



January 9, 2023

Ms. Lisa Dunning
Task Order Contracting Officer's Representative
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219

**Subject: Contract No. 68HERH19D0018; Task Order No. 68E0719F0190
Joplin Union Depot, 205 North Main Street, Joplin, Jasper County, Missouri
Phase II Environmental Site Assessment**

Dear Ms. Dunning:

Toeroek Associates, Inc. (Toeroek) and our teaming subcontractor, Tetra Tech, Inc. (Tetra Tech), (hereafter "Toeroek Team") are pleased to present the Phase II Environmental Site Assessment (ESA) report regarding the Joplin Union Depot Site at 205 North Main Street in Joplin, Jasper County, Missouri. This deliverable has been reviewed internally as part of Tetra Tech's quality assurance program, as well as Toeroek's quality assurance program, and is consistent with Toeroek's Quality Management Plan for the Resource Conservation and Recovery Act (RCRA) Enforcement and Permitting Assistance (REPA) contract. Documentation of this review is retained in the Toeroek Team's project files.

If you have any questions or comments, please contact Greg Hanna at 720-898-4102 or Kaitlyn Mitchell at 816-412-1742.

Sincerely,

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Enclosure: Phase II ESA

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**TARGETED BROWNFIELDS ASSESSMENT
PHASE II ENVIRONMENTAL SITE ASSESSMENT**

**JOPLIN UNION DEPOT
205 NORTH MAIN STREET
JOPLIN, JASPER COUNTY, MISSOURI**



Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 7**

Task Order	:	68E0719F0190
Subtask	:	19.03
EPA Region	:	7
Date Prepared	:	January 9, 2023
Contract No.	:	68HERH19D0018
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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) tasked Toeroek Associates, Inc. (Toeroek) and its teaming subcontractor, Tetra Tech, Inc. (Tetra Tech), (hereafter “Toeroek Team”) with providing technical support to the EPA Region 7 Brownfields Program under Contract Number (No.) 68HERH19D0018, Task Order No. 68E0719F0190. EPA Region 7 requested the Toeroek Team conduct a Phase II Environmental Site Assessment (ESA) as part of a Targeted Brownfields Assessment (TBA) of the Joplin Union Depot site at 205 North Main Street in Joplin, Jasper County, Missouri (the “Site”) ([Appendix A, Figure 1](#)). The Missouri Department of Natural Resources (MoDNR) currently owns the Site.

The Toeroek Team developed this Phase II ESA based on findings of the 2023 Phase I ESA of 205 North Main Street by the Toeroek Team (Toeroek Team 2023a). According to the Brownfields Assessment Application (MoDNR 2022), MoDNR has shown an interest in finding a preservation minded buyer to develop the Site contingent on findings from this Phase II ESA report.

The scope of this Phase II ESA included collection of surface soil, subsurface soil, groundwater, and soil-gas samples in the areas surrounding the Site building to confirm or eliminate recognized environmental conditions (RECs) identified during the Phase I ESA (Toeroek Team 2023a). The Toeroek Team also prepared a hazardous materials survey report, which is submitted under separate cover.

This Phase II ESA report is consistent with ASTM International (ASTM) Standard E1903-19 for Phase II ESAs (ASTM 2019), and otherwise complies with EPA’s “All Appropriate Inquiries” Rule (Title 40 *Code of Federal Regulations* [40 CFR] Part 312).

1.1 PURPOSE

Purposes of this Phase II ESA were to: (1) confirm or eliminate RECs identified during the Phase I ESA; (2) acquire information regarding the nature of contamination (if present) and risks posed by that contamination that would support informed business decisions about the Site; and (3) where applicable, satisfy the innocent purchaser defense under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

1.2 SPECIAL TERMS AND CONDITIONS

No special terms or conditions were identified during this Phase II ESA.

2.0 BACKGROUND AND SITE HISTORY

This section specifies the location of the Site and its features, conveys the physical setting, recounts the history of the Site, discusses land uses at the Site and adjacent properties, and describes results of previous investigations.

2.1 SITE DESCRIPTION AND FEATURES

Currently, the Site hosts one two-story former railroad depot building encompassing approximately 23,826 square feet that is not in use. The Site is within a mixed-use commercial and residential area, with the nearest residence approximately 465 feet to the west.

The Site is depicted on the Joplin East, Missouri, U.S. Geological Survey (USGS) 7.5-minute topographic series map (USGS 1979) ([Appendix A, Figure 1](#)). Coordinates at the approximate center of the Site are 37.0916710 degrees north latitude and 94.5120340 degrees west longitude. The Site encompasses approximately 3.6 acres on one parcel of land. [Figure 2](#) in [Appendix A](#) illustrates the Site boundaries.

2.2 PHYSICAL SETTING

The Site lies within the city limits of Joplin, Missouri. It is surrounded by commercial and residential properties. The Kansas City Southern railroad tracks are east of the subject property.

2.2.1 Geologic Setting

Dominant soils in the area are Rueter extremely gravelly silt loam and Cedargap gravelly silt loam. The Rueter series consists of deep and moderately deep, moderately well-drained, and well-drained soils with moderately coarse textures. Slopes range from 8 to 15 percent. These soils are on hillslopes. The Cedargap series consists of deep and moderately deep, moderately well-drained, and well-drained soils with moderate infiltration rates and moderately coarse textures. Slopes range from 1 to 3 percent. These soils generally are found in drainageways and are frequently flooded (U.S. Department of Agriculture [USDA] 2023). The hydrologic gradient at the Site is not known but is inferred to be parallel to the topographic gradient, which primarily slopes to the east-northeast.

2.2.2 Hydrogeology

The Site is in Jasper County, Missouri, within the Springfield Plateau Physiographic Province. The Ozark Plateaus aquifer system underlies the Site. The water-yielding rocks of the aquifer system are limestone and dolomites, and the confining units consist of shale or dolomite (USGS 1997).

The hydrologic gradient at the Site is not known but inferred to be consistent with the topographic gradient, which primarily slopes to the east-northeast. In the absence of site-specific data or other indicators, the groundwater flow direction has been inferred from the regional topography, which is to the east-northeast. Actual groundwater flow direction can be determined only by acquisition of site-specific groundwater elevation data.

2.2.3 Hydrology

Surface water likely infiltrates the ground or flows to the east-northeast toward the floodway/drainage ditch east of the Site.

2.2.4 Meteorology

Annual average rainfall in Joplin, Missouri, is approximately 40 inches. Average summer temperature highs are around 90 degrees Fahrenheit (°F). Average winter lows are around 25°F (National Weather Service 2023).

2.3 SITE HISTORY AND LAND USE

The Toeroek Team Phase I ESA report indicates construction of structures on the Site as early as 1900 through 1911 (Toeroek Team 2023a). The Site was historically used as a railroad depot from 1911 until the 1970s when the property was vacated.

2.4 ADJACENT PROPERTY USE

Properties surrounding the Site have been predominantly residential or commercial since the 1880s. Development of commercial structures south and west of the Site began in approximately 1884, and commercial and residential development to the south and west began as early as 1891 (Toeroek Team 2023a).

Currently, the Site is bounded north by Simpson Sheet Metal, with Becton Avenue and commercial properties beyond; east by Becton Avenue, with the Kansas City Southern railroad tracks, Joplin Creek, and residential properties beyond; south by 1st Street, with John and Dave's Automotive, Dollar General, and other commercial properties beyond; and west by Commercial Gasket & Packing Company and a U.S. Post Office, with Main Street, commercial properties, and residential properties beyond.

2.5 SUMMARY OF PREVIOUS ASSESSMENTS

In April 2023, the Toeroek Team conducted a Phase I ESA of the Site, on behalf of MoDNR. The Phase I ESA identified several RECs associated with historical use of the Site, including a former junk yard and coal storage on the Site, a railroad spur, and the location of the Site within the Oronogo-Duenweg Mining Belt (Toeroek Team 2023a). The Phase I ESA also identified a business environmental risk (BER) associated with the property. According to the property owner representative, the depot building was built in 1911. Based on its age, asbestos-containing material (ACM) and lead-based paint (LBP) likely were used in its construction. Possible presence of ACM and LBP within the building poses a BER for the Site.

The Phase I ESA also identified seven off-site historical RECs relating to historical uses of adjacent and nearby properties:

- Five lead and zinc mines were identified within a 0.25-mile radius of the Site. Documented widespread metals contamination from mines in the area as a result of airborne dispersion of dust or debris from ore transport poses a REC for the Site.
- The Al's 66 Service site, adjacent to and west-northwest of the Site at 228 North Main Street, is listed in the Environmental Data Resources, Inc. (EDR) Historic Automotive database as a gas station in 1971. EDR provides no further information. Based on the close proximity of this facility to the Site and operations prior to implementation of environmental regulations, this site poses a REC and a vapor encroachment concern (VEC) for the Site.
- The Jefferson-Greyhound Bus Terminal site, approximately 0.174 mile southwest of the Site at 219 West 2nd Street, is listed for a leaking underground storage tank (LUST) incident involving a release of unknown material in 1992. The date of finished cleanup of this facility was April 30, 1992; however, issuance of a No Further Action (NFA) letter was not reported. Based on location of this site upgradient of the Site and lack of documented regulatory closure, this listing poses a REC and VEC for the Site.
- The Luz's Pro Alterations and Drycleaning site, approximately 400 feet southwest of the Site at 106 Main Street, is listed in the MO Drycleaners database. The current facility at 106 North Main Street is Prince Payday Loans, and the current facility at 106 South Main Street is The Boardroom restaurant. No additional information was obtained regarding the status of this site or years of operation. Given the uncertainty regarding the site status and the upgradient location, this listing poses a REC and a VEC for the Site.

- The following facilities were identified in historical documentation and determined to be potential sources of environmental contamination because of close proximity to the Site: Southwestern White Lead & Paint Works adjacent to and west in 1891; a junk facility adjacent to and south-southwest in 1896; the “It” Mining Company shaft to the south in 1900; multiple filling stations to the south and west as early as 1950; multiple auto repair shops to the southwest as early as 1954; and a printing facility to the west as early as 1967. Several nearby properties hosted gas stations as early as 1964. Nearby historical operations of manufacturing, mining, automotive repair, and fueling facilities pose a REC for the Site.
- A possible railroad roundhouse used for railcar maintenance was adjacent to and northeast of the Site as early as 1938 until sometime before 1974. The railroad roundhouse poses a REC for the Site because of possible contamination commonly associated with railroad maintenance activities.
- A lead smelter and large tailings piles depicted west of the Site in 1978 pose a REC for the Site.

The Toeroek Team received an April 2001 Phase I ESA report regarding the Site. The report was prepared by BE&K/Terranext, which identified the following RECs or other environmental conditions (BE&K/Terranext 2001):

- Suspected LBP assessed in poor condition was identified on walls and ceilings of the Site building.
- Suspected ACM assessed in fair condition was identified in plaster on the interior walls of the Site building.
- According to EDR, one LUST site (Fastrip #21), identified within 0.25 mile north of the Site, could adversely affect the environmental condition of the Site. However, the EDR report concluded that this LUST site was at a lower elevation than the Site; therefore, minimizing the potential for adverse effects to the Site.

The Toeroek Team also received a Structural Assessment report from Bob D. Campbell & Co. dated October 2022, which found the Site building to be in good structural condition. Items of concern identified included maintenance issues that the engineer determined to be common to buildings of similar age that have been exposed to weather elements over more than 50 years, with some minor reinforcing steel corrosion in need of repair. The Structural Assessment report concluded that the building was structurally well designed and a good candidate for rehabilitation (Bob D. Campbell & Co. 2022).

No other assessments are known to have occurred at the Site.

3.0 PHASE II ENVIRONMENTAL SITE ASSESSMENT ACTIVITIES

The following subsections describe the scope, field exploration, and methods implemented during this Phase II ESA. From October 10 through 11, 2023, Toeroek Team members Macy La Masney and Reed Niemack conducted soil, groundwater, and soil-gas sampling. Photographs taken to document Phase II fieldwork are in [Appendix B](#). Phase II fieldwork activities, including boring logs and field notes, were documented in a site logbook; a copy is in [Appendix C](#).

3.1 SCOPE OF THE ASSESSMENT

The Toeroek Team performed environmental sampling to determine if soils, groundwater, or soil gas at the Site are contaminated by current and/or historical activities. Sampling was consistent with the Quality Assurance Project Plan (QAPP) approved by EPA on September 14, 2023 (Toeroek Team 2023b).

3.1.1 Sampling Plan

The proposed sampling scheme for this project incorporated a combination of biased/judgmental sampling with definitive laboratory analysis, in accordance with procedures included in the *Guidance for Performing Site Inspections Under CERCLA* (Office of Solid Waste and Emergency Response [OSWER] Directive #9345.1-05, September 1992). All samples were submitted for analysis to an off-site laboratory subcontracted by the Toeroek Team. The objective of soil, groundwater, and soil-gas sampling was to characterize possible previous releases to the environment. [Figure 3](#) in [Appendix A](#) depicts sampling locations at the Site. Sampling at the Site occurred as follows:

- Eight surface soil samples were collected, one at each of eight direct-push technology (DPT) boring locations. Each sample identification (ID) consists of the boring location (soil boring [SB]-1 through SB-8), followed by the sampling interval in parentheses; for example, the ID of a surface soil sample collected within 0 to 3 feet below ground surface (bgs) at SB-2 would be SB-2 (0-3).
- Eight subsurface soil samples were collected, one at each of eight DPT boring locations (SB-1 through SB-8). The subsurface soil sample from SB-2 was collected as a duplicate pair. Format of each sample ID was similar to that for a surface soil sample; for example, the ID of a subsurface soil sample collected within 6 to 8 feet bgs at SB-5 would be SB-5 (6-8).
- Four groundwater samples were collected, one each at four of eight DPT boring locations (SB-2, SB-5, SB-6, and SB-7). Each groundwater sample ID consists of the prefix “GW,” followed by the number of the soil boring. The groundwater sample from boring SB-2 (GW-2) was collected as a duplicate pair. Groundwater was not encountered at DPT boring locations SB-1, SB-3, SB-4, and SB-8.

- Seven soil-gas samples were collected, one each at seven of eight DPT boring locations (SB-1 through SB-8). Each soil-gas sample ID consists of the prefix “SG,” followed by the number of the soil boring. At each DPT boring location except for SB-2, one soil-gas sample was collected within a 6-inch interval at depth of approximately 6 feet bgs. Soil-gas sample SG-2 was not collected because of presence of shallow groundwater.

3.1.2 Chemical Testing Plan

Laboratory analyses for chemical parameters were selected based on possibly present contaminants associated with historical uses of the Site. Soil and groundwater samples were submitted to Eurofins of Cedar Falls, Iowa, to be analyzed for the following parameters: volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), and Target Analyte List (TAL) metals. Soil-gas samples were submitted to Eurofins of Knoxville, Tennessee, to be analyzed for VOCs.

3.1.3 Deviations from the QAPP

The following deviations from the QAPP occurred during Phase II fieldwork activities:

- Soil-gas was not collected at SB-2 because of the presence of shallow groundwater.
- Groundwater was not encountered at the following locations and were unable to be sampled: SB-1, SB-3, SB-4, and SB-8.

3.2 FIELD EXPLORATION AND METHODS

Phase II fieldwork activities at the Site occurred from October 10 through 11, 2023. Field staff shipped soil and groundwater samples for VOCs, SVOCs, and TAL metals analyses to Eurofins in Cedar Falls, Iowa. Field staff shipped soil-gas samples for VOCs analysis to Eurofins in Knoxville, Tennessee. The following sections summarize soil, groundwater, and soil-gas sample collections. Sampling locations are depicted on [Figure 3](#) in [Appendix A](#).

3.2.1 Soil Sampling

Eight surface soil and subsurface soil samples were collected during Phase II fieldwork activities to assess presence of contamination from historical activities at the Site. One surface soil sample (SB-2 [6-8]) was collected as a duplicate pair.

Soil sampling proceeded with a DPT rig. The Toeroek Team obtained soil cores using DPT sampler rods with disposable polyvinyl chloride (PVC) liners. The soil cores were screened with a hand-held

photoionization detector (PID) for presence of elevated concentrations of organic vapors indicating likely presence of VOCs. Soil borings were to be advanced to maximum depth of 30 feet bgs, to groundwater, or to refusal, whichever occurred first. Equipment refusal, assumed to be bedrock, was encountered between 5.5 and 11.5 feet bgs at most boring locations. Surface soil samples were collected within the 0- to 3-foot bgs interval. Subsurface soil samples were collected at biased intervals based on presence of staining or detection of odor or elevated PID readings (obvious contamination). If no obvious contamination was noted within the subsurface interval, the soil sample was collected within the bottom 2-foot interval of the soil core, or just above groundwater (if encountered). After completion of soil sampling at each location, each piece of non-disposable sampling equipment that encountered the soil sample was decontaminated with a non-phosphate detergent and tap water wash, followed by a tap water rinse. The PVC liners were discarded with other investigation-derived waste (IDW), such as disposable gloves. Boring logs are in [Appendix C](#).

Each soil sample to undergo VOCs and TPH-GRO analyses was a grab sample, collected in accordance with EPA SW-846 Method 5035, and consisting of the following: one 40-milliliter (mL) vial, preserved with sodium bisulfate and containing approximately 5 grams of soil; one 40-mL vial preserved with methanol and containing approximately 5 grams of soil; two 40-mL vials, each containing de-ionized water; and one unpreserved 4-ounce jar packed with soil for determination of moisture content. Soil samples were analyzed for VOCs via EPA SW-846 Method 8260. Each soil sample to undergo SVOCs and TPH-DRO/ORO analyses was a grab sample collected into one 4-ounce unpreserved jar. Soil samples were analyzed for SVOCs and TPH-DRO/ORO via EPA SW-846 Method 8270. Remaining soil from each sample interval was homogenized and placed into 8-ounce jars for TAL metals analysis (via EPA SW-846 Method 6010/6020/7471). [Table 1](#) summarizes soil samples collected during this Phase II ESA.

TABLE 1
SOIL SAMPLE SUMMARY
JOPLIN UNION DEPOT, JOPLIN, MISSOURI

Sample Identification	Latitude (°N)	Longitude (°W)	Analyses Performed
SB-1 (0-3)	37.0614789	-94.5122269	VOCs and TPH-GRO (EPA Method 8260); SVOCs and TPH-DRO/ORO (EPA Method 8270); and TAL metals (EPA Methods 6010/6020/7471).
SB-1 (3.5-5.5)			
SB-2 (0-3)	37.0919375	-94.5125173	
SB-2 (6-8)			
SB-2 (6-8) DUP			
SB-3 (0-3)	37.0923496	-94.5127748	
SB-3 (8.5-10.5)			
SB-4 (0-3)	37.0922889	-94.5122631	
SB-4 (8.5-10.5)			
SB-5 (0-3)	37.0923315	-94.5119473	
SB-5 (6-8)			
SB-6 (0-3)	37.0920956	-94.5117770	
SB-6 (6-8)			
SB-7 (0-3)	37.0910432	-94.5115624	
SB-7 (6-8)			
SB-8 (0-3)	37.0909796	-94.5119530	
SB-8 (4.5-6.5)			

Notes:

DUP	Field duplicate	SB	Soil Boring
DRO	Diesel-range organics	SVOC	Semivolatile organic compound
EPA	U.S. Environmental Protection Agency	TAL	Target Analyte List
GRO	Gasoline-range organics	TPH	Total petroleum hydrocarbons
N	North	VOC	Volatile organic compound
ORO	Oil-range organics	W	West

3.2.2 Groundwater Sampling

Four groundwater samples were collected at four locations co-located with soil samples (SB-2, SB-5, SB-6, and SB-7) to investigate possibly present groundwater contamination from historical activities at the Site. Groundwater was not encountered at the remaining four locations (SB-1, SB-3, SB-4, and SB-8); therefore, no groundwater samples were collected. One groundwater sample (GW-2) was collected as a duplicate pair. Groundwater was encountered at approximately 8 feet bgs. After completion of sampling at each location, each piece of sampling equipment that encountered the groundwater sample, except for the dedicated polyethylene tubing, was decontaminated by application of a non-phosphate detergent and tap water wash, followed by a tap water rinse.

The Toeroek Team collected groundwater samples from temporary wells using a Screen Point 16 sampling apparatus containing a reusable stainless-steel screen. At each groundwater sample location, the sampler was advanced to approximately 4 to 5 feet below the water table to ensure exposure of the screen to groundwater. After deployment of the screen at the bottom of the boring, approximately 1 gallon of

water was purged through disposable polyethylene tubing with a check valve placed at the bottom of the tubing. Each groundwater sample for analysis for low-level VOCs and TPH-GRO was collected into three 40-mL vials preserved with hydrochloric acid (HCl). Groundwater samples for analyses for SVOCs and TPH-DRO/ORO were collected in unpreserved 1-liter (L) amber glass bottles. Each groundwater sample for TAL metals analysis was collected in 1-L plastic containers and preserved with nitric acid to pH less than (<) 2. Unfiltered groundwater samples were collected for total metals analysis, and groundwater collected for dissolved metals analysis was filtered in the field with a disposable 0.45-micron filter prior to collection in a preserved container. [Table 2](#) summarizes groundwater samples collected during this Phase II ESA.

