 12:47	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 12:47	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 12:47	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 12:47	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 12:47	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-44		Lab ID: 50281332005		Collected: 03/03/21 14:30		Received: 03/04/21 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Indiana		Analytical Method: EPA 5030/8260							
		Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 12:47	98-82-8		
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 12:47	99-87-6		
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 12:47	75-09-2		
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 12:47	90-12-0		
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 12:47	91-57-6		
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 12:47	108-10-1		
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 12:47	1634-04-4		
Naphthalene	ND	ug/L	1.7	1		03/12/21 12:47	91-20-3		
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 12:47	103-65-1		
Styrene	ND	ug/L	5.0	1		03/12/21 12:47	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 12:47	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 12:47	79-34-5		
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 12:47	127-18-4		
Toluene	ND	ug/L	5.0	1		03/12/21 12:47	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 12:47	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 12:47	120-82-1		
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 12:47	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 12:47	79-00-5		
Trichloroethene	ND	ug/L	5.0	1		03/12/21 12:47	79-01-6		
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 12:47	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 12:47	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 12:47	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 12:47	108-67-8		
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 12:47	108-05-4		
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 12:47	75-01-4		
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 12:47	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	103	%	75-120	1		03/12/21 12:47	1868-53-7		
4-Bromofluorobenzene (S)	100	%	85-116	1		03/12/21 12:47	460-00-4		
Toluene-d8 (S)	99	%	83-111	1		03/12/21 12:47	2037-26-5		

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-44D	Lab ID: 50281332006	Collected: 03/03/21 13:55	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 23:26	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 23:26	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 23:26	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 23:26	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 23:26	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 23:26	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 23:26	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 23:26	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 23:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 23:26	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 23:26	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 23:26	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 23:26	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 23:26	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 23:26	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 23:26	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 23:26	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 23:26	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 23:26	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 23:26	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 23:26	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 23:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 23:26	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 23:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 23:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 23:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 23:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 23:26	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 23:26	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 23:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 23:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 23:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 23:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 23:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 23:26	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 23:26	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 23:26	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 23:26	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 23:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 23:26	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 23:26	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 23:26	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 23:26	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 23:26	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 23:26	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 23:26	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-44D	Lab ID: 50281332006	Collected: 03/03/21 13:55	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 23:26	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 23:26	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 23:26	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 23:26	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 23:26	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 23:26	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 23:26	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 23:26	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 23:26	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 23:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 23:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 23:26	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 23:26	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 23:26	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 23:26	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 23:26	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 23:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 23:26	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/12/21 23:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 23:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 23:26	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 23:26	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 23:26	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 23:26	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 23:26	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 23:26	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/12/21 23:26	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/12/21 23:26	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/12/21 23:26	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-45	Lab ID: 50281332007	Collected: 03/03/21 12:45	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 23:55	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 23:55	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 23:55	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 23:55	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 23:55	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 23:55	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 23:55	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 23:55	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 23:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 23:55	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 23:55	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 23:55	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 23:55	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 23:55	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 23:55	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 23:55	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 23:55	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 23:55	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 23:55	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 23:55	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 23:55	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 23:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 23:55	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 23:55	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 23:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 23:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 23:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 23:55	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 23:55	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 23:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 23:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 23:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 23:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 23:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 23:55	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 23:55	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 23:55	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 23:55	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 23:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 23:55	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 23:55	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 23:55	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 23:55	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 23:55	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 23:55	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 23:55	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-45		Lab ID: 50281332007		Collected: 03/03/21 12:45	Received: 03/04/21 09:20	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 23:55	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 23:55	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 23:55	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 23:55	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 23:55	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 23:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 23:55	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 23:55	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 23:55	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 23:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 23:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 23:55	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 23:55	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 23:55	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 23:55	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 23:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 23:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 23:55	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/12/21 23:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 23:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 23:55	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 23:55	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 23:55	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 23:55	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 23:55	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 23:55	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	75-120	1		03/12/21 23:55	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/12/21 23:55	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/12/21 23:55	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-45D	Lab ID: 50281332008	Collected: 03/03/21 12:10	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/13/21 00:24	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/13/21 00:24	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/13/21 00:24	107-13-1	
Benzene	ND	ug/L	5.0	1		03/13/21 00:24	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/13/21 00:24	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/13/21 00:24	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/13/21 00:24	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/13/21 00:24	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/13/21 00:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/13/21 00:24	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/13/21 00:24	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/13/21 00:24	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/13/21 00:24	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/13/21 00:24	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/13/21 00:24	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/13/21 00:24	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/13/21 00:24	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/13/21 00:24	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/13/21 00:24	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/13/21 00:24	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/13/21 00:24	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/13/21 00:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/13/21 00:24	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/13/21 00:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 00:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 00:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 00:24	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/13/21 00:24	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/13/21 00:24	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/13/21 00:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/13/21 00:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/13/21 00:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/13/21 00:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/13/21 00:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/13/21 00:24	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/13/21 00:24	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/13/21 00:24	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/13/21 00:24	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/13/21 00:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/13/21 00:24	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/13/21 00:24	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/13/21 00:24	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/13/21 00:24	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/13/21 00:24	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/13/21 00:24	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/13/21 00:24	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-45D		Lab ID: 50281332008	Collected: 03/03/21 12:10	Received: 03/04/21 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/13/21 00:24	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/13/21 00:24	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/13/21 00:24	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/13/21 00:24	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/13/21 00:24	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/13/21 00:24	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/13/21 00:24	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/13/21 00:24	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/13/21 00:24	103-65-1	
Styrene	ND	ug/L	5.0	1		03/13/21 00:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/13/21 00:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/13/21 00:24	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/13/21 00:24	127-18-4	
Toluene	ND	ug/L	5.0	1		03/13/21 00:24	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/13/21 00:24	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/13/21 00:24	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/13/21 00:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/13/21 00:24	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/13/21 00:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/13/21 00:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/13/21 00:24	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/13/21 00:24	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/13/21 00:24	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/13/21 00:24	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/13/21 00:24	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/13/21 00:24	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	75-120	1		03/13/21 00:24	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/13/21 00:24	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/13/21 00:24	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-46	Lab ID: 50281332009	Collected: 03/02/21 13:15	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 18:34	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 18:34	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 18:34	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 18:34	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 18:34	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 18:34	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 18:34	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 18:34	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 18:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 18:34	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 18:34	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 18:34	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 18:34	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 18:34	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 18:34	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 18:34	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 18:34	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 18:34	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 18:34	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 18:34	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 18:34	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 18:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 18:34	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 18:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 18:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 18:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 18:34	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 18:34	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 18:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 18:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 18:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 18:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 18:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 18:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 18:34	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 18:34	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 18:34	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 18:34	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 18:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 18:34	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 18:34	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 18:34	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 18:34	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 18:34	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 18:34	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 18:34	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-46		Lab ID: 50281332009		Collected: 03/02/21 13:15	Received: 03/04/21 09:20	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 18:34	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 18:34	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 18:34	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 18:34	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 18:34	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 18:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 18:34	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 18:34	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 18:34	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 18:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 18:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 18:34	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 18:34	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 18:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 18:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 18:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 18:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 18:34	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/12/21 18:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 18:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 18:34	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 18:34	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 18:34	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 18:34	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 18:34	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 18:34	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/12/21 18:34	1868-53-7	
4-Bromofluorobenzene (S)	98	%	85-116	1		03/12/21 18:34	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/12/21 18:34	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-461	Lab ID: 50281332010	Collected: 03/02/21 12:10	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 19:04	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 19:04	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 19:04	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 19:04	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 19:04	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 19:04	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 19:04	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 19:04	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 19:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 19:04	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 19:04	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 19:04	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 19:04	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 19:04	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 19:04	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 19:04	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 19:04	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 19:04	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 19:04	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 19:04	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 19:04	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 19:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 19:04	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 19:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 19:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 19:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 19:04	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 19:04	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 19:04	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 19:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 19:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 19:04	75-35-4	
cis-1,2-Dichloroethene	40.5	ug/L	5.0	1		03/12/21 19:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 19:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 19:04	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 19:04	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 19:04	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 19:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 19:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 19:04	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 19:04	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 19:04	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 19:04	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 19:04	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 19:04	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 19:04	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-46I	Lab ID: 50281332010	Collected: 03/02/21 12:10	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 19:04	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 19:04	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 19:04	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 19:04	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 19:04	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 19:04	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 19:04	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 19:04	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 19:04	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 19:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 19:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 19:04	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 19:04	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 19:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 19:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 19:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 19:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 19:04	79-00-5	
Trichloroethene	29.7	ug/L	5.0	1		03/12/21 19:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 19:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 19:04	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 19:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 19:04	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 19:04	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 19:04	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 19:04	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/12/21 19:04	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/12/21 19:04	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/12/21 19:04	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-46D	Lab ID: 50281332011	Collected: 03/02/21 11:25	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 19:33	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 19:33	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 19:33	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 19:33	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 19:33	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 19:33	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 19:33	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 19:33	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 19:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 19:33	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 19:33	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 19:33	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 19:33	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 19:33	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 19:33	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 19:33	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 19:33	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 19:33	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 19:33	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 19:33	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 19:33	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 19:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 19:33	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 19:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 19:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 19:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 19:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 19:33	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 19:33	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 19:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 19:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 19:33	75-35-4	
cis-1,2-Dichloroethene	9.3	ug/L	5.0	1		03/12/21 19:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 19:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 19:33	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 19:33	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 19:33	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 19:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 19:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 19:33	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 19:33	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 19:33	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 19:33	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 19:33	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 19:33	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 19:33	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-46D	Lab ID: 50281332011	Collected: 03/02/21 11:25	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 19:33	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 19:33	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 19:33	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 19:33	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 19:33	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 19:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 19:33	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 19:33	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 19:33	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 19:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 19:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 19:33	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 19:33	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 19:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 19:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 19:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 19:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 19:33	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/12/21 19:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 19:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 19:33	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 19:33	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 19:33	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 19:33	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 19:33	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 19:33	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/12/21 19:33	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/12/21 19:33	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/12/21 19:33	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-47	Lab ID: 50281332012	Collected: 03/02/21 16:05	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 20:02	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 20:02	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 20:02	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 20:02	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 20:02	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 20:02	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 20:02	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 20:02	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 20:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 20:02	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 20:02	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 20:02	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 20:02	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 20:02	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 20:02	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 20:02	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 20:02	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 20:02	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 20:02	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 20:02	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 20:02	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 20:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 20:02	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 20:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 20:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 20:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 20:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 20:02	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 20:02	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 20:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 20:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 20:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 20:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 20:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 20:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 20:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 20:02	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 20:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 20:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 20:02	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 20:02	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 20:02	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 20:02	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 20:02	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 20:02	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 20:02	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-47	Lab ID: 50281332012	Collected: 03/02/21 16:05	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 20:02	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 20:02	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 20:02	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 20:02	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 20:02	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 20:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 20:02	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 20:02	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 20:02	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 20:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 20:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 20:02	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 20:02	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 20:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 20:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 20:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 20:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 20:02	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/12/21 20:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 20:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 20:02	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 20:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 20:02	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 20:02	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 20:02	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 20:02	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/12/21 20:02	1868-53-7	
4-Bromofluorobenzene (S)	101	%	85-116	1		03/12/21 20:02	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/12/21 20:02	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-471	Lab ID: 50281332013	Collected: 03/02/21 15:35	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 20:31	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 20:31	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 20:31	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 20:31	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 20:31	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 20:31	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 20:31	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 20:31	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 20:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 20:31	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 20:31	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 20:31	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 20:31	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 20:31	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 20:31	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 20:31	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 20:31	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 20:31	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 20:31	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 20:31	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 20:31	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 20:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 20:31	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 20:31	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 20:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 20:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 20:31	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 20:31	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 20:31	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 20:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 20:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 20:31	75-35-4	
cis-1,2-Dichloroethene	6.7	ug/L	5.0	1		03/12/21 20:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 20:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 20:31	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 20:31	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 20:31	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 20:31	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 20:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 20:31	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 20:31	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 20:31	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 20:31	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 20:31	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 20:31	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 20:31	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-47I		Lab ID: 50281332013		Collected: 03/02/21 15:35	Received: 03/04/21 09:20	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 20:31	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 20:31	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 20:31	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 20:31	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 20:31	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 20:31	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 20:31	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 20:31	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 20:31	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 20:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 20:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 20:31	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 20:31	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 20:31	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 20:31	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 20:31	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 20:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 20:31	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/12/21 20:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 20:31	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 20:31	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 20:31	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 20:31	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 20:31	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 20:31	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 20:31	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/12/21 20:31	1868-53-7	
4-Bromofluorobenzene (S)	98	%	85-116	1		03/12/21 20:31	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/12/21 20:31	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-47D	Lab ID: 50281332014	Collected: 03/02/21 14:05	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 21:00	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 21:00	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 21:00	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 21:00	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 21:00	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 21:00	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 21:00	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 21:00	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 21:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 21:00	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 21:00	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 21:00	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 21:00	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 21:00	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 21:00	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 21:00	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 21:00	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 21:00	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 21:00	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 21:00	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 21:00	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 21:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 21:00	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 21:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:00	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:00	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 21:00	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 21:00	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 21:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 21:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 21:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 21:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 21:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 21:00	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 21:00	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 21:00	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 21:00	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 21:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 21:00	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 21:00	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 21:00	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 21:00	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 21:00	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 21:00	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 21:00	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-47D	Lab ID: 50281332014	Collected: 03/02/21 14:05	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 21:00	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 21:00	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 21:00	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 21:00	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 21:00	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 21:00	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 21:00	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 21:00	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 21:00	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 21:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 21:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 21:00	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 21:00	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 21:00	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:00	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:00	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 21:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 21:00	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/12/21 21:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 21:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 21:00	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 21:00	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 21:00	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 21:00	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 21:00	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 21:00	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/12/21 21:00	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/12/21 21:00	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/12/21 21:00	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-48	Lab ID: 50281332015	Collected: 03/02/21 17:10	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 21:29	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 21:29	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/12/21 21:29	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 21:29	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 21:29	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 21:29	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 21:29	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 21:29	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 21:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 21:29	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 21:29	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 21:29	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 21:29	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 21:29	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 21:29	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 21:29	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 21:29	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 21:29	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 21:29	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 21:29	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 21:29	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 21:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 21:29	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 21:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:29	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 21:29	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 21:29	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 21:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 21:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 21:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 21:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 21:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 21:29	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 21:29	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 21:29	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 21:29	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 21:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 21:29	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 21:29	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 21:29	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 21:29	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 21:29	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 21:29	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/12/21 21:29	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-48	Lab ID: 50281332015	Collected: 03/02/21 17:10	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 21:29	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 21:29	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 21:29	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 21:29	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 21:29	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 21:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 21:29	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 21:29	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 21:29	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 21:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 21:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 21:29	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 21:29	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 21:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 21:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 21:29	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/12/21 21:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 21:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 21:29	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 21:29	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 21:29	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 21:29	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 21:29	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 21:29	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	75-120	1		03/12/21 21:29	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/12/21 21:29	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/12/21 21:29	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-48D	Lab ID: 50281332016	Collected: 03/02/21 16:40	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/12/21 21:58	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/12/21 21:58	107-02-8	M1
Acrylonitrile	ND	ug/L	100	1		03/12/21 21:58	107-13-1	
Benzene	ND	ug/L	5.0	1		03/12/21 21:58	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/12/21 21:58	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/12/21 21:58	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/12/21 21:58	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/12/21 21:58	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/12/21 21:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/12/21 21:58	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/12/21 21:58	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/12/21 21:58	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/12/21 21:58	98-06-6	M1
Carbon disulfide	ND	ug/L	10.0	1		03/12/21 21:58	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/12/21 21:58	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/12/21 21:58	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/12/21 21:58	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/12/21 21:58	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/12/21 21:58	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 21:58	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/12/21 21:58	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/12/21 21:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/12/21 21:58	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/12/21 21:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:58	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/12/21 21:58	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/12/21 21:58	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/12/21 21:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/12/21 21:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/12/21 21:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 21:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/12/21 21:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 21:58	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/12/21 21:58	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/12/21 21:58	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/12/21 21:58	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 21:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/12/21 21:58	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/12/21 21:58	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/12/21 21:58	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/12/21 21:58	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/12/21 21:58	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/12/21 21:58	591-78-6	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-48D	Lab ID: 50281332016	Collected: 03/02/21 16:40	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Iodomethane	ND	ug/L	10.0	1		03/12/21 21:58	74-88-4	L1,M0, R1
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/12/21 21:58	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/12/21 21:58	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/12/21 21:58	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 21:58	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/12/21 21:58	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/12/21 21:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/12/21 21:58	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/12/21 21:58	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/12/21 21:58	103-65-1	
Styrene	ND	ug/L	5.0	1		03/12/21 21:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 21:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/12/21 21:58	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/12/21 21:58	127-18-4	
Toluene	ND	ug/L	5.0	1		03/12/21 21:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/12/21 21:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/12/21 21:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/12/21 21:58	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/12/21 21:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/12/21 21:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/12/21 21:58	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 21:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/12/21 21:58	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/12/21 21:58	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/12/21 21:58	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/12/21 21:58	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/12/21 21:58	1868-53-7	
4-Bromofluorobenzene (S)	98	%	85-116	1		03/12/21 21:58	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/12/21 21:58	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-49	Lab ID: 50281332017	Collected: 03/03/21 11:25	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/13/21 00:53	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/13/21 00:53	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/13/21 00:53	107-13-1	
Benzene	ND	ug/L	5.0	1		03/13/21 00:53	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/13/21 00:53	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/13/21 00:53	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/13/21 00:53	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/13/21 00:53	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/13/21 00:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/13/21 00:53	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/13/21 00:53	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/13/21 00:53	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/13/21 00:53	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/13/21 00:53	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/13/21 00:53	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/13/21 00:53	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/13/21 00:53	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/13/21 00:53	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/13/21 00:53	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/13/21 00:53	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/13/21 00:53	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/13/21 00:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/13/21 00:53	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/13/21 00:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 00:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 00:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 00:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/13/21 00:53	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/13/21 00:53	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/13/21 00:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/13/21 00:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/13/21 00:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/13/21 00:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/13/21 00:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/13/21 00:53	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/13/21 00:53	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/13/21 00:53	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/13/21 00:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/13/21 00:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/13/21 00:53	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/13/21 00:53	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/13/21 00:53	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/13/21 00:53	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/13/21 00:53	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/13/21 00:53	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/13/21 00:53	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-49	Lab ID: 50281332017	Collected: 03/03/21 11:25	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/13/21 00:53	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/13/21 00:53	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/13/21 00:53	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/13/21 00:53	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/13/21 00:53	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/13/21 00:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/13/21 00:53	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/13/21 00:53	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/13/21 00:53	103-65-1	
Styrene	ND	ug/L	5.0	1		03/13/21 00:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/13/21 00:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/13/21 00:53	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/13/21 00:53	127-18-4	
Toluene	ND	ug/L	5.0	1		03/13/21 00:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/13/21 00:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/13/21 00:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/13/21 00:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/13/21 00:53	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/13/21 00:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/13/21 00:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/13/21 00:53	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/13/21 00:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/13/21 00:53	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/13/21 00:53	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/13/21 00:53	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/13/21 00:53	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	75-120	1		03/13/21 00:53	1868-53-7	
4-Bromofluorobenzene (S)	98	%	85-116	1		03/13/21 00:53	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/13/21 00:53	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-49D	Lab ID: 50281332018	Collected: 03/03/21 10:35	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/13/21 01:23	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/13/21 01:23	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/13/21 01:23	107-13-1	
Benzene	ND	ug/L	5.0	1		03/13/21 01:23	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/13/21 01:23	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/13/21 01:23	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/13/21 01:23	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/13/21 01:23	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/13/21 01:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/13/21 01:23	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/13/21 01:23	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/13/21 01:23	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/13/21 01:23	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/13/21 01:23	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/13/21 01:23	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/13/21 01:23	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/13/21 01:23	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/13/21 01:23	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/13/21 01:23	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/13/21 01:23	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/13/21 01:23	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/13/21 01:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/13/21 01:23	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/13/21 01:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:23	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/13/21 01:23	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/13/21 01:23	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/13/21 01:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/13/21 01:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/13/21 01:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/13/21 01:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/13/21 01:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/13/21 01:23	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/13/21 01:23	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/13/21 01:23	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/13/21 01:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/13/21 01:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/13/21 01:23	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/13/21 01:23	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/13/21 01:23	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/13/21 01:23	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/13/21 01:23	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/13/21 01:23	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/13/21 01:23	74-88-4	L1

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-49D		Lab ID: 50281332018	Collected: 03/03/21 10:35	Received: 03/04/21 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/13/21 01:23	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/13/21 01:23	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/13/21 01:23	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/13/21 01:23	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/13/21 01:23	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/13/21 01:23	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/13/21 01:23	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/13/21 01:23	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/13/21 01:23	103-65-1	
Styrene	ND	ug/L	5.0	1		03/13/21 01:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/13/21 01:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/13/21 01:23	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/13/21 01:23	127-18-4	
Toluene	ND	ug/L	5.0	1		03/13/21 01:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/13/21 01:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/13/21 01:23	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/13/21 01:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/13/21 01:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/13/21 01:23	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/13/21 01:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/13/21 01:23	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/13/21 01:23	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/13/21 01:23	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/13/21 01:23	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/13/21 01:23	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/13/21 01:23	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/13/21 01:23	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: Dup-1	Lab ID: 50281332019	Collected: 03/02/21 08:00	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/13/21 01:08	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/13/21 01:08	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/13/21 01:08	107-13-1	
Benzene	ND	ug/L	5.0	1		03/13/21 01:08	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/13/21 01:08	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/13/21 01:08	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/13/21 01:08	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/13/21 01:08	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/13/21 01:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/13/21 01:08	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/13/21 01:08	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/13/21 01:08	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/13/21 01:08	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/13/21 01:08	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/13/21 01:08	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/13/21 01:08	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/13/21 01:08	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/13/21 01:08	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/13/21 01:08	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/13/21 01:08	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/13/21 01:08	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/13/21 01:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/13/21 01:08	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/13/21 01:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:08	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:08	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:08	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/13/21 01:08	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/13/21 01:08	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/13/21 01:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/13/21 01:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/13/21 01:08	75-35-4	
cis-1,2-Dichloroethene	9.0	ug/L	5.0	1		03/13/21 01:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/13/21 01:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/13/21 01:08	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/13/21 01:08	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/13/21 01:08	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/13/21 01:08	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/13/21 01:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/13/21 01:08	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/13/21 01:08	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/13/21 01:08	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/13/21 01:08	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/13/21 01:08	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/13/21 01:08	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/13/21 01:08	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: Dup-1		Lab ID: 50281332019	Collected: 03/02/21 08:00	Received: 03/04/21 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/13/21 01:08	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/13/21 01:08	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/13/21 01:08	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/13/21 01:08	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/13/21 01:08	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/13/21 01:08	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/13/21 01:08	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/13/21 01:08	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/13/21 01:08	103-65-1	
Styrene	ND	ug/L	5.0	1		03/13/21 01:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/13/21 01:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/13/21 01:08	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/13/21 01:08	127-18-4	
Toluene	ND	ug/L	5.0	1		03/13/21 01:08	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:08	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:08	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/13/21 01:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/13/21 01:08	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/13/21 01:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/13/21 01:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/13/21 01:08	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/13/21 01:08	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/13/21 01:08	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/13/21 01:08	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/13/21 01:08	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/13/21 01:08	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	75-120	1		03/13/21 01:08	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/13/21 01:08	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/13/21 01:08	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: Trip Blank	Lab ID: 50281332020	Collected: 03/02/21 08:00	Received: 03/04/21 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/13/21 01:37	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/13/21 01:37	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/13/21 01:37	107-13-1	
Benzene	ND	ug/L	5.0	1		03/13/21 01:37	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/13/21 01:37	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/13/21 01:37	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/13/21 01:37	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/13/21 01:37	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/13/21 01:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/13/21 01:37	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/13/21 01:37	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/13/21 01:37	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/13/21 01:37	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/13/21 01:37	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/13/21 01:37	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/13/21 01:37	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/13/21 01:37	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/13/21 01:37	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/13/21 01:37	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/13/21 01:37	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/13/21 01:37	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/13/21 01:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/13/21 01:37	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/13/21 01:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:37	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/13/21 01:37	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/13/21 01:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/13/21 01:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/13/21 01:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/13/21 01:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/13/21 01:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/13/21 01:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/13/21 01:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/13/21 01:37	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/13/21 01:37	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/13/21 01:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/13/21 01:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/13/21 01:37	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/13/21 01:37	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/13/21 01:37	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/13/21 01:37	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/13/21 01:37	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/13/21 01:37	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/13/21 01:37	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: Trip Blank		Lab ID: 50281332020	Collected: 03/02/21 08:00	Received: 03/04/21 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/13/21 01:37	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/13/21 01:37	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/13/21 01:37	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/13/21 01:37	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/13/21 01:37	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/13/21 01:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/13/21 01:37	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/13/21 01:37	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/13/21 01:37	103-65-1	
Styrene	ND	ug/L	5.0	1		03/13/21 01:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/13/21 01:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/13/21 01:37	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/13/21 01:37	127-18-4	
Toluene	ND	ug/L	5.0	1		03/13/21 01:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/13/21 01:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/13/21 01:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/13/21 01:37	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/13/21 01:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/13/21 01:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/13/21 01:37	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/13/21 01:37	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/13/21 01:37	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/13/21 01:37	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/13/21 01:37	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/13/21 01:37	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-120	1		03/13/21 01:37	1868-53-7	
4-Bromofluorobenzene (S)	99	%	85-116	1		03/13/21 01:37	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/13/21 01:37	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-34	Lab ID: 50281482001	Collected: 03/04/21 16:25	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 01:06	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 01:06	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 01:06	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 01:06	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 01:06	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 01:06	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 01:06	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 01:06	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 01:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 01:06	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 01:06	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 01:06	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 01:06	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 01:06	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 01:06	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 01:06	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 01:06	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 01:06	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 01:06	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 01:06	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 01:06	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 01:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 01:06	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 01:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 01:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 01:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 01:06	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 01:06	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 01:06	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 01:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 01:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 01:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 01:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 01:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 01:06	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 01:06	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 01:06	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 01:06	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 01:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 01:06	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 01:06	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 01:06	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 01:06	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 01:06	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 01:06	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 01:06	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-34	Lab ID: 50281482001	Collected: 03/04/21 16:25	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 01:06	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 01:06	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 01:06	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 01:06	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 01:06	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 01:06	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 01:06	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 01:06	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 01:06	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 01:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 01:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 01:06	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 01:06	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 01:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 01:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 01:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 01:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 01:06	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/16/21 01:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 01:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 01:06	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 01:06	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 01:06	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 01:06	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 01:06	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 01:06	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	112	%	75-120	1		03/16/21 01:06	1868-53-7	
4-Bromofluorobenzene (S)	92	%	85-116	1		03/16/21 01:06	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/16/21 01:06	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-34D	Lab ID: 50281482002	Collected: 03/04/21 15:45	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 01:40	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 01:40	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 01:40	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 01:40	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 01:40	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 01:40	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 01:40	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 01:40	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 01:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 01:40	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 01:40	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 01:40	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 01:40	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 01:40	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 01:40	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 01:40	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 01:40	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 01:40	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 01:40	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 01:40	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 01:40	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 01:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 01:40	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 01:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 01:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 01:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 01:40	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 01:40	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 01:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 01:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 01:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 01:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 01:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 01:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 01:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 01:40	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 01:40	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 01:40	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 01:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 01:40	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 01:40	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 01:40	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 01:40	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 01:40	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 01:40	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 01:40	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-34D	Lab ID: 50281482002	Collected: 03/04/21 15:45	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 01:40	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 01:40	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 01:40	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 01:40	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 01:40	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 01:40	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 01:40	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 01:40	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 01:40	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 01:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 01:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 01:40	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 01:40	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 01:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 01:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 01:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 01:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 01:40	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/16/21 01:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 01:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 01:40	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 01:40	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 01:40	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 01:40	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 01:40	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 01:40	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	116	%	75-120	1		03/16/21 01:40	1868-53-7	
4-Bromofluorobenzene (S)	90	%	85-116	1		03/16/21 01:40	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/16/21 01:40	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-35	Lab ID: 50281482003	Collected: 03/04/21 17:45	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 02:14	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 02:14	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 02:14	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 02:14	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 02:14	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 02:14	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 02:14	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 02:14	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 02:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 02:14	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 02:14	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 02:14	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 02:14	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 02:14	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 02:14	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 02:14	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 02:14	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 02:14	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 02:14	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 02:14	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 02:14	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 02:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 02:14	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 02:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 02:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 02:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 02:14	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 02:14	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 02:14	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 02:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 02:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 02:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 02:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 02:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 02:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 02:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 02:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 02:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 02:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 02:14	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 02:14	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 02:14	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 02:14	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 02:14	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 02:14	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 02:14	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-35	Lab ID: 50281482003	Collected: 03/04/21 17:45	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 02:14	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 02:14	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 02:14	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 02:14	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 02:14	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 02:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 02:14	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 02:14	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 02:14	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 02:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 02:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 02:14	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 02:14	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 02:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 02:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 02:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 02:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 02:14	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/16/21 02:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 02:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 02:14	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 02:14	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 02:14	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 02:14	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 02:14	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 02:14	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	112	%	75-120	1		03/16/21 02:14	1868-53-7	
4-Bromofluorobenzene (S)	95	%	85-116	1		03/16/21 02:14	460-00-4	
Toluene-d8 (S)	100	%	83-111	1		03/16/21 02:14	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-35D	Lab ID: 50281482004	Collected: 03/04/21 17:10	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 02:48	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 02:48	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 02:48	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 02:48	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 02:48	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 02:48	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 02:48	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 02:48	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 02:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 02:48	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 02:48	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 02:48	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 02:48	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 02:48	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 02:48	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 02:48	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 02:48	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 02:48	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 02:48	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 02:48	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 02:48	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 02:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 02:48	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 02:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 02:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 02:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 02:48	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 02:48	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 02:48	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 02:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 02:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 02:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 02:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 02:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 02:48	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 02:48	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 02:48	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 02:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 02:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 02:48	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 02:48	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 02:48	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 02:48	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 02:48	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 02:48	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 02:48	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-35D	Lab ID: 50281482004	Collected: 03/04/21 17:10	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 02:48	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 02:48	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 02:48	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 02:48	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 02:48	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 02:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 02:48	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 02:48	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 02:48	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 02:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 02:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 02:48	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 02:48	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 02:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 02:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 02:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 02:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 02:48	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/16/21 02:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 02:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 02:48	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 02:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 02:48	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 02:48	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 02:48	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 02:48	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	121	%	75-120	1		03/16/21 02:48	1868-53-7	S3
4-Bromofluorobenzene (S)	93	%	85-116	1		03/16/21 02:48	460-00-4	
Toluene-d8 (S)	97	%	83-111	1		03/16/21 02:48	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-36	Lab ID: 50281482005	Collected: 03/05/21 12:10	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 03:21	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 03:21	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 03:21	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 03:21	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 03:21	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 03:21	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 03:21	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 03:21	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 03:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 03:21	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 03:21	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 03:21	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 03:21	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 03:21	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 03:21	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 03:21	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 03:21	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 03:21	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 03:21	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 03:21	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 03:21	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 03:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 03:21	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 03:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 03:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 03:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 03:21	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 03:21	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 03:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 03:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 03:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 03:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 03:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 03:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 03:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 03:21	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 03:21	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 03:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 03:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 03:21	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 03:21	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 03:21	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 03:21	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 03:21	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 03:21	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 03:21	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-36	Lab ID: 50281482005	Collected: 03/05/21 12:10	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 03:21	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 03:21	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 03:21	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 03:21	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 03:21	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 03:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 03:21	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 03:21	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 03:21	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 03:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 03:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 03:21	79-34-5	
Tetrachloroethene	9.2	ug/L	5.0	1		03/16/21 03:21	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 03:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 03:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 03:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 03:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 03:21	79-00-5	
Trichloroethene	38.4	ug/L	5.0	1		03/16/21 03:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 03:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 03:21	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 03:21	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 03:21	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 03:21	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 03:21	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 03:21	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	112	%	75-120	1		03/16/21 03:21	1868-53-7	
4-Bromofluorobenzene (S)	96	%	85-116	1		03/16/21 03:21	460-00-4	
Toluene-d8 (S)	96	%	83-111	1		03/16/21 03:21	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-36D	Lab ID: 50281482006	Collected: 03/05/21 11:30	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 03:55	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 03:55	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 03:55	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 03:55	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 03:55	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 03:55	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 03:55	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 03:55	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 03:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 03:55	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 03:55	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 03:55	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 03:55	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 03:55	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 03:55	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 03:55	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 03:55	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 03:55	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 03:55	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 03:55	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 03:55	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 03:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 03:55	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 03:55	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 03:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 03:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 03:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 03:55	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 03:55	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 03:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 03:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 03:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 03:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 03:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 03:55	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 03:55	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 03:55	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 03:55	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 03:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 03:55	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 03:55	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 03:55	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 03:55	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 03:55	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 03:55	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 03:55	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-36D	Lab ID: 50281482006	Collected: 03/05/21 11:30	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 03:55	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 03:55	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 03:55	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 03:55	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 03:55	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 03:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 03:55	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 03:55	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 03:55	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 03:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 03:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 03:55	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 03:55	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 03:55	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 03:55	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 03:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 03:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 03:55	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/16/21 03:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 03:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 03:55	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 03:55	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 03:55	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 03:55	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 03:55	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 03:55	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	112	%	75-120	1		03/16/21 03:55	1868-53-7	
4-Bromofluorobenzene (S)	95	%	85-116	1		03/16/21 03:55	460-00-4	
Toluene-d8 (S)	100	%	83-111	1		03/16/21 03:55	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-37	Lab ID: 50281482007	Collected: 03/05/21 13:50	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 04:28	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 04:28	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 04:28	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 04:28	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 04:28	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 04:28	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 04:28	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 04:28	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 04:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 04:28	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 04:28	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 04:28	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 04:28	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 04:28	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 04:28	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 04:28	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 04:28	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 04:28	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 04:28	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 04:28	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 04:28	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 04:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 04:28	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 04:28	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 04:28	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 04:28	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 04:28	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 04:28	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 04:28	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 04:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 04:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 04:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 04:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 04:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 04:28	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 04:28	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 04:28	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 04:28	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 04:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 04:28	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 04:28	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 04:28	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 04:28	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 04:28	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 04:28	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 04:28	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-37		Lab ID: 50281482007		Collected: 03/05/21 13:50	Received: 03/05/21 15:55	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 04:28	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 04:28	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 04:28	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 04:28	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 04:28	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 04:28	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 04:28	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 04:28	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 04:28	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 04:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 04:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 04:28	79-34-5	
Tetrachloroethene	17.8	ug/L	5.0	1		03/16/21 04:28	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 04:28	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 04:28	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 04:28	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 04:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 04:28	79-00-5	
Trichloroethene	12.6	ug/L	5.0	1		03/16/21 04:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 04:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 04:28	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 04:28	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 04:28	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 04:28	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 04:28	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 04:28	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	109	%	75-120	1		03/16/21 04:28	1868-53-7	
4-Bromofluorobenzene (S)	92	%	85-116	1		03/16/21 04:28	460-00-4	
Toluene-d8 (S)	100	%	83-111	1		03/16/21 04:28	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-37D	Lab ID: 50281482008	Collected: 03/05/21 12:55	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 05:02	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 05:02	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 05:02	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 05:02	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 05:02	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 05:02	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 05:02	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 05:02	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 05:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 05:02	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 05:02	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 05:02	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 05:02	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 05:02	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 05:02	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 05:02	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 05:02	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 05:02	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 05:02	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 05:02	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 05:02	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 05:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 05:02	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 05:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 05:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 05:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 05:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 05:02	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 05:02	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 05:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 05:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 05:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 05:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 05:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 05:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 05:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 05:02	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 05:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 05:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 05:02	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 05:02	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 05:02	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 05:02	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 05:02	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 05:02	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 05:02	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-37D	Lab ID: 50281482008	Collected: 03/05/21 12:55	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 05:02	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 05:02	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 05:02	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 05:02	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 05:02	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 05:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 05:02	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 05:02	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 05:02	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 05:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 05:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 05:02	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 05:02	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 05:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 05:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 05:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 05:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 05:02	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/16/21 05:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 05:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 05:02	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 05:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 05:02	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 05:02	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 05:02	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 05:02	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	107	%	75-120	1		03/16/21 05:02	1868-53-7	
4-Bromofluorobenzene (S)	94	%	85-116	1		03/16/21 05:02	460-00-4	
Toluene-d8 (S)	100	%	83-111	1		03/16/21 05:02	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-38	Lab ID: 50281482009	Collected: 03/04/21 13:25	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 05:35	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 05:35	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 05:35	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 05:35	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 05:35	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 05:35	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 05:35	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 05:35	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 05:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 05:35	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 05:35	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 05:35	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 05:35	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 05:35	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 05:35	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 05:35	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 05:35	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 05:35	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 05:35	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 05:35	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 05:35	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 05:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 05:35	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 05:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 05:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 05:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 05:35	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 05:35	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 05:35	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 05:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 05:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 05:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 05:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 05:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 05:35	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 05:35	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 05:35	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 05:35	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 05:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 05:35	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 05:35	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 05:35	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 05:35	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 05:35	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 05:35	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 05:35	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-38	Lab ID: 50281482009	Collected: 03/04/21 13:25	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 05:35	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 05:35	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 05:35	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 05:35	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 05:35	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 05:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 05:35	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 05:35	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 05:35	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 05:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 05:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 05:35	79-34-5	
Tetrachloroethene	35.0	ug/L	5.0	1		03/16/21 05:35	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 05:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 05:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 05:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 05:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 05:35	79-00-5	
Trichloroethene	27.1	ug/L	5.0	1		03/16/21 05:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 05:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 05:35	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 05:35	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 05:35	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 05:35	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 05:35	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 05:35	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	107	%	75-120	1		03/16/21 05:35	1868-53-7	
4-Bromofluorobenzene (S)	95	%	85-116	1		03/16/21 05:35	460-00-4	
Toluene-d8 (S)	100	%	83-111	1		03/16/21 05:35	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-38D	Lab ID: 50281482010	Collected: 03/04/21 12:45	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 06:09	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 06:09	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 06:09	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 06:09	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 06:09	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 06:09	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 06:09	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 06:09	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 06:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 06:09	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 06:09	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 06:09	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 06:09	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 06:09	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 06:09	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 06:09	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 06:09	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 06:09	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 06:09	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 06:09	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 06:09	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 06:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 06:09	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 06:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 06:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 06:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 06:09	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 06:09	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 06:09	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 06:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 06:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 06:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 06:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 06:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 06:09	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 06:09	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 06:09	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 06:09	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 06:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 06:09	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 06:09	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 06:09	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 06:09	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 06:09	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 06:09	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 06:09	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-38D	Lab ID: 50281482010	Collected: 03/04/21 12:45	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 06:09	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 06:09	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 06:09	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 06:09	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 06:09	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 06:09	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 06:09	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 06:09	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 06:09	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 06:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 06:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 06:09	79-34-5	
Tetrachloroethene	13.2	ug/L	5.0	1		03/16/21 06:09	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 06:09	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 06:09	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 06:09	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 06:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 06:09	79-00-5	
Trichloroethene	99.7	ug/L	5.0	1		03/16/21 06:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 06:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 06:09	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 06:09	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 06:09	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 06:09	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 06:09	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 06:09	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	115	%	75-120	1		03/16/21 06:09	1868-53-7	
4-Bromofluorobenzene (S)	94	%	85-116	1		03/16/21 06:09	460-00-4	
Toluene-d8 (S)	100	%	83-111	1		03/16/21 06:09	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-39	Lab ID: 50281482011	Collected: 03/04/21 15:05	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 06:42	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 06:42	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 06:42	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 06:42	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 06:42	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 06:42	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 06:42	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 06:42	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 06:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 06:42	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 06:42	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 06:42	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 06:42	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 06:42	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 06:42	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 06:42	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 06:42	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 06:42	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 06:42	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 06:42	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 06:42	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 06:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 06:42	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 06:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 06:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 06:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 06:42	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 06:42	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 06:42	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 06:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 06:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 06:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 06:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 06:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 06:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 06:42	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 06:42	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 06:42	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 06:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 06:42	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 06:42	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 06:42	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 06:42	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 06:42	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 06:42	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 06:42	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-39	Lab ID: 50281482011	Collected: 03/04/21 15:05	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 06:42	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 06:42	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 06:42	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 06:42	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 06:42	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 06:42	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 06:42	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 06:42	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 06:42	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 06:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 06:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 06:42	79-34-5	
Tetrachloroethene	14.4	ug/L	5.0	1		03/16/21 06:42	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 06:42	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 06:42	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 06:42	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 06:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 06:42	79-00-5	
Trichloroethene	36.7	ug/L	5.0	1		03/16/21 06:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 06:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 06:42	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 06:42	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 06:42	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 06:42	108-05-4	
Vinyl chloride	4.7	ug/L	2.0	1		03/16/21 17:04	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 06:42	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	115	%	75-120	1		03/16/21 06:42	1868-53-7	
4-Bromofluorobenzene (S)	89	%	85-116	1		03/16/21 06:42	460-00-4	
Toluene-d8 (S)	97	%	83-111	1		03/16/21 06:42	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-39D	Lab ID: 50281482012	Collected: 03/04/21 14:20	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 07:16	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 07:16	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 07:16	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 07:16	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 07:16	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 07:16	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 07:16	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 07:16	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 07:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 07:16	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 07:16	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 07:16	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 07:16	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 07:16	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 07:16	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 07:16	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 07:16	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 07:16	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 07:16	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 07:16	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 07:16	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 07:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 07:16	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 07:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 07:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 07:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 07:16	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 07:16	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 07:16	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 07:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 07:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 07:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 07:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 07:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 07:16	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 07:16	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 07:16	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 07:16	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 07:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 07:16	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 07:16	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 07:16	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 07:16	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 07:16	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 07:16	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 07:16	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-39D		Lab ID: 50281482012		Collected: 03/04/21 14:20	Received: 03/05/21 15:55	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 07:16	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 07:16	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 07:16	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 07:16	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 07:16	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 07:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 07:16	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 07:16	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 07:16	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 07:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 07:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 07:16	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 07:16	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 07:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 07:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 07:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 07:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 07:16	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/16/21 07:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 07:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 07:16	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 07:16	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 07:16	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 07:16	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 07:16	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 07:16	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	112	%	75-120	1		03/16/21 07:16	1868-53-7	
4-Bromofluorobenzene (S)	95	%	85-116	1		03/16/21 07:16	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/16/21 07:16	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-42	Lab ID: 50281482013	Collected: 03/05/21 10:35	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 14:29	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 14:29	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 14:29	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 14:29	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 14:29	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 14:29	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 14:29	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 14:29	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 14:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 14:29	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 14:29	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 14:29	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 14:29	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 14:29	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 14:29	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 14:29	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 14:29	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 14:29	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 14:29	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 14:29	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 14:29	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 14:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 14:29	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 14:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 14:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 14:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 14:29	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 14:29	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 14:29	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 14:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 14:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 14:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 14:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 14:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 14:29	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 14:29	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 14:29	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 14:29	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 14:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 14:29	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 14:29	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 14:29	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 14:29	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 14:29	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 14:29	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 14:29	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-42		Lab ID: 50281482013	Collected: 03/05/21 10:35	Received: 03/05/21 15:55	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 14:29	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 14:29	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 14:29	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 14:29	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 14:29	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 14:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 14:29	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 14:29	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 14:29	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 14:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 14:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 14:29	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 14:29	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 14:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 14:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 14:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 14:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 14:29	79-00-5	
Trichloroethene	131	ug/L	5.0	1		03/16/21 14:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 14:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 14:29	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 14:29	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 14:29	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 14:29	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 14:29	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 14:29	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	111	%	75-120	1		03/16/21 14:29	1868-53-7	
4-Bromofluorobenzene (S)	93	%	85-116	1		03/16/21 14:29	460-00-4	
Toluene-d8 (S)	100	%	83-111	1		03/16/21 14:29	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-42D	Lab ID: 50281482014	Collected: 03/05/21 10:00	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 07:49	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 07:49	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 07:49	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 07:49	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 07:49	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 07:49	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 07:49	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 07:49	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 07:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 07:49	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 07:49	104-51-8	R1
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 07:49	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 07:49	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 07:49	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 07:49	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 07:49	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 07:49	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 07:49	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 07:49	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 07:49	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 07:49	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 07:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 07:49	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 07:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 07:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 07:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 07:49	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 07:49	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 07:49	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 07:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 07:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 07:49	75-35-4	
cis-1,2-Dichloroethene	369	ug/L	50.0	10		03/16/21 17:16	156-59-2	M1
trans-1,2-Dichloroethene	26.4	ug/L	5.0	1		03/16/21 07:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 07:49	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 07:49	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 07:49	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 07:49	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 07:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 07:49	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 07:49	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 07:49	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 07:49	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 07:49	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 07:49	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 07:49	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-42D	Lab ID: 50281482014	Collected: 03/05/21 10:00	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 07:49	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 07:49	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 07:49	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 07:49	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 07:49	91-57-6	R1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 07:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 07:49	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 07:49	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 07:49	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 07:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 07:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 07:49	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 07:49	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 07:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 07:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 07:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 07:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 07:49	79-00-5	
Trichloroethene	48.8	ug/L	5.0	1		03/16/21 07:49	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 07:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 07:49	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 07:49	95-63-6	R1
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 07:49	108-67-8	R1
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 07:49	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 07:49	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 07:49	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	111	%	75-120	1		03/16/21 07:49	1868-53-7	
4-Bromofluorobenzene (S)	93	%	85-116	1		03/16/21 07:49	460-00-4	
Toluene-d8 (S)	99	%	83-111	1		03/16/21 07:49	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-43	Lab ID: 50281482015	Collected: 03/04/21 11:50	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 15:03	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 15:03	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 15:03	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 15:03	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 15:03	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 15:03	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 15:03	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 15:03	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 15:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 15:03	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 15:03	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 15:03	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 15:03	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 15:03	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 15:03	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 15:03	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 15:03	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 15:03	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 15:03	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 15:03	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 15:03	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 15:03	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 15:03	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 15:03	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 15:03	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 15:03	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 15:03	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 15:03	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 15:03	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 15:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 15:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 15:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 15:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 15:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 15:03	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 15:03	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 15:03	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 15:03	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 15:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 15:03	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 15:03	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 15:03	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 15:03	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 15:03	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 15:03	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 15:03	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-43	Lab ID: 50281482015	Collected: 03/04/21 11:50	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 15:03	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 15:03	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 15:03	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 15:03	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 15:03	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 15:03	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 15:03	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 15:03	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 15:03	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 15:03	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 15:03	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 15:03	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 15:03	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 15:03	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 15:03	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 15:03	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 15:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 15:03	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/16/21 15:03	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 15:03	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 15:03	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 15:03	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 15:03	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 15:03	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 15:03	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 15:03	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	110	%	75-120	1		03/16/21 15:03	1868-53-7	
4-Bromofluorobenzene (S)	91	%	85-116	1		03/16/21 15:03	460-00-4	
Toluene-d8 (S)	100	%	83-111	1		03/16/21 15:03	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-43D	Lab ID: 50281482016	Collected: 03/04/21 11:00	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 15:36	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 15:36	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 15:36	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 15:36	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 15:36	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 15:36	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 15:36	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 15:36	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 15:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 15:36	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 15:36	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 15:36	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 15:36	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 15:36	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 15:36	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 15:36	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 15:36	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 15:36	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 15:36	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 15:36	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 15:36	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 15:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 15:36	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 15:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 15:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 15:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 15:36	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 15:36	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 15:36	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 15:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 15:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 15:36	75-35-4	
cis-1,2-Dichloroethene	10.7	ug/L	5.0	1		03/16/21 15:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 15:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 15:36	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 15:36	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 15:36	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 15:36	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 15:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 15:36	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 15:36	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 15:36	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 15:36	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 15:36	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 15:36	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 15:36	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: MW-43D		Lab ID: 50281482016		Collected: 03/04/21 11:00	Received: 03/05/21 15:55	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 15:36	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 15:36	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 15:36	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 15:36	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 15:36	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 15:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 15:36	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 15:36	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 15:36	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 15:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 15:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 15:36	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 15:36	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 15:36	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 15:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 15:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 15:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 15:36	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/16/21 15:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 15:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 15:36	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 15:36	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 15:36	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 15:36	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 15:36	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 15:36	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	119	%	75-120	1		03/16/21 15:36	1868-53-7	
4-Bromofluorobenzene (S)	90	%	85-116	1		03/16/21 15:36	460-00-4	
Toluene-d8 (S)	100	%	83-111	1		03/16/21 15:36	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: Dup-2	Lab ID: 50281482017	Collected: 03/05/21 08:00	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 16:09	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 16:09	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 16:09	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 16:09	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 16:09	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 16:09	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 16:09	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 16:09	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 16:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 16:09	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 16:09	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 16:09	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 16:09	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 16:09	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 16:09	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 16:09	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 16:09	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 16:09	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 16:09	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 16:09	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 16:09	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 16:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 16:09	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 16:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 16:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 16:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 16:09	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 16:09	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 16:09	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 16:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 16:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 16:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 16:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 16:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 16:09	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 16:09	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 16:09	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 16:09	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 16:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 16:09	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 16:09	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 16:09	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 16:09	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 16:09	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 16:09	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 16:09	74-88-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: Dup-2		Lab ID: 50281482017	Collected: 03/05/21 08:00	Received: 03/05/21 15:55	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 16:09	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 16:09	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 16:09	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 16:09	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 16:09	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 16:09	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 16:09	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 16:09	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 16:09	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 16:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 16:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 16:09	79-34-5	
Tetrachloroethene	10.1	ug/L	5.0	1		03/16/21 16:09	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 16:09	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 16:09	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 16:09	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 16:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 16:09	79-00-5	
Trichloroethene	38.6	ug/L	5.0	1		03/16/21 16:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 16:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 16:09	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 16:09	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 16:09	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 16:09	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 16:09	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 16:09	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	114	%	75-120	1		03/16/21 16:09	1868-53-7	
4-Bromofluorobenzene (S)	92	%	85-116	1		03/16/21 16:09	460-00-4	
Toluene-d8 (S)	98	%	83-111	1		03/16/21 16:09	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: Trip Blank	Lab ID: 50281482018	Collected: 03/04/21 08:00	Received: 03/05/21 15:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		03/16/21 16:43	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/16/21 16:43	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/16/21 16:43	107-13-1	
Benzene	ND	ug/L	5.0	1		03/16/21 16:43	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/16/21 16:43	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/16/21 16:43	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/16/21 16:43	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/16/21 16:43	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/16/21 16:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/16/21 16:43	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/16/21 16:43	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/16/21 16:43	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/16/21 16:43	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/16/21 16:43	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/16/21 16:43	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/16/21 16:43	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/16/21 16:43	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/16/21 16:43	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/16/21 16:43	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 16:43	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/16/21 16:43	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/16/21 16:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/16/21 16:43	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/16/21 16:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 16:43	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 16:43	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/16/21 16:43	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/16/21 16:43	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/16/21 16:43	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/16/21 16:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/16/21 16:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/16/21 16:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 16:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/16/21 16:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 16:43	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/16/21 16:43	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/16/21 16:43	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/16/21 16:43	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 16:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/16/21 16:43	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/16/21 16:43	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/16/21 16:43	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/16/21 16:43	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/16/21 16:43	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/16/21 16:43	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/16/21 16:43	74-88-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Sample: Trip Blank		Lab ID: 50281482018	Collected: 03/04/21 08:00	Received: 03/05/21 15:55	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/16/21 16:43	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/16/21 16:43	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/16/21 16:43	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 16:43	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/16/21 16:43	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/16/21 16:43	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/16/21 16:43	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		03/16/21 16:43	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/16/21 16:43	103-65-1	
Styrene	ND	ug/L	5.0	1		03/16/21 16:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 16:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/16/21 16:43	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/16/21 16:43	127-18-4	
Toluene	ND	ug/L	5.0	1		03/16/21 16:43	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 16:43	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/16/21 16:43	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/16/21 16:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/16/21 16:43	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/16/21 16:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/16/21 16:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/16/21 16:43	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 16:43	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/16/21 16:43	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/16/21 16:43	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/16/21 16:43	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/16/21 16:43	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	107	%	75-120	1		03/16/21 16:43	1868-53-7	
4-Bromofluorobenzene (S)	91	%	85-116	1		03/16/21 16:43	460-00-4	
Toluene-d8 (S)	100	%	83-111	1		03/16/21 16:43	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4
Pace Project No.: 50281332

QC Batch: 609832 Analysis Method: EPA 5030/8260
QC Batch Method: EPA 5030/8260 Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50281332001, 50281332002, 50281332003, 50281332004, 50281332005

METHOD BLANK: 2810685 Matrix: Water
Associated Lab Samples: 50281332001, 50281332002, 50281332003, 50281332004, 50281332005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	03/12/21 03:04	
1,1,1-Trichloroethane	ug/L	ND	5.0	03/12/21 03:04	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	03/12/21 03:04	
1,1,2-Trichloroethane	ug/L	ND	5.0	03/12/21 03:04	
1,1-Dichloroethane	ug/L	ND	5.0	03/12/21 03:04	
1,1-Dichloroethene	ug/L	ND	5.0	03/12/21 03:04	
1,1-Dichloropropene	ug/L	ND	5.0	03/12/21 03:04	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	03/12/21 03:04	
1,2,3-Trichloropropane	ug/L	ND	5.0	03/12/21 03:04	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	03/12/21 03:04	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	03/12/21 03:04	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	03/12/21 03:04	
1,2-Dichlorobenzene	ug/L	ND	5.0	03/12/21 03:04	
1,2-Dichloroethane	ug/L	ND	5.0	03/12/21 03:04	
1,2-Dichloropropane	ug/L	ND	5.0	03/12/21 03:04	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	03/12/21 03:04	
1,3-Dichlorobenzene	ug/L	ND	5.0	03/12/21 03:04	
1,3-Dichloropropane	ug/L	ND	5.0	03/12/21 03:04	
1,4-Dichlorobenzene	ug/L	ND	5.0	03/12/21 03:04	
1-Methylnaphthalene	ug/L	ND	10.0	03/12/21 03:04	
2,2-Dichloropropane	ug/L	ND	5.0	03/12/21 03:04	
2-Butanone (MEK)	ug/L	ND	25.0	03/12/21 03:04	
2-Chlorotoluene	ug/L	ND	5.0	03/12/21 03:04	
2-Hexanone	ug/L	ND	25.0	03/12/21 03:04	
2-Methylnaphthalene	ug/L	ND	10.0	03/12/21 03:04	
4-Chlorotoluene	ug/L	ND	5.0	03/12/21 03:04	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	03/12/21 03:04	
Acetone	ug/L	ND	100	03/12/21 03:04	
Acrolein	ug/L	ND	50.0	03/12/21 03:04	
Acrylonitrile	ug/L	ND	100	03/12/21 03:04	
Benzene	ug/L	ND	5.0	03/12/21 03:04	
Bromobenzene	ug/L	ND	5.0	03/12/21 03:04	
Bromochloromethane	ug/L	ND	5.0	03/12/21 03:04	
Bromodichloromethane	ug/L	ND	5.0	03/12/21 03:04	
Bromoform	ug/L	ND	5.0	03/12/21 03:04	
Bromomethane	ug/L	ND	5.0	03/12/21 03:04	
Carbon disulfide	ug/L	ND	10.0	03/12/21 03:04	
Carbon tetrachloride	ug/L	ND	5.0	03/12/21 03:04	
Chlorobenzene	ug/L	ND	5.0	03/12/21 03:04	
Chloroethane	ug/L	ND	5.0	03/12/21 03:04	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

METHOD BLANK: 2810685

Matrix: Water

Associated Lab Samples: 50281332001, 50281332002, 50281332003, 50281332004, 50281332005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	5.0	03/12/21 03:04	
Chloromethane	ug/L	ND	5.0	03/12/21 03:04	
cis-1,2-Dichloroethene	ug/L	ND	5.0	03/12/21 03:04	
cis-1,3-Dichloropropene	ug/L	ND	5.0	03/12/21 03:04	
Dibromochloromethane	ug/L	ND	5.0	03/12/21 03:04	
Dibromomethane	ug/L	ND	5.0	03/12/21 03:04	
Dichlorodifluoromethane	ug/L	ND	5.0	03/12/21 03:04	
Ethyl methacrylate	ug/L	ND	100	03/12/21 03:04	
Ethylbenzene	ug/L	ND	5.0	03/12/21 03:04	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	03/12/21 03:04	
Iodomethane	ug/L	ND	10.0	03/12/21 03:04	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	03/12/21 03:04	
Methyl-tert-butyl ether	ug/L	ND	4.0	03/12/21 03:04	
Methylene Chloride	ug/L	ND	5.0	03/12/21 03:04	
n-Butylbenzene	ug/L	ND	5.0	03/12/21 03:04	
n-Hexane	ug/L	ND	5.0	03/12/21 03:04	
n-Propylbenzene	ug/L	ND	5.0	03/12/21 03:04	
Naphthalene	ug/L	ND	1.7	03/12/21 03:04	
p-Isopropyltoluene	ug/L	ND	5.0	03/12/21 03:04	
sec-Butylbenzene	ug/L	ND	5.0	03/12/21 03:04	
Styrene	ug/L	ND	5.0	03/12/21 03:04	
tert-Butylbenzene	ug/L	ND	5.0	03/12/21 03:04	
Tetrachloroethene	ug/L	ND	5.0	03/12/21 03:04	
Toluene	ug/L	ND	5.0	03/12/21 03:04	
trans-1,2-Dichloroethene	ug/L	ND	5.0	03/12/21 03:04	
trans-1,3-Dichloropropene	ug/L	ND	5.0	03/12/21 03:04	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	03/12/21 03:04	
Trichloroethene	ug/L	ND	5.0	03/12/21 03:04	
Trichlorofluoromethane	ug/L	ND	5.0	03/12/21 03:04	
Vinyl acetate	ug/L	ND	50.0	03/12/21 03:04	
Vinyl chloride	ug/L	ND	2.0	03/12/21 03:04	
Xylene (Total)	ug/L	ND	10.0	03/12/21 03:04	
4-Bromofluorobenzene (S)	%	99	85-116	03/12/21 03:04	
Dibromofluoromethane (S)	%	103	75-120	03/12/21 03:04	
Toluene-d8 (S)	%	99	83-111	03/12/21 03:04	

LABORATORY CONTROL SAMPLE: 2810686

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	52.7	105	78-120	
1,1,1-Trichloroethane	ug/L	50	52.8	106	78-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.9	94	64-126	
1,1,2-Trichloroethane	ug/L	50	49.9	100	73-125	
1,1-Dichloroethane	ug/L	50	47.6	95	77-123	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