TABLE 2
GROUNDWATER SAMPLE SUMMARY
JOPLIN UNION DEPOT, JOPLIN, MISSOURI

Sample Identification	Depth Interval (ft bgs)	Latitude (°N)	Longitude (°W)	Analyses Performed
GW-2	8-10	37.0919375	-94.5125173	VOCs and TPH-GRO (EPA Method 8260); SVOCs and TPH-DRO/ORO (EPA Method 8270); and Total and Dissolved TAL metals (EPA Methods 6020/7470).
GW-2 DUP				
GW-5	8-10	37.0923315	-94.5119473	
GW-6	8-10	37.0920956	-94.5117770	
GW-7	8-10	37.0910432	-94.5115624	

Notes:

DRO	Diesel-range organics	ORO	Oil-range organics
DUP	Field duplicate	SVOC	Semivolatile organic compound
EPA	U.S. Environmental Protection Agency	TAL	Target analyte list
ft bgs	Feet below ground surface	TPH	Total petroleum hydrocarbons
GRO	Gasoline-range organics	VOC	Volatile organic compound
GW	Groundwater	W	West
N	North		

3.2.3 Soil-gas Sampling

The Toeroek Team collected seven soil-gas samples during Phase II fieldwork activities, co-located with eight soil borings (SB-1 and SB-3 through SB-8), to investigate possibly present vapor contamination from historical activities at the Site. Soil-gas was not collected at SB-2 because of the presence of shallow groundwater.

At each soil-gas sampling location, steel rods were advanced by the DPT rig to approximately 6 feet bgs and then retracted approximately 6 inches to create a void space to allow collection of soil gas. Soil-gas samples were collected through the steel rods with disposable polyethylene tubing connected to the bottom of the rod string and to an evacuated vacuum canister on the ground surface. Air in the tubing was evacuated with a vacuum pump prior to connection of the tubing to the canister. After connection of the canister to the tubing, a valve on the canister was opened to begin soil-gas sample collection. The canister remained attached to the polyethylene tubing until the vacuum gauge indicated approximately 5 to 7 inches of mercury (“Hg) in the canister.

After completion of soil-gas sampling at each location, each non-disposable piece of sampling equipment that encountered the soil-gas sample was decontaminated with a non-phosphate detergent and tap water wash, followed by a tap water rinse. Vacuum canisters were submitted to Eurofins in Knoxville, Tennessee, for analysis for VOCs via EPA Method Toxic Organics (TO)-15. [Table 3](#) summarizes soil-gas samples collected during this Phase II ESA.

TABLE 3
SOIL-GAS SAMPLE SUMMARY
JOPLIN UNION DEPOT, JOPLIN, MISSOURI

Sample Identification	Latitude (°N)	Longitude (°W)	Analyses Performed
SG-1	37.0614789	-94.5122269	VOCs (EPA Method TO-15)
SG-3	37.0923496	-94.5127748	
SG-4	37.0922889	-94.5122631	
SG-5	37.0923315	-94.5119473	
SG-6	37.0920956	-94.5117770	
SG-7	37.0910432	-94.5115624	
SG-8	37.0909796	-94.5119530	

Notes:

EPA U.S. Environmental Protection Agency
N North
SG Soil gas
TO Toxic Organics
VOC Volatile organic compound
W West

3.2.4 Quality Control Sampling

Field quality control sampling for this investigation included one soil field duplicate sample, one groundwater field duplicate sample, two trip blanks, one equipment rinsate blank, and two field blanks. Eurofins analyzed trip, field, and equipment rinsate blanks for VOCs. The field and equipment rinsate blanks were also analyzed for SVOCs, TPH, and metals (total and dissolved). Analytical data from the

blank samples were referenced to determine whether contamination had been introduced in the field and/or during transportation of containers and samples. The soil field duplicate sample and groundwater field duplicate sample were collected to determine total method precision. Analytical results from the field duplicate samples were used to calculate the relative percent difference (RPD) between each set of duplicate pair results for each reported analyte. The RPDs were used for informational purposes only; however, the higher concentration of each analyte in each duplicate sample pair was to be used at the discretion of the EPA Project Manager. Calculated RPDs are included in the applicable data validation reports in [Appendix D](#). Analytical accuracy was determined by analyses of laboratory-prepared spikes and duplicates.

4.0 EVALUATION AND PRESENTATION OF RESULTS

The following sections present analytical data from subsurface soil, groundwater, and soil-gas samples collected during this Phase II ESA. Copies of analytical data packages and data validation reports are in [Appendix D](#).

Soil sample results from this Phase II ESA were compared to MoDNR Risk-Based Corrective Action (MRBCA) Lowest Default Target Levels (LDTLs) and EPA Regional Screening Levels (RSLs) for residential and industrial land uses (MoDNR 2006; EPA 2023a). If the LDTLs were exceeded, concentrations were then compared to MRBCA Risk-Based Target Levels (RBTLs) for Non-residential Land Use, Soil Type 3 (Clayey). Metals results from soil samples also were compared to average background concentrations in Jasper County, Missouri, to determine if those metals results were consistent with naturally occurring concentrations (USGS 2023). A detected concentration of a metal is considered naturally occurring if it is at or below the average county background concentration (within one standard deviation of the mean). RSLs for soil assumed a total hazard quotient (THQ) of 1.0.

Groundwater sample results were compared to MRBCA LDTLs and EPA Maximum Contaminant Levels (MCLs) or RSLs for tap water if an MCL had not been established (MoDNR 2006; EPA 2023a). If the LDTLs were exceeded, concentrations were then compared to MRBCA RBTLs for groundwater for Non-residential Land Use, Soil Type 3 (Clayey). RSLs for tap water assumed a THQ of 1.0.

Soil-gas sample results were compared to EPA Vapor Intrusion Screening Levels (VISLs) for residential and commercial land uses, with an assumed THQ of 1.0 (EPA 2023b).

4.1 SOIL SAMPLES

One surface soil sample and one subsurface soil sample were collected at each of eight pre-selected locations to assess the possible presence of contamination from historical activities at the Site. Soil samples were submitted to Eurofins for analyses for VOCs, SVOCs, TPH, and TAL metals.

VOCs

No VOC was detected in any soil sample.

SVOCs

No SVOC was detected in any soil sample.

TPH

TPH were detected in 3 of 17 soil samples: SB-1 (0-3), SB-2 (0-3), and SB-6 (0-3). No concentration of TPH exceeded any regulatory benchmark. [Table 4](#) lists all TPH detections in soil.

TABLE 4
DETECTED TPH RESULTS FROM SOIL SAMPLES
JOPLIN UNION DEPOT, JOPLIN, MISSOURI

Sample Identification	TPH-DRO	TPH-ORO
	Regulatory Screening Levels	
	EPA RSL (Aliphatic Medium) TR=1E-06, THQ=1.0 Residential Soil = 96,000	EPA RSL (Aliphatic High) TR=1E-06, THQ=1.0 Residential Soil = 23,000,000
	EPA RSL (Aliphatic Medium) TR=1E-06, THQ=1.0 Industrial Soil = 440,000	EPA RSL (Aliphatic High) TR=1E-06, THQ=1.0 Industrial Soil = 350,000,000
	MRBCA LDTL = 4,150,000	MRBCA LDTL = 12,400,000
SB-1 (0-3)	21,600 F1	ND
SB-2 (0-3)	23,200	20,800
SB-6 (0-3)	ND	262,000

Notes:

All values are in micrograms per kilogram.

DRO	Diesel-range organics
EPA	U.S. Environmental Protection Agency
F1	MS and/or MSD recovery exceeds control limits
MRBCA	Missouri Risk-Based Corrective Action
LDTL	Lowest Default Target Level
ND	Not detected
ORO	Oil-range organics
RSL	Regional Screening Level
SB	Soil boring
TPH	Total petroleum hydrocarbons
THQ	Total hazard quotient
TR	Total cancer risk

Metals

Metals were detected in all soil samples.

- Arsenic was detected in multiple soil samples at concentrations exceeding the EPA RSL for residential and industrial soils, as well as MRBCA RBTL in subsurface soil samples SB-2 (6-8), SB-3 (8.5-10.5), SB-5 (6-8), and SB-8 (4.5-6.5). These detections also exceeded the Jasper County average. The RBTL was not exceeded in any surface soil sample. Detections exceeding the EPA industrial RSL but not the RBTL were consistent with Jasper County average background concentrations.
- Cadmium occurred at concentrations exceeding the EP RSL for residential soil, as well as the MRBCA RBTL in surface soil samples SB-1 (0-3), SB-5 (0-3), and SB-6 (0-3).

- Cobalt occurred at concentrations exceeding the EPA RSL for residential soil in samples SB-2 (6-8), SB-2 (6-8) DUP, SB-3 (8.5-10.5), SB-5 (6-8), SB-8 (0-3), and SB-8 (4.5-6.5). No detection exceeded the industrial RSL for cobalt, and an MRBCA RBTL has not been established.
- Iron occurred at concentrations exceeding the EPA RSL for residential soil in samples SB-3 (8.5-10.5) and SB-8 (4.5-6.5). No detection exceeded the industrial RSL for iron, and an MRBCA RBTL has not been established.
- Lead occurred at concentrations exceeding the MRBCA RBTL in samples SB-7 (6-8), SB-8 (0-3), and SB-8 (4.5-6.5). Concentrations of lead also exceeded the EPA RSL for industrial soil in samples SB-7 (6-8), SB-8 (0-3), and SB-8 (4.5-6.5) and the residential RSL SB-5 (0-3) and SB-6 (0-3). These exceedances also significantly exceeded the Jasper County average background concentrations.
- Thallium occurred at a concentration exceeding the MRBCA RBTL and the EPA RSL for industrial soil in the sample from SB-1 (3.5-5.5).

[Table 5](#) lists detections in soil samples of metals for which an EPA RSL or MRBCA LDTL for soil has been established.

TABLE 5

DETECTED METALS RESULTS FROM SOIL SAMPLES
JOPLIN UNION DEPOT, JOPLIN, MISSOURI

Sample Identification	Aluminum	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Thallium	Vanadium	Zinc
	EPA RSL (TR=1E-06, THQ=1.0) Residential Soil															
	77,000	0.68	15,000	160	7.1	120,000*	23	3,100	55,000	400	1,800	11	1,500	0.78	390	23,000
	EPA RSL (TR=1E-06, THQ=1.0) Industrial Soil															
	1,100,000	3	220,000	2,300	100	1,800,000*	350	47,000	820,000	800	26,000	46	22,000	12	5,800	350,000
	MRBCA LDTLs															
	75,500	3.89	2,040	0.737	9.31	74,600	NE	617	NE	3.74	2,720	2.19	505	2.20	530	7,220
	MRBCA RBTL Non-Residential Land Use Soil Type 3 (Clayey) Surface Soil – Ingestion, Inhalation and Dermal Contact															
	933,000	15.9	181,000	3.19	74.8	472,000	NE	38,100	NE	660	96,700	630	18,600	76.7	6,580	288,000
	USGS Jasper County Average Background Concentration (USGS 2023)															
	40,140	8.225	NE	NE	NE	NE	NE	8.246	22,020	72.651	1,525.61	0.048	NE	NE	NE	338.354
SB-1 (0-3)	5,670	14.8	137	ND	29.8	12.8	9.52	12.1	28,600	152	62.3	0.0497	23.8	ND	10.2	5,000
SB-1 (3.5-5.5)	1,730	ND	32.3	ND	ND	2.38	9.37	1.54	3,010	ND	47.1	ND	ND	154**	ND	18.8 J+
SB-2 (0-3)	11,300	7.80	80.0	ND	ND	15.8	6.02	4.99	12,300	170	40.5	0.0811	9.44	ND	29.4	111 J+
SB-2 (6-8)	9,070	14.1	20.5 J	1.51	ND	16.4 J	44.3 J	3.24	20,900	ND	188	ND	67.6	ND	11.2 J	41.2 J+
SB-2 (6-8) DUP	10,700	17.6	366 J	1.85	ND	24.4 J	25.2 J	3.34	21,300	ND	141	0.0390	86.9	ND	17.4 J	44.9 J+
SB-3 (0-3)	15,300	11.3	74.0	ND	5.01	30.8	5.55	11.7	22,100	354	92.6	0.274	19.6	ND	41.7	846
SB-3 (8.5-10.5)	14,500	27.7	143	ND	ND	67.3	24.5	9.98	64,200	211	572	0.0245	33.3	ND	58.5	462
SB-4 (0-3)	2,990	ND	19.1	ND	1.09	4.20	2.85	4.53	5,290	376	152	0.136	3.79	ND	6.78	210
SB-4 (8.5-10.5)	10,600	12.9	231	ND	ND	32.6	14.0	6.82	29,900	144	1,050	ND	26.1	ND	64.0	80.8
SB-5 (0-3)	1,190	4.78	17.7	ND	23.5	4.40	1.70	17.2	5,970	417	198	0.0347	8.23	ND	4.13	4,970
SB-5 (6-8)	15,800 J	33.9 J	147 J	ND	ND	49.0 J	40.0 J	10.2 J	50,700 J	198 J	268 J	ND	18.7 J	ND	140 J	80.6 J
SB-6 (0-3)	4,830	7.81	27.7	ND	13.5	9.56	6.05	14.6	17,600	499	197	0.0337	21.3	ND	14.1	3,260
SB-6 (6-8)	26,100	ND	201	ND	ND	28.9	11.0	9.03	24,900	91.3	155	0.0242	15.4	ND	44.8	237
SB-7 (0-3)	5,230	ND	43.4	ND	ND	6.95	4.92	3.44	6,580	221	138	0.0274	8.13	ND	10.7	36.1
SB-7 (6-8)	16,300	12.5	72.3	0.780	1.35	19.5	7.67	6.10	17,300	1,060	510	0.0769	28.4	ND	27.7	487
SB-8 (0-3)	10,700	10.6	35.9	0.604	ND	19.3	26.1	11.6	20,200	3,360	735	0.0458	42.8	ND	21.9	291
SB-8 (4.5-6.5)	31,000	49.1	77.1	ND	ND	70.5	81.9	31.1	56,900	6,500	763	0.0939	104	ND	81.2	1,660

Notes:
All values are in milligrams per kilogram.
Bold font indicates concentration exceeds EPA RSL for residential soil.
Italic font indicates concentration exceeds EPA RSL for industrial soil.
Gold highlighting indicates concentration exceeds MRBCA LDTL.
Green highlighting indicates concentration exceeds the USGS Jasper County average background concentration.
Blue highlighting indicates concentration exceeds the MRBCA LDTL and USGS Jasper County average background concentration.
Orange highlighting indicates concentration exceeds the MRBCA LDTL, MoDNR RBTL, and the Jasper County average background concentration.
* Trivalent chromium was assumed.
** County Average Not Established; however, result exceeds both MRBCA LDTL and RBTL.

DUP
EPA
J+
LDTL
MoDNR

Duplicate
U.S. Environmental Protection Agency
Qualified as estimated, biased high
Lowest Default Target Level (MoDNR 2006)
Missouri Department of Natural Resources

MRBCA
ND
NE
RBTL
RSL

Missouri Risk-Based Corrective Action
Not detected at associated reporting limit
Not established
Risk-Based Target Limit (MoDNR 2006)
Regional Screening Level (EPA 2023a)

SB
THQ
TR
USGS

Soil boring
Total hazard quotient
Total cancer risk
U.S. Geological Survey

4.2 GROUNDWATER SAMPLES

Four groundwater samples were collected at locations co-located with soil samples SB-2, SB-4, SB-6, and SB-7. One groundwater sample (GW-2) was collected as a duplicate pair. Groundwater was encountered at 8 feet bgs in the temporary wells. Groundwater samples were submitted to Eurofins for analyses for VOCs, SVOCs, TPH, and TAL metals (total and dissolved).

VOCs

VOCs were detected in groundwater samples GW-2 DUP and GW-6. Acetone (14.4 micrograms per liter [µg/L]) was the only VOC detected in the groundwater sample from GW-2 DUP, and methyl tertiary butyl ether (MTBE) estimated at 1.63 µg/L was the only VOC reported in the groundwater sample from GW-6. Neither of these detections exceeded an MoDNR LDTL or EPA MCL or RSL. Acetone is a common laboratory contaminant, and MTBE is a former gasoline additive. [Table 6](#) lists detections in groundwater samples compared to MRBCA LDTLs if established, or to EPA MCLs or RSLs.

TABLE 6
DETECTED VOC RESULTS FROM GROUNDWATER SAMPLES
JOPLIN UNION DEPOT, JOPLIN, MISSOURI

Sample Identification	Acetone	Methyl tertiary butyl ether
	EPA RSL (TCR=1E-06 THQ=1.0) Tap water	
	18,000	14
	MRBCA LDTL	
	2,970	128
GW-2 DUP	ND	1.63
GW-6	14.4	ND

Notes:

All values are in micrograms per liter.

No exceedance of an MRBCA LDTL or EPA RSL for tap water occurred.

DUP	Duplicate	ND	Not detected
EPA	U.S. Environmental Protection Agency	RSL	Regional Screening Level
GW	Groundwater	TCR	Total cancer risk
MRBCA	Missouri Risk-Based Corrective Action	THQ	Total hazard quotient
LDTL	Lowest Default Target Level	VOC	Volatile organic compound

SVOCs

No SVOC was detected in any groundwater sample.

TPH

TPH were not detected in any groundwater sample.

Metals

Metals were detected in all groundwater samples.

- Total arsenic occurred at concentrations exceeding the MRBCA LDTL and the EPA RSL for tap water in samples GW-2 and GW-2 DUP, but not the RBTL for groundwater. No concentration of dissolved arsenic exceeded a screening level.
- Total beryllium occurred at concentrations exceeding the MRBCA LDTL and the EPA RSL for tap water in all samples, but not the RBTL for groundwater. Dissolved beryllium was not detected.
- Total cadmium occurred at concentrations exceeding the MRBCA LDTL and EPA RSL for tap water in all samples. Dissolved cadmium exceeded the MRBCA LDTL and the EPA RSL for tap water in samples GW-6 and GW-7. None of the detections exceeded the RBTL for groundwater.
- Total chromium occurred at concentrations exceeding the MRBCA LDTL and EPA RSL for tap water in samples GW-5 and GW-6 but not the RBTL for groundwater. Dissolved chromium was not detected.
- Total and dissolved cobalt exceeded the MRBCA LDTL and the EPA RSL for tap water in all samples except for GW-7 (dissolved). None of the detections exceeded the RBTL for groundwater.
- Total iron occurred at concentrations exceeding the EPA RSL for tap water in samples GW-5 and GW-6. Neither of the detections exceeded the MRBCA LDTL for groundwater.
- Total lead occurred at concentrations exceeding the MRBCA LDTL and the EPA RSL for tap water in all samples. No concentration of dissolved lead exceeded a screening level. No RBTL has been established for lead in groundwater.
- Total manganese occurred at concentrations exceeding the MRBCA LDTL and the EPA RSL for tap water in all samples. Detections of dissolved manganese occurred at concentrations exceeding the EPA RSL for tap water in all samples and exceeded the MRBCA LDTL in samples GW-5 and GW-6. None of the detections exceeded the RBTL for groundwater.
- Total nickel in sample GW-2 DUP exceeded the MRBCA LDTL for groundwater but not the EPA RSL. The detection did not exceed the RBTL for groundwater.
- Total zinc occurred at concentrations exceeding the MRBCA LDTL and the EPA RSL for tap water in all samples. None of the detections exceeded the RBTL for groundwater.
- Total mercury in sample GW-7 exceeded the MRBCA LDTL as well as the EPA RSL for tap water. No RBTL has been established for mercury in groundwater.

[Table 7](#) below lists detected concentrations of metals in groundwater samples compared to MRBCA LDTLs if established, or to EPA MCLs or RSLs.

TABLE 7

DETECTED METALS RESULTS FROM GROUNDWATER SAMPLES
JOPLIN UNION DEPOT, JOPLIN, MISSOURI

Sample Identification	Aluminum*	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt*	Copper	Iron*	Lead	Manganese*	Nickel*	Vanadium*	Zinc*	Mercury
	EPA MCL or EPA RSL (TR=1E-06 THQ=1.0) Tap water														
	20	0.010	2.0	0.0040	0.0050	0.10	0.0060	1.3	14	0.015	0.43	0.39	0.086	6.0	0.0020
	MoDNR LDTLs														
	15.6	0.010	2.0	0.0040	0.0050	0.10	NE	0.624	NE	0.015	2.19	0.313	0.109	4.69	0.0507
	MRBCA RBTL Non-Residential Land Use Soil Type 3 (Clayey) Dermal Contact														
	31,000	0.578	6,190	0.103	2.28	46,500	NE	1,240	NE	NA	4,340	3,100	217	15,500	NA
Total Metals															
GW-2	7.34	0.0118	0.460	0.00633	0.0507	0.0117 J+	0.446	0.0198	7.57	0.0767	4.49	0.304	0.0117	7.81	ND
GW-2 DUP	8.51	0.0138	0.483	0.00920	0.0561	0.0100 J+	0.517	0.0177	12.9	0.0620	4.28	0.374	0.0117	9.28	ND
GW-5	7.30	0.00765	0.331	0.00805	0.186	0.145	0.154	0.111	42.4	0.934	7.88	0.115	0.0267	14.3	ND
GW-6	6.73	0.00581	0.694	0.0133	0.158	0.135	0.208	0.0706	41.2	1.20	13.1	0.221	0.0510	17.8	ND
GW-7	2.47	0.00207	0.591	0.00174	0.204	0.0157 J+	0.121	0.0265	0.838 J+	1.37	9.96	0.163	ND	27.1	0.829
Dissolved Metals															
GW-2	ND	0.00604	0.0353	ND	0.00120	ND	0.0233	0.00901	0.340 J+	0.00115	0.914	0.0244	ND	0.116	ND
GW-2 DUP	ND	0.00784	0.0356	ND	0.00113	ND	0.0273	ND	0.984 J+	ND	0.980	0.0271	ND	0.124	ND
GW-5	ND	ND	0.121	ND	0.00248	ND	0.0161	ND	0.355 J+	ND	2.70	0.0109	ND	0.0873	ND
GW-6	ND	ND	0.0885	ND	0.00533	ND	0.0155	0.00947	0.672 J+	0.00193	2.36	0.00593	ND	0.371	ND
GW-7	ND	ND	0.127	ND	0.00927	ND	0.00542	ND	ND	0.00520	1.18	ND	ND	0.829	ND

Notes:

All values are in milligrams per liter.