LABORATORY CONTROL SAMPLE: 2810686

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	50.7	101	79-128	
1,1-Dichloropropene	ug/L	50	47.5	95	78-120	
1,2,3-Trichlorobenzene	ug/L	50	48.9	98	75-126	
1,2,3-Trichloropropane	ug/L	50	48.6	97	71-131	
1,2,4-Trichlorobenzene	ug/L	50	50.5	101	76-130	
1,2,4-Trimethylbenzene	ug/L	50	47.1	94	76-119	
1,2-Dibromoethane (EDB)	ug/L	50	50.5	101	76-122	
1,2-Dichlorobenzene	ug/L	50	51.1	102	79-113	
1,2-Dichloroethane	ug/L	50	51.1	102	66-127	
1,2-Dichloropropane	ug/L	50	50.3	101	75-127	
1,3,5-Trimethylbenzene	ug/L	50	48.4	97	78-116	
1,3-Dichlorobenzene	ug/L	50	50.0	100	79-120	
1,3-Dichloropropane	ug/L	50	47.2	94	81-121	
1,4-Dichlorobenzene	ug/L	50	47.4	95	77-117	
1-Methylnaphthalene	ug/L	50	47.5	95	65-142	
2,2-Dichloropropane	ug/L	50	38.1	76	56-134	
2-Butanone (MEK)	ug/L	250	241	96	61-138	
2-Chlorotoluene	ug/L	50	45.2	90	73-125	
2-Hexanone	ug/L	250	207	83	58-138	
2-Methylnaphthalene	ug/L	50	54.3	109	60-136	
4-Chlorotoluene	ug/L	50	48.6	97	75-118	
4-Methyl-2-pentanone (MIBK)	ug/L	250	205	82	60-131	
Acetone	ug/L	250	216	86	57-126	
Acrolein	ug/L	1000	1070	107	56-120	
Acrylonitrile	ug/L	250	230	92	65-127	
Benzene	ug/L	50	49.4	99	75-118	
Bromobenzene	ug/L	50	46.0	92	68-127	
Bromochloromethane	ug/L	50	43.9	88	66-126	
Bromodichloromethane	ug/L	50	51.9	104	75-120	
Bromoform	ug/L	50	52.0	104	61-119	
Bromomethane	ug/L	50	60.2	120	12-184	
Carbon disulfide	ug/L	50	44.1	88	71-123	
Carbon tetrachloride	ug/L	50	53.9	108	73-125	
Chlorobenzene	ug/L	50	50.9	102	80-115	
Chloroethane	ug/L	50	45.9	92	46-133	
Chloroform	ug/L	50	49.8	100	75-117	
Chloromethane	ug/L	50	39.2	78	33-124	
cis-1,2-Dichloroethene	ug/L	50	51.3	103	76-120	
cis-1,3-Dichloropropene	ug/L	50	46.0	92	73-130	
Dibromochloromethane	ug/L	50	52.3	105	69-124	
Dibromomethane	ug/L	50	53.1	106	76-124	
Dichlorodifluoromethane	ug/L	50	46.3	93	36-145	
Ethyl methacrylate	ug/L	50	47.2J	94	67-140	
Ethylbenzene	ug/L	50	50.2	100	78-120	
Hexachloro-1,3-butadiene	ug/L	50	45.2	90	79-137	
Iodomethane	ug/L	50	103	206	10-184 L1	
Isopropylbenzene (Cumene)	ug/L	50	50.2	100	82-122	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

LABORATORY CONTROL SAMPLE: 2810686

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methyl-tert-butyl ether	ug/L	50	49.6	99	79-125	
Methylene Chloride	ug/L	50	56.3	113	68-126	
n-Butylbenzene	ug/L	50	45.6	91	73-123	
n-Hexane	ug/L	50	40.4	81	71-143	
n-Propylbenzene	ug/L	50	46.8	94	75-119	
Naphthalene	ug/L	50	50.1	100	70-130	
p-Isopropyltoluene	ug/L	50	48.9	98	82-119	
sec-Butylbenzene	ug/L	50	48.1	96	79-119	
Styrene	ug/L	50	50.5	101	80-121	
tert-Butylbenzene	ug/L	50	55.1	110	58-106	L1
Tetrachloroethene	ug/L	50	55.0	110	70-123	
Toluene	ug/L	50	47.6	95	72-114	
trans-1,2-Dichloroethene	ug/L	50	49.4	99	79-126	
trans-1,3-Dichloropropene	ug/L	50	48.0	96	68-122	
trans-1,4-Dichloro-2-butene	ug/L	50	42.1J	84	34-130	
Trichloroethene	ug/L	50	52.2	104	78-120	
Trichlorofluoromethane	ug/L	50	58.4	117	57-156	
Vinyl acetate	ug/L	200	139	70	50-116	
Vinyl chloride	ug/L	50	47.4	95	55-122	
Xylene (Total)	ug/L	150	144	96	81-118	
4-Bromofluorobenzene (S)	%			99	85-116	
Dibromofluoromethane (S)	%			104	75-120	
Toluene-d8 (S)	%			98	83-111	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

QC Batch: 610015

Analysis Method: EPA 5030/8260

QC Batch Method: EPA 5030/8260

Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50281332006, 50281332007, 50281332008, 50281332009, 50281332010, 50281332011, 50281332012, 50281332013, 50281332014, 50281332015, 50281332016, 50281332017, 50281332018

METHOD BLANK: 2811619

Matrix: Water

Associated Lab Samples: 50281332006, 50281332007, 50281332008, 50281332009, 50281332010, 50281332011, 50281332012, 50281332013, 50281332014, 50281332015, 50281332016, 50281332017, 50281332018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	03/12/21 15:40	
1,1,1-Trichloroethane	ug/L	ND	5.0	03/12/21 15:40	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	03/12/21 15:40	
1,1,2-Trichloroethane	ug/L	ND	5.0	03/12/21 15:40	
1,1-Dichloroethane	ug/L	ND	5.0	03/12/21 15:40	
1,1-Dichloroethene	ug/L	ND	5.0	03/12/21 15:40	
1,1-Dichloropropene	ug/L	ND	5.0	03/12/21 15:40	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	03/12/21 15:40	
1,2,3-Trichloropropane	ug/L	ND	5.0	03/12/21 15:40	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	03/12/21 15:40	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	03/12/21 15:40	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	03/12/21 15:40	
1,2-Dichlorobenzene	ug/L	ND	5.0	03/12/21 15:40	
1,2-Dichloroethane	ug/L	ND	5.0	03/12/21 15:40	
1,2-Dichloropropane	ug/L	ND	5.0	03/12/21 15:40	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	03/12/21 15:40	
1,3-Dichlorobenzene	ug/L	ND	5.0	03/12/21 15:40	
1,3-Dichloropropane	ug/L	ND	5.0	03/12/21 15:40	
1,4-Dichlorobenzene	ug/L	ND	5.0	03/12/21 15:40	
1-Methylnaphthalene	ug/L	ND	10.0	03/12/21 15:40	
2,2-Dichloropropane	ug/L	ND	5.0	03/12/21 15:40	
2-Butanone (MEK)	ug/L	ND	25.0	03/12/21 15:40	
2-Chlorotoluene	ug/L	ND	5.0	03/12/21 15:40	
2-Hexanone	ug/L	ND	25.0	03/12/21 15:40	
2-Methylnaphthalene	ug/L	ND	10.0	03/12/21 15:40	
4-Chlorotoluene	ug/L	ND	5.0	03/12/21 15:40	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	03/12/21 15:40	
Acetone	ug/L	ND	100	03/12/21 15:40	
Acrolein	ug/L	ND	50.0	03/12/21 15:40	
Acrylonitrile	ug/L	ND	100	03/12/21 15:40	
Benzene	ug/L	ND	5.0	03/12/21 15:40	
Bromobenzene	ug/L	ND	5.0	03/12/21 15:40	
Bromochloromethane	ug/L	ND	5.0	03/12/21 15:40	
Bromodichloromethane	ug/L	ND	5.0	03/12/21 15:40	
Bromoform	ug/L	ND	5.0	03/12/21 15:40	
Bromomethane	ug/L	ND	5.0	03/12/21 15:40	
Carbon disulfide	ug/L	ND	10.0	03/12/21 15:40	
Carbon tetrachloride	ug/L	ND	5.0	03/12/21 15:40	
Chlorobenzene	ug/L	ND	5.0	03/12/21 15:40	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

METHOD BLANK: 2811619

Matrix: Water

Associated Lab Samples: 50281332006, 50281332007, 50281332008, 50281332009, 50281332010, 50281332011, 50281332012, 50281332013, 50281332014, 50281332015, 50281332016, 50281332017, 50281332018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroethane	ug/L	ND	5.0	03/12/21 15:40	
Chloroform	ug/L	ND	5.0	03/12/21 15:40	
Chloromethane	ug/L	ND	5.0	03/12/21 15:40	
cis-1,2-Dichloroethene	ug/L	ND	5.0	03/12/21 15:40	
cis-1,3-Dichloropropene	ug/L	ND	5.0	03/12/21 15:40	
Dibromochloromethane	ug/L	ND	5.0	03/12/21 15:40	
Dibromomethane	ug/L	ND	5.0	03/12/21 15:40	
Dichlorodifluoromethane	ug/L	ND	5.0	03/12/21 15:40	
Ethyl methacrylate	ug/L	ND	100	03/12/21 15:40	
Ethylbenzene	ug/L	ND	5.0	03/12/21 15:40	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	03/12/21 15:40	
Iodomethane	ug/L	ND	10.0	03/12/21 15:40	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	03/12/21 15:40	
Methyl-tert-butyl ether	ug/L	ND	4.0	03/12/21 15:40	
Methylene Chloride	ug/L	ND	5.0	03/12/21 15:40	
n-Butylbenzene	ug/L	ND	5.0	03/12/21 15:40	
n-Hexane	ug/L	ND	5.0	03/12/21 15:40	
n-Propylbenzene	ug/L	ND	5.0	03/12/21 15:40	
Naphthalene	ug/L	ND	1.7	03/12/21 15:40	
p-Isopropyltoluene	ug/L	ND	5.0	03/12/21 15:40	
sec-Butylbenzene	ug/L	ND	5.0	03/12/21 15:40	
Styrene	ug/L	ND	5.0	03/12/21 15:40	
tert-Butylbenzene	ug/L	ND	5.0	03/12/21 15:40	
Tetrachloroethene	ug/L	ND	5.0	03/12/21 15:40	
Toluene	ug/L	ND	5.0	03/12/21 15:40	
trans-1,2-Dichloroethene	ug/L	ND	5.0	03/12/21 15:40	
trans-1,3-Dichloropropene	ug/L	ND	5.0	03/12/21 15:40	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	03/12/21 15:40	
Trichloroethene	ug/L	ND	5.0	03/12/21 15:40	
Trichlorofluoromethane	ug/L	ND	5.0	03/12/21 15:40	
Vinyl acetate	ug/L	ND	50.0	03/12/21 15:40	
Vinyl chloride	ug/L	ND	2.0	03/12/21 15:40	
Xylene (Total)	ug/L	ND	10.0	03/12/21 15:40	
4-Bromofluorobenzene (S)	%	99	85-116	03/12/21 15:40	
Dibromofluoromethane (S)	%	103	75-120	03/12/21 15:40	
Toluene-d8 (S)	%	99	83-111	03/12/21 15:40	

LABORATORY CONTROL SAMPLE: 2811620

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.4	101	78-120	
1,1,1-Trichloroethane	ug/L	50	49.2	98	78-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.7	91	64-126	

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

LABORATORY CONTROL SAMPLE: 2811620

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2-Trichloroethane	ug/L	50	48.2	96	73-125	
1,1-Dichloroethane	ug/L	50	44.0	88	77-123	
1,1-Dichloroethene	ug/L	50	45.7	91	79-128	
1,1-Dichloropropene	ug/L	50	45.2	90	78-120	
1,2,3-Trichlorobenzene	ug/L	50	49.7	99	75-126	
1,2,3-Trichloropropane	ug/L	50	46.3	93	71-131	
1,2,4-Trichlorobenzene	ug/L	50	51.0	102	76-130	
1,2,4-Trimethylbenzene	ug/L	50	45.6	91	76-119	
1,2-Dibromoethane (EDB)	ug/L	50	49.6	99	76-122	
1,2-Dichlorobenzene	ug/L	50	49.5	99	79-113	
1,2-Dichloroethane	ug/L	50	46.7	93	66-127	
1,2-Dichloropropane	ug/L	50	47.3	95	75-127	
1,3,5-Trimethylbenzene	ug/L	50	46.3	93	78-116	
1,3-Dichlorobenzene	ug/L	50	48.4	97	79-120	
1,3-Dichloropropane	ug/L	50	45.2	90	81-121	
1,4-Dichlorobenzene	ug/L	50	46.5	93	77-117	
1-Methylnaphthalene	ug/L	50	45.5	91	65-142	
2,2-Dichloropropane	ug/L	50	47.5	95	56-134	
2-Butanone (MEK)	ug/L	250	226	90	61-138	
2-Chlorotoluene	ug/L	50	43.3	87	73-125	
2-Hexanone	ug/L	250	210	84	58-138	
2-Methylnaphthalene	ug/L	50	52.3	105	60-136	
4-Chlorotoluene	ug/L	50	47.5	95	75-118	
4-Methyl-2-pentanone (MIBK)	ug/L	250	205	82	60-131	
Acetone	ug/L	250	210	84	57-126	
Acrolein	ug/L	1000	989	99	56-120	
Acrylonitrile	ug/L	250	220	88	65-127	
Benzene	ug/L	50	45.9	92	75-118	
Bromobenzene	ug/L	50	44.8	90	68-127	
Bromochloromethane	ug/L	50	41.1	82	66-126	
Bromodichloromethane	ug/L	50	49.1	98	75-120	
Bromoform	ug/L	50	49.7	99	61-119	
Bromomethane	ug/L	50	54.5	109	12-184	
Carbon disulfide	ug/L	50	40.5	81	71-123	
Carbon tetrachloride	ug/L	50	50.5	101	73-125	
Chlorobenzene	ug/L	50	48.6	97	80-115	
Chloroethane	ug/L	50	39.5	79	46-133	
Chloroform	ug/L	50	46.7	93	75-117	
Chloromethane	ug/L	50	32.1	64	33-124	
cis-1,2-Dichloroethene	ug/L	50	48.0	96	76-120	
cis-1,3-Dichloropropene	ug/L	50	45.6	91	73-130	
Dibromochloromethane	ug/L	50	51.2	102	69-124	
Dibromomethane	ug/L	50	51.2	102	76-124	
Dichlorodifluoromethane	ug/L	50	23.5	47	36-145	
Ethyl methacrylate	ug/L	50	46.1J	92	67-140	
Ethylbenzene	ug/L	50	48.6	97	78-120	
Hexachloro-1,3-butadiene	ug/L	50	50.3	101	79-137	

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

LABORATORY CONTROL SAMPLE: 2811620

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iodomethane	ug/L	50	94.1	188	10-184	L1
Isopropylbenzene (Cumene)	ug/L	50	49.1	98	82-122	
Methyl-tert-butyl ether	ug/L	50	47.3	95	79-125	
Methylene Chloride	ug/L	50	51.6	103	68-126	
n-Butylbenzene	ug/L	50	47.1	94	73-123	
n-Hexane	ug/L	50	42.9	86	71-143	
n-Propylbenzene	ug/L	50	46.2	92	75-119	
Naphthalene	ug/L	50	48.3	97	70-130	
p-Isopropyltoluene	ug/L	50	48.4	97	82-119	
sec-Butylbenzene	ug/L	50	47.4	95	79-119	
Styrene	ug/L	50	49.1	98	80-121	
tert-Butylbenzene	ug/L	50	47.6	95	58-106	
Tetrachloroethene	ug/L	50	52.3	105	70-123	
Toluene	ug/L	50	45.6	91	72-114	
trans-1,2-Dichloroethene	ug/L	50	46.0	92	79-126	
trans-1,3-Dichloropropene	ug/L	50	48.5	97	68-122	
trans-1,4-Dichloro-2-butene	ug/L	50	44.8J	90	34-130	
Trichloroethene	ug/L	50	49.9	100	78-120	
Trichlorofluoromethane	ug/L	50	52.1	104	57-156	
Vinyl acetate	ug/L	200	120	60	50-116	
Vinyl chloride	ug/L	50	38.5	77	55-122	
Xylene (Total)	ug/L	150	139	93	81-118	
4-Bromofluorobenzene (S)	%			99	85-116	
Dibromofluoromethane (S)	%			104	75-120	
Toluene-d8 (S)	%			99	83-111	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2811621 2811622

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50281332016 Result	Spike Conc.	Spike Conc.	Conc.							
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	59.1	57.3	118	115	51-135	3	20	
1,1,1-Trichloroethane	ug/L	ND	50	50	63.0	60.5	126	121	56-144	4	20	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	52.9	50.6	106	101	47-137	5	20	
1,1,2-Trichloroethane	ug/L	ND	50	50	56.7	54.5	113	109	55-136	4	20	
1,1-Dichloroethane	ug/L	ND	50	50	55.3	52.0	111	104	53-140	6	20	
1,1-Dichloroethene	ug/L	ND	50	50	60.4	57.2	121	114	60-140	5	20	
1,1-Dichloropropene	ug/L	ND	50	50	56.7	54.5	113	109	54-136	4	20	
1,2,3-Trichlorobenzene	ug/L	ND	50	50	53.4	52.6	107	105	35-140	2	20	
1,2,3-Trichloropropane	ug/L	ND	50	50	54.0	52.7	108	105	54-142	2	20	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	53.6	52.7	107	105	31-143	2	20	
1,2,4-Trimethylbenzene	ug/L	ND	50	50	51.9	50.6	104	101	13-152	2	20	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	57.2	55.7	114	111	56-136	3	20	
1,2-Dichlorobenzene	ug/L	ND	50	50	56.2	55.1	112	110	38-133	2	20	
1,2-Dichloroethane	ug/L	ND	50	50	57.6	55.6	115	111	46-145	4	20	
1,2-Dichloropropane	ug/L	ND	50	50	56.6	54.7	113	109	55-141	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Parameter	Units	2811621		2811622		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		50281332016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
1,3,5-Trimethylbenzene	ug/L	ND	50	50	53.1	51.8	106	104	23-145	2	20		
1,3-Dichlorobenzene	ug/L	ND	50	50	54.9	52.9	110	106	31-144	4	20		
1,3-Dichloropropane	ug/L	ND	50	50	53.2	51.2	106	102	60-139	4	20		
1,4-Dichlorobenzene	ug/L	ND	50	50	52.4	51.3	105	103	31-138	2	20		
1-Methylnaphthalene	ug/L	ND	50	50	49.7	52.6	99	105	40-150	6	20		
2,2-Dichloropropane	ug/L	ND	50	50	53.9	50.8	108	102	34-137	6	20		
2-Butanone (MEK)	ug/L	ND	250	250	264	242	105	97	42-150	8	20		
2-Chlorotoluene	ug/L	ND	50	50	50.2	48.8	100	98	28-148	3	20		
2-Hexanone	ug/L	ND	250	250	231	220	92	88	43-146	5	20		
2-Methylnaphthalene	ug/L	ND	50	50	55.4	58.7	111	117	32-142	6	20		
4-Chlorotoluene	ug/L	ND	50	50	53.7	52.7	107	105	25-145	2	20		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	227	216	91	87	42-142	5	20		
Acetone	ug/L	ND	250	250	242	227	97	91	36-142	6	20		
Acrolein	ug/L	ND	1000	1000	1230	1150	123	115	28-122	7	20	M1	
Acrylonitrile	ug/L	ND	250	250	253	239	101	96	48-137	6	20		
Benzene	ug/L	ND	50	50	56.8	54.6	114	109	49-135	4	20		
Bromobenzene	ug/L	ND	50	50	51.6	50.2	103	100	37-144	3	20		
Bromochloromethane	ug/L	ND	50	50	50.0	46.8	100	94	47-140	7	20		
Bromodichloromethane	ug/L	ND	50	50	58.3	56.2	117	112	55-133	4	20		
Bromoform	ug/L	ND	50	50	57.5	56.0	115	112	45-125	3	20		
Bromomethane	ug/L	ND	50	50	66.3	69.8	133	140	10-191	5	20		
Carbon disulfide	ug/L	ND	50	50	52.9	49.9	106	100	49-136	6	20		
Carbon tetrachloride	ug/L	ND	50	50	64.3	62.3	129	125	55-134	3	20		
Chlorobenzene	ug/L	ND	50	50	56.9	54.8	114	110	42-135	4	20		
Chloroethane	ug/L	ND	50	50	54.2	51.7	108	103	25-154	5	20		
Chloroform	ug/L	ND	50	50	57.0	55.0	114	110	57-130	4	20		
Chloromethane	ug/L	ND	50	50	50.8	45.6	102	91	17-129	11	20		
cis-1,2-Dichloroethene	ug/L	ND	50	50	58.8	56.1	118	112	53-134	5	20		
cis-1,3-Dichloropropene	ug/L	ND	50	50	53.0	51.1	106	102	50-136	4	20		
Dibromochloromethane	ug/L	ND	50	50	59.6	57.8	119	116	53-133	3	20		
Dibromomethane	ug/L	ND	50	50	60.8	58.3	122	117	57-139	4	20		
Dichlorodifluoromethane	ug/L	ND	50	50	55.3	51.1	111	102	21-154	8	20		
Ethyl methacrylate	ug/L	ND	50	50	52.8J	51J	106	102	56-148		20		
Ethylbenzene	ug/L	ND	50	50	57.0	55.3	114	111	28-147	3	20		
Hexachloro-1,3-butadiene	ug/L	ND	50	50	51.1	50.3	102	101	10-168	2	20		
Iodomethane	ug/L	ND	50	50	115	147	231	295	10-186	24	20	M0, R1	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	56.9	55.5	114	111	27-151	2	20		
Methyl-tert-butyl ether	ug/L	ND	50	50	56.2	53.5	112	107	60-142	5	20		
Methylene Chloride	ug/L	ND	50	50	61.7	58.7	123	117	46-138	5	20		
n-Butylbenzene	ug/L	ND	50	50	51.0	49.9	102	100	10-153	2	20		
n-Hexane	ug/L	ND	50	50	49.2	47.8	98	96	46-155	3	20		
n-Propylbenzene	ug/L	ND	50	50	52.8	51.6	106	103	20-149	2	20		
Naphthalene	ug/L	ND	50	50	53.6	52.6	107	105	41-139	2	20		
p-Isopropyltoluene	ug/L	ND	50	50	54.3	52.7	109	105	15-155	3	20		

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2811621		2811622		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50281332016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
sec-Butylbenzene	ug/L	ND	50	50	54.7	52.6	109	105	17-153	4	20		
Styrene	ug/L	ND	50	50	56.1	55.0	112	110	42-139	2	20		
tert-Butylbenzene	ug/L	ND	50	50	61.9	60.4	124	121	18-123	2	20	M1	
Tetrachloroethene	ug/L	ND	50	50	61.4	60.0	123	120	32-140	2	20		
Toluene	ug/L	ND	50	50	54.8	53.2	110	106	42-131	3	20		
trans-1,2-Dichloroethene	ug/L	ND	50	50	57.1	54.8	114	110	57-138	4	20		
trans-1,3-Dichloropropene	ug/L	ND	50	50	55.3	53.5	111	107	47-128	3	20		
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	46.6J	45.2J	93	90	10-135		20		
Trichloroethene	ug/L	ND	50	50	61.5	58.6	123	117	47-137	5	20		
Trichlorofluoromethane	ug/L	ND	50	50	71.2	67.4	142	135	42-163	5	20		
Vinyl acetate	ug/L	ND	200	200	140	131	70	66	10-114	7	20		
Vinyl chloride	ug/L	ND	50	50	59.7	53.7	119	107	36-136	11	20		
Xylene (Total)	ug/L	ND	150	150	161	156	107	104	30-145	3	20		
4-Bromofluorobenzene (S)	%						99	99	85-116				
Dibromofluoromethane (S)	%						104	103	75-120				
Toluene-d8 (S)	%						98	98	83-111				

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

QC Batch: 610017

Analysis Method: EPA 5030/8260

QC Batch Method: EPA 5030/8260

Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50281332019, 50281332020

METHOD BLANK: 2811631

Matrix: Water

Associated Lab Samples: 50281332019, 50281332020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	03/12/21 15:54	
1,1,1-Trichloroethane	ug/L	ND	5.0	03/12/21 15:54	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	03/12/21 15:54	
1,1,2-Trichloroethane	ug/L	ND	5.0	03/12/21 15:54	
1,1-Dichloroethane	ug/L	ND	5.0	03/12/21 15:54	
1,1-Dichloroethene	ug/L	ND	5.0	03/12/21 15:54	
1,1-Dichloropropene	ug/L	ND	5.0	03/12/21 15:54	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	03/12/21 15:54	
1,2,3-Trichloropropane	ug/L	ND	5.0	03/12/21 15:54	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	03/12/21 15:54	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	03/12/21 15:54	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	03/12/21 15:54	
1,2-Dichlorobenzene	ug/L	ND	5.0	03/12/21 15:54	
1,2-Dichloroethane	ug/L	ND	5.0	03/12/21 15:54	
1,2-Dichloropropane	ug/L	ND	5.0	03/12/21 15:54	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	03/12/21 15:54	
1,3-Dichlorobenzene	ug/L	ND	5.0	03/12/21 15:54	
1,3-Dichloropropane	ug/L	ND	5.0	03/12/21 15:54	
1,4-Dichlorobenzene	ug/L	ND	5.0	03/12/21 15:54	
1-Methylnaphthalene	ug/L	ND	10.0	03/12/21 15:54	
2,2-Dichloropropane	ug/L	ND	5.0	03/12/21 15:54	
2-Butanone (MEK)	ug/L	ND	25.0	03/12/21 15:54	
2-Chlorotoluene	ug/L	ND	5.0	03/12/21 15:54	
2-Hexanone	ug/L	ND	25.0	03/12/21 15:54	
2-Methylnaphthalene	ug/L	ND	10.0	03/12/21 15:54	
4-Chlorotoluene	ug/L	ND	5.0	03/12/21 15:54	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	03/12/21 15:54	
Acetone	ug/L	ND	100	03/12/21 15:54	
Acrolein	ug/L	ND	50.0	03/12/21 15:54	
Acrylonitrile	ug/L	ND	100	03/12/21 15:54	
Benzene	ug/L	ND	5.0	03/12/21 15:54	
Bromobenzene	ug/L	ND	5.0	03/12/21 15:54	
Bromochloromethane	ug/L	ND	5.0	03/12/21 15:54	
Bromodichloromethane	ug/L	ND	5.0	03/12/21 15:54	
Bromoform	ug/L	ND	5.0	03/12/21 15:54	
Bromomethane	ug/L	ND	5.0	03/12/21 15:54	
Carbon disulfide	ug/L	ND	10.0	03/12/21 15:54	
Carbon tetrachloride	ug/L	ND	5.0	03/12/21 15:54	
Chlorobenzene	ug/L	ND	5.0	03/12/21 15:54	
Chloroethane	ug/L	ND	5.0	03/12/21 15:54	

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

METHOD BLANK: 2811631

Matrix: Water

Associated Lab Samples: 50281332019, 50281332020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	5.0	03/12/21 15:54	
Chloromethane	ug/L	ND	5.0	03/12/21 15:54	
cis-1,2-Dichloroethene	ug/L	ND	5.0	03/12/21 15:54	
cis-1,3-Dichloropropene	ug/L	ND	5.0	03/12/21 15:54	
Dibromochloromethane	ug/L	ND	5.0	03/12/21 15:54	
Dibromomethane	ug/L	ND	5.0	03/12/21 15:54	
Dichlorodifluoromethane	ug/L	ND	5.0	03/12/21 15:54	
Ethyl methacrylate	ug/L	ND	100	03/12/21 15:54	
Ethylbenzene	ug/L	ND	5.0	03/12/21 15:54	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	03/12/21 15:54	
Iodomethane	ug/L	ND	10.0	03/12/21 15:54	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	03/12/21 15:54	
Methyl-tert-butyl ether	ug/L	ND	4.0	03/12/21 15:54	
Methylene Chloride	ug/L	ND	5.0	03/12/21 15:54	
n-Butylbenzene	ug/L	ND	5.0	03/12/21 15:54	
n-Hexane	ug/L	ND	5.0	03/12/21 15:54	
n-Propylbenzene	ug/L	ND	5.0	03/12/21 15:54	
Naphthalene	ug/L	ND	1.7	03/12/21 15:54	
p-Isopropyltoluene	ug/L	ND	5.0	03/12/21 15:54	
sec-Butylbenzene	ug/L	ND	5.0	03/12/21 15:54	
Styrene	ug/L	ND	5.0	03/12/21 15:54	
tert-Butylbenzene	ug/L	ND	5.0	03/12/21 15:54	
Tetrachloroethene	ug/L	ND	5.0	03/12/21 15:54	
Toluene	ug/L	ND	5.0	03/12/21 15:54	
trans-1,2-Dichloroethene	ug/L	ND	5.0	03/12/21 15:54	
trans-1,3-Dichloropropene	ug/L	ND	5.0	03/12/21 15:54	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	03/12/21 15:54	
Trichloroethene	ug/L	ND	5.0	03/12/21 15:54	
Trichlorofluoromethane	ug/L	ND	5.0	03/12/21 15:54	
Vinyl acetate	ug/L	ND	50.0	03/12/21 15:54	
Vinyl chloride	ug/L	ND	2.0	03/12/21 15:54	
Xylene (Total)	ug/L	ND	10.0	03/12/21 15:54	
4-Bromofluorobenzene (S)	%	97	85-116	03/12/21 15:54	
Dibromofluoromethane (S)	%	103	75-120	03/12/21 15:54	
Toluene-d8 (S)	%	99	83-111	03/12/21 15:54	

LABORATORY CONTROL SAMPLE: 2811632

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	53.2	106	78-120	
1,1,1-Trichloroethane	ug/L	50	52.8	106	78-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.1	94	64-126	
1,1,2-Trichloroethane	ug/L	50	48.8	98	73-125	
1,1-Dichloroethane	ug/L	50	46.5	93	77-123	

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

LABORATORY CONTROL SAMPLE: 2811632

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	49.9	100	79-128	
1,1-Dichloropropene	ug/L	50	48.6	97	78-120	
1,2,3-Trichlorobenzene	ug/L	50	50.0	100	75-126	
1,2,3-Trichloropropane	ug/L	50	49.2	98	71-131	
1,2,4-Trichlorobenzene	ug/L	50	52.3	105	76-130	
1,2,4-Trimethylbenzene	ug/L	50	48.4	97	76-119	
1,2-Dibromoethane (EDB)	ug/L	50	50.7	101	76-122	
1,2-Dichlorobenzene	ug/L	50	51.6	103	79-113	
1,2-Dichloroethane	ug/L	50	48.6	97	66-127	
1,2-Dichloropropane	ug/L	50	49.4	99	75-127	
1,3,5-Trimethylbenzene	ug/L	50	49.5	99	78-116	
1,3-Dichlorobenzene	ug/L	50	51.4	103	79-120	
1,3-Dichloropropane	ug/L	50	45.7	91	81-121	
1,4-Dichlorobenzene	ug/L	50	48.6	97	77-117	
1-Methylnaphthalene	ug/L	50	48.7	97	65-142	
2,2-Dichloropropane	ug/L	50	50.6	101	56-134	
2-Butanone (MEK)	ug/L	250	249	100	61-138	
2-Chlorotoluene	ug/L	50	46.0	92	73-125	
2-Hexanone	ug/L	250	211	84	58-138	
2-Methylnaphthalene	ug/L	50	53.3	107	60-136	
4-Chlorotoluene	ug/L	50	48.9	98	75-118	
4-Methyl-2-pentanone (MIBK)	ug/L	250	208	83	60-131	
Acetone	ug/L	250	248	99	57-126	
Acrolein	ug/L	1000	863	86	56-120	
Acrylonitrile	ug/L	250	210	84	65-127	
Benzene	ug/L	50	48.5	97	75-118	
Bromobenzene	ug/L	50	46.7	93	68-127	
Bromochloromethane	ug/L	50	42.5	85	66-126	
Bromodichloromethane	ug/L	50	52.2	104	75-120	
Bromoform	ug/L	50	51.4	103	61-119	
Bromomethane	ug/L	50	47.6	95	12-184	
Carbon disulfide	ug/L	50	42.8	86	71-123	
Carbon tetrachloride	ug/L	50	54.7	109	73-125	
Chlorobenzene	ug/L	50	50.4	101	80-115	
Chloroethane	ug/L	50	47.9	96	46-133	
Chloroform	ug/L	50	50.1	100	75-117	
Chloromethane	ug/L	50	34.9	70	33-124	
cis-1,2-Dichloroethene	ug/L	50	50.1	100	76-120	
cis-1,3-Dichloropropene	ug/L	50	48.1	96	73-130	
Dibromochloromethane	ug/L	50	51.5	103	69-124	
Dibromomethane	ug/L	50	53.6	107	76-124	
Dichlorodifluoromethane	ug/L	50	22.7	45	36-145	
Ethyl methacrylate	ug/L	50	47J	94	67-140	
Ethylbenzene	ug/L	50	50.7	101	78-120	
Hexachloro-1,3-butadiene	ug/L	50	51.7	103	79-137	
Iodomethane	ug/L	50	82.5	165	10-184	
Isopropylbenzene (Cumene)	ug/L	50	51.8	104	82-122	

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

LABORATORY CONTROL SAMPLE: 2811632

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methyl-tert-butyl ether	ug/L	50	48.6	97	79-125	
Methylene Chloride	ug/L	50	52.7	105	68-126	
n-Butylbenzene	ug/L	50	49.6	99	73-123	
n-Hexane	ug/L	50	46.0	92	71-143	
n-Propylbenzene	ug/L	50	48.2	96	75-119	
Naphthalene	ug/L	50	49.4	99	70-130	
p-Isopropyltoluene	ug/L	50	51.1	102	82-119	
sec-Butylbenzene	ug/L	50	50.9	102	79-119	
Styrene	ug/L	50	50.9	102	80-121	
tert-Butylbenzene	ug/L	50	50.4	101	58-106	
Tetrachloroethene	ug/L	50	55.8	112	70-123	
Toluene	ug/L	50	48.7	97	72-114	
trans-1,2-Dichloroethene	ug/L	50	48.6	97	79-126	
trans-1,3-Dichloropropene	ug/L	50	49.1	98	68-122	
trans-1,4-Dichloro-2-butene	ug/L	50	43J	86	34-130	
Trichloroethene	ug/L	50	52.2	104	78-120	
Trichlorofluoromethane	ug/L	50	54.4	109	57-156	
Vinyl acetate	ug/L	200	118	59	50-116	
Vinyl chloride	ug/L	50	39.8	80	55-122	
Xylene (Total)	ug/L	150	146	97	81-118	
4-Bromofluorobenzene (S)	%			98	85-116	
Dibromofluoromethane (S)	%			104	75-120	
Toluene-d8 (S)	%			98	83-111	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2811633 2811634

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50281481003 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	65.5	64.1	131	128	51-135	2	20		
1,1,1-Trichloroethane	ug/L	ND	50	50	69.5	69.1	139	138	56-144	1	20		
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	58.2	56.0	116	112	47-137	4	20		
1,1,2-Trichloroethane	ug/L	ND	50	50	62.1	59.8	124	120	55-136	4	20		
1,1-Dichloroethane	ug/L	ND	50	50	60.6	59.9	121	120	53-140	1	20		
1,1-Dichloroethene	ug/L	ND	50	50	68.3	67.4	137	135	60-140	1	20		
1,1-Dichloropropene	ug/L	ND	50	50	62.1	61.7	124	123	54-136	1	20		
1,2,3-Trichlorobenzene	ug/L	ND	50	50	59.2	55.9	118	112	35-140	6	20		
1,2,3-Trichloropropane	ug/L	ND	50	50	61.8	59.4	124	119	54-142	4	20		
1,2,4-Trichlorobenzene	ug/L	ND	50	50	59.9	57.2	120	114	31-143	5	20		
1,2,4-Trimethylbenzene	ug/L	ND	50	50	57.4	56.2	115	112	13-152	2	20		
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	64.1	62.2	128	124	56-136	3	20		
1,2-Dichlorobenzene	ug/L	ND	50	50	63.1	60.1	126	120	38-133	5	20		
1,2-Dichloroethane	ug/L	ND	50	50	62.1	60.9	124	122	46-145	2	20		
1,2-Dichloropropane	ug/L	ND	50	50	61.7	61.8	123	124	55-141	0	20		
1,3,5-Trimethylbenzene	ug/L	ND	50	50	58.7	56.9	117	114	23-145	3	20		
1,3-Dichlorobenzene	ug/L	ND	50	50	61.5	59.3	123	119	31-144	4	20		

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2811633												2811634											
Parameter	Units	50281481003		MS	MSD	50281481003		MS	MSD	2811634		% Rec	% Rec	Limits	RPD	Max RPD	Qual						
		Result	Conc.	Spike Conc.	MSD Conc.	Result	Result	% Rec	% Rec														
1,3-Dichloropropane	ug/L	ND	50	50	50	57.9	56.0	116	112	60-139	3	20											
1,4-Dichlorobenzene	ug/L	ND	50	50	50	58.1	56.0	116	112	31-138	4	20											
1-Methylnaphthalene	ug/L	ND	50	50	50	55.3	54.5	111	109	40-150	2	20											
2,2-Dichloropropane	ug/L	ND	50	50	50	60.5	58.9	121	118	34-137	3	20											
2-Butanone (MEK)	ug/L	ND	250	250	250	297	287	119	115	42-150	3	20											
2-Chlorotoluene	ug/L	ND	50	50	50	55.7	53.8	111	108	28-148	3	20											
2-Hexanone	ug/L	ND	250	250	250	251	240	100	96	43-146	4	20											
2-Methylnaphthalene	ug/L	ND	50	50	50	60.9	58.7	122	117	32-142	4	20											
4-Chlorotoluene	ug/L	ND	50	50	50	59.3	55.8	119	112	25-145	6	20											
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	250	250	239	100	96	42-142	4	20											
Acetone	ug/L	ND	250	250	250	288	283	115	113	36-142	2	20											
Acrolein	ug/L	ND	1000	1000	1000	1130	1100	113	110	28-122	2	20											
Acrylonitrile	ug/L	ND	250	250	250	255	253	102	101	48-137	1	20											
Benzene	ug/L	ND	50	50	50	61.8	61.4	124	123	49-135	1	20											
Bromobenzene	ug/L	ND	50	50	50	57.7	55.3	115	111	37-144	4	20											
Bromochloromethane	ug/L	ND	50	50	50	52.6	52.4	105	105	47-140	0	20											
Bromodichloromethane	ug/L	ND	50	50	50	65.7	65.7	131	131	55-133	0	20											
Bromoform	ug/L	ND	50	50	50	64.4	62.3	129	125	45-125	3	20	M1										
Bromomethane	ug/L	ND	50	50	50	51.8	70.4	104	141	10-191	31	20	R1										
Carbon disulfide	ug/L	ND	50	50	50	56.1	56.1	112	112	49-136	0	20											
Carbon tetrachloride	ug/L	ND	50	50	50	72.7	71.4	145	143	55-134	2	20	M1										
Chlorobenzene	ug/L	ND	50	50	50	62.2	60.5	124	121	42-135	3	20											
Chloroethane	ug/L	ND	50	50	50	69.1	67.4	138	135	25-154	2	20											
Chloroform	ug/L	ND	50	50	50	63.5	63.0	127	126	57-130	1	20											
Chloromethane	ug/L	ND	50	50	50	49.7	47.6	99	95	17-129	4	20											
cis-1,2-Dichloroethene	ug/L	ND	50	50	50	65.7	64.8	128	126	53-134	1	20											
cis-1,3-Dichloropropene	ug/L	ND	50	50	50	58.9	57.8	118	116	50-136	2	20											
Dibromochloromethane	ug/L	ND	50	50	50	65.8	63.7	132	127	53-133	3	20											
Dibromomethane	ug/L	ND	50	50	50	68.0	66.8	136	134	57-139	2	20											
Dichlorodifluoromethane	ug/L	ND	50	50	50	92.3	91.2	185	182	21-154	1	20	M1										
Ethyl methacrylate	ug/L	ND	50	50	50	58.4J	56.6J	117	113	56-148		20											
Ethylbenzene	ug/L	ND	50	50	50	62.2	61.4	124	123	28-147	1	20											
Hexachloro-1,3-butadiene	ug/L	ND	50	50	50	56.7	54.3	113	109	10-168	4	20											
Iodomethane	ug/L	ND	50	50	50	99.1	133	198	265	10-186	29	20	M1,R1										
Isopropylbenzene (Cumene)	ug/L	ND	50	50	50	62.1	60.5	124	121	27-151	3	20											
Methyl-tert-butyl ether	ug/L	ND	50	50	50	65.1	63.9	125	122	60-142	2	20											
Methylene Chloride	ug/L	ND	50	50	50	66.2	65.0	132	130	46-138	2	20											
n-Butylbenzene	ug/L	ND	50	50	50	55.2	53.6	110	107	10-153	3	20											
n-Hexane	ug/L	ND	50	50	50	54.7	53.3	109	107	46-155	3	20											
n-Propylbenzene	ug/L	ND	50	50	50	57.3	55.6	115	111	20-149	3	20											
Naphthalene	ug/L	ND	50	50	50	58.9	57.3	118	115	41-139	3	20											
p-Isopropyltoluene	ug/L	ND	50	50	50	59.1	57.0	118	114	15-155	4	20											
sec-Butylbenzene	ug/L	ND	50	50	50	59.5	57.7	119	115	17-153	3	20											
Styrene	ug/L	ND	50	50	50	61.8	60.0	124	120	42-139	3	20											

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2811633		2811634		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50281481003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
tert-Butylbenzene	ug/L	ND	50	50	67.6	65.9	135	132	18-123	3	20	M1	
Tetrachloroethene	ug/L	ND	50	50	67.7	65.8	135	132	32-140	3	20		
Toluene	ug/L	ND	50	50	60.8	59.8	122	120	42-131	2	20		
trans-1,2-Dichloroethene	ug/L	ND	50	50	62.7	61.4	125	123	57-138	2	20		
trans-1,3-Dichloropropene	ug/L	ND	50	50	60.5	59.2	121	118	47-128	2	20		
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	46.6J	43.9J	93	88	10-135		20		
Trichloroethene	ug/L	ND	50	50	66.7	65.6	133	131	47-137	2	20		
Trichlorofluoromethane	ug/L	ND	50	50	78.2	77.2	156	154	42-163	1	20		
Vinyl acetate	ug/L	ND	200	200	153	148	77	74	10-114	4	20		
Vinyl chloride	ug/L	ND	50	50	61.3	59.9	123	120	36-136	2	20		
Xylene (Total)	ug/L	ND	150	150	176	171	117	114	30-145	3	20		
4-Bromofluorobenzene (S)	%						99	98	85-116				
Dibromofluoromethane (S)	%						106	104	75-120				
Toluene-d8 (S)	%						99	98	83-111				

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

QC Batch: 610296

Analysis Method: EPA 5030/8260

QC Batch Method: EPA 5030/8260

Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50281482001, 50281482002, 50281482003, 50281482004, 50281482005, 50281482006, 50281482007, 50281482008, 50281482009, 50281482010, 50281482011, 50281482012, 50281482014

METHOD BLANK: 2812989

Matrix: Water

Associated Lab Samples: 50281482001, 50281482002, 50281482003, 50281482004, 50281482005, 50281482006, 50281482007, 50281482008, 50281482009, 50281482010, 50281482011, 50281482012, 50281482014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	03/16/21 00:33	
1,1,1-Trichloroethane	ug/L	ND	5.0	03/16/21 00:33	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	03/16/21 00:33	
1,1,2-Trichloroethane	ug/L	ND	5.0	03/16/21 00:33	
1,1-Dichloroethane	ug/L	ND	5.0	03/16/21 00:33	
1,1-Dichloroethene	ug/L	ND	5.0	03/16/21 00:33	
1,1-Dichloropropene	ug/L	ND	5.0	03/16/21 00:33	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	03/16/21 00:33	
1,2,3-Trichloropropane	ug/L	ND	5.0	03/16/21 00:33	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	03/16/21 00:33	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	03/16/21 00:33	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	03/16/21 00:33	
1,2-Dichlorobenzene	ug/L	ND	5.0	03/16/21 00:33	
1,2-Dichloroethane	ug/L	ND	5.0	03/16/21 00:33	
1,2-Dichloropropane	ug/L	ND	5.0	03/16/21 00:33	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	03/16/21 00:33	
1,3-Dichlorobenzene	ug/L	ND	5.0	03/16/21 00:33	
1,3-Dichloropropane	ug/L	ND	5.0	03/16/21 00:33	
1,4-Dichlorobenzene	ug/L	ND	5.0	03/16/21 00:33	
1-Methylnaphthalene	ug/L	ND	10.0	03/16/21 00:33	
2,2-Dichloropropane	ug/L	ND	5.0	03/16/21 00:33	
2-Butanone (MEK)	ug/L	ND	25.0	03/16/21 00:33	
2-Chlorotoluene	ug/L	ND	5.0	03/16/21 00:33	
2-Hexanone	ug/L	ND	25.0	03/16/21 00:33	
2-Methylnaphthalene	ug/L	ND	10.0	03/16/21 00:33	
4-Chlorotoluene	ug/L	ND	5.0	03/16/21 00:33	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	03/16/21 00:33	
Acetone	ug/L	ND	100	03/16/21 00:33	
Acrolein	ug/L	ND	50.0	03/16/21 00:33	
Acrylonitrile	ug/L	ND	100	03/16/21 00:33	
Benzene	ug/L	ND	5.0	03/16/21 00:33	
Bromobenzene	ug/L	ND	5.0	03/16/21 00:33	
Bromochloromethane	ug/L	ND	5.0	03/16/21 00:33	
Bromodichloromethane	ug/L	ND	5.0	03/16/21 00:33	
Bromoform	ug/L	ND	5.0	03/16/21 00:33	
Bromomethane	ug/L	ND	5.0	03/16/21 00:33	
Carbon disulfide	ug/L	ND	10.0	03/16/21 00:33	
Carbon tetrachloride	ug/L	ND	5.0	03/16/21 00:33	
Chlorobenzene	ug/L	ND	5.0	03/16/21 00:33	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

METHOD BLANK: 2812989

Matrix: Water

Associated Lab Samples: 50281482001, 50281482002, 50281482003, 50281482004, 50281482005, 50281482006, 50281482007, 50281482008, 50281482009, 50281482010, 50281482011, 50281482012, 50281482014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroethane	ug/L	ND	5.0	03/16/21 00:33	
Chloroform	ug/L	ND	5.0	03/16/21 00:33	
Chloromethane	ug/L	ND	5.0	03/16/21 00:33	
cis-1,2-Dichloroethene	ug/L	ND	5.0	03/16/21 00:33	
cis-1,3-Dichloropropene	ug/L	ND	5.0	03/16/21 00:33	
Dibromochloromethane	ug/L	ND	5.0	03/16/21 00:33	
Dibromomethane	ug/L	ND	5.0	03/16/21 00:33	
Dichlorodifluoromethane	ug/L	ND	5.0	03/16/21 00:33	
Ethyl methacrylate	ug/L	ND	100	03/16/21 00:33	
Ethylbenzene	ug/L	ND	5.0	03/16/21 00:33	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	03/16/21 00:33	
Iodomethane	ug/L	ND	10.0	03/16/21 00:33	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	03/16/21 00:33	
Methyl-tert-butyl ether	ug/L	ND	4.0	03/16/21 00:33	
Methylene Chloride	ug/L	ND	5.0	03/16/21 00:33	
n-Butylbenzene	ug/L	ND	5.0	03/16/21 00:33	
n-Hexane	ug/L	ND	5.0	03/16/21 00:33	
n-Propylbenzene	ug/L	ND	5.0	03/16/21 00:33	
Naphthalene	ug/L	ND	1.7	03/16/21 00:33	
p-Isopropyltoluene	ug/L	ND	5.0	03/16/21 00:33	
sec-Butylbenzene	ug/L	ND	5.0	03/16/21 00:33	
Styrene	ug/L	ND	5.0	03/16/21 00:33	
tert-Butylbenzene	ug/L	ND	5.0	03/16/21 00:33	
Tetrachloroethene	ug/L	ND	5.0	03/16/21 00:33	
Toluene	ug/L	ND	5.0	03/16/21 00:33	
trans-1,2-Dichloroethene	ug/L	ND	5.0	03/16/21 00:33	
trans-1,3-Dichloropropene	ug/L	ND	5.0	03/16/21 00:33	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	03/16/21 00:33	
Trichloroethene	ug/L	ND	5.0	03/16/21 00:33	
Trichlorofluoromethane	ug/L	ND	5.0	03/16/21 00:33	
Vinyl acetate	ug/L	ND	50.0	03/16/21 00:33	
Vinyl chloride	ug/L	ND	2.0	03/16/21 00:33	
Xylene (Total)	ug/L	ND	10.0	03/16/21 00:33	
4-Bromofluorobenzene (S)	%	92	85-116	03/16/21 00:33	
Dibromofluoromethane (S)	%	115	75-120	03/16/21 00:33	
Toluene-d8 (S)	%	100	83-111	03/16/21 00:33	

LABORATORY CONTROL SAMPLE: 2812990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	49.7	99	78-120	
1,1,1-Trichloroethane	ug/L	50	52.8	106	78-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.3	93	64-126	

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

LABORATORY CONTROL SAMPLE: 2812990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2-Trichloroethane	ug/L	50	49.5	99	73-125	
1,1-Dichloroethane	ug/L	50	47.0	94	77-123	
1,1-Dichloroethene	ug/L	50	56.4	113	79-128	
1,1-Dichloropropene	ug/L	50	53.3	107	78-120	
1,2,3-Trichlorobenzene	ug/L	50	48.1	96	75-126	
1,2,3-Trichloropropane	ug/L	50	44.3	89	71-131	
1,2,4-Trichlorobenzene	ug/L	50	48.9	98	76-130	
1,2,4-Trimethylbenzene	ug/L	50	48.4	97	76-119	
1,2-Dibromoethane (EDB)	ug/L	50	49.9	100	76-122	
1,2-Dichlorobenzene	ug/L	50	51.7	103	79-113	
1,2-Dichloroethane	ug/L	50	48.6	97	66-127	
1,2-Dichloropropane	ug/L	50	50.6	101	75-127	
1,3,5-Trimethylbenzene	ug/L	50	48.3	97	78-116	
1,3-Dichlorobenzene	ug/L	50	51.5	103	79-120	
1,3-Dichloropropane	ug/L	50	50.7	101	81-121	
1,4-Dichlorobenzene	ug/L	50	48.7	97	77-117	
1-Methylnaphthalene	ug/L	50	40.7	81	65-142	
2,2-Dichloropropane	ug/L	50	50.4	101	56-134	
2-Butanone (MEK)	ug/L	250	218	87	61-138	
2-Chlorotoluene	ug/L	50	51.5	103	73-125	
2-Hexanone	ug/L	250	214	85	58-138	
2-Methylnaphthalene	ug/L	50	46.8	94	60-136	
4-Chlorotoluene	ug/L	50	56.2	112	75-118	
4-Methyl-2-pentanone (MIBK)	ug/L	250	219	88	60-131	
Acetone	ug/L	250	227	91	57-126	
Acrolein	ug/L	1000	769	77	56-120	
Acrylonitrile	ug/L	250	224	90	65-127	
Benzene	ug/L	50	46.6	93	75-118	
Bromobenzene	ug/L	50	47.8	96	68-127	
Bromochloromethane	ug/L	50	45.5	91	66-126	
Bromodichloromethane	ug/L	50	48.1	96	75-120	
Bromoform	ug/L	50	44.5	89	61-119	
Bromomethane	ug/L	50	62.3	125	12-184	
Carbon disulfide	ug/L	50	45.2	90	71-123	
Carbon tetrachloride	ug/L	50	56.1	112	73-125	
Chlorobenzene	ug/L	50	51.7	103	80-115	
Chloroethane	ug/L	50	62.8	126	46-133	
Chloroform	ug/L	50	48.4	97	75-117	
Chloromethane	ug/L	50	45.0	90	33-124	
cis-1,2-Dichloroethene	ug/L	50	48.7	97	76-120	
cis-1,3-Dichloropropene	ug/L	50	51.7	103	73-130	
Dibromochloromethane	ug/L	50	51.8	104	69-124	
Dibromomethane	ug/L	50	50.8	102	76-124	
Dichlorodifluoromethane	ug/L	50	47.0	94	36-145	
Ethyl methacrylate	ug/L	50	46.9J	94	67-140	
Ethylbenzene	ug/L	50	51.4	103	78-120	
Hexachloro-1,3-butadiene	ug/L	50	60.5	121	79-137	

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

LABORATORY CONTROL SAMPLE: 2812990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iodomethane	ug/L	50	42.5	85	10-184	
Isopropylbenzene (Cumene)	ug/L	50	51.7	103	82-122	
Methyl-tert-butyl ether	ug/L	50	50.8	102	79-125	
Methylene Chloride	ug/L	50	57.1	114	68-126	
n-Butylbenzene	ug/L	50	50.8	102	73-123	
n-Hexane	ug/L	50	61.1	122	71-143	
n-Propylbenzene	ug/L	50	50.6	101	75-119	
Naphthalene	ug/L	50	42.9	86	70-130	
p-Isopropyltoluene	ug/L	50	51.0	102	82-119	
sec-Butylbenzene	ug/L	50	55.2	110	79-119	
Styrene	ug/L	50	49.0	98	80-121	
tert-Butylbenzene	ug/L	50	48.4	97	58-106	
Tetrachloroethene	ug/L	50	56.6	113	70-123	
Toluene	ug/L	50	50.7	101	72-114	
trans-1,2-Dichloroethene	ug/L	50	49.4	99	79-126	
trans-1,3-Dichloropropene	ug/L	50	51.5	103	68-122	
trans-1,4-Dichloro-2-butene	ug/L	50	43.1J	86	34-130	
Trichloroethene	ug/L	50	52.5	105	78-120	
Trichlorofluoromethane	ug/L	50	65.2	130	57-156	
Vinyl acetate	ug/L	200	151	75	50-116	
Vinyl chloride	ug/L	50	54.0	108	55-122	
Xylene (Total)	ug/L	150	151	100	81-118	
4-Bromofluorobenzene (S)	%			95	85-116	
Dibromofluoromethane (S)	%			90	75-120	
Toluene-d8 (S)	%			102	83-111	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2812991 2812992

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50281482014 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	50	41.1	41.7	82	83	51-135	2	20	
1,1,1-Trichloroethane	ug/L	ND	50	50	50	41.4	39.7	83	79	56-144	4	20	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	50	46.3	44.4	93	89	47-137	4	20	
1,1,2-Trichloroethane	ug/L	ND	50	50	50	46.7	46.5	93	93	55-136	0	20	
1,1-Dichloroethane	ug/L	ND	50	50	50	43.6	43.3	87	87	53-140	1	20	
1,1-Dichloroethene	ug/L	ND	50	50	50	43.5	43.2	87	86	60-140	1	20	
1,1-Dichloropropene	ug/L	ND	50	50	50	37.9	35.3	76	71	54-136	7	20	
1,2,3-Trichlorobenzene	ug/L	ND	50	50	50	25.7	28.1	51	56	35-140	9	20	
1,2,3-Trichloropropane	ug/L	ND	50	50	50	45.3	42.0	91	84	54-142	8	20	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	50	22.1	24.0	44	48	31-143	8	20	
1,2,4-Trimethylbenzene	ug/L	ND	50	50	50	22.7	51.0	45	102	13-152	77	20	R1
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	50	46.2	47.2	92	94	56-136	2	20	
1,2-Dichlorobenzene	ug/L	ND	50	50	50	31.8	31.8	64	64	38-133	0	20	
1,2-Dichloroethane	ug/L	ND	50	50	50	47.5	46.8	95	94	46-145	2	20	
1,2-Dichloropropane	ug/L	ND	50	50	50	44.9	45.9	90	92	55-141	2	20	

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2812991			2812992								
Parameter	Units	50281482014	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	RPD	RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits				
1,3,5-Trimethylbenzene	ug/L	ND	50	50	22.9	33.7	46	67	23-145	38	20	R1	
1,3-Dichlorobenzene	ug/L	ND	50	50	27.7	28.2	55	56	31-144	2	20		
1,3-Dichloropropane	ug/L	ND	50	50	46.7	46.9	93	94	60-139	0	20		
1,4-Dichlorobenzene	ug/L	ND	50	50	26.5	26.5	53	53	31-138	0	20		
1-Methylnaphthalene	ug/L	ND	50	50	27.7	33.0	55	66	40-150	18	20		
2,2-Dichloropropane	ug/L	ND	50	50	38.2	37.3	76	75	34-137	2	20		
2-Butanone (MEK)	ug/L	ND	250	250	224	211	90	84	42-150	6	20		
2-Chlorotoluene	ug/L	ND	50	50	29.1	31.6	58	63	28-148	8	20		
2-Hexanone	ug/L	ND	250	250	224	209	90	84	43-146	7	20		
2-Methylnaphthalene	ug/L	ND	50	50	28.5	37.4	57	75	32-142	27	20	R1	
4-Chlorotoluene	ug/L	ND	50	50	28.4	28.7	57	57	25-145	1	20		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	230	209	92	84	42-142	10	20		
Acetone	ug/L	ND	250	250	235	205	94	82	36-142	14	20		
Acrolein	ug/L	ND	1000	1000	698	681	70	68	28-122	2	20		
Acrylonitrile	ug/L	ND	250	250	236	226	95	90	48-137	5	20		
Benzene	ug/L	ND	50	50	39.9	39.3	80	79	49-135	1	20		
Bromobenzene	ug/L	ND	50	50	34.4	34.6	69	69	37-144	1	20		
Bromochloromethane	ug/L	ND	50	50	45.0	43.4	90	87	47-140	4	20		
Bromodichloromethane	ug/L	ND	50	50	46.1	45.4	92	91	55-133	2	20		
Bromoform	ug/L	ND	50	50	40.9	40.2	82	80	45-125	2	20		
Bromomethane	ug/L	ND	50	50	51.5	48.5	103	97	10-191	6	20		
Carbon disulfide	ug/L	ND	50	50	35.6	34.2	71	68	49-136	4	20		
Carbon tetrachloride	ug/L	ND	50	50	41.8	38.8	84	78	55-134	7	20		
Chlorobenzene	ug/L	ND	50	50	36.8	36.3	74	73	42-135	1	20		
Chloroethane	ug/L	ND	50	50	51.7	53.9	103	108	25-154	4	20		
Chloroform	ug/L	ND	50	50	45.1	43.6	90	87	57-130	4	20		
Chloromethane	ug/L	ND	50	50	39.3	38.7	79	77	17-129	2	20		
cis-1,2-Dichloroethene	ug/L	369	50	50	363	352	-12	-34	53-134	3	20	M1	
cis-1,3-Dichloropropene	ug/L	ND	50	50	41.8	40.9	84	82	50-136	2	20		
Dibromochloromethane	ug/L	ND	50	50	48.1	47.9	96	96	53-133	1	20		
Dibromomethane	ug/L	ND	50	50	49.1	48.3	98	97	57-139	2	20		
Dichlorodifluoromethane	ug/L	ND	50	50	36.5	32.9	73	66	21-154	10	20		
Ethyl methacrylate	ug/L	ND	50	50	49J	43.9J	98	88	56-148		20		
Ethylbenzene	ug/L	ND	50	50	31.9	31.7	64	63	28-147	0	20		
Hexachloro-1,3-butadiene	ug/L	ND	50	50	13.1	15.4	26	31	10-168	16	20		
Iodomethane	ug/L	ND	50	50	32.1	35.9	64	72	10-186	11	20		
Isopropylbenzene (Cumene)	ug/L	ND	50	50	27.8	27.3	56	55	27-151	2	20		
Methyl-tert-butyl ether	ug/L	ND	50	50	51.2	50.6	102	101	60-142	1	20		
Methylene Chloride	ug/L	ND	50	50	50.2	49.3	100	99	46-138	2	20		
n-Butylbenzene	ug/L	ND	50	50	15.7	19.6	31	39	10-153	22	20	R1	
n-Hexane	ug/L	ND	50	50	38.6	38.2	77	76	46-155	1	20		
n-Propylbenzene	ug/L	ND	50	50	23.1	25.9	46	52	20-149	11	20		
Naphthalene	ug/L	ND	50	50	31.6	35.0	63	70	41-139	10	20		
p-Isopropyltoluene	ug/L	ND	50	50	18.7	20.2	37	40	15-155	8	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Parameter	Units	2812991		2812992		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50281482014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
sec-Butylbenzene	ug/L	ND	50	50	21.6	23.4	43	47	17-153	8	20		
Styrene	ug/L	ND	50	50	32.6	32.6	65	65	42-139	0	20		
tert-Butylbenzene	ug/L	ND	50	50	25.8	28.1	52	56	18-123	8	20		
Tetrachloroethene	ug/L	ND	50	50	31.8	32.4	64	65	32-140	2	20		
Toluene	ug/L	ND	50	50	36.6	35.4	73	71	42-131	3	20		
trans-1,2-Dichloroethene	ug/L	26.4	50	50	63.0	60.5	73	68	57-138	4	20		
trans-1,3-Dichloropropene	ug/L	ND	50	50	40.4	43.1	81	86	47-128	6	20		
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	32.3J	33.7J	65	67	10-135		20		
Trichloroethene	ug/L	48.8	50	50	84.5	85.2	71	73	47-137	1	20		
Trichlorofluoromethane	ug/L	ND	50	50	50.0	42.5	100	85	42-163	16	20		
Vinyl acetate	ug/L	ND	200	200	113	110	57	55	10-114	3	20		
Vinyl chloride	ug/L	ND	50	50	47.8	43.8	96	88	36-136	9	20		
Xylene (Total)	ug/L	ND	150	150	94.4	95.8	63	64	30-145	1	20		
4-Bromofluorobenzene (S)	%						98	93	85-116				
Dibromofluoromethane (S)	%						92	91	75-120				
Toluene-d8 (S)	%						99	97	83-111				