*EPA RSL for tap water used if EPA MCL not established.

Bold font indicates concentration exceeds the MRBCA LDTL for groundwater.

Gold highlighting indicates concentration exceeds the EPA MCL and/or EPA RSL for tap water.

- DUP

Duplicate
- EPA

U.S. Environmental Protection Agency
- J+

Qualified as estimated, with possible high bias
- LDTL

Lowest Default Target Level
- MCL

Maximum Contaminant Level (EPA 2023a)
- MoDNR

Missouri Department of Natural Resources
- NA

Not available
- ND

Not detected
- NE

Not established
- RBTL

Risk-Based Target Level
- RSL

Regional Screening Level (EPA 2023a)
- TCR

Total cancer risk
- THQ

Total hazard quotient

4.3 SOIL-GAS SAMPLES

The Toeroek Team collected seven soil-gas samples, one each co-located with soil borings SB-1 and SB-3 through SB-8. Soil-gas samples were collected to detect contamination in soil vapors from historical activities at the Site and were submitted to Eurofins for analysis for VOCs via EPA Method TO-15.

VOCs were detected in all soil-gas samples. Concentrations of benzene in samples SG-1 and SG-4 exceeded the residential VISL of 12 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), and concentration in SG-1 also exceeded the commercial VISL of $52.4 \mu\text{g}/\text{m}^3$. [Table 8](#) below lists detected VOC results in soil-gas samples.

TABLE 8

DETECTED VOC RESULTS FROM SOIL-GAS SAMPLES
JOPLIN UNION DEPOT, JOPLIN, MISSOURI

Sample Identification	1,2,4-Trimethylbenzene	2-Butanone	4-Methyl-2-pentanone	Acetone	Benzene	Carbon disulfide	Chloroform	Chloromethane	Cyclohexane	Ethylbenzene	Hexane	Methylene Chloride	Styrene	Toluene	Trichlorofluoromethane	m&p-Xylene	o-Xylene
	Residential Target Sub-Slab and Near-source Soil-Gas VISL (TR=1E-06 or THQ=1.0)																
	2,090	174,000	104,000	NE	12	24,300	4.07	3,130	209,000	37.4	468	3,380	34,800	174,000	NE	3,480	3,480
	Commercial Target Sub-Slab and Near-source Soil-Gas VISL (TR=1E-06 or THQ=1.0)																
	8,760	730,000	438,000	NE	52.4	102,000	17.8	13,100	87,600	164	2,040	40,900	146,000	730,000	NE	14,600	14,600
SG-1	2.60	24.8	10.9 J+	182 J+	55.8	29.7	ND	ND	33.4	3.52	74.7	ND	1.84	33.4	1.15	8.77	4.04
SG-3	1.22	21.4	ND	53.2	7.49	2.98	ND	ND	9.77	1.28	18.7	ND	ND	7.00	1.20	ND	1.27
SG-4	1.21	36.3	ND	165 J+	22.7	15.9	ND	ND	9.18	1.77	11.3	5.54	ND	15.3	1.30	ND	1.63
SG-5	1.34	13.7	ND	54.0	1.60	3.87	ND	ND	4.14	ND	ND	ND	ND	ND	2.16	ND	1.43
SG-6	ND	14.4	ND	60.5	1.55	5.25	1.57	2.60	12.1	ND	3.82	ND	ND	ND	52.9	ND	0.892
SG-7	ND	26.3	ND	143 J+	3.30	2.37	1.33	ND	2.30	ND	ND	ND	ND	3.83	1.33	ND	ND
SG-8	ND	8.15	ND	37.7 J+	1.51	3.20	ND	ND	ND	ND	ND	ND	ND	ND	1.13	ND	ND

Notes:

All values are in micrograms per cubic meter.

Bold font indicates concentration exceeds EPA residential VISL.
Italic font indicates concentration exceeds EPA commercial VISL.

- EPA
- U.S. Environmental Protection Agency
- J+
- Qualified as estimated, biased high
- ND
- Not detected at associated reporting limit
- NE
- Not established
- RSL
- Regional Screening Level
- SG
- Soil Gas
- THQ
- Total hazard quotient
- TR
- Total cancer risk
- VISL
- Vapor Intrusion Screening Level (EPA 2023b)
- VOC
- Volatile organic compound

4.4 QUALITY CONTROL SAMPLES

Two water trip blanks were included to determine whether contamination had been introduced during transportation of containers and samples. One trip blank was broken during shipping, so only one trip blank was analyzed for VOCs. The trip blank yielded no detection of a VOC.

The equipment rinsate blank and field blanks were analyzed for VOCs/TPH GRO, SVOCs/TPH-DRO/ORO, and metals. The equipment rinsate blank yielded detections of chromium (0.00528 milligrams per liter [mg/L]), iron (0.290 mg/L), and lead (0.000597 mg/L). The equipment rinsate blank yielded no detections of VOCs, TPH, or SVOCs.

Field blank FB-1 yielded detections of lead (0.00127 mg/L), manganese (0.0146 mg/L), and zinc (0.0499 mg/L). Field blank FB-2 yielded detections of acetone (11.4 µg/L), a common laboratory contaminant. Neither FB-1 nor FB-2 had detectable concentrations of VOCs, SVOCs, or TPH.

The data validation reports included in [Appendix D](#) provide a discussion of the implications of these detections in the blanks. The results of data validation have been applied as data qualifiers in the tables in [Section 4.1](#), [Section 4.2](#), and [Section 4.3](#). All data were usable as qualified based on the findings of data validation.

5.0 DISCUSSION OF SIGNIFICANT FINDINGS AND CONCLUSIONS

This section summarizes significant findings and offers conclusions regarding Phase II fieldwork activities.

5.1 SURFACE AND SUBSURFACE SOIL

No VOC was detected in any soil sample.

No SVOC was detected in any soil sample.

TPH were detected in 3 of 17 soil samples: SB-1 (0-3), SB-2 (0-3), and SB-6 (0-3). No concentration of TPH exceeded any regulatory benchmark.

Metals were detected at concentrations that exceeded EPA RSLs or MRBCA RBTLs and significantly exceeded the Jasper County average background concentration. In surface soil, the following metals exceeded the MRBCA RBTL or EPA RSL in at least one soil sample:

- Cadmium – residential RSL and non-residential RBTL (SB-1, SB-5, and SB-6);
- Cobalt – residential RSL (SB-8); and
- Lead – non-residential RBTL (SB-8), residential RSL (SB-5 and SB-6).

In subsurface soil, the following metals exceeded the MRBCA RBTL or EPA RSL in at least one sample:

- Arsenic – industrial RSL and non-residential RBTL (SB-2, SB-3, SB-5, and SB-8);
- Cobalt – residential RSL (SB-2, SB-3, SB-5, and SB-8);
- Iron – residential RSL (SB-3 and SB-8);
- Lead – non-residential RBTL and industrial RSL (SB-7 and SB-8); and
- Thallium – non-residential RBTL and industrial RSL (SB-1).

5.2 GROUNDWATER

VOCs were detected in groundwater samples GW-2 DUP and GW-6, but neither of these detections exceeded an MoDNR LDTL or EPA MCL or RSL.

SVOCs were not detected in any groundwater sample.

TPH were not detected in any groundwater sample.

Total and dissolved metals were detected at concentrations that exceeded EPA MCLs or RSLs for tap water. No concentration exceeded an MRBCA RBTL for groundwater. The following total metals exceeded the EPA MCLs or RSLs for tap water:

- Total arsenic – GW-2;
- Total beryllium – all samples;
- Total cadmium – all samples;
- Total chromium – GW-5 and GW-6;
- Total cobalt – all samples;
- Total iron – GW-5 and GW-6;
- Total lead – all samples;
- Total manganese – all samples;
- Total zinc – all samples; and
- Total mercury – GW-7.

The following total metals exceeded the EPA MCLs or RSLs for tap water:

- Dissolved cadmium – GW-6 and GW-7;
- Dissolved cobalt – GW-2, GW-5, and GW-6; and
- Dissolved manganese – all samples.

Some portion of the metals detected in total metals samples are expected to be derived from suspended sediment rather than from groundwater.

5.3 SOIL GAS

VOCs were detected in all soil-gas samples. Concentrations of benzene in samples SG-1 and SG-4 exceeded the residential VISL, and concentration of benzene in SG-1 also exceeded the commercial VISL.

5.4 EVALUATION OF PREVIOUSLY IDENTIFIED RECS

This section discusses and evaluates the previously identified RECs reported in the April 2023 Phase I ESA report (Toeroek Team 2023a). Based on results of soil, groundwater, and soil-gas sampling, the Site

appears to have been affected by historical activities associated with the railroad depot, and by off-site historical use of adjacent properties as gas stations.

5.5 CONCEPTUAL SITE MODEL

The following sections describe elements of the conceptual site model:

5.5.1 Chemical Release Scenario and Spatial Distribution

Sampling results during this Phase II ESA indicated presence at the Site of metals in soil and groundwater, and of VOCs in soil gas.

Sampling results from soil were compared to EPA RSLs under residential and industrial scenarios, and to MRBCA LDTLS and RBTLs for soil, with an assumption of a THQ of 1.0 for RSLs (EPA 2023a; MoDNR 2006). VOC results from soil-gas samples were compared to EPA VISLs under residential and commercial scenarios, with assumption of a THQ of 1.0 (EPA 2023b). These comparisons indicated elevated concentrations of VOCs and metals likely associated with historical operations at or adjacent to the Site.

5.5.2 Current and Future Land Use and Groundwater Use

The Site consists of one parcel at 205 North Main Street in Joplin, Jasper County, Missouri. The Site encompasses approximately 3.6 acres and hosts one former railroad depot building. [Figure 2](#) in [Appendix A](#) illustrates the approximate footprint of the Site building and the Site boundaries.

Currently, groundwater is not used for drinking water at the Site. The City of Joplin obtains its drinking water from Missouri American Water, sourced from Shoal Creek surface water and wells with depths exceeding 1,000 feet bgs in the Springfield Plateau Province of the Ozark Aquifer. The nearest well is approximately 1.3 miles east of the Site and has total depth exceeding 1,500 feet bgs. Shoal Creek intake is approximately 4.5 miles southwest of the Site (Missouri American Water 2022; MoDNR 2023).

The current owner of the Site, MoDNR, is interested in finding a preservation minded buyer to develop the site contingent on findings from this Phase II ESA report.

5.5.3 Land and Groundwater Use Restrictions

No known land or groundwater use restrictions exist.

5.5.4 Physical Conditions

A discussion of physical conditions is in [Section 2.2](#) of this report.

5.5.5 Remedial Activities at the Site

No known remedial activities have occurred at the Site.

5.5.6 Exposure Model

Groundwater Migration Pathway and Targets

The Site is within a mixed-use area of the City of Joplin and surrounded by commercial businesses with residential areas beyond. The City of Joplin obtains its drinking water from Missouri American Water, sourced from Shoal Creek surface water and wells with depths exceeding 1,000 feet bgs in the Springfield Plateau Province of the Ozark Aquifer. The nearest well is approximately 1.3 miles east of the Site and has total depth exceeding 1,500 feet bgs. Shoal Creek intake is approximately 4.5 miles southwest of the Site (Missouri American Water 2022; MoDNR 2023). Use of groundwater at the Site as a potable water source is not expected in the future. Because Missouri American Water serves the groundwater domestic use pathway, likelihood of ingestion of or dermal exposure to contaminants present in groundwater at the Site is low.

Surface Water Migration Pathway and Targets

The hydrologic gradient at the Site is not known but may be inferred to be east, which is consistent with the topographic gradient. Threatened or endangered species known or likely to occur in Jasper County, Missouri, include the gray bat (*Myotis grisescens*), the Neosho mucket (*Lampsilis rafinesqueana*), the northern long-eared bat (*Myotis septentrionalis*), the Indiana bat (*Myotis sodalists*), Mead's milkweed (*Asclepias meadii*), the western fanshell (*Cyprogenia aberti*), the Neosho madtom (*Noturus placidus*), the Ozark cavefish (*Amblyopsis rosae*), and the Rabbitsfoot (*Quadrula cylindrica*). The tricolored bat (*Perimyotis subflavus*) is proposed endangered, and the little brown bat (*Myotis lucifugus*) and regal fritillary (*Speyeria idalia*) are currently under review. The monarch butterfly (*Danaus plexippus*) is a candidate species. No critical habitats are listed on the Site (U.S. Fish and Wildlife Service [USFWS] 2023). Presence of these species at the Site area has not been verified, and the Site has not undergone a habitat assessment.

The Site does not host any surface water features. Stormwater flows to the municipal stormwater sewer system; likelihood of contamination to surface water is low.

Soil Exposure and Air Migration Pathways and Targets

Soils at the Site have been classified as Rueter extremely gravelly silt loam and Cedargap gravelly silt loam. The Rueter series consists of deep and moderately deep, moderately well-drained, and well-drained soils with moderately coarse textures. Slopes range from 8 to 15 percent. These soils are on hillslopes. The Cedargap series consists of deep and moderately deep, moderately well-drained, and well-drained soils with moderate infiltration rates and moderately coarse textures. Slopes range from 1 to 3 percent. These soils generally are found in drainageways and are frequently flooded (USDA 2023). The Site includes gravel and grassy areas except for the building footprint. Concentrations of metals in surface soil exceed residential and industrial RSLs and MRBCA non-residential RBTLs. As a result, residents or workers may be exposed to unacceptable risks from exposure to soil.

Subsurface Vapor Intrusion Migration Pathway and Targets

The Site currently hosts one former railroad depot building and includes gravel parking lots. Historical documentation indicates previous operations of a railroad depot facility. The current owner of the Site, MoDNR, has shown interest in redeveloping the Site, contingent on findings from this Phase II ESA report.

Soil-gas samples were collected at seven locations (co-located with seven of eight soil borings). Results of the soil-gas sampling are discussed in [Section 4.2](#).

VOCs were detected in all soil-gas samples. Concentrations of benzene in samples SG-1 and SG-4 exceeded the residential VISL, and concentration in SG-1 also exceeded the commercial VISL. Based on these detected concentrations, residential receptors in the current buildings may be exposed to concentrations of VOCs that exceed RSLs.

5.6 AFFECTED MEDIA

Sampling results during this Phase II ESA indicated presence at the Site of metals in soil and groundwater, and of VOCs in soil gas.

Comparisons with EPA RSLs under residential and industrial scenarios for soil and groundwater, MRBCA LDTLs for soil and groundwater, and EPA VISLs under residential and commercial scenarios indicated elevated concentrations of metals likely associated with historical operations at or adjacent to the Site. Some of these detections exceeded residential and non-residential/industrial screening levels. Elevated concentrations of benzene in soil gas suggests a fuel release at or adjacent to the Site.

The current owner of the Site, MoDNR, has shown an interest in finding a preservation minded buyer to develop the Site, contingent on findings from this Phase II ESA report. Based on analytical results from soil, groundwater, and soil-gas samples, further investigation and/or remediation appears warranted. If the soil is to be disturbed during redevelopment, a soil management plan may be necessary to protect construction or utility workers. Isolated areas where concentrations of contaminants exceed screening levels may require additional excavation or capping. An Analysis of Brownfields Cleanup Alternatives, to be submitted under separate cover and as directed by EPA, will present alternatives for remediating affected media at the Site.

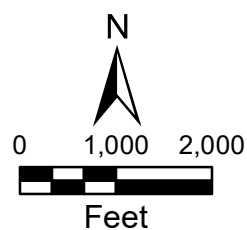
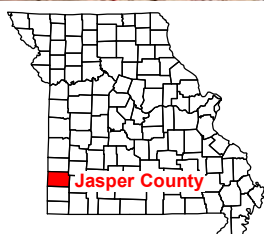
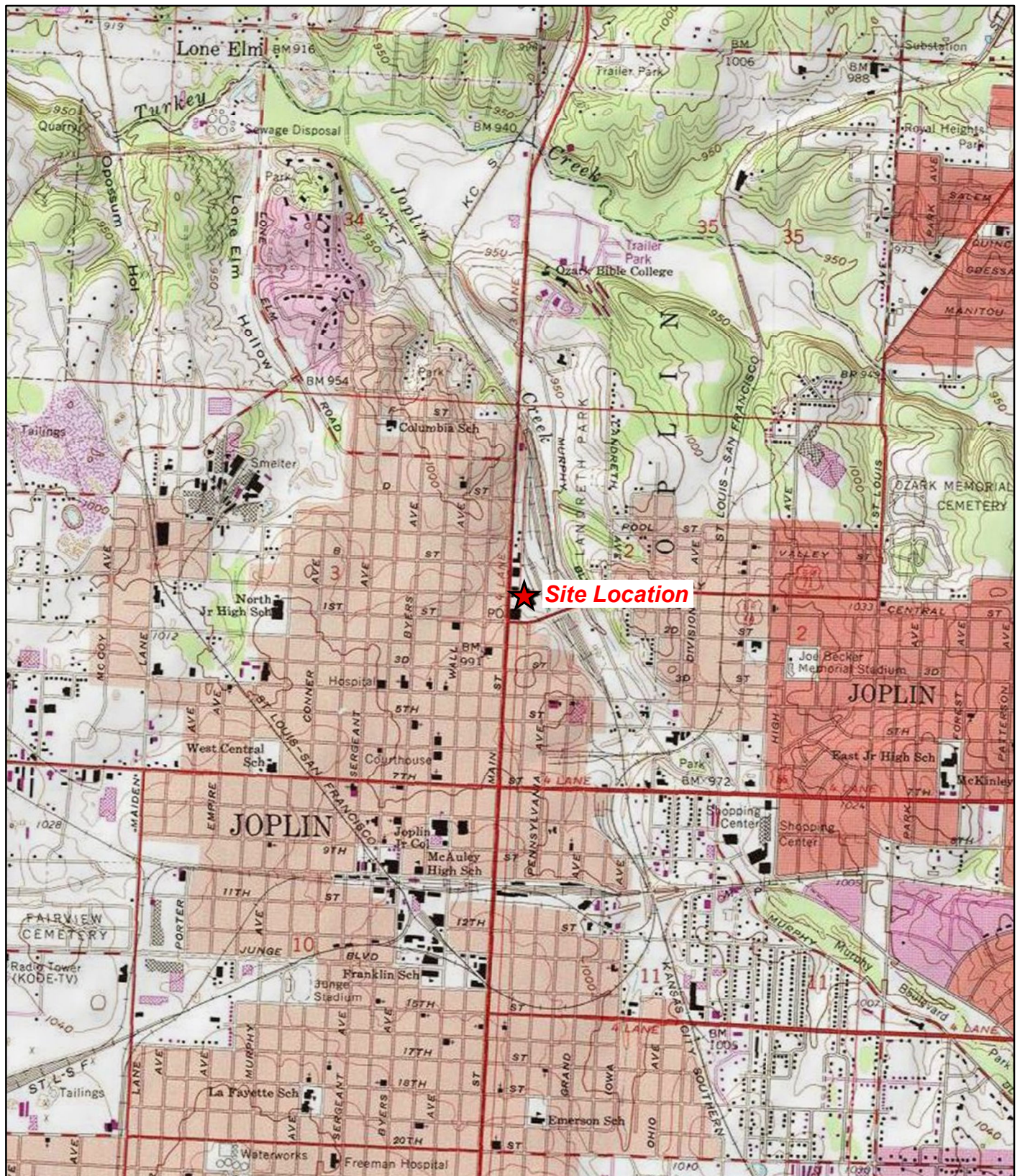
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APPENDIX A

FIGURES



Joplin Union Depot
205 N. Main Street, Joplin, Missouri

Figure 1
Site Location Map

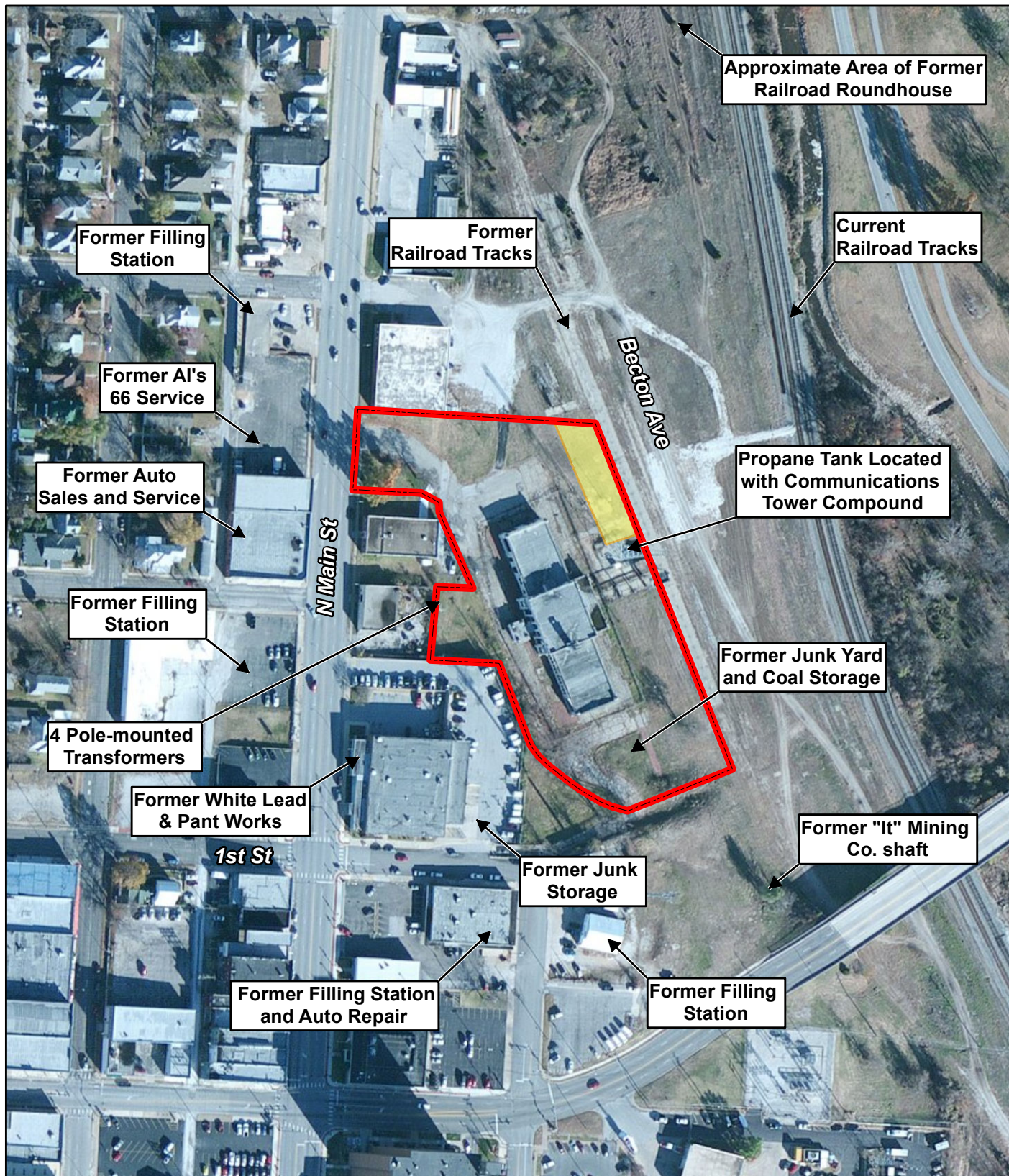


Source: USGS Joplin East, MO 7.5 Minute Topo Quad, 1979;
USGS Joplin West, MO 7.5 Minute Topo Quad, 1979

Date: 3/2/2023

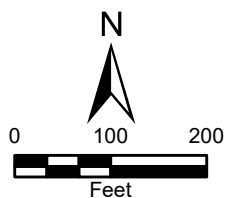
Drawn By: Susmita Shrestha

Project No: 103G65210190.1



Legend

- Approximate former railroad spur
- Approximate subject property boundary



Joplin Union Depot Site
205 North Main Street
Joplin, Jasper County, Missouri

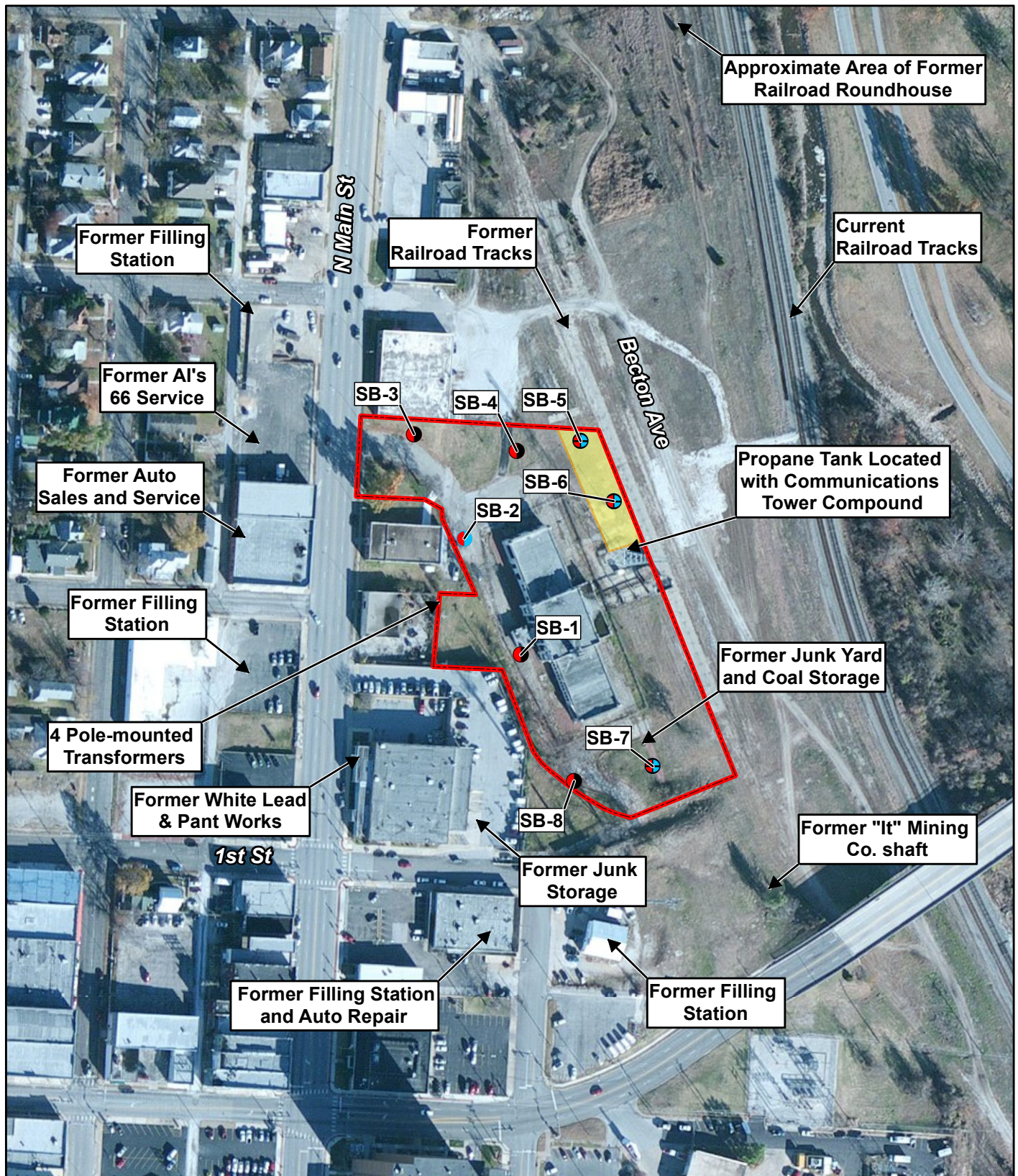
Figure 2
Site Layout Map



TETRA TECH

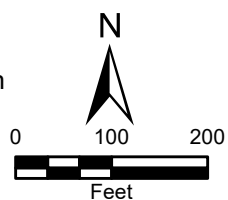


**TOEROEK
ASSOCIATES, INC.**



Legend

- Soil/groundwater sample location
- Soil/groundwater/soil-gas sample location
- Soil/soil gas sample location
- Approximate former railroad spur
- Approximate subject property boundary



Joplin Union Depot
205 N Main St, Joplin, MO

Figure 3
Sample Location Map



TETRA TECH



**TOEROEK
ASSOCIATES, INC.**

Date: 1/8/2024

Drawn By: Nick Wiederholt

Project No: 103265210190.19.01

APPENDIX B
PHOTOGRAPHIC DOCUMENTATION

**Phase II Environmental Site Assessment
Photographic Documentation
Joplin Union Depot – Joplin, Missouri**



SUBTASK NO. 19.03	DESCRIPTION	This photograph shows the subject property structure at 205 North Main Street.	1
	CLIENT	U.S. Environmental Protection Agency (EPA)	DATE: 10/11/23
DIRECTION: Southwest	PHOTOGRAPHER	Macy La Masney	



SUBTASK NO. 19.03	DESCRIPTION	This photograph shows the direct-push technology (DPT) rig at soil boring (SB)-1.	2
	CLIENT	EPA	DATE: 10/10/23
DIRECTION: North	PHOTOGRAPHER	Macy La Masney	

**Phase II Environmental Site Assessment
Photographic Documentation
Joplin Union Depot – Joplin, Missouri**



SUBTASK NO. 19.03	DESCRIPTION	This photograph shows the DPT rig at SB-2.	3
	CLIENT	EPA	
DIRECTION: East-southeast	PHOTOGRAPHER	Macy La Masney	DATE: 10/10/23



SUBTASK NO. 19.03	DESCRIPTION	This photograph shows the DPT rig at SB-3.	4
	CLIENT	EPA	
DIRECTION: West-northwest	PHOTOGRAPHER	Macy La Masney	DATE: 10/10/23

**Phase II Environmental Site Assessment
Photographic Documentation
Joplin Union Depot – Joplin, Missouri**



SUBTASK NO. 19.03	DESCRIPTION	This photograph shows the DPT rig at SB-4.	5
	CLIENT	EPA	DATE: 10/11/23
DIRECTION: Southeast	PHOTOGRAPHER	Macy La Masney	



SUBTASK NO. 19.03	DESCRIPTION	This photograph shows the DPT rig at SB-5.	6
	CLIENT	EPA	DATE: 10/11/23
DIRECTION: Southwest	PHOTOGRAPHER	Macy La Masney	

**Phase II Environmental Site Assessment
Photographic Documentation
Joplin Union Depot – Joplin, Missouri**



SUBTASK NO. 19.03	DESCRIPTION	This photograph shows the DPT rig at SB-6.	7
	CLIENT	EPA	DATE: 10/11/23
DIRECTION: West-southwest	PHOTOGRAPHER	Macy La Masney	



SUBTASK NO. 19.03	DESCRIPTION	This photograph shows the DPT rig at SB-7.	8
	CLIENT	EPA	DATE: 10/11/23
DIRECTION: North	PHOTOGRAPHER	Macy La Masney	

**Phase II Environmental Site Assessment
Photographic Documentation
Joplin Union Depot – Joplin, Missouri**



SUBTASK NO. 19.03	DESCRIPTION	This photograph shows the DPT rig at SB-8.	9
	CLIENT	EPA	DATE: 10/11/23
DIRECTION: North-northeast	PHOTOGRAPHER	Macy La Masney	

APPENDIX C

LOGBOOK AND SOIL BORING LOGS

10/10/23

Joplin Union Depot

weather: sunny, high of 77°

0845

TT member M. LaMasney leaving
KC office for the site.

1110

Arrive on site with Lori Hawn
go over sampling plan.
R. Nemack and Plains (driller)
arrive on site.

1150

Begin SG-1. coordinates:

37.0914789, -94.5122269

Refusal encountered at ~5.5 ft bgs

can: 12096 ID: SG-1

A12044 / 12096

start p: -29 end p: -5

start t: 1230

1240

Begin SB-1. Refusal at ~5.5 ft bgs.

1255

collected sample SB-1(0-3)

1300

collected sample SB-1(3.5-5.5)

NO PID readings at this location.

Groundwater not encountered.

1330

Begin SG-2 coordinates:

37.0919375, -94.5125173

Soil-gas sample SG-2 was
not collected due to shallow
groundwater.

1420 collected sample SB-2(0-3)

1430 collected sample SB-2(6-8) and

10/10/23

Joplin Union Depot

Sample SB-2(6-8) Dup.

Groundwater encountered at approximately
8 ft bgs. NO PID readings at
this location.

1455

collected sample GW-2 from
6-8 ft bgs and sample GW-2 Dup.

1520

Begin SG-3. coordinates:

37.0923496, -94.5127748

can: 10411 ID: SG-3

label 12188 / 10411

start p: -29 end p: -5

start t: 1530

1533

Begin SB-3.

1545

collected field blank FB-1

1555

collected sample SB-3(0-3)

Refusal encountered at approximately
10.5 ft bgs.

1600

collected sample SB-3(8.5-10.5)

Groundwater not encountered
at this location. NO PID readings
at this location.

1620

Leaving the site. no further work
today. end of day - Ice added
to sample coolersml 10/10/23
Rite in the Rain.

4 10/11/23

Joplin Union Depot.

0800 M. Lamasney, R. Mremaek, and
plains arrive onsite.

0820 Begin SG-4 coordinates:

37.0922889, -94.5122631

can: 10409 ID: SG-4
a3239

start p: -29 end p: -5

start t: 0830

0835 Begin SB-4.

0850 collected sample SB-4(0-3)

0855 collected sample SB-4(8.5-10.5)

No PID readings at this location.
Refusal encountered at ~10.5 ft bgs.
Groundwater not encountered
at this location.

0920 Begin SG-5 coordinates:

37.0923315, -94.5119473

can: 34000159 ID: SG-5
9629B

start p: -29 end p: -5

start t: 0935

water was drawn into the
tubing, the can was closed
but possible moisture is noted on
COC and the lab was contacted.

10/11/23

5

0850 begin SB-5.

1015 collected sample SB-5(0-3)

1020 collected sample SB-5(6-8)

~~1025~~ Refusal at 11.5 ft bgs.Groundwater encountered at
approximately 8 ft bgs. NO PID readings

1025 ml collected sample GW-5

1120 Begin SG-6. coordinates:

37.0920956, -94.5117770

can: 09988 ID: SG-6
1373

start p: -29 end p: -5

start t: 1130

1136 Begin SB-6.

1150 collected sample SB-6(0-3)

Groundwater encountered at
~8 ft bgs. NO PID readings.

1155 collected sample SB-6(6-8)

1200 collected sample GW-6

1205 collected sample FB-2

1228 Begin SG-7. coordinates:

37.0910432, -94.5115624

can: 11221 ID: SG-7

A10766/11221

start p: -29 end p: -5

start t: 1235

Rite in the Rain.

6 10/11/23 Joplin Union Depot

1242 Begin SB-7.

1300 collected sample SB-7(0-3)

1305 collected sample SB-7(6-8)

1310 collected sample GW-7.

Groundwater encountered at ~8 ft bgs.

NO PID readings at this location.

1402 Begin SG-8. coordinates:

37.0909796, -94.5119530

can: 12145 ID: SG-8

start p: -29 end p: -5

start t: 1410

1412 Begin SB-8

1425 collected sample SB-8(0-3)

encountered refusal at ~6.5 ft bgs

NO PID readings at this location.

1430 collected sample SB-8(4.5-6.5)

NO groundwater encountered at this location.

1440 collected sample EB-1

collected trip blanks 1 and 2

1500 Leaving the site. Getting ice for sample coolers, then going to KC office.

1750 Arrive at KC office. Packing coolers with fresh ice then taking them to Fedex.

10/11/23 Joplin Union Depot

1935 Samples (summas and coolers) dropped off at Fedex.

No further work today.

end of day.

ML 10/11/23

ML 10/11/23

Rite in the Rain.

Boring Log Form

Site Name: Joplin Union Depot Boring Number: SB-2

Date Drilled (Start/Finish): 10/10/23

Drilling Method: OPT

Drilling Company: plains

Elevation: _____ Total Depth: 8 ft 695

Total Depth: 8 ft 695

Coordinates: _____

Depth to Water: 8 ft bgs

Geologist: M. Lamasney

Project Number: _____ Weather: _____

Weather: _____

[illegible]

Boring Log Form

Site Name: Joplin Union Depot Boring Number: SB-3

Site Name: Joplin Union Depot Boring Number: SB-3

Date Drilled (Start/Finish): 10/10/23
Drilling Method: OPT

Date Drilled (Start/Finish): 10/10/23
Drilling Method: OPT

Drilling Company: Plains
Elevation: _____ Total Depth: 10.5 ft 10.5

Drilling Company: Plains
Elevation: _____ Total Depth: 10.5 ft 10.5

Drilling Company: Plains
Elevation: _____ Total Depth: 10.5 ft 10.5

Coordinates: _____

Coordinates: _____

Depth to Water: 1 Geologist: M. La Messner
Project Number: _____ Weather: _____

Depth to Water: 1 Geologist: M. La Messner
Project Number: _____ Weather: _____

Sample Interval	Interval	Soil Recv.	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Lithology	Graphic Log	Description and Remarks
			0	5				Brown and red soft clay with gravel/rocks
			0					Limestone layer at approximately 3 ft bgs
			0	10				hard, red and brown clay
								↓
								Refusal at 10.5 ft bgs

Boring Log Form

Site Name: Joplin Union Depot Boring Number: SB-4

Date Drilled (Start/Finish): 10/11/23
Drilling Method: DPT

Drilling Company: plains

Elevation: _____ Total Depth: 10.5 ft bgs

Coordinates: _____

Depth to Water: — Geologist: M. La Marney
Project Number: _____ Weather: _____

[illegible]

Sample Interval	Recd Interval	Reading or pressure	Depth (feet)	Color	Log	Graphic Log	Description and Remarks
-----------------	---------------	---------------------	--------------	-------	-----	-------------	-------------------------

Soil	PID F	D	(Munsell or Rock)	Litho	Gr:
Int					
Int					
Soil					

[illegible]

Boring Log Form

Site Name: Toptin Union Depot Boring Number: SB-5

Date Drilled (Start/Finish): 10/11/23

Drilling Method: DPT

Drilling Company: Plains

Elevation: _____ Total Depth: 11.5 ft bas

Elevation: _____ Total Depth: 11.5 ft bgs

Coordinates:

Depth to Water: 8 ft bgs Geologist: M. LaMasney

Depth to Water: 8 ft bgs Geologist: M. LaMasney

Project Number: _____ Weather: _____

Project Number: _____ Weather: _____

Sample Interval	Interval	Soil Recv.	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Lithology	Graphic Log	Description and Remarks
			0	5				Dark brown/black soil with fine grained sand and small rocks/gravel (chat?)
			0	8				Red and grey silty clay, soft. some brick fragments.
			0	11.5				Dark brown soft silty clay
								Groundwater encountered at approximately 8 ft bgs
								Refusal at ~ 11.5 ft bgs

Boring Log Form

Site Name: Joplin Union Depot Boring Number: SB-6

Date Drilled (Start/Finish): 10/11/23

Drilling Method: DPT

Drilling Company: Plains

Elevation: _____ Total Depth: 12 ft 695

Elevation: _____ Total Depth: 12 ft 695

Coordinates: _____

Depth to Water: 8 ft bgs Geologist: M. La Masney

Depth to Water: 8 ft bgs Geologist: M. La Masney

Project Number: _____ **Weather:** _____

Project Number: _____ **Weather:** _____

[illegible]

Boring Log Form	
Site Name: <u>Joplin Union Depot</u>	Boring Number: <u>SB-7</u>
Date Drilled (Start/Finish): <u>10/11/23</u>	
Drilling Method: <u>DPT</u>	
Drilling Company: <u>Plains</u>	
Elevation: _____	Total Depth: <u>8 ft bgs</u>
Coordinates: _____	
Depth to Water: <u>8 ft bgs</u>	Geologist: <u>M. Lamasney</u>
Project Number: _____	Weather: _____

[illegible]

Boring Log Form

Site Name: Joplin Union Depot Boring Number: SB-8

Site Name: Joplin Union Depot Boring Number: SB-8

Date Drilled (Start/Finish): 10/11/23

Drilling Method: DPT

Drilling Company: Plains

Elevation: _____ Total Depth: 6.5 ft bag

Elevation: _____ Total Depth: 6.5 ft bgs

Coordinates:

Depth to Water: — Geologist: M. La Marsen

Depth to Water: — Geologist: M. La Marney

Project Number: _____ Weather: _____

Project Number: _____ Weather: _____

Sample Interval	Interval	Soil Recv.	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Lithology	Graphic Log	Description and Remarks
			0					Back to hard red clay with rocks/gravel (chat?) ↓ Refusal at ~6.5 ft bgs

APPENDIX D

ANALYTICAL DATA PACKAGES AND DATA VALIDATION REPORTS

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Emily Fisher
Tetra Tech EM Inc.
415 Oak Street
Kansas City, Missouri 64106

Generated 10/19/2023 12:18:00 PM

JOB DESCRIPTION

Joplin MO Union Depot Site

JOB NUMBER

310-267019-1

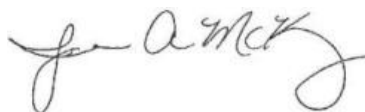
Eurofins Cedar Falls

Job Notes

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Authorization



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Authorized for release by
Jamie McKinney, Senior Project Manager
Jamie.McKinney@et.eurofinsus.com
(865)291-3000

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Case Narrative

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Job ID: 310-267019-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-267019-1

Receipt

The samples were received on 10/12/2023 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. COC list canister asset number as 3400019, should be 34000159.