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

QC Batch:	610452	Analysis Method:	EPA 5030/8260
QC Batch Method:	EPA 5030/8260	Analysis Description:	8260 MSV
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50281482013, 50281482015, 50281482016, 50281482017, 50281482018

METHOD BLANK: 2813584 Matrix: Water

Associated Lab Samples: 50281482013, 50281482015, 50281482016, 50281482017, 50281482018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	03/16/21 13:55	
1,1,1-Trichloroethane	ug/L	ND	5.0	03/16/21 13:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	03/16/21 13:55	
1,1,2-Trichloroethane	ug/L	ND	5.0	03/16/21 13:55	
1,1-Dichloroethane	ug/L	ND	5.0	03/16/21 13:55	
1,1-Dichloroethene	ug/L	ND	5.0	03/16/21 13:55	
1,1-Dichloropropene	ug/L	ND	5.0	03/16/21 13:55	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	03/16/21 13:55	
1,2,3-Trichloropropane	ug/L	ND	5.0	03/16/21 13:55	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	03/16/21 13:55	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	03/16/21 13:55	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	03/16/21 13:55	
1,2-Dichlorobenzene	ug/L	ND	5.0	03/16/21 13:55	
1,2-Dichloroethane	ug/L	ND	5.0	03/16/21 13:55	
1,2-Dichloropropane	ug/L	ND	5.0	03/16/21 13:55	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	03/16/21 13:55	
1,3-Dichlorobenzene	ug/L	ND	5.0	03/16/21 13:55	
1,3-Dichloropropane	ug/L	ND	5.0	03/16/21 13:55	
1,4-Dichlorobenzene	ug/L	ND	5.0	03/16/21 13:55	
1-Methylnaphthalene	ug/L	ND	10.0	03/16/21 13:55	
2,2-Dichloropropane	ug/L	ND	5.0	03/16/21 13:55	
2-Butanone (MEK)	ug/L	ND	25.0	03/16/21 13:55	
2-Chlorotoluene	ug/L	ND	5.0	03/16/21 13:55	
2-Hexanone	ug/L	ND	25.0	03/16/21 13:55	
2-Methylnaphthalene	ug/L	ND	10.0	03/16/21 13:55	
4-Chlorotoluene	ug/L	ND	5.0	03/16/21 13:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	03/16/21 13:55	
Acetone	ug/L	ND	100	03/16/21 13:55	
Acrolein	ug/L	ND	50.0	03/16/21 13:55	
Acrylonitrile	ug/L	ND	100	03/16/21 13:55	
Benzene	ug/L	ND	5.0	03/16/21 13:55	
Bromobenzene	ug/L	ND	5.0	03/16/21 13:55	
Bromochloromethane	ug/L	ND	5.0	03/16/21 13:55	
Bromodichloromethane	ug/L	ND	5.0	03/16/21 13:55	
Bromoform	ug/L	ND	5.0	03/16/21 13:55	
Bromomethane	ug/L	ND	5.0	03/16/21 13:55	
Carbon disulfide	ug/L	ND	10.0	03/16/21 13:55	
Carbon tetrachloride	ug/L	ND	5.0	03/16/21 13:55	
Chlorobenzene	ug/L	ND	5.0	03/16/21 13:55	
Chloroethane	ug/L	ND	5.0	03/16/21 13:55	

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

METHOD BLANK: 2813584

Matrix: Water

Associated Lab Samples: 50281482013, 50281482015, 50281482016, 50281482017, 50281482018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	5.0	03/16/21 13:55	
Chloromethane	ug/L	ND	5.0	03/16/21 13:55	
cis-1,2-Dichloroethene	ug/L	ND	5.0	03/16/21 13:55	
cis-1,3-Dichloropropene	ug/L	ND	5.0	03/16/21 13:55	
Dibromochloromethane	ug/L	ND	5.0	03/16/21 13:55	
Dibromomethane	ug/L	ND	5.0	03/16/21 13:55	
Dichlorodifluoromethane	ug/L	ND	5.0	03/16/21 13:55	
Ethyl methacrylate	ug/L	ND	100	03/16/21 13:55	
Ethylbenzene	ug/L	ND	5.0	03/16/21 13:55	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	03/16/21 13:55	
Iodomethane	ug/L	ND	10.0	03/16/21 13:55	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	03/16/21 13:55	
Methyl-tert-butyl ether	ug/L	ND	4.0	03/16/21 13:55	
Methylene Chloride	ug/L	ND	5.0	03/16/21 13:55	
n-Butylbenzene	ug/L	ND	5.0	03/16/21 13:55	
n-Hexane	ug/L	ND	5.0	03/16/21 13:55	
n-Propylbenzene	ug/L	ND	5.0	03/16/21 13:55	
Naphthalene	ug/L	ND	1.7	03/16/21 13:55	
p-Isopropyltoluene	ug/L	ND	5.0	03/16/21 13:55	
sec-Butylbenzene	ug/L	ND	5.0	03/16/21 13:55	
Styrene	ug/L	ND	5.0	03/16/21 13:55	
tert-Butylbenzene	ug/L	ND	5.0	03/16/21 13:55	
Tetrachloroethene	ug/L	ND	5.0	03/16/21 13:55	
Toluene	ug/L	ND	5.0	03/16/21 13:55	
trans-1,2-Dichloroethene	ug/L	ND	5.0	03/16/21 13:55	
trans-1,3-Dichloropropene	ug/L	ND	5.0	03/16/21 13:55	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	03/16/21 13:55	
Trichloroethene	ug/L	ND	5.0	03/16/21 13:55	
Trichlorofluoromethane	ug/L	ND	5.0	03/16/21 13:55	
Vinyl acetate	ug/L	ND	50.0	03/16/21 13:55	
Vinyl chloride	ug/L	ND	2.0	03/16/21 13:55	
Xylene (Total)	ug/L	ND	10.0	03/16/21 13:55	
4-Bromofluorobenzene (S)	%	93	85-116	03/16/21 13:55	
Dibromofluoromethane (S)	%	112	75-120	03/16/21 13:55	
Toluene-d8 (S)	%	101	83-111	03/16/21 13:55	

LABORATORY CONTROL SAMPLE: 2813585

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	43.6	87	78-120	
1,1,1-Trichloroethane	ug/L	50	51.2	102	78-130	
1,1,2,2-Tetrachloroethane	ug/L	50	41.2	82	64-126	
1,1,2-Trichloroethane	ug/L	50	44.6	89	73-125	
1,1-Dichloroethane	ug/L	50	46.1	92	77-123	

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

LABORATORY CONTROL SAMPLE: 2813585

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	55.8	112	79-128	
1,1-Dichloropropene	ug/L	50	52.8	106	78-120	
1,2,3-Trichlorobenzene	ug/L	50	42.1	84	75-126	
1,2,3-Trichloropropane	ug/L	50	39.3	79	71-131	
1,2,4-Trichlorobenzene	ug/L	50	43.0	86	76-130	
1,2,4-Trimethylbenzene	ug/L	50	43.8	88	76-119	
1,2-Dibromoethane (EDB)	ug/L	50	45.5	91	76-122	
1,2-Dichlorobenzene	ug/L	50	47.0	94	79-113	
1,2-Dichloroethane	ug/L	50	45.9	92	66-127	
1,2-Dichloropropane	ug/L	50	47.4	95	75-127	
1,3,5-Trimethylbenzene	ug/L	50	45.3	91	78-116	
1,3-Dichlorobenzene	ug/L	50	47.7	95	79-120	
1,3-Dichloropropane	ug/L	50	46.7	93	81-121	
1,4-Dichlorobenzene	ug/L	50	45.2	90	77-117	
1-Methylnaphthalene	ug/L	50	34.6	69	65-142	
2,2-Dichloropropane	ug/L	50	51.0	102	56-134	
2-Butanone (MEK)	ug/L	250	198	79	61-138	
2-Chlorotoluene	ug/L	50	48.6	97	73-125	
2-Hexanone	ug/L	250	199	80	58-138	
2-Methylnaphthalene	ug/L	50	39.7	79	60-136	
4-Chlorotoluene	ug/L	50	53.1	106	75-118	
4-Methyl-2-pentanone (MIBK)	ug/L	250	201	80	60-131	
Acetone	ug/L	250	196	79	57-126	
Acrolein	ug/L	1000	700	70	56-120	
Acrylonitrile	ug/L	250	209	84	65-127	
Benzene	ug/L	50	44.8	90	75-118	
Bromobenzene	ug/L	50	45.2	90	68-127	
Bromochloromethane	ug/L	50	43.9	88	66-126	
Bromodichloromethane	ug/L	50	46.4	93	75-120	
Bromoform	ug/L	50	38.0	76	61-119	
Bromomethane	ug/L	50	57.4	115	12-184	
Carbon disulfide	ug/L	50	45.6	91	71-123	
Carbon tetrachloride	ug/L	50	58.0	116	73-125	
Chlorobenzene	ug/L	50	48.9	98	80-115	
Chloroethane	ug/L	50	57.7	115	46-133	
Chloroform	ug/L	50	46.6	93	75-117	
Chloromethane	ug/L	50	41.0	82	33-124	
cis-1,2-Dichloroethene	ug/L	50	47.7	95	76-120	
cis-1,3-Dichloropropene	ug/L	50	48.0	96	73-130	
Dibromochloromethane	ug/L	50	48.1	96	69-124	
Dibromomethane	ug/L	50	48.5	97	76-124	
Dichlorodifluoromethane	ug/L	50	42.3	85	36-145	
Ethyl methacrylate	ug/L	50	44.9J	90	67-140	
Ethylbenzene	ug/L	50	50.5	101	78-120	
Hexachloro-1,3-butadiene	ug/L	50	54.4	109	79-137	
Iodomethane	ug/L	50	41.0	82	10-184	
Isopropylbenzene (Cumene)	ug/L	50	51.3	103	82-122	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

LABORATORY CONTROL SAMPLE: 2813585

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methyl-tert-butyl ether	ug/L	50	47.3	95	79-125	
Methylene Chloride	ug/L	50	52.3	105	68-126	
n-Butylbenzene	ug/L	50	47.8	96	73-123	
n-Hexane	ug/L	50	57.3	115	71-143	
n-Propylbenzene	ug/L	50	48.8	98	75-119	
Naphthalene	ug/L	50	37.1	74	70-130	
p-Isopropyltoluene	ug/L	50	47.8	96	82-119	
sec-Butylbenzene	ug/L	50	53.0	106	79-119	
Styrene	ug/L	50	47.5	95	80-121	
tert-Butylbenzene	ug/L	50	45.8	92	58-106	
Tetrachloroethene	ug/L	50	51.5	103	70-123	
Toluene	ug/L	50	46.2	92	72-114	
trans-1,2-Dichloroethene	ug/L	50	49.5	99	79-126	
trans-1,3-Dichloropropene	ug/L	50	48.7	97	68-122	
trans-1,4-Dichloro-2-butene	ug/L	50	40.4J	81	34-130	
Trichloroethene	ug/L	50	50.8	102	78-120	
Trichlorofluoromethane	ug/L	50	63.0	126	57-156	
Vinyl acetate	ug/L	200	138	69	50-116	
Vinyl chloride	ug/L	50	51.6	103	55-122	
Xylene (Total)	ug/L	150	153	102	81-118	
4-Bromofluorobenzene (S)	%			98	85-116	
Dibromofluoromethane (S)	%			95	75-120	
Toluene-d8 (S)	%			100	83-111	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2813890 2813891

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50281707006 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	47.2	49.0	94	98	51-135	4	20		
1,1,1-Trichloroethane	ug/L	ND	50	50	42.1	40.6	84	81	56-144	4	20		
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	52.3	49.7	105	99	47-137	5	20		
1,1,2-Trichloroethane	ug/L	ND	50	50	49.4	51.6	99	103	55-136	4	20		
1,1-Dichloroethane	ug/L	ND	50	50	43.1	42.4	86	85	53-140	2	20		
1,1-Dichloroethene	ug/L	ND	50	50	42.6	42.5	85	85	60-140	0	20		
1,1-Dichloropropene	ug/L	ND	50	50	39.1	38.4	78	77	54-136	2	20		
1,2,3-Trichlorobenzene	ug/L	ND	50	50	42.2	35.6	84	71	35-140	17	20		
1,2,3-Trichloropropane	ug/L	ND	50	50	49.1	45.5	98	91	54-142	7	20		
1,2,4-Trichlorobenzene	ug/L	ND	50	50	38.4	31.9	77	64	31-143	18	20		
1,2,4-Trimethylbenzene	ug/L	ND	50	50	38.5	31.3	77	63	13-152	21	20	R1	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	50.4	51.4	101	103	56-136	2	20		
1,2-Dichlorobenzene	ug/L	ND	50	50	48.4	40.7	97	81	38-133	17	20		
1,2-Dichloroethane	ug/L	ND	50	50	47.8	47.0	96	94	46-145	2	20		
1,2-Dichloropropane	ug/L	ND	50	50	48.5	46.9	97	94	55-141	3	20		
1,3,5-Trimethylbenzene	ug/L	ND	50	50	38.1	31.0	76	62	23-145	21	20	R1	
1,3-Dichlorobenzene	ug/L	ND	50	50	45.1	37.5	90	75	31-144	18	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2813890												2813891	
Parameter	Units	50281707006 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD		RPD	
1,3-Dichloropropane	ug/L	ND	50	50	49.8	50.8	100	102	60-139	2	20		
1,4-Dichlorobenzene	ug/L	ND	50	50	41.5	35.7	83	71	31-138	15	20		
1-Methylnaphthalene	ug/L	ND	50	50	36.3	33.2	73	66	40-150	9	20		
2,2-Dichloropropane	ug/L	ND	50	50	38.4	37.4	77	75	34-137	3	20		
2-Butanone (MEK)	ug/L	ND	250	250	227	216	91	86	42-150	5	20		
2-Chlorotoluene	ug/L	ND	50	50	44.5	36.9	89	74	28-148	19	20		
2-Hexanone	ug/L	ND	250	250	231	222	92	89	43-146	4	20		
2-Methylnaphthalene	ug/L	ND	50	50	39.9	36.4	80	73	32-142	9	20		
4-Chlorotoluene	ug/L	ND	50	50	48.1	38.7	96	77	25-145	22	20 R1		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	246	241	98	97	42-142	2	20		
Acetone	ug/L	ND	250	250	244	223	97	89	36-142	9	20		
Acrolein	ug/L	ND	1000	1000	769	712	77	71	28-122	8	20		
Acrylonitrile	ug/L	ND	250	250	234	225	94	90	48-137	4	20		
Benzene	ug/L	ND	50	50	41.4	40.2	83	80	49-135	3	20		
Bromobenzene	ug/L	ND	50	50	44.1	38.8	88	78	37-144	13	20		
Bromochloromethane	ug/L	ND	50	50	45.4	43.1	91	86	47-140	5	20		
Bromodichloromethane	ug/L	ND	50	50	49.1	47.3	98	95	55-133	4	20		
Bromoform	ug/L	ND	50	50	47.8	45.7	96	91	45-125	4	20		
Bromomethane	ug/L	ND	50	50	34.2	39.7	68	79	10-191	15	20		
Carbon disulfide	ug/L	ND	50	50	37.7	36.3	75	73	49-136	4	20		
Carbon tetrachloride	ug/L	ND	50	50	41.8	40.0	84	80	55-134	4	20		
Chlorobenzene	ug/L	ND	50	50	47.9	43.9	96	88	42-135	9	20		
Chloroethane	ug/L	ND	50	50	55.0	52.9	110	106	25-154	4	20		
Chloroform	ug/L	ND	50	50	46.4	44.8	93	90	57-130	4	20		
Chloromethane	ug/L	ND	50	50	34.3	35.1	69	70	17-129	2	20		
cis-1,2-Dichloroethene	ug/L	ND	50	50	46.3	44.2	93	88	53-134	5	20		
cis-1,3-Dichloropropene	ug/L	ND	50	50	46.7	47.4	93	95	50-136	1	20		
Dibromochloromethane	ug/L	ND	50	50	51.2	52.9	102	106	53-133	3	20		
Dibromomethane	ug/L	ND	50	50	52.1	50.3	104	101	57-139	3	20		
Dichlorodifluoromethane	ug/L	ND	50	50	29.5	29.8	59	60	21-154	1	20		
Ethyl methacrylate	ug/L	ND	50	50	47.9J	47.4J	96	95	56-148		20		
Ethylbenzene	ug/L	ND	50	50	43.1	38.1	86	76	28-147	12	20		
Hexachloro-1,3-butadiene	ug/L	ND	50	50	39.1	27.3	78	55	10-168	35	20 R1		
Iodomethane	ug/L	ND	50	50	13.6	19.5	27	39	10-186	36	20 R1		
Isopropylbenzene (Cumene)	ug/L	ND	50	50	39.2	34.7	78	69	27-151	12	20		
Methyl-tert-butyl ether	ug/L	ND	50	50	49.9	49.4	100	99	60-142	1	20		
Methylene Chloride	ug/L	ND	50	50	51.4	49.0	103	98	46-138	5	20		
n-Butylbenzene	ug/L	ND	50	50	35.8	26.6	72	53	10-153	29	20 R1		
n-Hexane	ug/L	ND	50	50	39.0	38.7	78	77	46-155	1	20		
n-Propylbenzene	ug/L	ND	50	50	39.7	31.7	79	63	20-149	22	20 R1		
Naphthalene	ug/L	ND	50	50	40.2	37.5	80	75	41-139	7	20		
p-Isopropyltoluene	ug/L	ND	50	50	37.7	29.4	75	59	15-155	25	20 R1		
sec-Butylbenzene	ug/L	ND	50	50	41.6	32.1	83	64	17-153	26	20 R1		
Styrene	ug/L	ND	50	50	43.2	37.1	86	74	42-139	15	20		

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QUALITY CONTROL DATA

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Parameter	Units	2813890		2813891		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50281707006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
tert-Butylbenzene	ug/L	ND	50	50	40.1	32.3	80	65	18-123	22	20	R1	
Tetrachloroethene	ug/L	ND	50	50	42.6	39.3	85	79	32-140	8	20		
Toluene	ug/L	ND	50	50	44.3	42.7	89	85	42-131	4	20		
trans-1,2-Dichloroethene	ug/L	ND	50	50	41.9	40.6	84	81	57-138	3	20		
trans-1,3-Dichloropropene	ug/L	ND	50	50	48.6	48.8	97	98	47-128	0	20		
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	39.3J	40.1J	79	80	10-135		20		
Trichloroethene	ug/L	ND	50	50	43.0	40.2	86	80	47-137	7	20		
Trichlorofluoromethane	ug/L	ND	50	50	45.4	44.9	91	90	42-163	1	20		
Vinyl acetate	ug/L	ND	200	200	129	126	65	63	10-114	3	20		
Vinyl chloride	ug/L	ND	50	50	40.2	42.3	80	85	36-136	5	20		
Xylene (Total)	ug/L	ND	150	150	127	112	84	75	30-145	12	20		
4-Bromofluorobenzene (S)	%						91	92	85-116				
Dibromofluoromethane (S)	%						92	90	75-120				
Toluene-d8 (S)	%						103	103	83-111				

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QUALIFIERS

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Houghland Canning FSI #4

Pace Project No.: 50281332

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50281332001	MW-40	EPA 5030/8260	609832		
50281332002	MW-40D	EPA 5030/8260	609832		
50281332003	MW-41	EPA 5030/8260	609832		
50281332004	MW-41D	EPA 5030/8260	609832		
50281332005	MW-44	EPA 5030/8260	609832		
50281332006	MW-44D	EPA 5030/8260	610015		
50281332007	MW-45	EPA 5030/8260	610015		
50281332008	MW-45D	EPA 5030/8260	610015		
50281332009	MW-46	EPA 5030/8260	610015		
50281332010	MW-46I	EPA 5030/8260	610015		
50281332011	MW-46D	EPA 5030/8260	610015		
50281332012	MW-47	EPA 5030/8260	610015		
50281332013	MW-47I	EPA 5030/8260	610015		
50281332014	MW-47D	EPA 5030/8260	610015		
50281332015	MW-48	EPA 5030/8260	610015		
50281332016	MW-48D	EPA 5030/8260	610015		
50281332017	MW-49	EPA 5030/8260	610015		
50281332018	MW-49D	EPA 5030/8260	610015		
50281332019	Dup-1	EPA 5030/8260	610017		
50281332020	Trip Blank	EPA 5030/8260	610017		
50281482001	MW-34	EPA 5030/8260	610296		
50281482002	MW-34D	EPA 5030/8260	610296		
50281482003	MW-35	EPA 5030/8260	610296		
50281482004	MW-35D	EPA 5030/8260	610296		
50281482005	MW-36	EPA 5030/8260	610296		
50281482006	MW-36D	EPA 5030/8260	610296		
50281482007	MW-37	EPA 5030/8260	610296		
50281482008	MW-37D	EPA 5030/8260	610296		
50281482009	MW-38	EPA 5030/8260	610296		
50281482010	MW-38D	EPA 5030/8260	610296		
50281482011	MW-39	EPA 5030/8260	610296		
50281482012	MW-39D	EPA 5030/8260	610296		
50281482013	MW-42	EPA 5030/8260	610452		
50281482014	MW-42D	EPA 5030/8260	610296		
50281482015	MW-43	EPA 5030/8260	610452		
50281482016	MW-43D	EPA 5030/8260	610452		
50281482017	Dup-2	EPA 5030/8260	610452		
50281482018	Trip Blank	EPA 5030/8260	610452		

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SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: DMP 3/4/21 144J

- 1. Courier: FED EX UPS CLIENT PACE USPS OTHER _____
- 2. Custody Seal on Cooler/Box Present: Yes No
(If yes) Seals Intact: Yes No (leave blank if no seals were present)
- 3. Thermometer: 1 2 3 4 5 6 A B C D E F
0.0 / 0.0
- 4. Cooler Temperature: _____
Temp should be above freezing to 6°C (Initial/Corrected)

- 5. Packing Material: Bubble Wrap Bubble Bags
 None Other _____
- 6. Ice Type: Wet Blue None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?: Yes No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u>	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)		<u>N/A</u>	Trip Blank Present?	<input checked="" type="checkbox"/>		
			Trip Blank Custody Seals?:	<input checked="" type="checkbox"/>		

COMMENTS:

Sample Container Count

Sample Line Item	WGUFU	R	SBS DI BK Kit	DG9H	VOA VIAL HS (≥6mm)	VG9U	DG9U	DG9T	AG0U	AG1H	AG1U	AG3S	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Matrix	pH <2	pH >9	pH >10	
				3																						WT		
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

Container Codes

Glass				Plastic / Misc.			
DG9B	40mL Na Bisulfate amber vial	AG0U	100mL unpres amber glass	BG3U	250mL Unpres Clear Glass	BP3U	250mL unpreserved plastic
DG9H	40mL HCl amber voa vial	AG1H	1L HCl amber glass	BP1A	1L NaOH, Asc Acid plastic	BP3S	250mL H2SO4 plastic
DG9M	40mL MeOH clear vial	AG1S	1L H2SO4 amber glass	BP1N	1L HNO3 plastic	BP3Z	250mL NaOH, Zn Ac plastic
DG9P	40mL TSP amber vial	AG1T	1L Na Thiosulfate amber glass	BP1S	1L H2SO4 plastic		
DG9S	40mL H2SO4 amber vial	AG1U	1liter unpres amber glass	BP1U	1L unpreserved plastic		
DG9T	40mL Na Thio amber vial	AG2N	500mL HNO3 amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
DG9U	40mL unpreserved amber vial	AG2S	500mL H2SO4 amber glass	BP2A	500mL NaOH, Asc Acid plastic	C	Air Cassettes
VG9H	40mL HCl clear vial	AG2U	500mL unpres amber glass	BP2N	500mL HNO3 plastic	R	Terra core kit
VG9T	40mL Na Thio. clear vial	AG3S	250mL H2SO4 amber glass	BP2O	500mL NaOH plastic	SP5T	120mL Coliform Na Thiosulfate
VG9U	40mL unpreserved clear vial	AG3U	250mL unpres amber glass	BP2S	500mL H2SO4 plastic	U	Summa Can
VGFX	40mL w/hexane wipe vial	AG3C	250mL NaOH amber glass	BP2U	500mL unpreserved plastic	ZPLC	Ziploc Bag
VSG	Headspace septa vial & HCl	BG1H	1L HCl clear glass	BP2Z	500mL NaOH, Zn Ac		
WGKU	8oz unpreserved clear jar	BG1S	1L H2SO4 clear glass	BP3B	250mL NaOH plastic	WT	Water
WGUFU	4oz clear soil jar	BG1T	1L Na Thiosulfate clear glass	BP3N	250mL HNO3 plastic	SL	Solid
JGFU	4oz unpreserved amber wide	BG1U	1L unpreserved glass	BP3F	250mL HNO3 plastic (field filtered)	NAL	Non-aqueous liquid
CG3H	250mL clear glass HCl	BG3H	250mL HCl Clear Glass			WP	Wipe

Sample Container Count

Sample Line Item	WGUFU	SBS DI BK Kit	R	DG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	DG9T	AG0U	AG1H	AG1U	AG3S	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Matrix	pH <2	pH >9	pH >10	
				VG9H																								
1				3																					WT			
2				↓																								
3				↓																								
4				9			MS / MSD																					
5				3																								
6				↓																								
7				↓																								
8				↓																								
9																												
10																												
11																												
12																												

Container Codes

Glass				Plastic / Misc.			
DG9B	40mL Na Bisulfate amber vial	AG0U	100mL unpres amber glass	BG3U	250mL Unpres Clear Glass	BP3U	250mL unpreserved plastic
DG9H	40mL HCl amber voa vial	AG1H	1L HCl amber glass	BP1A	1L NaOH, Asc Acid plastic	BP3S	250mL H2SO4 plastic
DG9M	40mL MeOH clear vial	AG1S	1L H2SO4 amber glass	BP1N	1L HNO3 plastic	BP3Z	250mL NaOH, Zn Ac plastic
DG9P	40mL TSP amber vial	AG1T	1L Na Thiosulfate amber glass	BP1S	1L H2SO4 plastic		
DG9S	40mL H2SO4 amber vial	AG1U	1liter unpres amber glass	BP1U	1L unpreserved plastic		
DG9T	40mL Na Thio amber vial	AG2N	500mL HNO3 amber glass	BP1Z	1L NaOH, Zn, Ac		
DG9U	40mL unpreserved amber vial	AG2S	500mL H2SO4 amber glass	BP2A	500mL NaOH, Asc Acid plastic		
VG9H	40mL HCl clear vial	AG2U	500mL unpres amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG3S	250mL H2SO4 amber glass	BP2O	500mL NaOH plastic		
VG9U	40mL unpreserved clear vial	AG3U	250mL unpres amber glass	BP2S	500mL H2SO4 plastic		
VGFX	40mL w/hexane wipe vial	AG3C	250mL NaOH amber glass	BP2U	500mL unpreserved plastic		
VSG	Headspace septa vial & HCl	BG1H	1L HCl clear glass	BP2Z	500mL NaOH, Zn Ac		
WGKU	8oz unpreserved clear jar	BG1S	1L H2SO4 clear glass	BP3B	250mL NaOH plastic		
WGUFU	4oz clear soil jar	BG1T	1L Na Thiosulfate clear glass	BP3N	250mL HNO3 plastic		
JGFU	4oz unpreserved amber wide	BG1U	1L unpreserved glass	BP3F	250mL HNO3 plastic (field filtered)		
CG3H	250mL clear glass HCl	BG3H	250mL HCl Clear Glass				
						AF	Air Filter
						C	Air Cassettes
						R	Terra core kit
						SP5T	120mL Coliform Na Thiosulfate
						U	Summa Can
						ZPLC	Ziploc Bag
						WT	Water
						SL	Solid
						NAL	Non-aqueous liquid
						WP	Wipe



SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: WS 3-5-21 ¹⁵⁵⁵

1. Courier: FED EX UPS CLIENT PACE USPS OTHER _____

2. Custody Seal on Cooler/Box Present: Yes No

(If yes)Seals Intact: Yes No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 A B C D E F

4. Cooler Temperature: 20/20
Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material: Bubble Wrap Bubble Bags

None Other _____

6. Ice Type: Wet Blue None

7. If temp. is over 6°C or under 0°C, was the PM notified?: Yes No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	<u>Present</u>	<u>Absent</u>	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Trip Blank Present?	<input checked="" type="checkbox"/>		
Extra labels on Terracore Vials? (soils only)		<input checked="" type="checkbox"/>	Trip Blank Custody Seals?:	<input checked="" type="checkbox"/>		

COMMENTS:

Sample Container Count

Sample Line Item	WGUFU	SBS DI BK Kit	R	DG9H	DG9M	VOA VIAL HS (≤9mm)	VG9U	DG9U	DG9T	AG0U	AG1H	AG1U	AG3S	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Matrix	pH <2	pH >9	pH >10	
				1				3																					WT
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

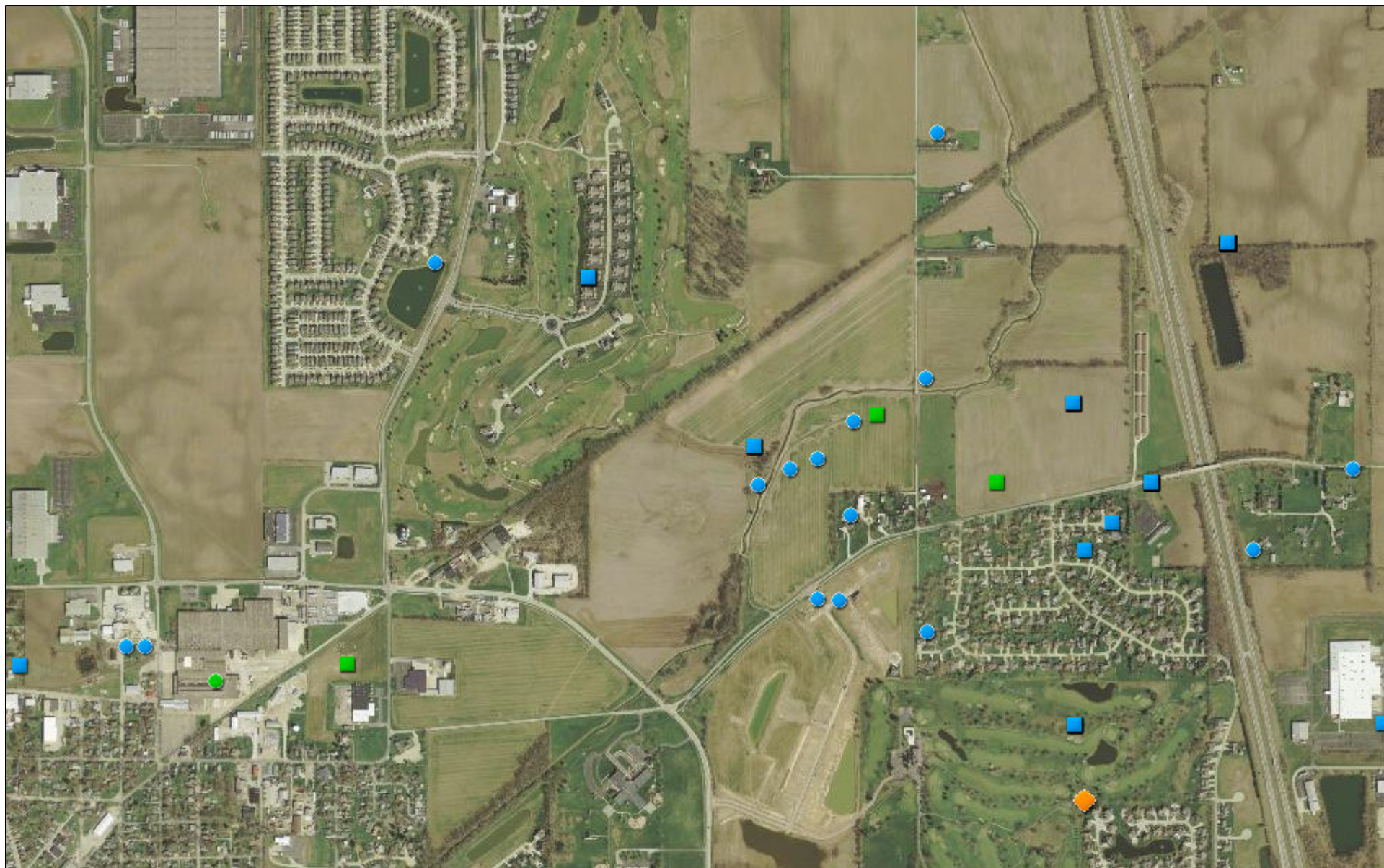
Container Codes

Glass				Plastic / Misc.			
DG9B	40mL Na Bisulfate amber vial	AG0U	100mL unpres amber glass	BG3U	250mL Unpres Clear Glass	BP3U	250mL unpreserved plastic
DG9H	40mL HCl amber voa vial	AG1H	1L HCl amber glass	BP1A	1L NaOH, Asc Acid plastic	BP3S	250mL H2SO4 plastic
DG9M	40mL MeOH clear vial	AG1S	1L H2SO4 amber glass	BP1N	1L HNO3 plastic	BP3Z	250mL NaOH, Zn Ac plastic
DG9P	40mL TSP amber vial	AG1T	1L Na Thiosulfate amber glass	BP1S	1L H2SO4 plastic		
DG9S	40mL H2SO4 amber vial	AG1U	1liter unpres amber glass	BP1U	1L unpreserved plastic		
DG9T	40mL Na Thio amber vial	AG2N	500mL HNO3 amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
DG9U	40mL unpreserved amber vial	AG2S	500mL H2SO4 amber glass	BP2A	500mL NaOH, Asc Acid plastic	C	Air Cassettes
VG9H	40mL HCl clear vial	AG2U	500mL unpres amber glass	BP2N	500mL HNO3 plastic	R	Terra core kit
VG9T	40mL Na Thio. clear vial	AG3S	250mL H2SO4 amber glass	BP2O	500mL NaOH plastic	SP5T	120mL Coliform Na Thiosulfate
VG9U	40mL unpreserved clear vial	AG3U	250mL unpres amber glass	BP2S	500mL H2SO4 plastic	U	Summa Can
VGFX	40mL w/hexane wipe vial	AG3C	250mL NaOH amber glass	BP2U	500mL unpreserved plastic	ZPLC	Ziploc Bag
VSG	Headspace septa vial & HCl	BG1H	1L HCl clear glass	BP2Z	500mL NaOH, Zn Ac		
WGKU	8oz unpreserved clear jar	BG1S	1L H2SO4 clear glass	BP3B	250mL NaOH plastic	WT	Water
WGUFU	4oz clear soil jar	BG1T	1L Na Thiosulfate clear glass	BP3N	250mL HNO3 plastic	SL	Solid
JGFU	4oz unpreserved amber wide	BG1U	1L unpreserved glass	BP3F	250mL HNO3 plastic (field filtered)	NAL	Non-aqueous liquid
CG3H	250mL clear glass HCl	BG3H	250mL HCl Clear Glass			WP	Wipe

ATTACHMENT 3

IDNR Water Well Location Map & Wellhead
Protection Information

Indiana DNR Water Well Viewer



6/3/2021, 11:55:25 AM

Unconsolidated Wells

Other



Field Located

Unspecified Well Type

Other

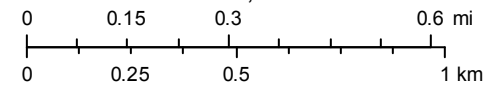


Field Located



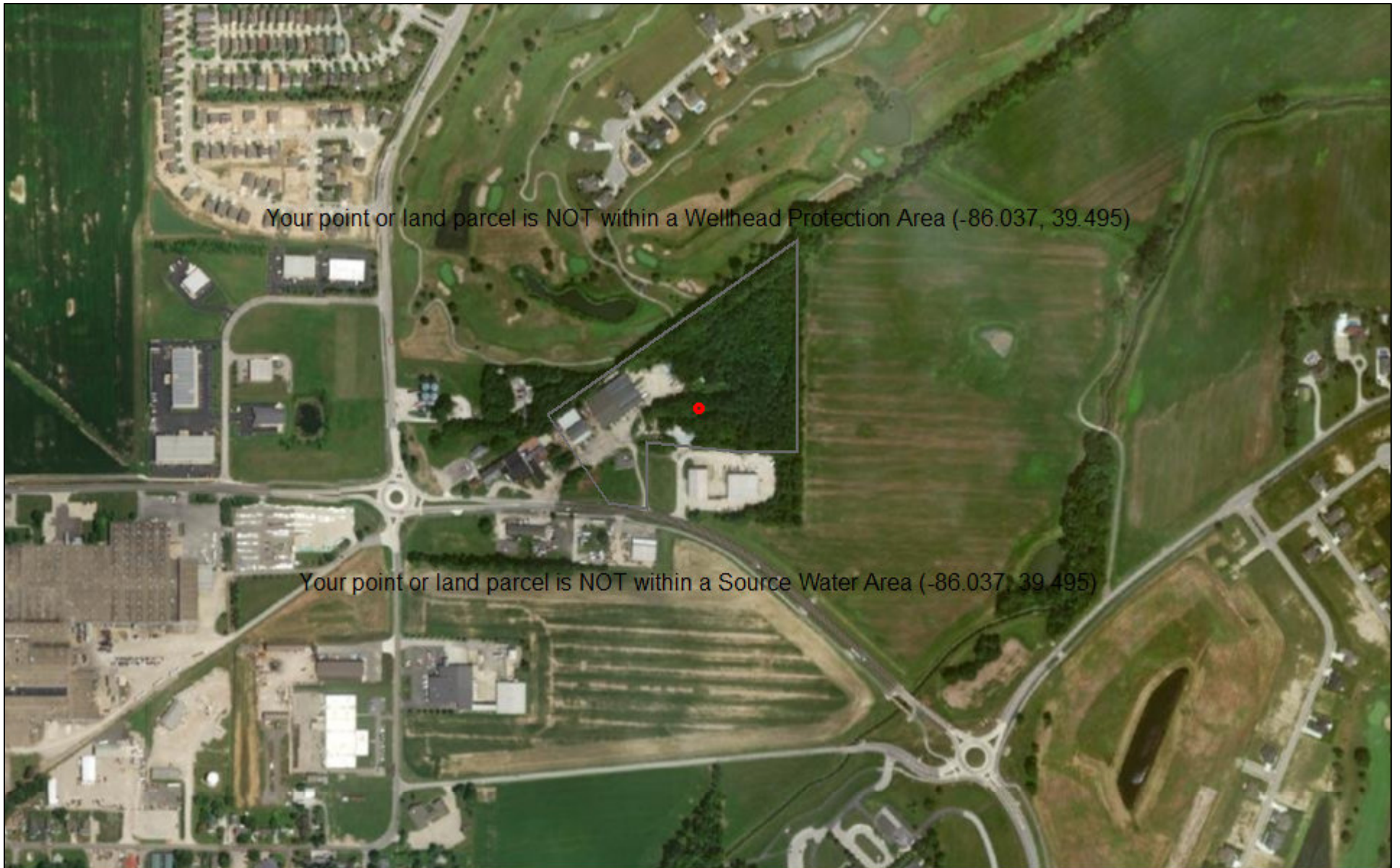
Significant Withdraw Wells

1:18,056

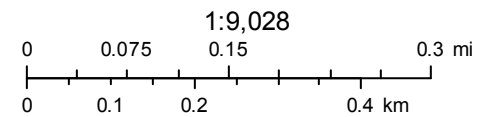


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

IDEM Source Water Proximity



June 3, 2021



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ATTACHMENT 4

Nearby Wetland Map & Johnson County
Endangered & Threatened Species List

Indiana County Endangered, Threatened and Rare Species List

County: Johnson



Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
<i>Alasmidonta viridis</i>	Slippershell Mussel		SSC	G4G5	S3
<i>Epioblasma rangiana</i>	Northern Riffleshell	LE	SE	G1	S1
<i>Epioblasma triquetra</i>	Snuffbox	LE	SE	G3	S1
<i>Lampsilis fasciola</i>	Wavyrayed Lampmussel		SSC	G5	S3
<i>Obovaria subrotunda</i>	Round Hickorynut	C	SE	G4	S1
<i>Pleurobema clava</i>	Clubshell	LE	SE	G1G2	S1
<i>Ptychobranthus fasciolaris</i>	Kidneyshell		SSC	G4G5	S2
<i>Simpsonaias ambigua</i>	Salamander Mussel	C	SSC	G3	S2
<i>Theliderma cylindrica</i>	Rabbitsfoot	LT	SE	G3G4	S1
<i>Villosa fabalis</i>	Rayed Bean	LE	SE	G2	S1
<i>Villosa iris</i>	Rainbow		SSC	G5	S3
<i>Villosa lienosa</i>	Little Spectaclecase		SSC	G5	S3
Insect: Odonata (Dragonflies & Damselflies)					
<i>Cordulegaster bilineata</i>	Brown Spiketail		WL	G5	S3
<i>Enallagma divagans</i>	Turquoise Bluet		SR	G5	S3
<i>Sympetrum semicinctum</i>	Band-winged Meadowhawk		SR	G5	S2S3
Amphibian					
<i>Acris blanchardi</i>	Blanchard's Cricket Frog		SSC	G5	S4
Reptile					
<i>Clonophis kirtlandii</i>	Kirtland's Snake		SE	G2	S2
<i>Terrapene carolina carolina</i>	Eastern Box Turtle		SSC	G5T5	S3
Bird					
<i>Aimophila aestivalis</i>	Bachman's Sparrow			G3	SXB
<i>Ammodramus henslowii</i>	Henslow's Sparrow		SE	G4	S3B
<i>Bartramia longicauda</i>	Upland Sandpiper		SE	G5	S3B
<i>Circus hudsonius</i>	Northern Harrier		SE	G5	S2
<i>Cistothorus platensis</i>	Sedge Wren		SE	G5	S3B
<i>Haliaeetus leucocephalus</i>	Bald Eagle		SSC	G5	S2
<i>Helmitheros vermivorus</i>	Worm-eating Warbler		SSC	G5	S3B
<i>Ixobrychus exilis</i>	Least Bittern		SE	G4G5	S3B
<i>Nycticorax nycticorax</i>	Black-crowned Night-heron		SE	G5	S1B
<i>Rallus elegans</i>	King Rail		SE	G4	S1B
<i>Rallus limicola</i>	Virginia Rail		SE	G5	S3B
<i>Setophaga cerulea</i>	Cerulean Warbler		SE	G4	S3B
<i>Setophaga citrina</i>	Hooded Warbler		SSC	G5	S3B
<i>Tyto alba</i>	Barn Owl		SE	G5	S2
Mammal					
<i>Lasiurus borealis</i>	Eastern Red Bat		SSC	G3G4	S4
<i>Mustela nivalis</i>	Least Weasel		SSC	G5	S2?

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long-term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long-term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Johnson



Species Name	Common Name	FED	STATE	GRANK	SRANK
<i>Myotis lucifugus</i>	Little Brown Bat	C	SE	G3	S2
<i>Myotis septentrionalis</i>	Northern Long Eared Bat	LT	SE	G1G2	S2S3
<i>Myotis sodalis</i>	Indiana Bat	LE	SE	G2	S1
<i>Nycticeius humeralis</i>	Evening Bat		SE	G5	S1
<i>Perimyotis subflavus</i>	Tricolored Bat		SE	G2G3	S2S3
<i>Sorex fumeus</i>	Smoky Shrew		SSC	G5	S2
<i>Sorex hoyi</i>	Pygmy Shrew		SSC	G5	S2
<i>Taxidea taxus</i>	American Badger		SSC	G5	S2
Vascular Plant					
<i>Azolla caroliniana</i>	Carolina mosquito-fern		ST	G5	S3
<i>Carex timida</i>	timid sedge		SE	G2G4	S1
<i>Chelone obliqua var. speciosa</i>	rose turtlehead		WL	G4T3	S3
<i>Huperzia lucidula</i>	shining clubmoss		WL	G5	S3
<i>Hydrastis canadensis</i>	golden seal		WL	G3G4	S3
<i>Juglans cinerea</i>	butternut		ST	G3	S2
<i>Panax quinquefolius</i>	American ginseng		WL	G3G4	S3
High Quality Natural Community					
<i>Forest - floodplain wet-mesic</i>	Wet-mesic Floodplain Forest		SG	G3?	S3
<i>Forest - upland dry-mesic Highland Rim</i>	Highland Rim Dry-mesic Upland Forest		SG	GNR	S3
<i>Forest - upland mesic Highland Rim</i>	Highland Rim Mesic Upland Forest		SG	GNR	S3
<i>Wetland - seep circumneutral</i>	Circumneutral Seep		SG	GU	S1


Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
 State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list
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June 3, 2021

Wetlands

- | | | |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland |  Lake |
|  Estuarine and Marine Wetland |  Freshwater Forested/Shrub Wetland |  Other |
| |  Freshwater Pond |  Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

ATTACHMENT 5

Contaminant Information

SAFETY DATA SHEET

Creation Date 10-December-2009

Revision Date 17-January-2018

Revision Number 5

1. Identification

Product Name Tetrachloroethylene

Cat No. : C182-20; C182-4

CAS-No 127-18-4
Synonyms Perchloroethylene

Recommended Use Laboratory chemicals.
Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company

Importer/Distributor
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Manufacturer

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Skin Sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Central nervous system (CNS).	
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Kidney, Liver, Blood.	

Label Elements

Signal Word

Danger

Hazard Statements

Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
May cause drowsiness and dizziness

May cause cancer
 May cause damage to organs through prolonged or repeated exposure



Precautionary Statements

Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fumes/gas/mist/vapours/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing should not be allowed out of the workplace

Response

IF exposed or concerned: Get medical advice/attention
 IF ON SKIN: Wash with plenty of soap and water
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Take off contaminated clothing

Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Tetrachloroethylene	127-18-4	>95

4. First-aid measures

General Advice	If symptoms persist, call a physician.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
Inhalation	Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water.
Most important symptoms/effects	None reasonably foreseeable. May cause allergic skin reaction. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble

Notes to Physician breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media No information available

Flash Point No information available

Method - No information available

Autoignition Temperature No information available

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Containers may explode when heated.

Hazardous Combustion Products

Chlorine Hydrogen chloride gas Phosgene

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health
2

Flammability
0

Instability
0

Physical hazards
N/A

6. Accidental release measures

Personal Precautions Use personal protective equipment. Ensure adequate ventilation.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Ensure adequate ventilation. Avoid ingestion and inhalation.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec	ACGIH TLV	OSHA PEL	NIOSH IDLH
Tetrachloroethylene	TWA: 25 ppm TWA: 170 mg/m ³ STEL: 100 ppm STEL: 678 mg/m ³	TWA: 25 ppm STEL: 100 ppm	TWA: 25 ppm STEL: 100 ppm	TWA: 25 ppm TWA: 170 mg/m ³ STEL: 100 ppm STEL: 685 mg/m ³	TWA: 25 ppm STEL: 100 ppm	(Vacated) TWA: 25 ppm (Vacated) TWA: 170 mg/m ³ Ceiling: 200 ppm TWA: 100 ppm	IDLH: 150 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Goggles

Hand Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Glove material	Breakthrough time	Glove thickness	Glove comments
Nitrile rubber	> 480 minutes	0.38 mm	As tested under EN374-3
Viton (R)	> 480 minutes	0.3 mm	Determination of Resistance to Permeation by Chemicals

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Characteristic, sweet
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-22 °C / -7.6 °F
Boiling Point/Range	120 - 122 °C / 248 - 251.6 °F @ 760 mmHg
Flash Point	No information available
Evaporation Rate	6.0 (Ether = 1.0)
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	18 mbar @ 20 °C
Vapor Density	No information available
Density	1.619

Specific Gravity	1.625
Solubility	0.15 g/L water (20°C)
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	> 150°C
Viscosity	0.89 mPa s at 20 °C
Molecular Formula	C ₂ Cl ₄
Molecular Weight	165.83

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products. Excess heat. Exposure to moist air or water.
Incompatible Materials	Strong acids, Strong oxidizing agents, Strong bases, Metals, Zinc, Amines, Aluminium
Hazardous Decomposition Products	Chlorine, Hydrogen chloride gas, Phosgene
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tetrachloroethylene	LD50 = 2629 mg/kg (Rat)	LD50 > 10000 mg/kg (Rat)	LC50 = 27.8 mg/L (Rat) 4 h

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Irritating to eyes and skin
Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Tetrachloroethylene	127-18-4	Group 2A	Reasonably Anticipated	A3	X	A3

IARC: (International Agency for Research on Cancer)

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

ACGIH: (American Conference of Governmental Industrial Hygienists)

Mexico - Occupational Exposure Limits - Carcinogens

Mexico - Occupational Exposure Limits - Carcinogens

A1 - Confirmed Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Confirmed Animal Carcinogen

A4 - Not Classifiable as a Human Carcinogen
A5 - Not Suspected as a Human Carcinogen

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Central nervous system (CNS)

STOT - repeated exposure Kidney Liver Blood

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Endocrine Disruptor Information

Component	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Tetrachloroethylene	Group II Chemical	Not applicable	Not applicable

Other Adverse Effects Tumorigenic effects have been reported in experimental animals.

12. Ecological information

Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Tetrachloroethylene	EC50: > 500 mg/L, 96h (Pseudokirchneriella subcapitata)	LC50: 4.73 - 5.27 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 11.0 - 15.0 mg/L, 96h static (Lepomis macrochirus) LC50: 8.6 - 13.5 mg/L, 96h static (Pimephales promelas) LC50: 12.4 - 14.4 mg/L, 96h flow-through (Pimephales promelas)	EC50 = 100 mg/L 24 h EC50 = 112 mg/L 24 h EC50 = 120.0 mg/L 30 min	EC50: 6.1 - 9.0 mg/L, 48h Static (Daphnia magna)

Persistence and Degradability Insoluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility . Is not likely mobile in the environment due its low water solubility. Will likely be mobile in the environment due to its volatility.

Component	log Pow
Tetrachloroethylene	2.53 - 2.88

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Tetrachloroethylene		

Tetrachloroethylene - 127-18-4	U210	-
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14. Transport information

DOT

UN-No UN1897
 Proper Shipping Name TETRACHLOROETHYLENE
 Hazard Class 6.1
 Packing Group III

TDG

UN-No UN1897
 Proper Shipping Name TETRACHLOROETHYLENE
 Hazard Class 6.1
 Packing Group III

IATA

UN-No UN1897
 Proper Shipping Name TETRACHLOROETHYLENE
 Hazard Class 6.1
 Packing Group III

IMDG/IMO

UN-No UN1897
 Proper Shipping Name TETRACHLOROETHYLENE
 Hazard Class 6.1
 Subsidiary Hazard Class P
 Packing Group III

15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

International Inventories

Component	DSL	NDSL	TSCA	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Tetrachloroethylene	X	-	X	204-825-9	-		X	X	X	X	X

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

Component	Canada - National Pollutant Release Inventory (NPRI)	Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances	Canada's Chemicals Management Plan (CEPA)
Tetrachloroethylene	Part 1, Group A Substance	Schedule I	

16. Other information

Prepared By Regulatory Affairs
 Thermo Fisher Scientific
 Email: EMSDS.RA@thermofisher.com

Creation Date 10-December-2009

Revision Date 17-January-2018

Print Date 17-January-2018

Revision Summary This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

SAFETY DATA SHEET

Trichloroethylene

Section 1. Identification

GHS product identifier	: Trichloroethylene
Chemical name	: trichloroethylene
Other means of identification	: trichloroethene; Ethene, 1,1,2-trichloro-; Ethene, trichloro-; Trichlorethylene; Ethylene, trichloro-
Product use	: Synthetic/Analytical chemistry.
Synonym	: trichloroethene; Ethene, 1,1,2-trichloro-; Ethene, trichloro-; Trichlorethylene; Ethylene, trichloro-
SDS #	: 001206
Supplier's details	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
24-hour telephone	: 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A GERM CELL MUTAGENICITY - Category 2 CARCINOGENICITY - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms



Signal word : Danger

Hazard statements : Causes serious eye irritation.
Causes skin irritation.
May cause cancer.
Suspected of causing genetic defects.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. Wash hands thoroughly after handling.
Response	: IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Substance
Chemical name : trichloroethylene
Other means of identification : trichloroethene; Ethene, 1,1,2-trichloro-; Ethene, trichloro-; Trichlorethylene; Ethylene, trichloro-

CAS number/other identifiers

CAS number : 79-01-6
Product code : 001206

Ingredient name	%	CAS number
trichloroethylene	100	79-01-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation.
- Frostbite** : Try to warm up the frozen tissues and seek medical attention.
- Ingestion** : No known significant effects or critical hazards.

Section 4. First aid measures

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following: pain or irritation, watering, redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following: irritation, redness
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
carbonyl halides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

trichloroethylene

ACGIH TLV (United States, 3/2016).

STEL: 25 ppm 15 minutes.

TWA: 10 ppm 8 hours.

OSHA PEL 1989 (United States, 3/1989).

STEL: 1080 mg/m³ 15 minutes.

STEL: 200 ppm 15 minutes.

TWA: 270 mg/m³ 8 hours.

TWA: 50 ppm 8 hours.

OSHA PEL Z2 (United States, 2/2013).

AMP: 300 ppm 5 minutes.

CEIL: 200 ppm

TWA: 100 ppm 8 hours.

Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Watery liquid.]
- Color** : Colorless.
- Molecular weight** : 131.38 g/mole
- Molecular formula** : C₂H-Cl₃
- Boiling/condensation point** : 86.7°C (188.1°F)
- Melting/freezing point** : -84.8°C (-120.6°F)
- Critical temperature** : Not available.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not available.
- Flash point** : Not available.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Evaporation rate** : 6.39 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	: Lower: 8% Upper: 10.5%
Vapor pressure	: 9.9 kPa (74.256033302 mm Hg) [room temperature]
Vapor density	: 4.5 (Air = 1)
Specific Volume (ft³/lb)	: 0.6849
Gas Density (lb/ft³)	: 1.46
Relative density	: 1.5
Solubility	: Not available.
Solubility in water	: 1.1 g/l
Partition coefficient: n-octanol/water	: 2.53
Auto-ignition temperature	: 410°C (770°F)
Decomposition temperature	: Not available.
SADT	: Not available.
Viscosity	: Dynamic (room temperature): 0.58 mPa·s (0.58 cP)

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
trichloroethylene	LC50 Inhalation Vapor	Rat	140700 mg/m ³	1 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	4920 mg/kg	-

IDLH : 1000 ppm

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
trichloroethylene	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-

Sensitization

Not available.

Section 11. Toxicological information

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
trichloroethylene	-	1	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes skin irritation.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following: , pain or irritation, watering, redness
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following: , irritation, redness
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.
Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity : Suspected of causing genetic defects.

Section 11. Toxicological information

- Teratogenicity** : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
trichloroethylene	Acute EC50 95000 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 36.5 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
	Acute LC50 20 mg/l Marine water	Crustaceans - Elminius modestus	48 hours
	Acute LC50 18 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 3100 µg/l Fresh water	Fish - Jordanella floridae - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic EC10 12.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
Chronic NOEC 10 mg/l Fresh water	Daphnia - Daphnia magna	21 days	

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
trichloroethylene	2.53	17	low

Mobility in soil

- Soil/water partition coefficient (K_{oc})** : Not available.

- Other adverse effects** : No known significant effects or critical hazards.

Section 13. Disposal considerations






- Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 13. Disposal considerations

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Trichloroethylene; Ethene, trichloro-	79-01-6	Listed	U228

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1710	UN1710	UN1710	UN1710	UN1710
UN proper shipping name	TRICHLOROETHYLENE	TRICHLOROETHYLENE	TRICHLOROETHYLENE	TRICHLOROETHYLENE	TRICHLOROETHYLENE
Transport hazard class(es)	6.1 	6.1 	6.1 	6.1 	6.1 
Packing group	III	III	III	III	III
Environment	No.	No.	No.	No.	No.
Additional information	<p>Reportable quantity 100 lbs / 45.4 kg [8.2147 gal / 31.096 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p>Limited quantity Yes.</p> <p>Packaging instruction Passenger aircraft Quantity limitation: 60 L</p> <p>Cargo aircraft Quantity limitation: 220 L</p> <p>Special provisions IB3, N36, T4, TP1, T1</p>	<p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.26-2.36 (Class 6).</p> <p>Explosive Limit and Limited Quantity Index 5</p>	-	-	<p>Passenger and Cargo Aircraft Quantity limitation: 60 L</p> <p>Cargo Aircraft Only Quantity limitation: 220 L</p> <p>Limited Quantities - Passenger Aircraft Quantity limitation: 2 L</p>

“Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product.”