Air - GC/MS VOA

Methods TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by Eurofins TestAmerica Knoxville.

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

Sample Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-267019-1	SG-1	Air	10/10/23 12:30	10/12/23 09:45	Air Canister (6-Liter) #12096
310-267019-2	SG-3	Air	10/10/23 15:30	10/12/23 09:45	Air Canister (6-Liter) #10411
310-267019-3	SG-4	Air	10/11/23 08:30	10/12/23 09:45	Air Canister (6-Liter) #10404
310-267019-4	SG-5	Air	10/11/23 09:35	10/12/23 09:45	Air Canister (6-Liter) #34000159
310-267019-5	SG-6	Air	10/11/23 11:30	10/12/23 09:45	Air Canister (6-Liter) #09988
310-267019-6	SG-7	Air	10/11/23 12:35	10/12/23 09:45	Air Canister (6-Liter) #11221
310-267019-7	SG-8	Air	10/11/23 14:10	10/12/23 09:45	Air Canister (6-Liter) #12145

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-1

Lab Sample ID: 310-267019-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	2.60		0.983		ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	24.8		2.95		ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	10.9	CI	4.10		ug/m3	1		TO-15	Total/NA
Acetone	182	CI	17.8		ug/m3	1		TO-15	Total/NA
Benzene	55.8		0.639		ug/m3	1		TO-15	Total/NA
Carbon disulfide	29.7		1.56		ug/m3	1		TO-15	Total/NA
Cyclohexane	33.4		1.72		ug/m3	1		TO-15	Total/NA
Ethylbenzene	3.52		0.868		ug/m3	1		TO-15	Total/NA
Hexane	74.7		2.82		ug/m3	1		TO-15	Total/NA
m-Xylene & p-Xylene	8.77		3.47		ug/m3	1		TO-15	Total/NA
o-Xylene	4.04		0.868		ug/m3	1		TO-15	Total/NA
Styrene	1.84		0.852		ug/m3	1		TO-15	Total/NA
Toluene	33.4		3.77		ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	1.15		1.12		ug/m3	1		TO-15	Total/NA

Client Sample ID: SG-3

Lab Sample ID: 310-267019-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	1.22		0.983		ug/m3	1.33		TO-15	Total/NA
2-Butanone (MEK)	21.4		2.95		ug/m3	1.33		TO-15	Total/NA
Acetone	53.2		17.8		ug/m3	1.33		TO-15	Total/NA
Benzene	7.49		0.639		ug/m3	1.33		TO-15	Total/NA
Carbon disulfide	2.98		1.56		ug/m3	1.33		TO-15	Total/NA
Cyclohexane	9.77		1.72		ug/m3	1.33		TO-15	Total/NA
Ethylbenzene	1.28		0.868		ug/m3	1.33		TO-15	Total/NA
Hexane	18.7		2.82		ug/m3	1.33		TO-15	Total/NA
o-Xylene	1.27		0.868		ug/m3	1.33		TO-15	Total/NA
Styrene	1.46		0.852		ug/m3	1.33		TO-15	Total/NA
Toluene	7.00		3.77		ug/m3	1.33		TO-15	Total/NA
Trichlorofluoromethane	1.20		1.12		ug/m3	1.33		TO-15	Total/NA

Client Sample ID: SG-4

Lab Sample ID: 310-267019-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	1.21		0.983		ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	36.3		2.95		ug/m3	1		TO-15	Total/NA
Acetone	165	CI	17.8		ug/m3	1		TO-15	Total/NA
Benzene	22.7		0.639		ug/m3	1		TO-15	Total/NA
Carbon disulfide	15.9		1.56		ug/m3	1		TO-15	Total/NA
Cyclohexane	9.18		1.72		ug/m3	1		TO-15	Total/NA
Ethylbenzene	1.77		0.868		ug/m3	1		TO-15	Total/NA
Hexane	11.3		2.82		ug/m3	1		TO-15	Total/NA
Methylene Chloride	5.54		3.47		ug/m3	1		TO-15	Total/NA
o-Xylene	1.63		0.868		ug/m3	1		TO-15	Total/NA
Styrene	1.06		0.852		ug/m3	1		TO-15	Total/NA
Toluene	15.3		3.77		ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	1.30		1.12		ug/m3	1		TO-15	Total/NA

Client Sample ID: SG-5

Lab Sample ID: 310-267019-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	1.34		0.983		ug/m3	1.32		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-5 (Continued)

Lab Sample ID: 310-267019-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	13.7		2.95		ug/m3	1.32		TO-15	Total/NA
Acetone	54.0		17.8		ug/m3	1.32		TO-15	Total/NA
Benzene	1.60		0.639		ug/m3	1.32		TO-15	Total/NA
Carbon disulfide	3.87		1.56		ug/m3	1.32		TO-15	Total/NA
Cyclohexane	4.14		1.72		ug/m3	1.32		TO-15	Total/NA
o-Xylene	1.43		0.868		ug/m3	1.32		TO-15	Total/NA
Trichlorofluoromethane	2.16		1.12		ug/m3	1.32		TO-15	Total/NA

Client Sample ID: SG-6

Lab Sample ID: 310-267019-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	14.4		2.95		ug/m3	1		TO-15	Total/NA
Acetone	60.5		17.8		ug/m3	1		TO-15	Total/NA
Benzene	1.55		0.639		ug/m3	1		TO-15	Total/NA
Carbon disulfide	5.25		1.56		ug/m3	1		TO-15	Total/NA
Chloroform	1.57		0.977		ug/m3	1		TO-15	Total/NA
Chloromethane	2.60		2.07		ug/m3	1		TO-15	Total/NA
Cyclohexane	12.1		1.72		ug/m3	1		TO-15	Total/NA
Hexane	3.82		2.82		ug/m3	1		TO-15	Total/NA
o-Xylene	0.892		0.868		ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	52.9		1.12		ug/m3	1		TO-15	Total/NA

Client Sample ID: SG-7

Lab Sample ID: 310-267019-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	26.3		2.95		ug/m3	1		TO-15	Total/NA
Acetone	143	CI	17.8		ug/m3	1		TO-15	Total/NA
Benzene	3.30		0.639		ug/m3	1		TO-15	Total/NA
Carbon disulfide	2.37		1.56		ug/m3	1		TO-15	Total/NA
Chloroform	1.33		0.977		ug/m3	1		TO-15	Total/NA
Cyclohexane	2.30		1.72		ug/m3	1		TO-15	Total/NA
Toluene	3.83		3.77		ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	1.33		1.12		ug/m3	1		TO-15	Total/NA

Client Sample ID: SG-8

Lab Sample ID: 310-267019-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	8.15		2.95		ug/m3	1.39		TO-15	Total/NA
Acetone	37.7	CI	17.8		ug/m3	1.39		TO-15	Total/NA
Benzene	1.51		0.639		ug/m3	1.39		TO-15	Total/NA
Carbon disulfide	3.20		1.56		ug/m3	1.39		TO-15	Total/NA
Trichlorofluoromethane	1.13		1.12		ug/m3	1.39		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-1

Lab Sample ID: 310-267019-1

Date Collected: 10/10/23 12:30

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 18:19	1
1,1,2,2-Tetrachloroethane	<1.37		1.37		ug/m3			10/16/23 18:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.53		1.53		ug/m3			10/16/23 18:19	1
1,1,2-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 18:19	1
1,1-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 18:19	1
1,1-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 18:19	1
1,2,4-Trichlorobenzene	<14.8		14.8		ug/m3			10/16/23 18:19	1
1,2,4-Trimethylbenzene	2.60		0.983		ug/m3			10/16/23 18:19	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<1.40		1.40		ug/m3			10/16/23 18:19	1
1,2-Dichlorobenzene	<2.40		2.40		ug/m3			10/16/23 18:19	1
1,2-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 18:19	1
1,2-Dichloropropane	<0.924		0.924		ug/m3			10/16/23 18:19	1
1,3,5-Trimethylbenzene	<1.97		1.97		ug/m3			10/16/23 18:19	1
1,3-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 18:19	1
1,4-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 18:19	1
1,4-Dioxane	<18.0		18.0		ug/m3			10/16/23 18:19	1
2-Butanone (MEK)	24.8		2.95		ug/m3			10/16/23 18:19	1
4-Methyl-2-pentanone (MIBK)	10.9	CI	4.10		ug/m3			10/16/23 18:19	1
Acetone	182	CI	17.8		ug/m3			10/16/23 18:19	1
Benzene	55.8		0.639		ug/m3			10/16/23 18:19	1
Benzyl chloride	<4.14		4.14		ug/m3			10/16/23 18:19	1
Bromoform	<2.07		2.07		ug/m3			10/16/23 18:19	1
Bromomethane	<0.777		0.777		ug/m3			10/16/23 18:19	1
Carbon disulfide	29.7		1.56		ug/m3			10/16/23 18:19	1
Carbon tetrachloride	<1.26		1.26		ug/m3			10/16/23 18:19	1
Chlorobenzene	<0.921		0.921		ug/m3			10/16/23 18:19	1
Dibromochloromethane	<1.70		1.70		ug/m3			10/16/23 18:19	1
Chloroethane	<2.11		2.11		ug/m3			10/16/23 18:19	1
Chloroform	<0.977		0.977		ug/m3			10/16/23 18:19	1
Chloromethane	<2.07		2.07		ug/m3			10/16/23 18:19	1
cis-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 18:19	1
cis-1,3-Dichloropropene	<1.82		1.82		ug/m3			10/16/23 18:19	1
Cyclohexane	33.4		1.72		ug/m3			10/16/23 18:19	1
Bromodichloromethane	<1.34		1.34		ug/m3			10/16/23 18:19	1
Dichlorodifluoromethane	<2.47		2.47		ug/m3			10/16/23 18:19	1
Ethylbenzene	3.52		0.868		ug/m3			10/16/23 18:19	1
1,2-Dibromoethane (EDB)	<1.54		1.54		ug/m3			10/16/23 18:19	1
Hexachlorobutadiene	<10.7		10.7		ug/m3			10/16/23 18:19	1
Hexane	74.7		2.82		ug/m3			10/16/23 18:19	1
Isopropyl alcohol	<12.3		12.3		ug/m3			10/16/23 18:19	1
Isopropylbenzene	<3.93		3.93		ug/m3			10/16/23 18:19	1
m-Xylene & p-Xylene	8.77		3.47		ug/m3			10/16/23 18:19	1
Methyl tert-butyl ether	<3.61		3.61		ug/m3			10/16/23 18:19	1
Methylene Chloride	<3.47		3.47		ug/m3			10/16/23 18:19	1
Naphthalene	<2.62		2.62		ug/m3			10/16/23 18:19	1
o-Xylene	4.04		0.868		ug/m3			10/16/23 18:19	1
Styrene	1.84		0.852		ug/m3			10/16/23 18:19	1
Tetrachloroethene	<1.36		1.36		ug/m3			10/16/23 18:19	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-1

Lab Sample ID: 310-267019-1

Date Collected: 10/10/23 12:30

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<14.7		14.7		ug/m3			10/16/23 18:19	1
Toluene	33.4		3.77		ug/m3			10/16/23 18:19	1
trans-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 18:19	1
trans-1,3-Dichloropropene	<0.908		0.908		ug/m3			10/16/23 18:19	1
Trichloroethene	<1.07		1.07		ug/m3			10/16/23 18:19	1
Trichlorofluoromethane	1.15		1.12		ug/m3			10/16/23 18:19	1
Vinyl acetate	<17.6		17.6		ug/m3			10/16/23 18:19	1
Vinyl bromide	<0.875		0.875		ug/m3			10/16/23 18:19	1
Vinyl chloride	<1.02		1.02		ug/m3			10/16/23 18:19	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-3

Lab Sample ID: 310-267019-2

Date Collected: 10/10/23 15:30

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 19:09	1.33
1,1,2,2-Tetrachloroethane	<1.37		1.37		ug/m3			10/16/23 19:09	1.33
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.53		1.53		ug/m3			10/16/23 19:09	1.33
1,1,2-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 19:09	1.33
1,1-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 19:09	1.33
1,1-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 19:09	1.33
1,2,4-Trichlorobenzene	<14.8		14.8		ug/m3			10/16/23 19:09	1.33
1,2,4-Trimethylbenzene	1.22		0.983		ug/m3			10/16/23 19:09	1.33
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<1.40		1.40		ug/m3			10/16/23 19:09	1.33
1,2-Dichlorobenzene	<2.40		2.40		ug/m3			10/16/23 19:09	1.33
1,2-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 19:09	1.33
1,2-Dichloropropane	<0.924		0.924		ug/m3			10/16/23 19:09	1.33
1,3,5-Trimethylbenzene	<1.97		1.97		ug/m3			10/16/23 19:09	1.33
1,3-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 19:09	1.33
1,4-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 19:09	1.33
1,4-Dioxane	<18.0		18.0		ug/m3			10/16/23 19:09	1.33
2-Butanone (MEK)	21.4		2.95		ug/m3			10/16/23 19:09	1.33
4-Methyl-2-pentanone (MIBK)	<4.10		4.10		ug/m3			10/16/23 19:09	1.33
Acetone	53.2		17.8		ug/m3			10/16/23 19:09	1.33
Benzene	7.49		0.639		ug/m3			10/16/23 19:09	1.33
Benzyl chloride	<4.14		4.14		ug/m3			10/16/23 19:09	1.33
Bromoform	<2.07		2.07		ug/m3			10/16/23 19:09	1.33
Bromomethane	<0.777		0.777		ug/m3			10/16/23 19:09	1.33
Carbon disulfide	2.98		1.56		ug/m3			10/16/23 19:09	1.33
Carbon tetrachloride	<1.26		1.26		ug/m3			10/16/23 19:09	1.33
Chlorobenzene	<0.921		0.921		ug/m3			10/16/23 19:09	1.33
Dibromochloromethane	<1.70		1.70		ug/m3			10/16/23 19:09	1.33
Chloroethane	<2.11		2.11		ug/m3			10/16/23 19:09	1.33
Chloroform	<0.977		0.977		ug/m3			10/16/23 19:09	1.33
Chloromethane	<2.07		2.07		ug/m3			10/16/23 19:09	1.33
cis-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 19:09	1.33
cis-1,3-Dichloropropene	<1.82		1.82		ug/m3			10/16/23 19:09	1.33
Cyclohexane	9.77		1.72		ug/m3			10/16/23 19:09	1.33
Bromodichloromethane	<1.34		1.34		ug/m3			10/16/23 19:09	1.33
Dichlorodifluoromethane	<2.47		2.47		ug/m3			10/16/23 19:09	1.33
Ethylbenzene	1.28		0.868		ug/m3			10/16/23 19:09	1.33
1,2-Dibromoethane (EDB)	<1.54		1.54		ug/m3			10/16/23 19:09	1.33
Hexachlorobutadiene	<10.7		10.7		ug/m3			10/16/23 19:09	1.33
Hexane	18.7		2.82		ug/m3			10/16/23 19:09	1.33
Isopropyl alcohol	<12.3		12.3		ug/m3			10/16/23 19:09	1.33
Isopropylbenzene	<3.93		3.93		ug/m3			10/16/23 19:09	1.33
m-Xylene & p-Xylene	<3.47		3.47		ug/m3			10/16/23 19:09	1.33
Methyl tert-butyl ether	<3.61		3.61		ug/m3			10/16/23 19:09	1.33
Methylene Chloride	<3.47		3.47		ug/m3			10/16/23 19:09	1.33
Naphthalene	<2.62		2.62		ug/m3			10/16/23 19:09	1.33
o-Xylene	1.27		0.868		ug/m3			10/16/23 19:09	1.33
Styrene	1.46		0.852		ug/m3			10/16/23 19:09	1.33
Tetrachloroethene	<1.36		1.36		ug/m3			10/16/23 19:09	1.33

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-3

Lab Sample ID: 310-267019-2

Date Collected: 10/10/23 15:30

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<14.7		14.7		ug/m3			10/16/23 19:09	1.33
Toluene	7.00		3.77		ug/m3			10/16/23 19:09	1.33
trans-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 19:09	1.33
trans-1,3-Dichloropropene	<0.908		0.908		ug/m3			10/16/23 19:09	1.33
Trichloroethene	<1.07		1.07		ug/m3			10/16/23 19:09	1.33
Trichlorofluoromethane	1.20		1.12		ug/m3			10/16/23 19:09	1.33
Vinyl acetate	<17.6		17.6		ug/m3			10/16/23 19:09	1.33
Vinyl bromide	<0.875		0.875		ug/m3			10/16/23 19:09	1.33
Vinyl chloride	<1.02		1.02		ug/m3			10/16/23 19:09	1.33

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-4

Lab Sample ID: 310-267019-3

Date Collected: 10/11/23 08:30

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 19:58	1
1,1,2,2-Tetrachloroethane	<1.37		1.37		ug/m3			10/16/23 19:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.53		1.53		ug/m3			10/16/23 19:58	1
1,1,2-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 19:58	1
1,1-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 19:58	1
1,1-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 19:58	1
1,2,4-Trichlorobenzene	<14.8		14.8		ug/m3			10/16/23 19:58	1
1,2,4-Trimethylbenzene	1.21		0.983		ug/m3			10/16/23 19:58	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<1.40		1.40		ug/m3			10/16/23 19:58	1
1,2-Dichlorobenzene	<2.40		2.40		ug/m3			10/16/23 19:58	1
1,2-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 19:58	1
1,2-Dichloropropane	<0.924		0.924		ug/m3			10/16/23 19:58	1
1,3,5-Trimethylbenzene	<1.97		1.97		ug/m3			10/16/23 19:58	1
1,3-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 19:58	1
1,4-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 19:58	1
1,4-Dioxane	<18.0		18.0		ug/m3			10/16/23 19:58	1
2-Butanone (MEK)	36.3		2.95		ug/m3			10/16/23 19:58	1
4-Methyl-2-pentanone (MIBK)	<4.10		4.10		ug/m3			10/16/23 19:58	1
Acetone	165	CI	17.8		ug/m3			10/16/23 19:58	1
Benzene	22.7		0.639		ug/m3			10/16/23 19:58	1
Benzyl chloride	<4.14		4.14		ug/m3			10/16/23 19:58	1
Bromoform	<2.07		2.07		ug/m3			10/16/23 19:58	1
Bromomethane	<0.777		0.777		ug/m3			10/16/23 19:58	1
Carbon disulfide	15.9		1.56		ug/m3			10/16/23 19:58	1
Carbon tetrachloride	<1.26		1.26		ug/m3			10/16/23 19:58	1
Chlorobenzene	<0.921		0.921		ug/m3			10/16/23 19:58	1
Dibromochloromethane	<1.70		1.70		ug/m3			10/16/23 19:58	1
Chloroethane	<2.11		2.11		ug/m3			10/16/23 19:58	1
Chloroform	<0.977		0.977		ug/m3			10/16/23 19:58	1
Chloromethane	<2.07		2.07		ug/m3			10/16/23 19:58	1
cis-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 19:58	1
cis-1,3-Dichloropropene	<1.82		1.82		ug/m3			10/16/23 19:58	1
Cyclohexane	9.18		1.72		ug/m3			10/16/23 19:58	1
Bromodichloromethane	<1.34		1.34		ug/m3			10/16/23 19:58	1
Dichlorodifluoromethane	<2.47		2.47		ug/m3			10/16/23 19:58	1
Ethylbenzene	1.77		0.868		ug/m3			10/16/23 19:58	1
1,2-Dibromoethane (EDB)	<1.54		1.54		ug/m3			10/16/23 19:58	1
Hexachlorobutadiene	<10.7		10.7		ug/m3			10/16/23 19:58	1
Hexane	11.3		2.82		ug/m3			10/16/23 19:58	1
Isopropyl alcohol	<12.3		12.3		ug/m3			10/16/23 19:58	1
Isopropylbenzene	<3.93		3.93		ug/m3			10/16/23 19:58	1
m-Xylene & p-Xylene	<3.47		3.47		ug/m3			10/16/23 19:58	1
Methyl tert-butyl ether	<3.61		3.61		ug/m3			10/16/23 19:58	1
Methylene Chloride	5.54		3.47		ug/m3			10/16/23 19:58	1
Naphthalene	<2.62		2.62		ug/m3			10/16/23 19:58	1
o-Xylene	1.63		0.868		ug/m3			10/16/23 19:58	1
Styrene	1.06		0.852		ug/m3			10/16/23 19:58	1
Tetrachloroethene	<1.36		1.36		ug/m3			10/16/23 19:58	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-4