Special precautions for user : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

- U.S. Federal regulations**
- TSCA 5(a)2 final significant new use rules:** trichloroethylene
 - TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
 - TSCA 12(b) one-time export:** trichloroethylene
 - United States inventory (TSCA 8b):** This material is listed or exempted.
 - Clean Water Act (CWA) 307:** trichloroethylene
 - Clean Water Act (CWA) 311:** trichloroethylene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
trichloroethylene	100	No.	No.	No.	Yes.	Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	trichloroethylene	79-01-6	100
Supplier notification	trichloroethylene	79-01-6	100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : This material is listed.

New York : This material is listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 15. Regulatory information

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
trichloroethylene	Yes.	Yes.	14 µg/day (ingestion) 50 µg/day (inhalation)	No.

International regulations

International lists

National inventory

Australia	: This material is listed or exempted.
Canada	: This material is listed or exempted.
China	: This material is listed or exempted.
Europe	: This material is listed or exempted.
Japan	: This material is listed or exempted.
Malaysia	: This material is listed or exempted.
New Zealand	: This material is listed or exempted.
Philippines	: This material is listed or exempted.
Republic of Korea	: This material is listed or exempted.
Taiwan	: This material is listed or exempted.

Canada

WHMIS (Canada)	: Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic). CEPA Toxic substances: This material is listed. Canadian ARET: This material is not listed. Canadian NPRI: This material is listed. Alberta Designated Substances: This material is not listed. Ontario Designated Substances: This material is not listed. Quebec Designated Substances: This material is not listed.
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Section 16. Other information

Canada Label requirements	: Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).
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Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



Section 16. Other information

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
Skin Irrit. 2, H315	Expert judgment
Eye Irrit. 2A, H319	Expert judgment
Muta. 2, H341	Expert judgment
Carc. 1, H350	Expert judgment
Aquatic Chronic 3, H412	Expert judgment

History

Date of printing : 11/21/2016
Date of issue/Date of revision : 11/21/2016
Date of previous issue : No previous validation
Version : 0.01

Key to abbreviations : ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations

References : Not available.

☑ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Creation Date 22-Sep-2009

Revision Date 23-Jan-2018

Revision Number 3

1. Identification

Product Name cis-1,2-Dichloroethylene

Cat No. : AC113380000; AC113380025; AC113380100; AC113380500

Synonyms cis-Acetylene dichloride.

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.
Details of the supplier of the safety data sheet

Company

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor
Harmful if swallowed
Harmful if inhaled

Causes serious eye irritation
 Causes skin irritation
 May cause respiratory irritation



Precautionary Statements

Prevention

Wear protective gloves/protective clothing/eye protection/face protection
 Use only outdoors or in a well-ventilated area
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Take precautionary measures against static discharge
 Do not eat, drink or smoke when using this product

Response

Call a POISON CENTER or doctor/physician if you feel unwell

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell

Skin

IF ON SKIN: Wash with plenty of soap and water
 Take off contaminated clothing and wash before reuse
 If skin irritation occurs: Get medical advice/attention

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention

Ingestion

Rinse mouth
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Fire

Explosion risk in case of fire
 Fight fire with normal precautions from a reasonable distance
 Evacuate area

Storage

Store in a well-ventilated place. Keep cool
 Store in a closed container
 Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
cis-1,2-Dichloroethylene	156-59-2	97

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.
Inhalation	Remove to fresh air. Get medical attention. If not breathing, give artificial respiration.
Ingestion	Do NOT induce vomiting. Get medical attention.
Most important symptoms and effects	Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Dry chemical. Water mist may be used to cool closed containers. Chemical foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media	No information available
Flash Point	6 °C / 42.8 °F
Method -	No information available
Autoignition Temperature	440 °C / 824 °F
Explosion Limits	
Upper	12.80%
Lower	9.70%
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Flammable. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrogen chloride gas.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health 2	Flammability 3	Instability 0	Physical hazards N/A
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6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing.
Environmental Precautions	See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system.
Methods for Containment and Clean Up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. Handling and storage

Handling	Ensure adequate ventilation. Wear personal protective equipment/face protection. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.
Storage	Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed. Keep away from heat, sparks and flame. Flammables area. Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
cis-1,2-Dichloroethylene	TWA: 200 ppm			TWA: 200 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

Engineering Measures	Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.
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Personal Protective Equipment

Eye/face Protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	No protective equipment is needed under normal use conditions.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	aromatic
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-80 °C / -112 °F
Boiling Point/Range	60 °C / 140 °F @ 760 mmHg
Flash Point	6 °C / 42.8 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	12.80%
Lower	9.70%
Vapor Pressure	201 mmHg @ 25 °C
Vapor Density	3.34 (Air = 1.0)
Specific Gravity	1.280
Solubility	No information available
Partition coefficient; n-octanol/water	No data available

Autoignition Temperature	440 °C / 824 °F
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	C2 H2 Cl2
Molecular Weight	96.94

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Keep away from open flames, hot surfaces and sources of ignition. Exposure to air. Exposure to light. Incompatible products. Exposure to moist air or water.
Incompatible Materials	Bases
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Hydrogen chloride gas
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Irritating to eyes, respiratory system and skin
Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
cis-1,2-Dichloroethylene	156-59-2	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects	No information available
Reproductive Effects	No information available.
Developmental Effects	No information available.
Teratogenicity	No information available.
STOT - single exposure	Respiratory system
STOT - repeated exposure	None known
Aspiration hazard	No information available
Symptoms / effects, both acute and delayed	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Endocrine Disruptor Information	No information available
Other Adverse Effects	The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains. Do not flush into surface water or sanitary sewer system. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
cis-1,2-Dichloroethylene	Not listed	Not listed	EC50 = 721 mg/L 5 min EC50 = 905 mg/L 30 min	Not listed

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN1150
 Proper Shipping Name 1,2-DICHLOROETHYLENE
 Hazard Class 3
 Packing Group II

TDG

UN-No UN1150
 Proper Shipping Name 1,2-DICHLOROETHYLENE
 Hazard Class 3
 Packing Group II

IATA

UN-No UN1150
 Proper Shipping Name 1,2-DICHLOROETHYLENE
 Hazard Class 3
 Packing Group II

IMDG/IMO

UN-No UN1150
 Proper Shipping Name 1,2-DICHLOROETHYLENE
 Hazard Class 3
 Packing Group II

15. Regulatory information

United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
cis-1,2-Dichloroethylene	156-59-2	X	ACTIVE	-

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
cis-1,2-Dichloroethylene	156-59-2	-	X	205-859-7	-	X	X	X	KE-10124

U.S. Federal Regulations

SARA 313	Not applicable
SARA 311/312 Hazard Categories	See section 2 for more information
CWA (Clean Water Act)	Not applicable
Clean Air Act	Not applicable
OSHA - Occupational Safety and Health Administration	Not applicable

CERCLA

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
cis-1,2-Dichloroethylene	X	-	X	-	-

U.S. Department of Transportation

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other information

Prepared By	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
Creation Date	22-Sep-2009
Revision Date	23-Jan-2018
Print Date	23-Jan-2018
Revision Summary	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

trans-1,2-Dichloroethylene

Safety Data Sheet 1300513

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 04/06/2016

Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Substance name	: trans-1,2-Dichloroethylene
CAS No	: 156-60-5
Product code	: 1300-5-13
Formula	: C ₂ H ₂ Cl ₂
Synonyms	: (E)-1,2-Dichloroethene; (E)-1,2-Dichloroethylene; 1,2-trans-Dichloroethene; 1,2-trans-Dichloroethylene; HCC 1130t; NSC 60512; R 1130t
Other means of identification	: MFCD00062942

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: Laboratory chemicals Manufacture of substances Scientific research and development
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1.3. Details of the supplier of the safety data sheet

SynQuest Laboratories, Inc.
P.O. Box 309
Alachua, FL 32615 - United States of America
T (386) 462-0788 - F (386) 462-7097
info@synquestlabs.com - www.synquestlabs.com

1.4. Emergency telephone number

Emergency number	: (844) 523-4086 (3E Company - Account 10069)
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SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

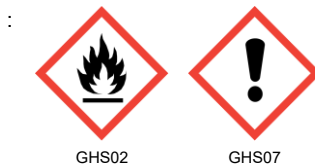
Flam. Liq. 2	H225 - Highly flammable liquid and vapour
Acute Tox. 4 (Oral)	H302 - Harmful if swallowed
Acute Tox. 4 (Inhalation:vapour)	H332 - Harmful if inhaled
Aquatic Acute 3	H402 - Harmful to aquatic life
Aquatic Chronic 3	H412 - Harmful to aquatic life with long lasting effects

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H225 - Highly flammable liquid and vapor
H302+H332 - Harmful if swallowed or if inhaled
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS-US)

: P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P312 - If swallowed: Call a POISON CENTER or doctor/ physician if you feel unwell

trans-1,2-Dichloroethylene

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P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth
P370+P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to an approved waste disposal plant

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type : Mono-constituent

Name	Product identifier	%	Classification (GHS-US)
trans-1,2-Dichloroethylene (Main constituent)	(CAS No) 156-60-5	<= 100	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:vapour), H332 Aquatic Acute 3, H402 Aquatic Chronic 3, H412

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get immediate medical advice/attention.

First-aid measures after skin contact : Wash with plenty of soap and water. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get immediate medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Thermal decomposition generates: Carbon oxides. Hydrogen chloride.

Explosion hazard : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers. May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection during firefighting : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".

trans-1,2-Dichloroethylene

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.
- 6.1.1. For non-emergency personnel**
- Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene.
- 6.1.2. For emergency responders**
- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level. Consider the risk of potentially explosive atmospheres. Eliminate every possible source of ignition.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Stop leak if safe to do so. Dike for recovery or absorb with appropriate material.
- Methods for cleaning up : Take up large spills with pump or vacuum and finish with dry chemical absorbent. Use explosion-proof equipment. Take up small spills with dry chemical absorbent. Sweep or shovel spills into appropriate container for disposal. Ventilate area.
- Other information : For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe fumes, mist, spray, vapors. Wear personal protective equipment. Avoid contact with skin and eyes. Keep away from ignition sources (including static discharges). Proper grounding procedures to avoid static electricity should be followed. Use only non-sparking tools.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Keep container closed when not in use. Keep away from ignition sources. Air sensitive. Moisture sensitive. Keep contents under inert gas.
- Incompatible materials : Refer to Section 10 on Incompatible Materials.
- Storage temperature : 2 - 8 °C Use explosion proof refrigerator
- Storage area : Store in dry, well-ventilated area. Light sensitive.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

trans-1,2-Dichloroethylene (156-60-5)

ACGIH	ACGIH TWA (ppm)	200 ppm
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8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Hand protection : Protective gloves. 29 CFR 1910.138: Hand Protection.
- Eye protection : Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory Protection.
- Other information : Safety shoes. 29 CFR 1910.136: Foot Protection.

trans-1,2-Dichloroethylene

Safety Data Sheet

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: 48 °C
Freezing point	: No data available
Boiling point	: 48 °C
Flash point	: 6 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: 5.16 psig (@ 20 °C)
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Specific gravity / density	: 1.257 g/ml (@ 25 °C)
Molecular mass	: 96.94 g/mol
Solubility	: Water: 600 mg/l (at 20 °C)
Log Pow	: 1.48
Auto-ignition temperature	: 460 °C
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

Refractive index	: 1.446 (@ 20 °C)
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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Keep away from heat, sparks and flame.

10.5. Incompatible materials

Acids. Oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Inhalation:vapour: Harmful if inhaled.

trans-1,2-Dichloroethylene (156-60-5)

LD50 oral rat	1235 mg/kg
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trans-1,2-Dichloroethylene

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trans-1,2-Dichloroethylene (156-60-5)	
LD50 dermal rabbit	5000 mg/kg
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

trans-1,2-Dichloroethylene (156-60-5)	
LC50 fish 1	135 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

trans-1,2-Dichloroethylene (156-60-5)	
Log Pow	1.48

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII. U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring. U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261. U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents. U.S. - RCRA (Resource Conservation & Recovery Act) - Part 268 Appendix III - Halogenated Organic Compounds (HOCs). U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards. U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring. U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics.
Waste treatment methods	: Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber.
Waste disposal recommendations	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information	: Recycle the material as far as possible.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	: UN1150 1,2-Dichloroethylene, 3, II
UN-No.(DOT)	: UN1150
Proper Shipping Name (DOT)	: 1,2-Dichloroethylene
Transport hazard class(es) (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

trans-1,2-Dichloroethylene

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Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : II - Medium Danger
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: t_r is the maximum mean bulk temperature during transport, t_f is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (t_f) and the maximum mean bulk temperature during transportation (t_r) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d_{15} and d_{50} are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
Other information : No supplementary information available.

TDG

No additional information available

Transport by sea

UN-No. (IMDG) : 1150
Proper Shipping Name (IMDG) : 1,2-DICHLOROETHYLENE
Class (IMDG) : 3 - Flammable liquids
Packing group (IMDG) : II - substances presenting medium danger

Air transport

UN-No. (IATA) : 1150
Proper Shipping Name (IATA) : 1,2-Dichloroethylene
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

trans-1,2-Dichloroethylene (156-60-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

trans-1,2-Dichloroethylene

Safety Data Sheet

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15.2. International regulations

CANADA

trans-1,2-Dichloroethylene (156-60-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Class B Division 2 - Flammable Liquid

Class D Division 2 Subdivision B - Toxic material causing other toxic effects

EU-Regulations

No additional information available

National regulations

trans-1,2-Dichloroethylene (156-60-5)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Japanese Pollutant Release and Transfer Register Law (PRTR Law)

Listed on INSQ (Mexican national Inventory of Chemical Substances)

15.3. US State regulations

trans-1,2-Dichloroethylene (156-60-5)

State or local regulations

U.S. - Massachusetts - Right To Know List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

U.S. - Pennsylvania - RTK (Right to Know) List

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases:

Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Flam. Liq. 2	Flammable liquids Category 2
H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H332	Harmful if inhaled
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

NFPA health hazard

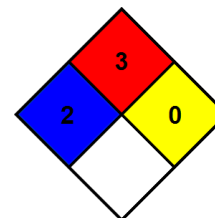
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

* - Chronic (long-term) health effects may result from repeated overexposure

Flammability

: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

trans-1,2-Dichloroethylene

Safety Data Sheet

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable or any damage resulting from handling or from contact with the above product.

SAFETY DATA SHEET

Vinyl Chloride

Section 1. Identification

GHS product identifier	: Vinyl Chloride
Chemical name	: vinyl chloride
Other means of identification	: chloroethylene; Ethene, chloro-; Chloroethene; Vinyl chloride, monomer; Ethene, chloro- (vinyl chloride); Vinyl chloride monomer; Monochloroethylene; Monochloroethene; Ethylene monochloride; VCM; VC
Product type	: Gas.
Product use	: Synthetic/Analytical chemistry.
Synonym	: chloroethylene; Ethene, chloro-; Chloroethene; Vinyl chloride, monomer; Ethene, chloro- (vinyl chloride); Vinyl chloride monomer; Monochloroethylene; Monochloroethene; Ethylene monochloride; VCM; VC
SDS #	: 001067
Supplier's details	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
24-hour telephone	: 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Liquefied gas CARCINOGENICITY - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (liver) - Category 2

GHS label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: Extremely flammable gas.
May form explosive mixtures with air.
Contains gas under pressure; may explode if heated.
May cause frostbite
May displace oxygen and cause rapid suffocation.
May cause cancer.
May cause damage to organs through prolonged or repeated exposure. (liver)

Precautionary statements

General

: Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position. Approach suspected leak area with caution.

Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe gas.

Section 2. Hazards identification

- Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
- Storage** : Store locked up. Protect from sunlight. Store in a well-ventilated place.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

Section 3. Composition/information on ingredients

- Substance/mixture** : Substance
- Chemical name** : vinyl chloride
- Other means of identification** : chloroethylene; Ethene, chloro-; Chloroethene; Vinyl chloride, monomer; Ethene, chloro- (vinyl chloride); Vinyl chloride monomer; Monochloroethylene; Monochloroethene; Ethylene monochloride; VCM; VC
- Product code** : 001067
- CAS number/other identifiers**
- CAS number** : 75-01-4

Ingredient name	%	CAS number
vinyl chloride	100	75-01-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Frostbite** : Try to warm up the frozen tissues and seek medical attention.
- Ingestion** : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Section 4. First aid measures

- Eye contact** : No specific data.
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.
- Large spill** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Do not breathe gas. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F). Store locked up. Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
vinyl chloride	<p>ACGIH TLV (United States, 3/2017). TWA: 1 ppm 8 hours.</p> <p>OSHA PEL (United States, 6/2016). STEL: 5 ppm 15 minutes. TWA: 1 ppm 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). STEL: 5 ppm 15 minutes. TWA: 1 ppm 8 hours.</p>

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Section 8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Gas. [COLORLESS GAS OR LIQUID (BELOW 7 F) WITH A PLEASANT ODOR AT HIGH CONCENTRATIONS. [NOTE: SHIPPED AS A LIQUEFIED COMPRESSED GAS.]
- Color** : Colorless.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : -153.8°C (-244.8°F)
- Boiling point** : -13.4°C (7.9°F)
- Critical temperature** : 158.45°C (317.2°F)
- Flash point** : Closed cup: -78°C (-108.4°F)
Open cup: -78°C (-108.4°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 3.8%
Upper: 29.3%

Section 9. Physical and chemical properties

Vapor pressure	: Not available.
Vapor density	: 2.2 (Air = 1)
Specific Volume (ft³/lb)	: 6.25
Gas Density (lb/ft³)	: 0.16129 (21.1°C / 70 to °F)
Relative density	: Not applicable.
Solubility	: Not available.
Solubility in water	: 1.1 g/l
Partition coefficient: n-octanol/water	: 1.38
Auto-ignition temperature	: 472°C (881.6°F)
Decomposition temperature	: Not available.
Viscosity	: Not applicable.
Flow time (ISO 2431)	: Not available.
Molecular weight	: 62.5 g/mole
<u>Aerosol product</u>	
Heat of combustion	: -18924336 J/kg

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Oxidizers
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Section 11. Toxicological information

Classification

Product/ingredient name	OSHA	IARC	NTP
vinyl chloride	+	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
vinyl chloride	Category 2	Not determined	liver

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
vinyl chloride	1.38	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.






United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Vinyl chloride; Ethene, chloro-	75-01-4	Listed	U043

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1086	UN1086	UN1086	UN1086	UN1086
UN proper shipping name	VINYL CHLORIDE, STABILIZED	VINYL CHLORIDE, STABILIZED	VINYL CHLORIDE, STABILIZED	VINYL CHLORIDE, STABILIZED	VINYL CHLORIDE, STABILIZED

Section 14. Transport information

Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

“Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product.”

Additional information

DOT Classification

- : **Reportable quantity** 1 lbs / 0.454 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
- : **Limited quantity** Yes.
- : **Quantity limitation** Passenger aircraft/rail: Forbidden. Cargo aircraft: 150 kg.
- : **Special provisions** 21, B44, T50

TDG Classification

- : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).
- : **Explosive Limit and Limited Quantity Index** 0.125
- : **ERAP Index** 3000
- : **Passenger Carrying Road or Rail Index** Forbidden

IATA

- : **Quantity limitation** Passenger and Cargo Aircraft: Forbidden. Cargo Aircraft Only: 150 kg.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

- U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
Clean Water Act (CWA) 307: vinyl chloride
Clean Air Act (CAA) 112 regulated flammable substances: vinyl chloride
- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Not listed
- SARA 302/304**
Composition/information on ingredients
No products were found.
- SARA 304 RQ** : Not applicable.

Section 15. Regulatory information

SARA 311/312

Classification : Refer to Section 2: Hazards Identification of this SDS for classification of substance.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	vinyl chloride	75-01-4	100
Supplier notification	vinyl chloride	75-01-4	100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : This material is listed.

New York : This material is listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

California Prop. 65

⚠ WARNING: This product can expose you to Vinyl chloride, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Vinyl chloride	Yes.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : This material is listed or exempted.

Canada : This material is listed or exempted.

China : This material is listed or exempted.

Europe : This material is listed or exempted.

Japan : **Japan inventory (ENCS):** This material is listed or exempted.
Japan inventory (ISHL): This material is listed or exempted.

Malaysia : This material is listed or exempted.

New Zealand : This material is listed or exempted.

Philippines : This material is listed or exempted.

Republic of Korea : This material is listed or exempted.

Taiwan : This material is listed or exempted.

Thailand : Not determined.

Turkey : This material is listed or exempted.

Section 15. Regulatory information

United States : This material is listed or exempted.

Viet Nam : Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		4
Physical hazards		2

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE GASES - Category 1	Expert judgment
GASES UNDER PRESSURE - Liquefied gas	Expert judgment
CARCINOGENICITY - Category 1	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (liver) - Category 2	Expert judgment

History

Date of printing : 7/9/2018

Date of issue/Date of revision : 7/9/2018

Date of previous issue : 10/11/2016

Version : 0.02

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations

Section 16. Other information

References : Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

ATTACHMENT 6

Remedial Injection Designs



Remedial Cost Proposal

To: Steve Sittler (Patriot)
sent via email

From: Brett Hicks--Ohio Valley District Manager
Bhicks@regenesisis.com 765-256-0272

Subject: ***Preliminary Design and Cost Estimate***

Site: *Houghland Canning*
Franklin, IN

Location: Dissolved Plume

6/11/2021

Applicable Product(s)

Link(s) to View/Download Product Info

3-D Microemulsion® Factory Emulsified	3-D Microemulsion
Bio-Dechlor INOCULUM® Plus	BDI Plus
PlumeStop® Liquid Activated Carbon™	PlumeStop
Sulfidated MicroZVI™	S-MZVI

REGENESIS is pleased to present you with this design and cost estimate for the proposed treatment at your site utilizing the remediation technologies presented above. Included within this document you will find the following attachments supporting the proposed approach:

- Map Depicting Treatment Area
- Remedial Design and Cost Estimate
- Product Technical Sheet(s)
- Suggested Performance Monitoring Parameters
- Standard Assumptions
- Terms and Conditions
- Design Verification - Summary of Proposed Testing

Remedial Approach



We are proposing application of PlumeStop® Liquid Activated Carbon™ (PlumeStop) and Sulfidated-MicroZVI (S-MZVI)® to treat residual chlorinated solvents. PlumeStop is a colloidal form of activated carbon with a surface treatment which reduces its interactions with the soil matrix. This allows it to move through soil pores leaving a coating on the soil matrix as it distributes from the injection point. This provides a very large sorption surface which will result in immediate reduction of these contaminants while concentrating contaminants to allow for more efficient and controlled remediation through destructive technologies like S-MZVI. S-MZVI is a concentrated aqueous suspension of sulfidated, colloidal zero valent iron formulated for compatibility with PlumeStop. When applied to the subsurface it imparts an in-situ chemical reduction (ISCR) mechanism that allows for the destruction of chlorinated ethenes (i.e. TCE) via abiotic degradation pathways. This unique mechanism allows for the traditional reduction pathway to be circumvented, minimizing the formation of daughter species such as vinyl chloride. Sulfidation blocks the effects of water on the ZVI particles, allowing the reagent to be effectively focused on the chemical reduction of chlorinated ethenes. As contaminants are degraded to non-toxic and non-sorptive end products, the PlumeStop sorption surface will be regenerated. This allows for further sorption and treatment of contaminants that may diffuse back into the groundwater from the soil matrix over time.

The costs presented assume the proposed remediation technologies will be applied by our Remediation Services Division (RRS). RRS will provide all personnel and equipment to complete the application including subcontracting of a direct push drilling rig and operator. Please refer to the attached standard RRS' assumptions for remedial applications.

Design Verification Testing

To best ensure a successful treatment, we recommend design verification testing (DVT) be completed prior to application of the proposed remedy. A tabulated summary of DVT items specifically recommended for this project is attached. The table contains explanations of these items, their purpose and designates responsibility for their completion. Please note that our cost estimate is inclusive of any DVT items to be completed by REGENESIS.

Assumptions

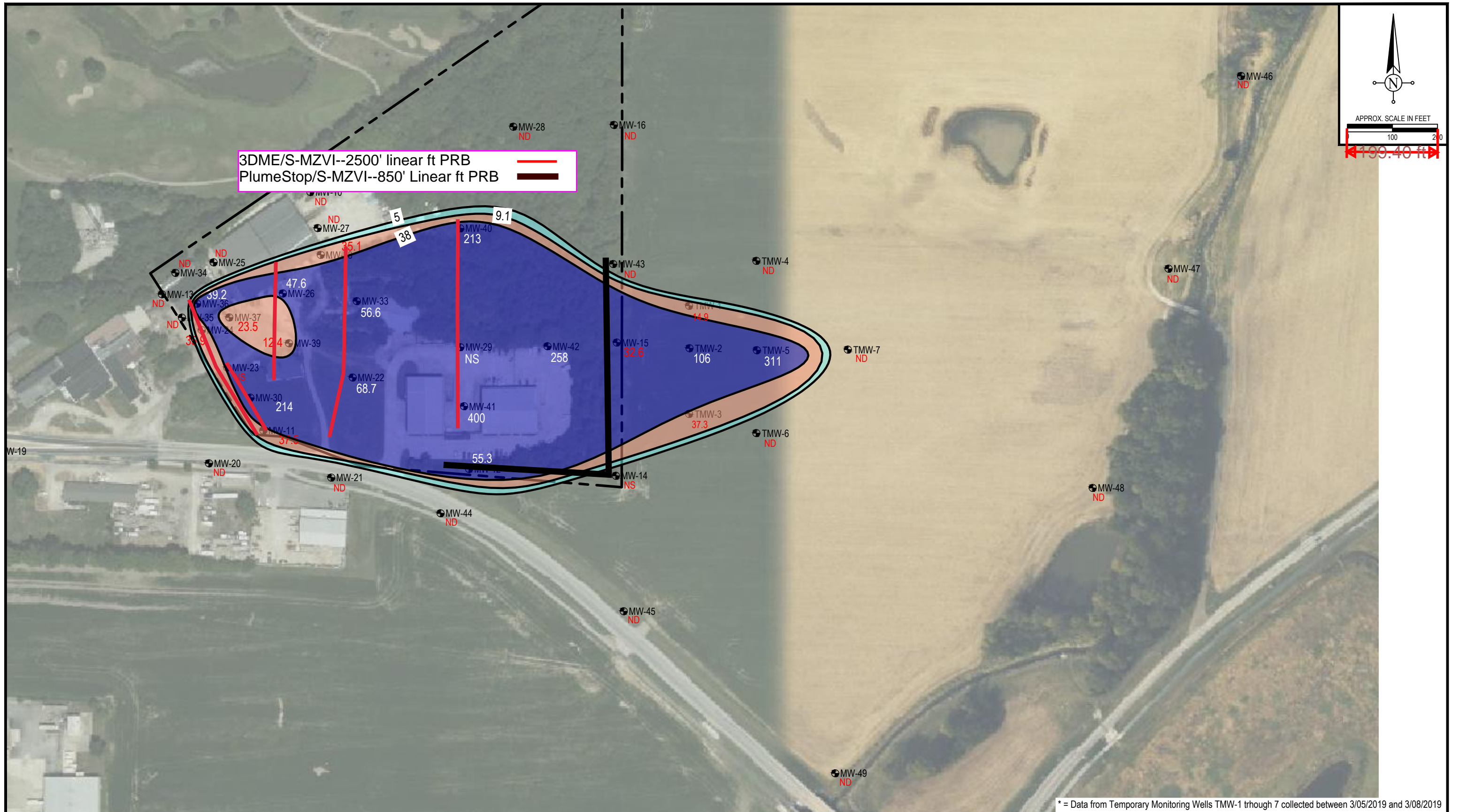
In generating this design proposal REGENESIS relied upon professional judgment and site specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estimate of the mass of product and subsurface placement required to affect remediation of the site. The attached design summary tables specify the assumptions used in preparation of this technical design. We request that these modeling input assumptions be verified by your firm.



REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the earlier environmental site assessment(s). The fees and charges associated with the Scope of Work were generated through REGENESIS' proprietary formulas and thus may not conform to billing guidelines, constraints or other limits on fees. REGENESIS does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or cause to be presented any claim for payment to the Government.

Closing

Please feel free to contact me if you need additional information or have any questions regarding our evaluation and/or this correspondence (contact info listed above). Thank you for considering REGENESIS as part of your remedial solution for this project.