Lab Sample ID: 310-267019-3

Date Collected: 10/11/23 08:30

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<14.7		14.7		ug/m3			10/16/23 19:58	1
Toluene	15.3		3.77		ug/m3			10/16/23 19:58	1
trans-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 19:58	1
trans-1,3-Dichloropropene	<0.908		0.908		ug/m3			10/16/23 19:58	1
Trichloroethene	<1.07		1.07		ug/m3			10/16/23 19:58	1
Trichlorofluoromethane	1.30		1.12		ug/m3			10/16/23 19:58	1
Vinyl acetate	<17.6		17.6		ug/m3			10/16/23 19:58	1
Vinyl bromide	<0.875		0.875		ug/m3			10/16/23 19:58	1
Vinyl chloride	<1.02		1.02		ug/m3			10/16/23 19:58	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-5

Lab Sample ID: 310-267019-4

Date Collected: 10/11/23 09:35

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 20:47	1.32
1,1,2,2-Tetrachloroethane	<1.37		1.37		ug/m3			10/16/23 20:47	1.32
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.53		1.53		ug/m3			10/16/23 20:47	1.32
1,1,2-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 20:47	1.32
1,1-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 20:47	1.32
1,1-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 20:47	1.32
1,2,4-Trichlorobenzene	<14.8		14.8		ug/m3			10/16/23 20:47	1.32
1,2,4-Trimethylbenzene	1.34		0.983		ug/m3			10/16/23 20:47	1.32
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<1.40		1.40		ug/m3			10/16/23 20:47	1.32
1,2-Dichlorobenzene	<2.40		2.40		ug/m3			10/16/23 20:47	1.32
1,2-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 20:47	1.32
1,2-Dichloropropane	<0.924		0.924		ug/m3			10/16/23 20:47	1.32
1,3,5-Trimethylbenzene	<1.97		1.97		ug/m3			10/16/23 20:47	1.32
1,3-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 20:47	1.32
1,4-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 20:47	1.32
1,4-Dioxane	<18.0		18.0		ug/m3			10/16/23 20:47	1.32
2-Butanone (MEK)	13.7		2.95		ug/m3			10/16/23 20:47	1.32
4-Methyl-2-pentanone (MIBK)	<4.10		4.10		ug/m3			10/16/23 20:47	1.32
Acetone	54.0		17.8		ug/m3			10/16/23 20:47	1.32
Benzene	1.60		0.639		ug/m3			10/16/23 20:47	1.32
Benzyl chloride	<4.14		4.14		ug/m3			10/16/23 20:47	1.32
Bromoform	<2.07		2.07		ug/m3			10/16/23 20:47	1.32
Bromomethane	<0.777		0.777		ug/m3			10/16/23 20:47	1.32
Carbon disulfide	3.87		1.56		ug/m3			10/16/23 20:47	1.32
Carbon tetrachloride	<1.26		1.26		ug/m3			10/16/23 20:47	1.32
Chlorobenzene	<0.921		0.921		ug/m3			10/16/23 20:47	1.32
Dibromochloromethane	<1.70		1.70		ug/m3			10/16/23 20:47	1.32
Chloroethane	<2.11		2.11		ug/m3			10/16/23 20:47	1.32
Chloroform	<0.977		0.977		ug/m3			10/16/23 20:47	1.32
Chloromethane	<2.07		2.07		ug/m3			10/16/23 20:47	1.32
cis-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 20:47	1.32
cis-1,3-Dichloropropene	<1.82		1.82		ug/m3			10/16/23 20:47	1.32
Cyclohexane	4.14		1.72		ug/m3			10/16/23 20:47	1.32
Bromodichloromethane	<1.34		1.34		ug/m3			10/16/23 20:47	1.32
Dichlorodifluoromethane	<2.47		2.47		ug/m3			10/16/23 20:47	1.32
Ethylbenzene	<0.868		0.868		ug/m3			10/16/23 20:47	1.32
1,2-Dibromoethane (EDB)	<1.54		1.54		ug/m3			10/16/23 20:47	1.32
Hexachlorobutadiene	<10.7		10.7		ug/m3			10/16/23 20:47	1.32
Hexane	<2.82		2.82		ug/m3			10/16/23 20:47	1.32
Isopropyl alcohol	<12.3		12.3		ug/m3			10/16/23 20:47	1.32
Isopropylbenzene	<3.93		3.93		ug/m3			10/16/23 20:47	1.32
m-Xylene & p-Xylene	<3.47		3.47		ug/m3			10/16/23 20:47	1.32
Methyl tert-butyl ether	<3.61		3.61		ug/m3			10/16/23 20:47	1.32
Methylene Chloride	<3.47		3.47		ug/m3			10/16/23 20:47	1.32
Naphthalene	<2.62		2.62		ug/m3			10/16/23 20:47	1.32
o-Xylene	1.43		0.868		ug/m3			10/16/23 20:47	1.32
Styrene	<0.852		0.852		ug/m3			10/16/23 20:47	1.32
Tetrachloroethene	<1.36		1.36		ug/m3			10/16/23 20:47	1.32

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-5

Lab Sample ID: 310-267019-4

Date Collected: 10/11/23 09:35

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<14.7		14.7		ug/m3			10/16/23 20:47	1.32
Toluene	<3.77		3.77		ug/m3			10/16/23 20:47	1.32
trans-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 20:47	1.32
trans-1,3-Dichloropropene	<0.908		0.908		ug/m3			10/16/23 20:47	1.32
Trichloroethene	<1.07		1.07		ug/m3			10/16/23 20:47	1.32
Trichlorofluoromethane	2.16		1.12		ug/m3			10/16/23 20:47	1.32
Vinyl acetate	<17.6		17.6		ug/m3			10/16/23 20:47	1.32
Vinyl bromide	<0.875		0.875		ug/m3			10/16/23 20:47	1.32
Vinyl chloride	<1.02		1.02		ug/m3			10/16/23 20:47	1.32

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-6

Lab Sample ID: 310-267019-5

Date Collected: 10/11/23 11:30

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 21:35	1
1,1,2,2-Tetrachloroethane	<1.37		1.37		ug/m3			10/16/23 21:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.53		1.53		ug/m3			10/16/23 21:35	1
1,1,2-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 21:35	1
1,1-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 21:35	1
1,1-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 21:35	1
1,2,4-Trichlorobenzene	<14.8		14.8		ug/m3			10/16/23 21:35	1
1,2,4-Trimethylbenzene	<0.983		0.983		ug/m3			10/16/23 21:35	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<1.40		1.40		ug/m3			10/16/23 21:35	1
1,2-Dichlorobenzene	<2.40		2.40		ug/m3			10/16/23 21:35	1
1,2-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 21:35	1
1,2-Dichloropropane	<0.924		0.924		ug/m3			10/16/23 21:35	1
1,3,5-Trimethylbenzene	<1.97		1.97		ug/m3			10/16/23 21:35	1
1,3-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 21:35	1
1,4-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 21:35	1
1,4-Dioxane	<18.0		18.0		ug/m3			10/16/23 21:35	1
2-Butanone (MEK)	14.4		2.95		ug/m3			10/16/23 21:35	1
4-Methyl-2-pentanone (MIBK)	<4.10		4.10		ug/m3			10/16/23 21:35	1
Acetone	60.5		17.8		ug/m3			10/16/23 21:35	1
Benzene	1.55		0.639		ug/m3			10/16/23 21:35	1
Benzyl chloride	<4.14		4.14		ug/m3			10/16/23 21:35	1
Bromoform	<2.07		2.07		ug/m3			10/16/23 21:35	1
Bromomethane	<0.777		0.777		ug/m3			10/16/23 21:35	1
Carbon disulfide	5.25		1.56		ug/m3			10/16/23 21:35	1
Carbon tetrachloride	<1.26		1.26		ug/m3			10/16/23 21:35	1
Chlorobenzene	<0.921		0.921		ug/m3			10/16/23 21:35	1
Dibromochloromethane	<1.70		1.70		ug/m3			10/16/23 21:35	1
Chloroethane	<2.11		2.11		ug/m3			10/16/23 21:35	1
Chloroform	1.57		0.977		ug/m3			10/16/23 21:35	1
Chloromethane	2.60		2.07		ug/m3			10/16/23 21:35	1
cis-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 21:35	1
cis-1,3-Dichloropropene	<1.82		1.82		ug/m3			10/16/23 21:35	1
Cyclohexane	12.1		1.72		ug/m3			10/16/23 21:35	1
Bromodichloromethane	<1.34		1.34		ug/m3			10/16/23 21:35	1
Dichlorodifluoromethane	<2.47		2.47		ug/m3			10/16/23 21:35	1
Ethylbenzene	<0.868		0.868		ug/m3			10/16/23 21:35	1
1,2-Dibromoethane (EDB)	<1.54		1.54		ug/m3			10/16/23 21:35	1
Hexachlorobutadiene	<10.7		10.7		ug/m3			10/16/23 21:35	1
Hexane	3.82		2.82		ug/m3			10/16/23 21:35	1
Isopropyl alcohol	<12.3		12.3		ug/m3			10/16/23 21:35	1
Isopropylbenzene	<3.93		3.93		ug/m3			10/16/23 21:35	1
m-Xylene & p-Xylene	<3.47		3.47		ug/m3			10/16/23 21:35	1
Methyl tert-butyl ether	<3.61		3.61		ug/m3			10/16/23 21:35	1
Methylene Chloride	<3.47		3.47		ug/m3			10/16/23 21:35	1
Naphthalene	<2.62		2.62		ug/m3			10/16/23 21:35	1
o-Xylene	0.892		0.868		ug/m3			10/16/23 21:35	1
Styrene	<0.852		0.852		ug/m3			10/16/23 21:35	1
Tetrachloroethene	<1.36		1.36		ug/m3			10/16/23 21:35	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-6

Lab Sample ID: 310-267019-5

Date Collected: 10/11/23 11:30

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<14.7		14.7		ug/m3			10/16/23 21:35	1
Toluene	<3.77		3.77		ug/m3			10/16/23 21:35	1
trans-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 21:35	1
trans-1,3-Dichloropropene	<0.908		0.908		ug/m3			10/16/23 21:35	1
Trichloroethene	<1.07		1.07		ug/m3			10/16/23 21:35	1
Trichlorofluoromethane	52.9		1.12		ug/m3			10/16/23 21:35	1
Vinyl acetate	<17.6		17.6		ug/m3			10/16/23 21:35	1
Vinyl bromide	<0.875		0.875		ug/m3			10/16/23 21:35	1
Vinyl chloride	<1.02		1.02		ug/m3			10/16/23 21:35	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-7

Lab Sample ID: 310-267019-6

Date Collected: 10/11/23 12:35

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 22:22	1
1,1,2,2-Tetrachloroethane	<1.37		1.37		ug/m3			10/16/23 22:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.53		1.53		ug/m3			10/16/23 22:22	1
1,1,2-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 22:22	1
1,1-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 22:22	1
1,1-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 22:22	1
1,2,4-Trichlorobenzene	<14.8		14.8		ug/m3			10/16/23 22:22	1
1,2,4-Trimethylbenzene	<0.983		0.983		ug/m3			10/16/23 22:22	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<1.40		1.40		ug/m3			10/16/23 22:22	1
1,2-Dichlorobenzene	<2.40		2.40		ug/m3			10/16/23 22:22	1
1,2-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 22:22	1
1,2-Dichloropropane	<0.924		0.924		ug/m3			10/16/23 22:22	1
1,3,5-Trimethylbenzene	<1.97		1.97		ug/m3			10/16/23 22:22	1
1,3-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 22:22	1
1,4-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 22:22	1
1,4-Dioxane	<18.0		18.0		ug/m3			10/16/23 22:22	1
2-Butanone (MEK)	26.3		2.95		ug/m3			10/16/23 22:22	1
4-Methyl-2-pentanone (MIBK)	<4.10		4.10		ug/m3			10/16/23 22:22	1
Acetone	143	CI	17.8		ug/m3			10/16/23 22:22	1
Benzene	3.30		0.639		ug/m3			10/16/23 22:22	1
Benzyl chloride	<4.14		4.14		ug/m3			10/16/23 22:22	1
Bromoform	<2.07		2.07		ug/m3			10/16/23 22:22	1
Bromomethane	<0.777		0.777		ug/m3			10/16/23 22:22	1
Carbon disulfide	2.37		1.56		ug/m3			10/16/23 22:22	1
Carbon tetrachloride	<1.26		1.26		ug/m3			10/16/23 22:22	1
Chlorobenzene	<0.921		0.921		ug/m3			10/16/23 22:22	1
Dibromochloromethane	<1.70		1.70		ug/m3			10/16/23 22:22	1
Chloroethane	<2.11		2.11		ug/m3			10/16/23 22:22	1
Chloroform	1.33		0.977		ug/m3			10/16/23 22:22	1
Chloromethane	<2.07		2.07		ug/m3			10/16/23 22:22	1
cis-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 22:22	1
cis-1,3-Dichloropropene	<1.82		1.82		ug/m3			10/16/23 22:22	1
Cyclohexane	2.30		1.72		ug/m3			10/16/23 22:22	1
Bromodichloromethane	<1.34		1.34		ug/m3			10/16/23 22:22	1
Dichlorodifluoromethane	<2.47		2.47		ug/m3			10/16/23 22:22	1
Ethylbenzene	<0.868		0.868		ug/m3			10/16/23 22:22	1
1,2-Dibromoethane (EDB)	<1.54		1.54		ug/m3			10/16/23 22:22	1
Hexachlorobutadiene	<10.7		10.7		ug/m3			10/16/23 22:22	1
Hexane	<2.82		2.82		ug/m3			10/16/23 22:22	1
Isopropyl alcohol	<12.3		12.3		ug/m3			10/16/23 22:22	1
Isopropylbenzene	<3.93		3.93		ug/m3			10/16/23 22:22	1
m-Xylene & p-Xylene	<3.47		3.47		ug/m3			10/16/23 22:22	1
Methyl tert-butyl ether	<3.61		3.61		ug/m3			10/16/23 22:22	1
Methylene Chloride	<3.47		3.47		ug/m3			10/16/23 22:22	1
Naphthalene	<2.62		2.62		ug/m3			10/16/23 22:22	1
o-Xylene	<0.868		0.868		ug/m3			10/16/23 22:22	1
Styrene	<0.852		0.852		ug/m3			10/16/23 22:22	1
Tetrachloroethene	<1.36		1.36		ug/m3			10/16/23 22:22	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-7

Lab Sample ID: 310-267019-6

Date Collected: 10/11/23 12:35

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<14.7		14.7		ug/m3			10/16/23 22:22	1
Toluene	3.83		3.77		ug/m3			10/16/23 22:22	1
trans-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 22:22	1
trans-1,3-Dichloropropene	<0.908		0.908		ug/m3			10/16/23 22:22	1
Trichloroethene	<1.07		1.07		ug/m3			10/16/23 22:22	1
Trichlorofluoromethane	1.33		1.12		ug/m3			10/16/23 22:22	1
Vinyl acetate	<17.6		17.6		ug/m3			10/16/23 22:22	1
Vinyl bromide	<0.875		0.875		ug/m3			10/16/23 22:22	1
Vinyl chloride	<1.02		1.02		ug/m3			10/16/23 22:22	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-8

Lab Sample ID: 310-267019-7

Date Collected: 10/11/23 14:10

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 23:11	1.39
1,1,2,2-Tetrachloroethane	<1.37		1.37		ug/m3			10/16/23 23:11	1.39
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.53		1.53		ug/m3			10/16/23 23:11	1.39
1,1,2-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 23:11	1.39
1,1-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 23:11	1.39
1,1-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 23:11	1.39
1,2,4-Trichlorobenzene	<14.8		14.8		ug/m3			10/16/23 23:11	1.39
1,2,4-Trimethylbenzene	<0.983		0.983		ug/m3			10/16/23 23:11	1.39
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<1.40		1.40		ug/m3			10/16/23 23:11	1.39
1,2-Dichlorobenzene	<2.40		2.40		ug/m3			10/16/23 23:11	1.39
1,2-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 23:11	1.39
1,2-Dichloropropane	<0.924		0.924		ug/m3			10/16/23 23:11	1.39
1,3,5-Trimethylbenzene	<1.97		1.97		ug/m3			10/16/23 23:11	1.39
1,3-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 23:11	1.39
1,4-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 23:11	1.39
1,4-Dioxane	<18.0		18.0		ug/m3			10/16/23 23:11	1.39
2-Butanone (MEK)	8.15		2.95		ug/m3			10/16/23 23:11	1.39
4-Methyl-2-pentanone (MIBK)	<4.10		4.10		ug/m3			10/16/23 23:11	1.39
Acetone	37.7	CI	17.8		ug/m3			10/16/23 23:11	1.39
Benzene	1.51		0.639		ug/m3			10/16/23 23:11	1.39
Benzyl chloride	<4.14		4.14		ug/m3			10/16/23 23:11	1.39
Bromoform	<2.07		2.07		ug/m3			10/16/23 23:11	1.39
Bromomethane	<0.777		0.777		ug/m3			10/16/23 23:11	1.39
Carbon disulfide	3.20		1.56		ug/m3			10/16/23 23:11	1.39
Carbon tetrachloride	<1.26		1.26		ug/m3			10/16/23 23:11	1.39
Chlorobenzene	<0.921		0.921		ug/m3			10/16/23 23:11	1.39
Dibromochloromethane	<1.70		1.70		ug/m3			10/16/23 23:11	1.39
Chloroethane	<2.11		2.11		ug/m3			10/16/23 23:11	1.39
Chloroform	<0.977		0.977		ug/m3			10/16/23 23:11	1.39
Chloromethane	<2.07		2.07		ug/m3			10/16/23 23:11	1.39
cis-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 23:11	1.39
cis-1,3-Dichloropropene	<1.82		1.82		ug/m3			10/16/23 23:11	1.39
Cyclohexane	<1.72		1.72		ug/m3			10/16/23 23:11	1.39
Bromodichloromethane	<1.34		1.34		ug/m3			10/16/23 23:11	1.39
Dichlorodifluoromethane	<2.47		2.47		ug/m3			10/16/23 23:11	1.39
Ethylbenzene	<0.868		0.868		ug/m3			10/16/23 23:11	1.39
1,2-Dibromoethane (EDB)	<1.54		1.54		ug/m3			10/16/23 23:11	1.39
Hexachlorobutadiene	<10.7		10.7		ug/m3			10/16/23 23:11	1.39
Hexane	<2.82		2.82		ug/m3			10/16/23 23:11	1.39
Isopropyl alcohol	<12.3		12.3		ug/m3			10/16/23 23:11	1.39
Isopropylbenzene	<3.93		3.93		ug/m3			10/16/23 23:11	1.39
m-Xylene & p-Xylene	<3.47		3.47		ug/m3			10/16/23 23:11	1.39
Methyl tert-butyl ether	<3.61		3.61		ug/m3			10/16/23 23:11	1.39
Methylene Chloride	<3.47		3.47		ug/m3			10/16/23 23:11	1.39
Naphthalene	<2.62		2.62		ug/m3			10/16/23 23:11	1.39
o-Xylene	<0.868		0.868		ug/m3			10/16/23 23:11	1.39
Styrene	<0.852		0.852		ug/m3			10/16/23 23:11	1.39
Tetrachloroethene	<1.36		1.36		ug/m3			10/16/23 23:11	1.39

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-8

Lab Sample ID: 310-267019-7

Date Collected: 10/11/23 14:10

Matrix: Air

Date Received: 10/12/23 09:45

Sample Container: Summa Canister 6L

Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<14.7		14.7		ug/m3			10/16/23 23:11	1.39
Toluene	<3.77		3.77		ug/m3			10/16/23 23:11	1.39
trans-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 23:11	1.39
trans-1,3-Dichloropropene	<0.908		0.908		ug/m3			10/16/23 23:11	1.39
Trichloroethene	<1.07		1.07		ug/m3			10/16/23 23:11	1.39
Trichlorofluoromethane	1.13		1.12		ug/m3			10/16/23 23:11	1.39
Vinyl acetate	<17.6		17.6		ug/m3			10/16/23 23:11	1.39
Vinyl bromide	<0.875		0.875		ug/m3			10/16/23 23:11	1.39
Vinyl chloride	<1.02		1.02		ug/m3			10/16/23 23:11	1.39

Definitions/Glossary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 140-78945/6