* = Data from Temporary Monitoring Wells TMW-1 through 7 collected between 3/05/2019 and 3/08/2019



LEGEND

- Site Boundary
- Patriot Monitoring Well Location
- 423 TCE Concentration (µg/L)
- ND Not Detected
- NS Not Sampled

- Area where contaminant exceeds IDEM RCG Residential TWSL for TCE (5 µg/L)
- Area where contaminant exceeds IDEM RCG Residential VESL for TCE (9.1 µg/L)
- Area where contaminant exceeds IDEM RCG Industrial VESL for TCE (38 µg/L)

Project: Former Houghland Tomato Cannery FSI #4
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Project Number 20-0963-01E	Drawn By: J. DuMond
Date: January 11, 2021	Approved: J. Cody
	DWG: 20-0963-01_FS14

Figure 10
Shallow TCE Plume Map
November 2020*



Project Information			3-D Microemulsion®, S-MZVI®, CRS®, BDI® Plus Application Design Summary		
Houghland Canning Franklin, IN Dissolved Plume Prepared For: Steve Sittler (Patriot)					
Target Treatment Zone (TTZ) Info			Dissolved Plume		
	Unit	Value	Treatment Type	Barrier	Input special application instructions here as needed.
Barrier Length	ft	2,500	Distance Perpendicular to Flow (ft)	2,500	
Top Treat Depth	ft	10.0	Spacing Within Rows (ft)	8	
Bot Treat Depth	ft	30.0	Number of Rows	1	
Vertical Treatment Interval	ft	20.0	DPT Injection Points	313	
Treatment Zone Volume	ft ³	400,000	Top Application Depth (ft bgs)	10	Field Mixing Ratios
Treatment Zone Volume	cy	14,815	Bottom Application Depth (ft bgs)	30	
Soil Type	---	sand	3DME to be Applied (lbs)	28,000	3DME Concentrate per Pt (gals)
Porosity	cm ³ /cm ³	0.33	3DME to be Applied (gals)	3,355	Mix Water per Pt (gals)
Effective Porosity	cm ³ /cm ³	0.15	3DME Mix %	5%	204
Treatment Zone Pore Volume	gals	987,429	Volume Water (gals)	63,751	3DME Mix Volume per Pt (gals)
Treatment Zone Effective Pore Volume	gals	448,831	3DME Mix Volume (gals)	67,106	214
Fraction Organic Carbon (foc)	g/g	0.002	S-MZVI to be Applied (lbs)	21,000	S-MZVI Volume per Pt (gals)
Soil Density	g/cm ³	1.7	S-MZVI Volume (gals)	1,391	4
Soil Density	lb/ft ³	108	BDI Plus to be Applied (L)	170	BDI Volume per Pt (L)
Soil Weight	lbs	4.3E+07	BDI Plus Mix Water Volume (gals)	1,700	0.5
Hydraulic Conductivity	ft/day	25.0			
Hydraulic Conductivity	cm/sec	8.82E-03	Total Application Volume (gals)	70,242	Volume per pt (gals)
Hydraulic Gradient	ft/ft	0.003			224
GW Velocity	ft/day	0.50			
GW Velocity	ft/yr	183			
			Prepared by: Brett Hicks--Ohio Valley Distr Date: 6/11/2021		Volume per vertical ft (gals)
					11
			Technical Notes/Discussion		
			Assumptions/Qualifications		
			<p>In generating this preliminary estimate, Regenesis relied upon professional judgment and site specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estimate of the mass of product and subsurface placement required to affect remediation of the site.</p>		
			<p>REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the earlier environmental site assessment(s). The fees and charges associated with the Scope of Work were generated through REGENESIS' proprietary formulas and thus may not conform to billing guidelines, constraints or other limits on fees. REGENESIS does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or cause to be presented any claim for payment to the Government.</p>		
Application Dosing					
3-D Microemulsion to be Applied	lbs	28,000			
S-MZVI to be Applied	lbs	21,000			
BDI Plus to be Applied	liters	170			



Project Info			PlumeStop® Application Design Summary		
Houghland Canning Franklin, IN Property Boundary Barrier			Property Boundary Barrier		
			PlumeStop + S-MZVI		Technical Notes
			Treatment Type	Barrier	
Prepared For:			Distance Perpendicular to Flow (ft)	850	<u>Injection Radius for Soil Coverage (ft-est.avg.)</u> 3.2
Steve Sittler (Patriot)			Spacing Within Rows (ft)	6	
			Number of Rows	1	
Target Treatment Zone (TTZ) Info			DPT Injection Points	142	<u>PlumeStop Inject. Conc. (mg/L)</u> 10,000
Barrier Length	ft	850	Top Application Depth (ft bgs)	10	
Top Treat Depth	ft	10.0	Bottom Application Depth (ft bgs)	30	
Bot Treat Depth	ft	30.0	PlumeStop to be Applied (lbs)	38,000	Special Instructions:
Vertical Treatment Interval	ft	20.0	PlumeStop to be Applied (gals)	4,218	
Treatment Zone Volume	ft ³	102,000	In Situ Chemical Reduction - S-MZVI		
Treatment Zone Volume	cy	3,778	S-MZVI to be added to PlumeStop (lbs)	7,900	
Soil Type	---	sand	S-MZVI to be added to PlumeStop (gals)	523	
Porosity	cm ³ /cm ³	0.33	PlumeStop + S-MZVI Volume Totals		
Effective Porosity	cm ³ /cm ³	0.20	Mixing Water (gal)	86,855	
Treatment Zone Pore Volume	gals	251,794	Total Application Volume (gals)	91,664	
Treatment Zone Effective Pore Volume	gals	152,603	Injection Volume per Point (gals)	646	
Treatment Zone Pore Volume	liters	953,142			
Treatment Zone Effective Pore Volume	liters	577,662			
Fraction Organic Carbon (foc)	g/g	0.002	Bioaugmentation - BDI Plus		
Soil Density	g/cm ³	1.7	BDI Plus Application Points	142	
Soil Density	lb/ft ³	108	BDI Plus to be Applied (Liters)	58	
Soil Weight	lbs	1.1E+07	BDI Plus per point (Liters)	0.4	
Hydraulic Conductivity	ft/day	25.0	Assumptions/Qualifications		
Hydraulic Conductivity	cm/sec	8.82E-03	<p>In generating this preliminary estimate, Regenesi relied upon professional judgment and site specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estimate of the mass of product and subsurface placement required to affect remediation of the site.</p> <p>REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the earlier environmental site assessment(s). The fees and charges associated with the Scope of Work were generated through REGENESIS' proprietary formulas and thus may not conform to billing guidelines, constraints or other limits on fees. REGENESIS does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or cause to be presented any claim for payment to the Government.</p>		
Hydraulic Gradient	ft/ft	0.003			
GW Velocity	ft/day	0.38			
GW Velocity	ft/yr	137	<p>Prepared by: Brett Hicks--Ohio Valley District Manager Date: 6/11/2021</p>		
Sources of Hydrogen Demand					
	Unit	Value			
Mass Flux and HRC Demand					
	Unit	Value			
Application Dosing					
	Unit	Value			
PlumeStop to be Applied	lbs	38,000			
S-MZVI to be Applied	lbs	7,900			
BDI Plus to be Applied	Liters	58			



* = Data from Temporary Monitoring Wells TMW-1 through 7 collected between 3/05/2019 and 3/08/2019



LEGEND	
	Site Boundary
	Patriot Monitoring Well Location
423	TCE Concentration (µg/L)
ND	Not Detected
NS	Not Sampled
	Area where contaminant exceeds IDEM RCG Residential TWSL for TCE (5 µg/L)
	Area where contaminant exceeds IDEM RCG Residential VESL for TCE (9.1 µg/L)
	Area where contaminant exceeds IDEM RCG Industrial VESL for TCE (38 µg/L)

Project: Former Houghland Tomato Cannery FSI #4 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	
Project Number 20-0963-01E	Drawn By: J. DuMond
Date: January 11, 2021	Approved: J. Cody
	DWG: 20-0963-01_FS14

Figure 11
Deep TCE Plume Map
November 2020*



Project Information			3-D Microemulsion®, S-MZVI®, CRS®, BDI® Plus Application Design Summary		
Houghland Canning Franklin, IN Dissolved Plume Prepared For: Steve Sittler (Patriot)					
Target Treatment Zone (TTZ) Info			Dissolved Plume		Input special application instructions here as needed. Field Mixing Ratios 3DME Concentrate per Pt (gals) 30 Mix Water per Pt (gals) 508 3DME Mix Volume per Pt (gals) 538 S-MZVI Volume per Pt (gals) 12 BDI Volume per Pt (L) 1.8 Volume per pt (gals) 569 Volume per vertical ft (gals) 11
Barrier Length	ft	650	Treatment Type	Barrier	
Top Treat Depth	ft	10.0	Distance Perpendicular to Flow (ft)	650	
Bot Treat Depth	ft	60.0	Spacing Within Rows (ft)	8	
Vertical Treatment Interval	ft	50.0	Number of Rows	1	
Treatment Zone Volume	ft ³	260,000	DPT Injection Points	81	
Treatment Zone Volume	cy	9,630	Top Application Depth (ft bgs)	10	
Soil Type	---	sand	Bottom Application Depth (ft bgs)	60	
Porosity	cm ³ /cm ³	0.33	3DME to be Applied (lbs)	20,000	
Effective Porosity	cm ³ /cm ³	0.20	3DME to be Applied (gals)	2,397	
Treatment Zone Pore Volume	gals	641,829	3DME Mix %	6%	
Treatment Zone Effective Pore Volume	gals	388,987	Volume Water (gals)	41,179	
Fraction Organic Carbon (foc)	g/g	0.002	3DME Mix Volume (gals)	43,575	
Soil Density	g/cm ³	1.7	S-MZVI to be Applied (lbs)	15,000	
Soil Density	lb/ft ³	108	S-MZVI Volume (gals)	993	
Soil Weight	lbs	2.8E+07	BDI Plus to be Applied (L)	148	
Hydraulic Conductivity	ft/day	25.0	BDI Plus Mix Water Volume (gals)	1,480	
Hydraulic Conductivity	cm/sec	8.82E-03			
Hydraulic Gradient	ft/ft	0.003	Total Application Volume (gals)	46,088	
GW Velocity	ft/day	0.38			
GW Velocity	ft/yr	137			
			Prepared by: Brett Hicks--Ohio Valley Distr Date: 6/18/2021		
			Technical Notes/Discussion		
			Assumptions/Qualifications		
			<p>In generating this preliminary estimate, Regenesis relied upon professional judgment and site specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estimate of the mass of product and subsurface placement required to affect remediation of the site.</p> <p>REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the earlier environmental site assessment(s). The fees and charges associated with the Scope of Work were generated through REGENESIS' proprietary formulas and thus may not conform to billing guidelines, constraints or other limits on fees. REGENESIS does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or cause to be presented any claim for payment to the Government.</p>		
Application Dosing					
3-D Microemulsion to be Applied	lbs	20,000			
S-MZVI to be Applied	lbs	15,000			
BDI Plus to be Applied	liters	148			

PlumeStop® Liquid Activated Carbon™ Technical Description

PlumeStop Liquid Activated Carbon is an innovative groundwater remediation technology designed to rapidly remove and permanently degrade groundwater contaminants. PlumeStop is composed of very fine particles of activated carbon (1-2µm) suspended in water through the use of unique organic polymer dispersion chemistry. Once in the subsurface, the material behaves as a colloidal biomatrix, binding to the aquifer matrix, rapidly removing contaminants from groundwater, and expediting permanent contaminant biodegradation.

This unique remediation technology accomplishes treatment with the use of highly dispersible, fast-acting, sorption-based technology, capturing and concentrating dissolved-phase contaminants within its matrix-like structure. Once contaminants are sorbed onto the regenerative matrix, biodegradation processes achieve complete remediation at an accelerated rate.



Distribution of PlumeStop in water

To see a list of treatable contaminants with the use of PlumeStop, view the [Range of Treatable Contaminants Guide](#).

Chemical Composition

- Water - CAS# 7732-18-5
- Colloidal Activated Carbon ≤2.5 - CAS# µm 7440-44-0
- Proprietary Additives

Properties

- Physical state: Liquid
- Form: Aqueous suspension
- Color: Black
- Odor: Odorless
- pH: 8 - 10

Storage and Handling Guidelines

Storage

Store in original tightly closed container
Store away from incompatible materials
Protect from freezing

Handling

Avoid contact with skin and eyes
Avoid prolonged exposure
Observe good industrial hygiene practices
Wash thoroughly after handling
Wear appropriate personal protective equipment

PlumeStop® Liquid Activated Carbon™ Technical Description

Applications

PlumeStop is easily applied into the subsurface through gravity-feed or low-pressure injection.

Health and Safety

Wash hands after handling. Dispose of waste and residues in accordance with local authority requirements. Please review the Material Safety Data Sheet for additional storage, usage, and handling requirements here: [PlumeStop SDS](#).



www.regenesis.com
1011 Calle Sombra, San Clemente CA 92673
949.366.8000

3-D Microemulsion® Factory Emulsified Technical Description

3-D Microemulsion (3DME®) is comprised of a patented molecular structure containing oleic acids (i.e., oil component) and lactates/poly lactates, which are molecularly bound to one another (figure 1). The 3DME molecule contains both a soluble (hydrophilic) and in-soluble (lipophilic) region. These two regions of the molecule are designed to be balanced in size and relative strength. The balanced hydrophilic/lipophilic regions of 3DME result in an electron donor with physical properties allowing it to initially adsorb to the aquifer material in the area of application, then slowly redistribute via very small 3DME “bundles” called micelles. These 3DME micelles spontaneously form within sections of the aquifer where concentrations of 3DME reach several hundred parts per million. The micelles’ small size and mobility allow it to move with groundwater flow through the aquifer matrix, passing easily through the pore throats in between soil grains resulting in the further redistribution of 3DME within the aquifer. This allows for advective distribution of the oleic acids which are otherwise insoluble and unable to distribute in this manner, allowing for increased persistence of the lactate/poly lactates component due to their initial attachment to the oleic acids.

Due to its patented molecular structure, 3DME offers far greater transport when compared to blended emulsified vegetable oil (EVO) products, which fail to distribute beyond the limits of pumping. 3DME also provides greater persistence when compared to soluble substrates such as lactates or simple sugars. The 3DME molecular structures capitalize on the best features of the two electron-donor types while at the same time, minimize their limitations. 3DME is delivered to the site as a ready-to-apply emulsion that is simply diluted with water to generate a large volume of a 3DME colloidal suspension.

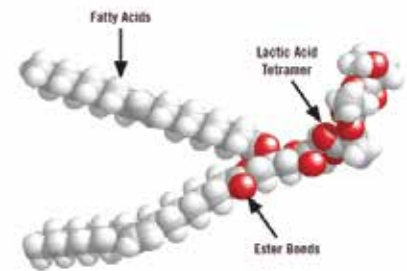
Suspension of 3DME generated by this mixing range from micelles on the order of .02 microns to .05 microns in diameter, to “swollen” micelles, (termed “microemulsions”) which are on the order of .05 to 5 microns in diameter. Once injected into the subsurface in high volumes, the colloidal suspension mixes and dilutes in existing pore waters. The micelles/microemulsions on the injection front will then begin to sorb onto the surfaces of soils as a result of zeta potential attraction and organic matter within the soils themselves. As the sorption continues, the 3DME will “coat” pore surfaces developing a layer of molecules and in some cases a bilayer. This sorption process continues as the micelles/microemulsion moves outward and disassociates into their hydrophilic/hydrophobic components. The specialized chemistry of 3DME results in a staged release of electron donors: free lactate (immediate); polylactate esters (mid-range) and free fatty acids & fatty acid esters (long-term). Material longevity of three years or greater has been seen at most sites as determined from biogeochemical analyses.

For a list of treatable contaminants with the use of 3DME, view the [Range of Treatable Contaminants Guide](#)



Example of 3-D Microemulsion

FIGURE 1: THE 3-D MICROEMULSION MOLECULAR STRUCTURE



Chemical Composition

- Hydrogen Release Compound Partitioning Electron Donor – CAS #823190-10-9
- Sodium Lactate – CAS# 72-17-3
- Water – CAS# – 7732-18-5

3-D Microemulsion[®] Factory Emulsified Technical Description

Properties

- Density – Approximately 1.0 grams per cubic centimeter (relative to water)
- pH – Neutral (approximately 6.5 to 7.5 standard units)
- Solubility – Soluble in Water
- Appearance – White emulsion
- Odor – Not detectable
- Vapor Pressure – None
- Non-hazardous

Storage and Handling Guidelines

Storage

Store in original tightly closed container

Store in a cool, dry, well-ventilated place

Store away from incompatible materials

Recommended storage containers: plastic lined steel, plastic, glass, aluminum, stainless steel, or reinforced fiberglass

Handling

Avoid contact with eyes, skin, and clothing

Provide adequate ventilation

Wear appropriate personal protective equipment

Observe good industrial hygiene practices

Applications

- 3DME is diluted with water prior to application. Resulting emulsion has viscosity similar to water.
- Easily injects into formation through direct push injection points, injection wells or other injection delivery systems.

Application instructions for this product are contained here [3DME FE Application Instructions](#).

Health and Safety

Material is food grade and relatively safe to handle. We recommend avoiding contact with eyes and prolonged contact with skin. OSHA Level D personal protection equipment including vinyl or rubber gloves, and eye protection are recommended when handling this product. Please review the Material Safety Data Sheet for additional storage, usage, and handling requirements here: [SDS-3DME FE](#).

S-MicroZVI Specification Sheet

S-MicroZVI Technical Description

S-MicroZVI™ is an *In Situ* Chemical Reduction (ISCR) reagent that promotes the destruction of many organic pollutants and is most commonly used with chlorinated hydrocarbons. It is engineered to provide an optimal source of micro-scale zero valent iron (ZVI) that is both easy to use and delivers enhanced reactivity with the target contaminants via multiple pathways. S-MicroZVI can destroy many chlorinated contaminants through a direct chemical reaction (see Figure 1). S-MicroZVI will also stimulate anaerobic biological degradation by rapidly creating a reducing environment that is favorable for reductive dechlorination.



Sulfidated ZVI

S-MicroZVI is composed of colloidal, sulfidated zero-valent iron particles suspended in glycerol using proprietary environmentally acceptable dispersants. The passivation technique of sulfidation, completed using proprietary processing methods, provides unparalleled reactivity with chlorinated hydrocarbons like PCE and TCE and increases its stability and longevity by minimizing undesirable side reactions. In addition to superior reactivity, S-MicroZVI is designed for easy handling that is unmatched by any ZVI product on the market. Shipped as a liquid suspension, S-MicroZVI requires no powder feeders, no thickening with guar, and pneumatic or hydraulic fracturing is not mandatory. When diluted with water prior to application, the resulting suspension is easy to inject using either direct push or permanent injection wells.

S-MicroZVI is Best in Class For

- Longevity
- Kinetics
- Transport

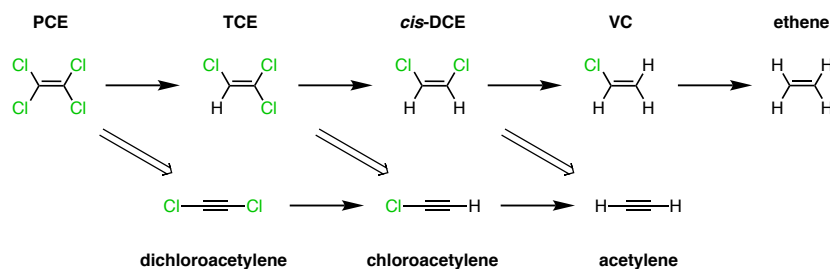


Figure 1: Chlorinated ethene degradation pathways and products. The top pathway with single line arrows represent the reductive dechlorination (hydrogenolysis) pathway. The lower pathway with downward facing double line arrows represent the beta-elimination pathway.

To see a list of treatable contaminants, view the S-MicroZVI treatable contaminants guide.

S-MicroZVI Specification Sheet

Chemical Composition

Iron, powders CAS 7439-89-6
Iron (II) sulfide CAS 1317-37-9
Glycerol CAS 56-81-8

Properties

Physical State: Liquid
Form: Viscous metallic suspension
Color: Dark gray
Odor: Slight
pH: Typically 7-9 as applied
Density: 15 lb/gal

Storage and Handling Guidelines

Storage:

- Use within four weeks of delivery
- Store in original containers
- Store at temperatures below 95F°
- Store away from incompatible materials

Handling:

- Never mix with oxidants or acids
- Wear appropriate personal protective equipment
- Do not taste or swallow
- Observe good industrial hygiene practices

Applications

S-MicroZVI is diluted with water on site and easily applied into the subsurface through low-pressure injections. S-MicroZVI can also be mixed with products like 3-D Microemulsion® or PlumeStop® prior to injection.

Health and Safety

The material is relatively safe to handle; however, avoid contact with eyes, skin and clothing. OSHA Level D personal protection equipment including: vinyl or rubber gloves and eye protection are recommended when handling this product. Please review the Safety Data Sheet for additional storage, and handling requirements here: S-MicroZVI SDS.



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BDI PLUS® Technical Description

Bio-Dechlor INOCULUM Plus (BDI PLUS®) is an enriched natural consortium containing species of Dehalococcoides sp. (DHC). BDI PLUS has been shown to simulate the rapid and complete dechlorination of chlorinated solvents such as tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene (DCE) and vinyl chloride (VC) to non-toxic end products, ethene, carbon dioxide and water.

The culture also contains microbes capable of dehalogenating halomethanes (e.g., carbon tetrachloride and chloroform) and haloethanes (e.g., 1,1,1-TCA and 1,1-DCA) as well as mixtures of these contaminants.



Species of Dehalococcoides sp. (DHC)

For a list of treatable contaminants with the use of BDI PLUS, view the [Range of Treatable Contaminants Guide](#)

Chemical Composition

- Non-hazardous, naturally-occurring, non-altered anaerobic microbes and enzymes in a water-based medium.

Properties

- Appearance – Murky, yellow to grey water
- Odor – Musty
- pH 6.0 to 8.0
- Density – Approximately 1.0 grams per cubic centimeter (0.9 to 1.1 g/cc)
- Solubility – Soluble in Water
- Vapor Pressure – None
- Non-hazardous

Storage and Handling Guidelines

Storage

Store in original tightly closed container

Store away from incompatible materials

Recommended storage containers: plastic lined steel, plastic, glass, aluminum, stainless steel, or reinforced fiberglass

Store in a cool, dry area at 4-5°C (39 - 41°F)

Material may be stored for up to 3 weeks at 2-4°C without aeration

Handling

Avoid prolonged exposure

Observe good industrial hygiene practices

Wear appropriate personal protective equipment

BDI PLUS® Technical Description

Applications

- BDI PLUS is delivered to the site in liquid form and is designed to be injected directly into the saturated zone requiring treatment.
- Most often diluted with de-oxygenated water prior to injection into either hydraulic push injection points or properly constructed injection wells.
- The typical dilution rate of the injected culture is 10 gallons of deoxygenated water to 1 liter of standard BDI PLUS culture.

Application instructions for this product are contained here [BDI PLUS Application Instructions](#).

Health and Safety

Material is non-hazardous and relatively safe to handle; however avoid contact with eyes and prolonged contact with skin. OSHA Level D personal protection equipment including: vinyl or rubber gloves and safety goggles or a splash shield are recommended when handling this product. An eyewash station is recommended. Please review the Material Safety Data Sheet for additional storage, usage, and handling requirements here: [BDI PLUS SDS](#).



Remedial Design Assumptions and Qualifications

Cost Estimate Disclaimer: The cost listed assumes conditions set forth within the proposed scope of work and assumptions and qualifications. Changes to either could impact the final cost of the project. This may include final shipping arrangements, sales tax or application related tasks such as product storage and handling, access to water, etc. If items listed need to be modified, please contact Regenesis for further evaluation.

Shipping Estimates: Shipping estimates are valid for 30 days. All shipping charges are estimates and actual freight charges are calculated at the time of invoice. Additional freight charges may be assessed for any accessorial requested at the time of delivery. The estimate included within assumes standard shipping.

Standard delivery is between 8am -5pm Monday –Friday. *accessorial – can include, but not limited to lift gate and pallet jack at delivery, inside delivery, time definite deliveries, and delivery appointments.

Please communicate any requirements for delivery with the customer service department at the time the order is placed.

Return Policy: To initiate a return please contact your local sales manager for an RMA. A 15% re-stocking fee will be charged for all returned goods. Return freight must be prepaid. All requests to return product must be in original condition and no product will be accepted for return after 90 days from date of delivery.

Professional Judgement: In generating this estimate, REGENESIS relied upon professional judgment and site specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estimate of the mass of product and subsurface placement required to affect remediation of the site.

REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the earlier environmental site assessment(s), and in reliance upon REGENESIS' prior experience on similar project sites. The fees and charges associated with the Scope of Work were generated through REGENESIS' proprietary formulas and thus may not conform to billing guidelines, constraints or other limits on fees. REGENESIS does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from Government, REGENESIS does not knowingly present or cause to be presented any claim for payment to the government.

Terms and Conditions Products and Services

1. PAYMENT TERMS. Net 30 Days. Accounts outstanding after 30 days will be assessed 1.5% monthly interest. Volume discount pricing will be rescinded on all accounts outstanding over 90 days. An early payment discount of 1.5% Net 10 is available for cash or check payments only. We accept Master Card, Visa and American Express.

2. RETURN POLICY. A 15% re-stocking fee will be charged for all returned goods. All requests to return product must be pre-approved by seller. Returned product must be in original condition and no product will be accepted for return after a period of 90 days.

3 FORCE MAJEURE. Seller shall not be liable for delays in delivery or services or failure to manufacture or deliver due to causes beyond its reasonable control, including but not limited to acts of God, acts of buyer, acts of military or civil authorities, fires, strikes, flood, epidemic, war, riot, delays in transportation or car shortages, or inability to obtain necessary labor, materials, components or services through seller's usual and regular sources at usual and regular prices. In any such event Seller may, without notice to buyer, at any time and from time to time, postpone the delivery or service dates under this contract or make partial delivery or performance or cancel all or any portion of this and any other contract with buyer without further liability to buyer. Cancellation of any part of this order shall not affect Seller's right to payment for any product delivered or service performed hereunder.

4. LIMITED WARRANTY. Seller warrants the product(s) sold and services provided as specified on face of invoice, solely to buyer. Seller makes no other warranty of any kind respecting the product and services, and expressly **DISCLAIMS ALL OTHER WARRANTIES OF WHATEVER KIND RESPECTING THE PRODUCT AND SERVICES, INCLUDING ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND NON-INFRINGEMENT.**

5. DISCLAIMER. Where warranties to a person other than buyer may not be disclaimed under law, seller extends to such a person the same warranty seller makes to buyer as set forth herein, subject to all disclaimers, exclusions and limitations of warranties, all limitations of liability and all other provisions set forth in the Terms and Conditions herein. Buyer agrees to transmit a copy of the Terms and Conditions set forth herein to any and all persons to whom buyer sells, or otherwise furnishes the products and/or services provided buyer by seller and buyer agrees to indemnify seller for any liability, loss, costs and attorneys' fees which seller may incur by reason, in whole or in part, of failure by buyer to transmit the Terms and Conditions as provided herein.

6. LIMITATION OF SELLER'S LIABILITY AND LIMITATION OF BUYER'S REMEDY. Seller's liability on any claim of any kind, including negligence, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery, resale, repair or use of any goods or performance of any services covered by or furnished hereunder, shall in no case exceed the lesser of (1) the cost of repairing or replacing goods and repeating the services failing to conform to the forgoing warranty or the price of the goods and/or services or part thereof which gives rise to the claim. **IN NO EVENT SHALL SELLER BE LIABLE FOR SPECIAL INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, OR FOR DAMAGES IN THE NATURE OF PENALTIES.**

7. INDEMNIFICATION. Buyer agrees to defend and indemnify seller of and from any and all claims or liabilities asserted against seller in connection with the manufacture, sale, delivery, resale or repair or use of any goods, and performance of any services, covered by or furnished hereunder arising in whole or in part out of or by reason of the failure of buyer, its agents, servants, employees or customers to follow instructions, warnings or recommendations furnished by seller in connection with such goods and services, by reason of the failure of buyer, its agents, servants, employees or customers to comply with all federal, state and local laws applicable to such goods and services, or the use thereof, including the Occupational Safety and Health Act of 1970, or by reason of the negligence or misconduct of buyer, its agents, servants, employees or customers.

8. EXPENSES OF ENFORCEMENT. In the event seller undertakes any action to collect amounts due from buyer, or otherwise enforce its rights hereunder, Buyer agrees to pay and reimburse Seller for all such expenses, including, without limitation, all attorneys and collection fees.

9. TAXES. Liability for all taxes and import or export duties, imposed by any city, state, federal or other governmental authority, shall be assumed and paid by buyer. Buyer further agrees to defend and indemnify seller against any and all liabilities for such taxes or duties and legal fees or costs incurred by seller in connection therewith.

10. ASSISTANCE AND ADVICE. Upon request, seller in its discretion will furnish as an accommodation to buyer such technical advice or assistance as is available in reference to the goods and services. Seller assumes no obligation or liability for the advice or assistance given or results obtained, all such advice or assistance being given and accepted at buyer's risk.

11. SITE SAFETY. Buyer shall provide a safe working environment at the site of services and shall comply with all applicable provisions of federal, state, provincial and municipal safety laws, building codes, and safety regulations to prevent accidents or injuries to persons on, about or adjacent to the site.

12. INDEPENDENT CONTRACTOR. Seller and Buyer are independent contractors and nothing shall be construed to place them in the relationship of partners, principal and agent, employer/employee or joint ventures. Neither party will have the power or right to bind or obligate the other party except as may be expressly agreed and delegated by other party, nor will it hold itself out as having such authority.

13. REIMBURSEMENT. Seller shall provide the products and services in reliance upon the data and professional judgments provided by or on behalf of buyer. The fees and charges associated with the products and services thus may not conform to billing guidelines, constraints or other limits on fees. Seller does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where seller may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by seller, it is the sole responsibility of the buyer or other entity seeking reimbursement to ensure the products and services and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from the Government, seller does not knowingly present or cause to be presented any claim for payment to the Government.

14. APPLICABLE LAW/JURISDICTION AND VENUE. The rights and duties of the parties shall be governed by, construed, and enforced in accordance with the laws of the State of California (excluding its conflict of laws rules which would refer to and apply the substantive laws of another jurisdiction). Any suit or proceeding hereunder shall be brought exclusively in state or federal courts located in Orange County, California. Each party consents to the personal jurisdiction of said state and federal courts and waives any objection that such courts are an inconvenient forum.

15. ENTIRE AGREEMENT. This agreement constitutes the entire contract between buyer and seller relating to the goods or services identified herein. No modifications hereof shall be binding upon the seller unless in writing and signed by seller's duly authorized representative, and no modification shall be effected by seller's acknowledgment or acceptance of buyer's purchase order forms containing different provisions. Trade usage shall neither be applicable nor relevant to this agreement, nor be used in any manner whatsoever to explain, qualify or supplement any of the provisions hereof. No waiver by either party of default shall be deemed a waiver of any subsequent default.