Matrix: Air

Analysis Batch: 78945

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 12:52	1
1,1,2,2-Tetrachloroethane	<1.37		1.37		ug/m3			10/16/23 12:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.53		1.53		ug/m3			10/16/23 12:52	1
1,1,2-Trichloroethane	<1.09		1.09		ug/m3			10/16/23 12:52	1
1,1-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 12:52	1
1,1-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 12:52	1
1,2,4-Trichlorobenzene	<14.8		14.8		ug/m3			10/16/23 12:52	1
1,2,4-Trimethylbenzene	<0.983		0.983		ug/m3			10/16/23 12:52	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<1.40		1.40		ug/m3			10/16/23 12:52	1
1,2-Dichlorobenzene	<2.40		2.40		ug/m3			10/16/23 12:52	1
1,2-Dichloroethane	<0.809		0.809		ug/m3			10/16/23 12:52	1
1,2-Dichloropropane	<0.924		0.924		ug/m3			10/16/23 12:52	1
1,3,5-Trimethylbenzene	<1.97		1.97		ug/m3			10/16/23 12:52	1
1,3-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 12:52	1
1,4-Dichlorobenzene	<1.20		1.20		ug/m3			10/16/23 12:52	1
1,4-Dioxane	<18.0		18.0		ug/m3			10/16/23 12:52	1
2-Butanone (MEK)	<2.95		2.95		ug/m3			10/16/23 12:52	1
4-Methyl-2-pentanone (MIBK)	<4.10		4.10		ug/m3			10/16/23 12:52	1
Acetone	<17.8		17.8		ug/m3			10/16/23 12:52	1
Benzene	<0.639		0.639		ug/m3			10/16/23 12:52	1
Benzyl chloride	<4.14		4.14		ug/m3			10/16/23 12:52	1
Bromoform	<2.07		2.07		ug/m3			10/16/23 12:52	1
Bromomethane	<0.777		0.777		ug/m3			10/16/23 12:52	1
Carbon disulfide	<1.56		1.56		ug/m3			10/16/23 12:52	1
Carbon tetrachloride	<1.26		1.26		ug/m3			10/16/23 12:52	1
Chlorobenzene	<0.921		0.921		ug/m3			10/16/23 12:52	1
Dibromochloromethane	<1.70		1.70		ug/m3			10/16/23 12:52	1
Chloroethane	<2.11		2.11		ug/m3			10/16/23 12:52	1
Chloroform	<0.977		0.977		ug/m3			10/16/23 12:52	1
Chloromethane	<2.07		2.07		ug/m3			10/16/23 12:52	1
cis-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 12:52	1
cis-1,3-Dichloropropene	<1.82		1.82		ug/m3			10/16/23 12:52	1
Cyclohexane	<1.72		1.72		ug/m3			10/16/23 12:52	1
Bromodichloromethane	<1.34		1.34		ug/m3			10/16/23 12:52	1
Dichlorodifluoromethane	<2.47		2.47		ug/m3			10/16/23 12:52	1
Ethylbenzene	<0.868		0.868		ug/m3			10/16/23 12:52	1
1,2-Dibromoethane (EDB)	<1.54		1.54		ug/m3			10/16/23 12:52	1
Hexachlorobutadiene	<10.7		10.7		ug/m3			10/16/23 12:52	1
Hexane	<2.82		2.82		ug/m3			10/16/23 12:52	1
Isopropyl alcohol	<12.3		12.3		ug/m3			10/16/23 12:52	1
Isopropylbenzene	<3.93		3.93		ug/m3			10/16/23 12:52	1
m-Xylene & p-Xylene	<3.47		3.47		ug/m3			10/16/23 12:52	1
Methyl tert-butyl ether	<3.61		3.61		ug/m3			10/16/23 12:52	1
Methylene Chloride	<3.47		3.47		ug/m3			10/16/23 12:52	1
Naphthalene	<2.62		2.62		ug/m3			10/16/23 12:52	1
o-Xylene	<0.868		0.868		ug/m3			10/16/23 12:52	1
Styrene	<0.852		0.852		ug/m3			10/16/23 12:52	1
Tetrachloroethene	<1.36		1.36		ug/m3			10/16/23 12:52	1

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 140-78945/6

Matrix: Air

Analysis Batch: 78945

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<14.7		14.7		ug/m3			10/16/23 12:52	1
Toluene	<3.77		3.77		ug/m3			10/16/23 12:52	1
trans-1,2-Dichloroethene	<0.793		0.793		ug/m3			10/16/23 12:52	1
trans-1,3-Dichloropropene	<0.908		0.908		ug/m3			10/16/23 12:52	1
Trichloroethene	<1.07		1.07		ug/m3			10/16/23 12:52	1
Trichlorofluoromethane	<1.12		1.12		ug/m3			10/16/23 12:52	1
Vinyl acetate	<17.6		17.6		ug/m3			10/16/23 12:52	1
Vinyl bromide	<0.875		0.875		ug/m3			10/16/23 12:52	1
Vinyl chloride	<1.02		1.02		ug/m3			10/16/23 12:52	1

Lab Sample ID: LCS 140-78945/1002

Matrix: Air

Analysis Batch: 78945

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	10.9	10.41		ug/m3		95	70 - 130
1,1,2,2-Tetrachloroethane	13.7	13.81		ug/m3		101	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	15.3	15.58		ug/m3		102	70 - 130
1,1,2-Trichloroethane	10.9	10.88		ug/m3		100	70 - 130
1,1-Dichloroethane	8.09	8.064		ug/m3		100	70 - 130
1,1-Dichloroethene	7.93	7.577		ug/m3		96	70 - 130
1,2,4-Trichlorobenzene	14.8	16.53		ug/m3		111	60 - 140
1,2,4-Trimethylbenzene	9.83	9.920		ug/m3		101	70 - 130
1,2-Dichloro-1,1,2,2-tetrafluoroethane	14.0	13.34		ug/m3		95	60 - 140
1,2-Dichlorobenzene	12.0	12.10		ug/m3		101	70 - 130
1,2-Dichloroethane	8.09	7.647		ug/m3		94	70 - 130
1,2-Dichloropropane	9.24	9.018		ug/m3		98	70 - 130
1,3,5-Trimethylbenzene	9.83	10.97		ug/m3		112	70 - 130
1,3-Dichlorobenzene	12.0	12.35		ug/m3		103	70 - 130
1,4-Dichlorobenzene	12.0	12.22		ug/m3		102	70 - 130
1,4-Dioxane	7.21	6.194	J	ug/m3		86	60 - 140
2-Butanone (MEK)	5.90	5.973		ug/m3		101	60 - 140
4-Methyl-2-pentanone (MIBK)	8.19	7.885		ug/m3		96	60 - 140
Acetone	4.75	4.615	J	ug/m3		97	60 - 140
Benzene	6.39	6.292		ug/m3		98	70 - 130
Benzyl chloride	10.4	11.68		ug/m3		113	70 - 130
Bromoform	20.7	22.66		ug/m3		110	60 - 140
Bromomethane	7.77	6.751		ug/m3		87	70 - 130
Carbon disulfide	6.23	6.177		ug/m3		99	70 - 130
Carbon tetrachloride	12.6	12.30		ug/m3		98	70 - 130
Chlorobenzene	9.21	9.348		ug/m3		102	70 - 130
Dibromochloromethane	17.0	18.14		ug/m3		106	70 - 130
Chloroethane	5.28	4.551		ug/m3		86	70 - 130
Chloroform	9.77	9.567		ug/m3		98	70 - 130
Chloromethane	4.13	3.880		ug/m3		94	60 - 140
cis-1,2-Dichloroethene	7.93	7.777		ug/m3		98	70 - 130
cis-1,3-Dichloropropene	9.08	9.221		ug/m3		102	70 - 130

Eurofins Cedar Falls

QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 140-78945/1002

Matrix: Air

Analysis Batch: 78945

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyclohexane	6.88	6.749		ug/m3		98	70 - 130
Bromodichloromethane	13.4	12.96		ug/m3		97	70 - 130
Dichlorodifluoromethane	9.89	9.725		ug/m3		98	60 - 140
Ethylbenzene	8.68	8.301		ug/m3		96	70 - 130
1,2-Dibromoethane (EDB)	15.4	15.54		ug/m3		101	70 - 130
Hexachlorobutadiene	21.3	20.96		ug/m3		98	60 - 140
Hexane	7.05	6.785		ug/m3		96	70 - 130
Isopropyl alcohol	4.92	5.643		ug/m3		115	60 - 140
Isopropylbenzene	9.83	9.873		ug/m3		100	70 - 130
m-Xylene & p-Xylene	17.4	16.42		ug/m3		95	70 - 130
Methyl tert-butyl ether	7.21	7.082		ug/m3		98	60 - 140
Methylene Chloride	6.95	5.911		ug/m3		85	70 - 130
Naphthalene	10.5	10.43		ug/m3		99	60 - 140
o-Xylene	8.68	8.399		ug/m3		97	70 - 130
Styrene	8.52	8.795		ug/m3		103	70 - 130
Tetrachloroethene	13.6	13.44		ug/m3		99	70 - 130
Tetrahydrofuran	5.90	5.771	J	ug/m3		98	60 - 140
Toluene	7.54	7.222		ug/m3		96	70 - 130
trans-1,2-Dichloroethene	7.93	7.850		ug/m3		99	70 - 130
trans-1,3-Dichloropropene	9.08	9.454		ug/m3		104	70 - 130
Trichloroethene	10.7	10.72		ug/m3		100	70 - 130
Trichlorofluoromethane	11.2	10.68		ug/m3		95	60 - 140
Vinyl acetate	7.04	7.105		ug/m3		101	60 - 140
Vinyl bromide	8.75	9.280		ug/m3		106	60 - 140
Vinyl chloride	5.11	4.784		ug/m3		94	70 - 130

QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Air - GC/MS VOA

Analysis Batch: 78945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267019-1	SG-1	Total/NA	Air	TO-15	
310-267019-2	SG-3	Total/NA	Air	TO-15	
310-267019-3	SG-4	Total/NA	Air	TO-15	
310-267019-4	SG-5	Total/NA	Air	TO-15	
310-267019-5	SG-6	Total/NA	Air	TO-15	
310-267019-6	SG-7	Total/NA	Air	TO-15	
310-267019-7	SG-8	Total/NA	Air	TO-15	
MB 140-78945/6	Method Blank	Total/NA	Air	TO-15	
LCS 140-78945/1002	Lab Control Sample	Total/NA	Air	TO-15	

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Client Sample ID: SG-1

Date Collected: 10/10/23 12:30

Date Received: 10/12/23 09:45

Lab Sample ID: 310-267019-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	TO-15		1	78945	S1K	EET KNX	10/16/23 18:19

Client Sample ID: SG-3

Date Collected: 10/10/23 15:30

Date Received: 10/12/23 09:45

Lab Sample ID: 310-267019-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	TO-15		1.33	78945	S1K	EET KNX	10/16/23 19:09

Client Sample ID: SG-4

Date Collected: 10/11/23 08:30

Date Received: 10/12/23 09:45

Lab Sample ID: 310-267019-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	TO-15		1	78945	S1K	EET KNX	10/16/23 19:58

Client Sample ID: SG-5

Date Collected: 10/11/23 09:35

Date Received: 10/12/23 09:45

Lab Sample ID: 310-267019-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	TO-15		1.32	78945	S1K	EET KNX	10/16/23 20:47

Client Sample ID: SG-6

Date Collected: 10/11/23 11:30

Date Received: 10/12/23 09:45

Lab Sample ID: 310-267019-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	TO-15		1	78945	S1K	EET KNX	10/16/23 21:35

Client Sample ID: SG-7

Date Collected: 10/11/23 12:35

Date Received: 10/12/23 09:45

Lab Sample ID: 310-267019-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	TO-15		1	78945	S1K	EET KNX	10/16/23 22:22

Client Sample ID: SG-8

Date Collected: 10/11/23 14:10

Date Received: 10/12/23 09:45

Lab Sample ID: 310-267019-7

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	TO-15		1.39	78945	S1K	EET KNX	10/16/23 23:11

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Laboratory: Eurofins Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-24
Colorado	State	TN00009	02-29-24
Connecticut	State	PH-0223	09-30-25
Florida	NELAP	E87177	06-30-24
Georgia (DW)	State	906	07-27-25
Hawaii	State	NA	07-27-24
Kansas	NELAP	E-10349	10-31-23
Kentucky (DW)	State	90101	12-31-23
Louisiana (All)	NELAP	83979	06-30-24
Louisiana (DW)	State	LA019	12-31-23
Maryland	State	277	03-31-24
Michigan	State	9933	07-27-25
Nevada	State	TN00009	07-31-24
New Hampshire	NELAP	2999	01-17-24
New Jersey	NELAP	TN001	07-01-24
New York	NELAP	10781	03-31-24
North Carolina (DW)	State	21705	07-31-24
North Carolina (WW/SW)	State	64	12-31-23
Oklahoma	State	9415	12-31-23
Oregon	NELAP	TNI0189	01-01-24
Pennsylvania	NELAP	68-00576	12-01-23
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-23-18	08-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	525-22-279-18762	10-06-25
Utah	NELAP	TN00009	07-31-24
Virginia	NELAP	460176	09-14-24
Washington	State	C593	01-19-24
West Virginia (DW)	State	9955C	12-31-23
West Virginia DEP	State	345	04-30-24
Wisconsin	State	998044300	08-31-24

Method Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267019-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	EET KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

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Canister Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

Environmental Testing
Equipment

Knoxville, TN 37921-5947
phone 865.291.3000 fax 865.584.4315

810-412-1759

Client Contact Information Company Name: Tetra Tech Address: 415 Oak St City/State/Zip: Kansas City, MO 64106 Phone: 816-241-3000 & 16-112-1741 FAX:				Client Project Manager: Macy La Masney Phone: 816-241-3000 Email: macy.lamasney@tetratech.com				Samples Collected By: Macy La Masney COC No.: 1 of 1 COCs					
Project Name: Site/Location: Joplin Union Depot/MO P O #				Analysis Turnaround Time Standard (Specific): Rush (Specify):				Site Contact: Tel/Fax:					
Sample Identification				Time Start End Date		Sample Time Stop		Canister Vacuum in Field, "Hg (Start) Vacuum in Field, "Hg (Stop)		Flow Controller ID		Canister ID	
SG-1 SG-3 SG-4 SG-5 SG-6 SG-7 SG-8				10/10 1230 10/10 1530 10/11 0830 10/11 0935 10/11 1130 10/11 1235 10/11 1410		10/10 1230 10/10 1530 10/11 0830 10/11 0935 10/11 1130 10/11 1235 10/11 1410		-29 -5 -29 -5 -29 -5 -29 -5 -29 -5 -29 -5 -29 -5		12393 10411 10404 34009 09988 11221 12145		12096 10411 10404 34009 09988 11221 12145	
Other (Please specify in notes section)				EPA 15/16		Other (Please specify in notes section)		Sample Type		Indoor Air/Ambient Air		Sub-Slab	
Soil Gas				Soil Vapor Extraction (SVE)		Landfill Gas		Other (Please specify in notes section)		Job / SDG No.: (See below for Add'l Items)		Sample Specific Notes:	
For Lab Use Only: Walk-in Client: Lab Sampling:				TALS Project #:		COC No.: 1 of 1 COCs		Job / SDG No.: (See below for Add'l Items)		Sample Specific Notes:		Other (Please specify in notes section)	

Special Instructions/QC Requirements & Comments:			
Custody Seals Intact Received Ambient 10/12/23 2 Boxes FedEx 4491 9029 4648 in PD 8 Cans / 1 Image / 0 Flows			

Samples Shipped by: Macy La Masney			
Samples Relinquished by: Macy La Masney			
Relinquished by:			
Lab Use Only:			

Samples Received by: Dana Hill STA R0X 10/12/23 9:45			
Received by:			
Received by:			
Condition:			

Form No. CA-C-WI-003, Rev. 2.23, dated 5/4/2020

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	✓			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			✓	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	✓			<input type="checkbox"/> Yes <input type="checkbox"/> NA	7. Sample id: SG-5 Loc: 3400019 Canister label: 34000159 Logged per canister label asset id
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			✓	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	✓			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	✓			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	✓	✓		<input checked="" type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	✓			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	✓			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	✓			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	✓			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	✓			<input type="checkbox"/> COC No tests on COC	pH test strip lot number: _____
13. Is the matrix of the samples noted?	✓			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	✓			<input type="checkbox"/> Holding Time - Receipt	Box 16A: pH Preservation
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Box 18A: Residual Chlorine
17. Were VOA samples received without headspace?			✓	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	Preservative: _____ Lot Number: _____ Exp Date: _____ Analyst: _____ Date: _____ Time: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			✓		
19. For 1613B water samples is pH<9?			✓	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			✓	<input type="checkbox"/> Project missing info	
Project #: 31016661 PM Instructions: _____					

Sample Receiving Associate: Deanne Hoch Date: 10/12/23 QA026R32.doc, 062719

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Gauge ID: G5
Date/Time: 10/12/23 1332

[illegible]

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-33633-1
 SDG No.: _____
 Client Sample ID: 10009 Lab Sample ID: 140-33633-1
 Matrix: Air Lab File ID: RI25LOT33633A1.D
 Analysis Method: TO 15 LL Date Collected: 09/23/2023 11:18
 Sample wt/vol: 500 (mL) Date Analyzed: 09/25/2023 13:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 Purge Volume: _____ Heated Purge: (Y/N) _____ pH: _____
 % Moisture: _____ % Solids: _____ Level: (low/med) Low
 Analysis Batch No.: 78053 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.16	
106-99-0	1,3-Butadiene	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-33633-1
 SDG No.: _____
 Client Sample ID: 10009 Lab Sample ID: 140-33633-1
 Matrix: Air Lab File ID: RI25LOT33633A1.D
 Analysis Method: TO 15 LL Date Collected: 09/23/2023 11:18
 Sample wt/vol: 500 (mL) Date Analyzed: 09/25/2023 13:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 Purge Volume: _____ Heated Purge: (Y/N) _____ pH: _____
 % Moisture: _____ % Solids: _____ Level: (low/med) Low
 Analysis Batch No.: 78053 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND	++	2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-33633-1
 SDG No.: _____
 Client Sample ID: 10009 Lab Sample ID: 140-33633-1
 Matrix: Air Lab File ID: RI25LOT33633A1.D
 Analysis Method: TO 15 LL Date Collected: 09/23/2023 11:18
 Sample wt/vol: 500 (mL) Date Analyzed: 09/25/2023 13:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 Purge Volume: _____ Heated Purge: (Y/N) _____ pH: _____
 % Moisture: _____ % Solids: _____ Level: (low/med) Low
 Analysis Batch No.: 78053 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		1.0	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	0.13		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-33633-1
SDG No.: _____
Client Sample ID: 10009 Lab Sample ID: 140-33633-1
Matrix: Air Lab File ID: RI25LOT33633A1.D
Analysis Method: TO 15 LL Date Collected: 09/23/2023 11:18
Sample wt/vol: 500 (mL) Date Analyzed: 09/25/2023 13:58
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
Purge Volume: _____ Heated Purge: (Y/N) _____ pH: _____
% Moisture: _____ % Solids: _____ Level: (low/med) Low
Analysis Batch No.: 78053 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins Knoxville Job No.: 140-33633-1
 SDG No.: _____
 Client Sample ID: 10009 Lab Sample ID: 140-33633-1
 Matrix: Air Lab File ID: RI25LOT33633A1.D
 Analysis Method: TO 15 LL Date Collected: 09/23/2023 11:18
 Sample wt/vol: 500 (mL) Date Analyzed: 09/25/2023 13:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 Purge Volume: _____ Heated Purge: (Y/N) _____ pH: _____
 % Moisture: _____ % Solids: _____ Level: (low/med) Low
 Analysis Batch No.: 78053 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

Eurofins Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\MR\20230922-29762.b\RI25LOT33633A1.D
 Lims ID: 140-33633-A-1
 Client ID: 10009
 Sample Type: Client
 Inject. Date: 25-Sep-2023 13:58:30 ALS Bottle#: 17 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0029762-009
 Misc. Info.: 10009
 Operator ID: Instrument ID: MR
 Method: \\chromfs\Knoxville\ChromData\MR\20230922-29762.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Sep-2023 14:18:58 Calib Date: 15-Jun-2023 00:39:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\MR\20230614-28446.b\RF14IC07.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX1616

First Level Reviewer: khachitpongpanits

Date:

26-Sep-2023 14:19:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.477	9.482	-0.005	74	102762	3.76	
* 2 1,4-Difluorobenzene	114	11.661	11.666	-0.005	92	562003	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.514	16.530	-0.016	83	420730	3.92	
\$ 4 4-Bromofluorobenzene (Surr)	95	18.148	18.159	-0.011	94	200801	3.21	
31 Methylene Chloride	84	6.748	6.739	0.005	84	6603	0.2551	
67 Toluene	91	14.502	14.519	-0.017	92	13660	0.1349	

QC Flag Legend

Processing Flags

Reagents:

40MXISSUR_00003

Amount Added: 40.00

Units: mL

Run Reagent

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\MR\20230922-29762.b\RI25LOT33633A1.D

Injection Date: 25-Sep-2023 13:58:30

Instrument ID: MR

Operator ID:

Lims ID: 140-33633-A-1

Lab Sample ID: 140-33633-1

Worklist Smp#: 9

Client ID: 10009

Purge Vol: 500.000 mL

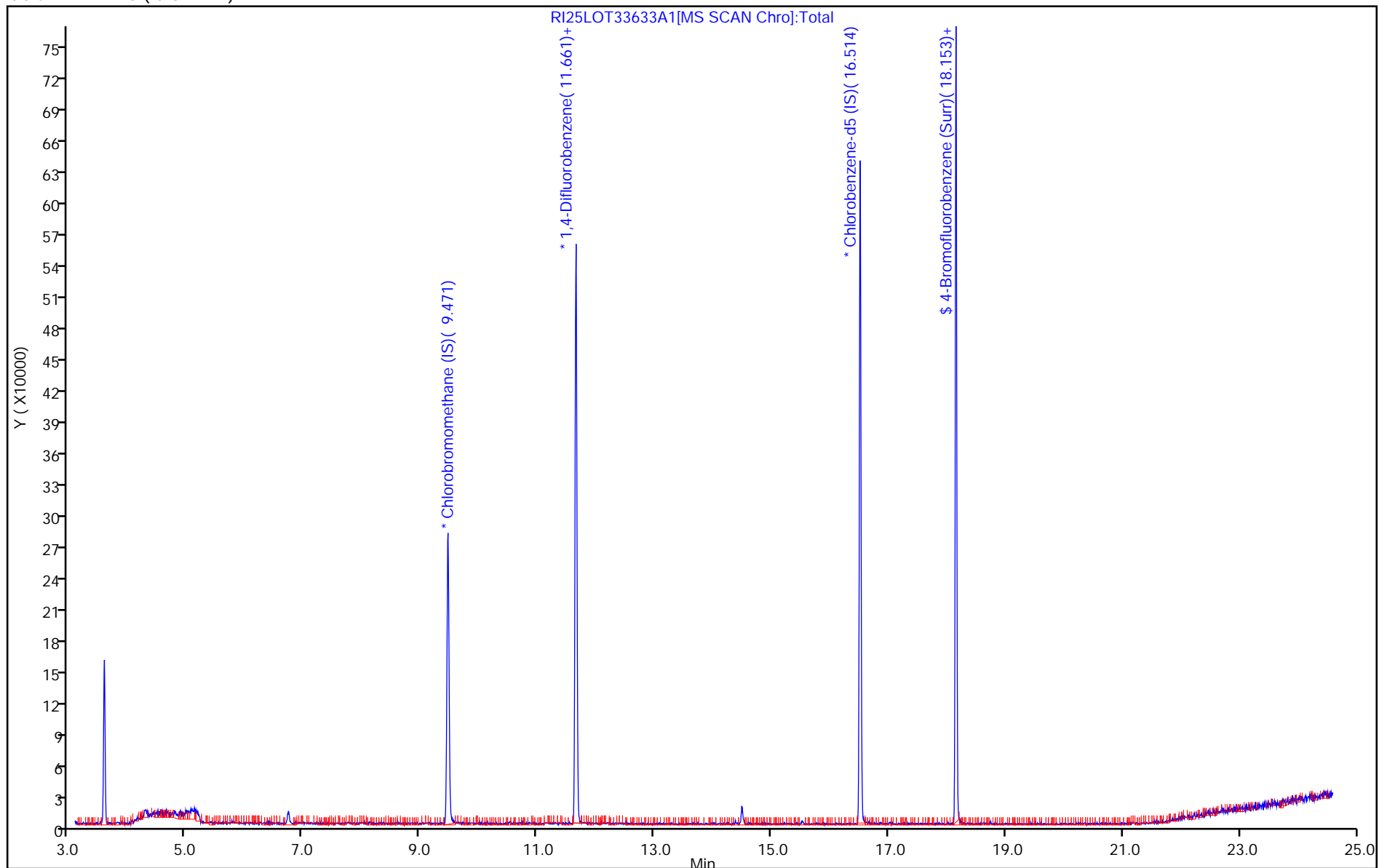
Dil. Factor: 1.0000

ALS Bottle#: 17

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\MR\20230922-29762.b\RI25LOT33633A1.D

Injection Date: 25-Sep-2023 13:58:30

Instrument ID: MR

Lims ID: 140-33633-A-1

Lab Sample ID: 140-33633-1

Client ID: 10009

Operator ID:

ALS Bottle#:

17

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

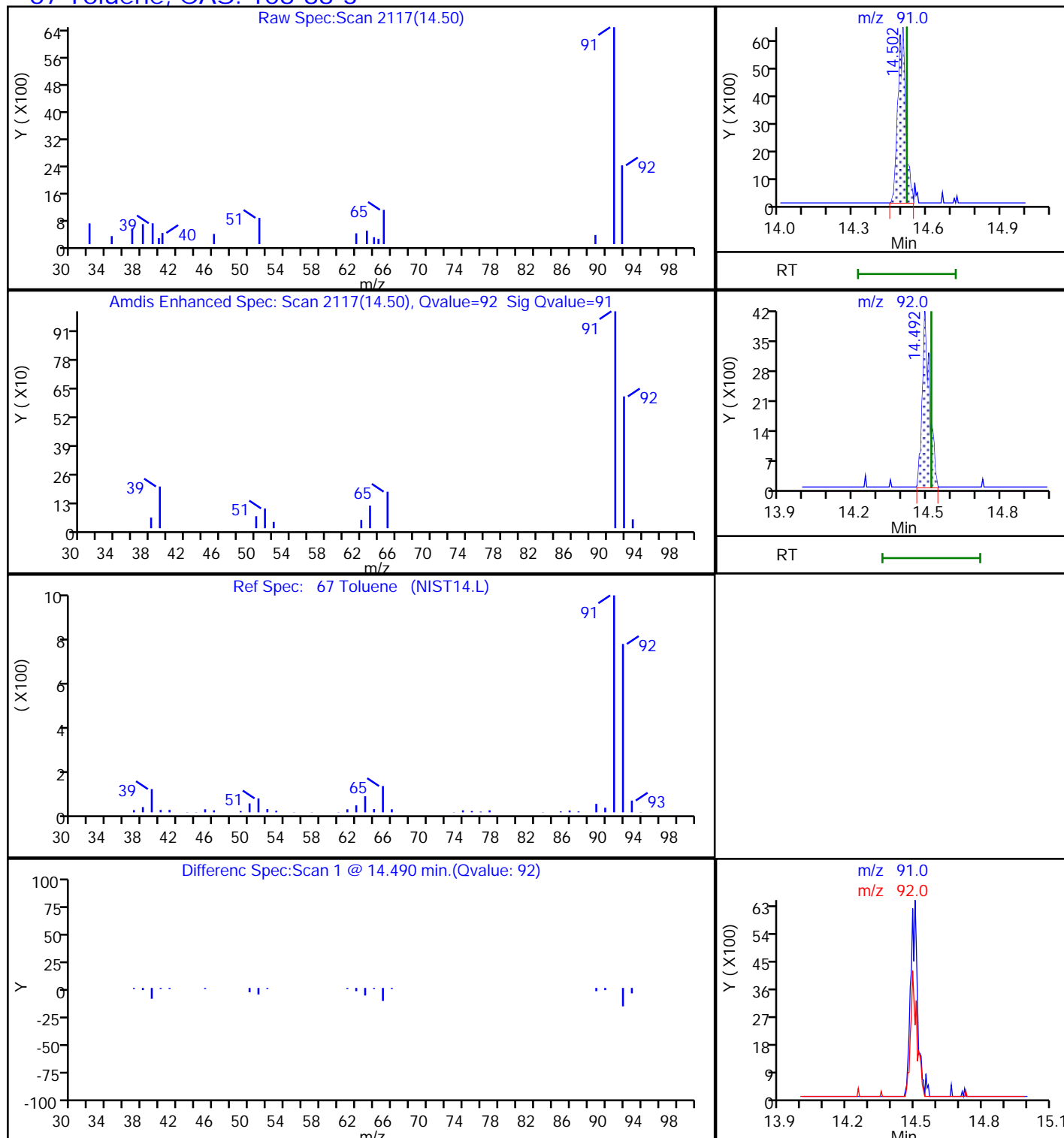
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

67 Toluene, CAS: 108-88-3

Summa Canister Dilution Worksheet

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job No.: 310-267019-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Pressure Gauge ID	Date	Analyst Initials
310-267019-2	6	-7.5	0.75	4.50	0.0	1.00	6.00		1.33	1.33	g5	10/12/23 13:37	BTB
310-267019-4	6	-7.3	0.76	4.54	0.0	1.00	6.00		1.32	1.32	g5	10/12/23 13:40	BTB
310-267019-7	6	-7.1	0.76	4.58	0.9	1.06	6.37		1.39	1.39	g5	10/12/23 13:45	BTB

Formulae:

Preadjusted Volume (L) = ((Preadjusted Pressure ("Hg) + 29.92 "Hg) * Vol L) / 29.92 "Hg

Adjusted Volume (L) = ((Adjusted Pressure (psig) + 14.7 psig) * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Emily Fisher
Tetra Tech EM Inc.
415 Oak Street
Kansas City, Missouri 64106

Generated 10/26/2023 3:50:09 PM

JOB DESCRIPTION

Joplin MO Union Depot Site

JOB NUMBER

310-267039-1

Eurofins Cedar Falls

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Case Narrative

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Job ID: 310-267039-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-267039-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 10/12/2023 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.5°C, 1.9°C, 2.1°C and 2.6°C

GC/MS VOA

Method 8260D: The following samples were collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The samples were analyzed within the 7-day holding time specified for unpreserved samples: GW-2 (310-267039-18), GW-5 (310-267039-20), GW-6 (310-267039-21) and GW-7 (310-267039-22).

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

GC/MS Semi VOA

Method 8270E: The following sample(s) was re-prepared outside of preparation holding time due to not being logged in for correct method.

Method 8270E: Surrogate recovery for the following samples were outside of acceptance limits due to extraction for BN only: GW-2 (310-267039-18), GW-2 DUP (310-267039-19), GW-5 (310-267039-20), GW-6 (310-267039-21), GW-7 (310-267039-22), FB-1 (310-267039-23), (LCS 310-402395/2-A), (LCSD 310-402395/3-A) and (MB 310-402395/1-A). Samples will be reprepared to confirm results.

Method 8270E: A laboratory control sample (LCS) for BNAs was not prepared. Samples will be reprepared with appropriate QC.

Method 8270E: The following samples were diluted due to the nature of the sample matrix: GW-2 (310-267039-18), GW-2 DUP (310-267039-19) and GW-7 (310-267039-22). Elevated reporting limits (RLs) are provided.

Method 8270E: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 310-402395 and analytical batch 310-402779 recovered outside control limits for the following analytes: C10-C21. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270E: The following samples were diluted due to the nature of the sample matrix: GW-2 (310-267039-18), GW-2 DUP (310-267039-19) and GW-7 (310-267039-22). Elevated reporting limits (RLs) are provided.

Method 8270E: The following samples were diluted due to the nature of the sample matrix: SB-1 (3.5-5.5) (310-267039-2), SB-3 (0-3) (310-267039-5), SB-5 (6-8) (310-267039-10), SB-6 (0-3) (310-267039-11) and SB-8 (4.5-6.5) (310-267039-16). Elevated reporting limits (RLs) are provided.

Method 8270E: Internal standard (ISTD) response for the following sample was outside of acceptance limits: SB-3 (8.5-10.5) (310-267039-6). The ISTD failed low, causing results to be biased high. Since all associated hits are less than the reporting limit, results will be reported.

Case Narrative

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Job ID: 310-267039-1 (Continued)

Laboratory: Eurofins Cedar Falls (Continued)

Method 8270E: Surrogate recovery for the following sample was outside the upper control limit: SB-3 (8.5-10.5) (310-267039-6). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8270E: The surrogate recovery for the blank associated with preparation batch 310-402911 and analytical batch 310-403033 was outside the upper control limits.

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

Metals

Method 6010D: The following sample(s) was diluted due to the presence of an interferent. SB-1 (0-3) (310-267039-1), SB-2 (6-8) (310-267039-4), SB-3 (8.5-10.5) (310-267039-6), SB-4 (8.5-10.5) (310-267039-8), SB-5 (6-8) (310-267039-10), SB-6 (6-8) (310-267039-12) and SB-8 (4.5-6.5) (310-267039-16). Elevated reporting limits (RLs) are provided.

Method 6020B: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of >2: GW-2 (310-267039-18), GW-2 DUP (310-267039-19), GW-6 (310-267039-21) and GW-7 (310-267039-22). The sample(s) was preserved to the appropriate pH in the laboratory.

Method 6020B: The laboratory control sample (LCS) for preparation batch 310-402547 and analytical batch 310-402835 recovered outside control limits for the following analytes: Antimony. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

GW-2 (310-267039-18), GW-2 DUP (310-267039-19), GW-5 (310-267039-20), GW-6 (310-267039-21), GW-7 (310-267039-22), FB-1 (310-267039-23), FB-2 (310-267039-24) and EB-1 (310-267039-25)

Method 7470A: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of >2: GW-2 (310-267039-18), GW-6 (310-267039-21) and GW-7 (310-267039-22). The sample(s) was preserved to the appropriate pH in the laboratory.

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

General Chemistry

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

Sample Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-267039-1	SB-1 (0-3)	Solid	10/10/23 12:55	10/12/23 09:30
310-267039-2	SB-1 (3.5-5.5)	Solid	10/10/23 13:00	10/12/23 09:30
310-267039-3	SB-2 (0-3)	Solid	10/10/23 14:20	10/12/23 09:30
310-267039-4	SB-2 (6-8)	Solid	10/10/23 14:30	10/12/23 09:30
310-267039-5	SB-3 (0-3)	Solid	10/10/23 15:55	10/12/23 09:30
310-267039-6	SB-3 (8.5-10.5)	Solid	10/10/23 16:00	10/12/23 09:30
310-267039-7	SB-4 (0-3)	Solid	10/11/23 08:50	10/12/23 09:30
310-267039-8	SB-4 (8.5-10.5)	Solid	10/11/23 08:55	10/12/23 09:30
310-267039-9	SB-5 (0-3)	Solid	10/11/23 10:15	10/12/23 09:30
310-267039-10	SB-5 (6-8)	Solid	10/11/23 10:20	10/12/23 09:30
310-267039-11	SB-6 (0-3)	Solid	10/11/23 11:50	10/12/23 09:30
310-267039-12	SB-6 (6-8)	Solid	10/11/23 11:55	10/12/23 09:30
310-267039-13	SB-7 (0-3)	Solid	10/11/23 13:00	10/12/23 09:30
310-267039-14	SB-7 (6-8)	Solid	10/11/23 13:05	10/12/23 09:30
310-267039-15	SB-8 (0-3)	Solid	10/11/23 14:25	10/12/23 09:30
310-267039-16	SB-8 (4.5-6.5)	Solid	10/11/23 14:30	10/12/23 09:30
310-267039-17	SB-2 (6-8) Dup	Solid	10/10/23 14:30	10/12/23 09:30
310-267039-18	GW-2	Water	10/10/23 14:55	10/12/23 09:30
310-267039-19	GW-2 DUP	Water	10/10/23 14:55	10/12/23 09:30
310-267039-20	GW-5	Water	10/11/23 10:25	10/12/23 09:30
310-267039-21	GW-6	Water	10/11/23 12:00	10/12/23 09:30
310-267039-22	GW-7	Water	10/11/23 13:10	10/12/23 09:30
310-267039-23	FB-1	Water	10/10/23 15:45	10/12/23 09:30
310-267039-24	FB-2	Water	10/11/23 12:05	10/12/23 09:30
310-267039-25	EB-1	Water	10/11/23 14:40	10/12/23 09:30
310-267039-26	Trip Blank 1	Water	10/11/23 00:00	10/12/23 09:30

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-1 (0-3)

Lab Sample ID: 310-267039-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
TPH-DRO (C10-C21)	21600	F1	18500		ug/Kg	1	✱		8270E	Total/NA
Aluminum	5670		50.0		mg/Kg	2	✱		6010D	Total/NA
Arsenic	14.8		8.00		mg/Kg	2	✱		6010D	Total/NA
Barium	137		2.00		mg/Kg	2	✱		6010D	Total/NA
Cadmium	29.8		2.00		mg/Kg	2	✱		6010D	Total/NA
Calcium	28300		200		mg/Kg	2	✱		6010D	Total/NA
Chromium	12.8		2.00		mg/Kg	2	✱		6010D	Total/NA
Copper	12.1		2.00		mg/Kg	2	✱		6010D	Total/NA
Iron	28600		100		mg/Kg	2	✱		6010D	Total/NA
Lead	152		10.0		mg/Kg	2	✱		6010D	Total/NA
Magnesium	3880		100		mg/Kg	2	✱		6010D	Total/NA
Manganese	62.3		5.00		mg/Kg	2	✱		6010D	Total/NA
Nickel	23.8		5.00		mg/Kg	2	✱		6010D	Total/NA
Potassium	2130		200		mg/Kg	2	✱		6010D	Total/NA
Vanadium	10.2		5.00		mg/Kg	2	✱		6010D	Total/NA
Zinc	5000		10.0		mg/Kg	2	✱		6010D	Total/NA
Cobalt	9.52		0.500		mg/Kg	5	✱		6020B	Total/NA
Mercury	0.0497		0.0238		mg/Kg	1	✱		7471B	Total/NA

Client Sample ID: SB-1 (3.5-5.5)

Lab Sample ID: 310-267039-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	1730		28.3		mg/Kg	1	✱		6010D	Total/NA
Barium	32.3		1.13		mg/Kg	1	✱		6010D	Total/NA
Calcium	886		113		mg/Kg	1	✱		6010D	Total/NA
Chromium	2.38		1.13		mg/Kg	1	✱		6010D	Total/NA
Copper	1.54		1.13		mg/Kg	1	✱		6010D	Total/NA
Iron	3010		56.7		mg/Kg	1	✱		6010D	Total/NA
Magnesium	141		56.7		mg/Kg	1	✱		6010D	Total/NA
Manganese	47.1		2.83		mg/Kg	1	✱		6010D	Total/NA
Potassium	923		113		mg/Kg	1	✱		6010D	Total/NA
Sodium	154		113		mg/Kg	1	✱		6010D	Total/NA
Zinc	18.8		5.67		mg/Kg	1	✱		6010D	Total/NA
Cobalt	9.37		0.567		mg/Kg	5	✱		6020B	Total/NA

Client Sample ID: SB-2 (0-3)

Lab Sample ID: 310-267039-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
TPH-DRO (C10-C21)	23200		17400		ug/Kg	1	✱		8270E	Total/NA
TPH-ORO (C21-C35)	20800		17400		ug/Kg	1	✱		8270E	Total/NA
Aluminum	11300		22.8		mg/Kg	1	✱		6010D	Total/NA
Arsenic	7.80		3.65		mg/Kg	1	✱		6010D	Total/NA
Barium	80.0		0.913		mg/Kg	1	✱		6010D	Total/NA
Calcium	3010		91.3		mg/Kg	1	✱		6010D	Total/NA
Chromium	15.8		0.913		mg/Kg	1	✱		6010D	Total/NA
Copper	4.99		0.913		mg/Kg	1	✱		6010D	Total/NA
Iron	12300		45.7		mg/Kg	1	✱		6010D	Total/NA
Lead	170		4.57		mg/Kg	1	✱		6010D	Total/NA
Magnesium	866		45.7		mg/Kg	1	✱		6010D	Total/NA
Manganese	40.5		2.28		mg/Kg	1	✱		6010D	Total/NA
Nickel	9.44		2.28		mg/Kg	1	✱		6010D	Total/NA
Potassium	1050		91.3		mg/Kg	1	✱		6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (0-3) (Continued)

Lab Sample ID: 310-267039-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	108		91.3		mg/Kg	1	✱	6010D	Total/NA
Vanadium	29.4		2.28		mg/Kg	1	✱	6010D	Total/NA
Zinc	111		4.57		mg/Kg	1	✱	6010D	Total/NA
Cobalt	6.02		0.457		mg/Kg	5	✱	6020B	Total/NA
Mercury	0.0811		0.0196		mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: SB-2 (6-8)

Lab Sample ID: 310-267039-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	9070		46.8		mg/Kg	2	✱	6010D	Total/NA
Arsenic	14.1		7.49		mg/Kg	2	✱	6010D	Total/NA
Barium	20.5		1.87		mg/Kg	2	✱	6010D	Total/NA
Beryllium	1.51		0.936		mg/Kg	2	✱	6010D	Total/NA
Calcium	2410		187		mg/Kg	2	✱	6010D	Total/NA
Chromium	16.4		1.87		mg/Kg	2	✱	6010D	Total/NA
Copper	3.24		1.87		mg/Kg	2	✱	6010D	Total/NA
Iron	20900		93.6		mg/Kg	2	✱	6010D	Total/NA
Magnesium	2460		93.6		mg/Kg	2	✱	6010D	Total/NA
Manganese	188		4.68		mg/Kg	2	✱	6010D	Total/NA
Nickel	67.6		4.68		mg/Kg	2	✱	6010D	Total/NA
Potassium	1070		187		mg/Kg	2	✱	6010D	Total/NA
Vanadium	11.2		4.68		mg/Kg	2	✱	6010D	Total/NA
Zinc	41.2		9.36		mg/Kg	2	✱	6010D	Total/NA
Cobalt	44.3		0.468		mg/Kg	5	✱	6020B	Total/NA

Client Sample ID: SB-3 (0-3)

Lab Sample ID: 310-267039-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	15300		26.4		mg/Kg	1	✱	6010D	Total/NA
Arsenic	11.3		4.23		mg/Kg	1	✱	6010D	Total/NA
Barium	74.0		1.06		mg/Kg	1	✱	6010D	Total/NA
Cadmium	5.01		1.06		mg/Kg	1	✱	6010D	Total/NA
Calcium	3040		106		mg/Kg	1	✱	6010D	Total/NA
Chromium	30.8		1.06		mg/Kg	1	✱	6010D	Total/NA
Copper	11.7		1.06		mg/Kg	1	✱	6010D	Total/NA
Iron	22100		52.8		mg/Kg	1	✱	6010D	Total/NA
Lead	354		5.28		mg/Kg	1	✱	6010D	Total/NA
Magnesium	1000		52.8		mg/Kg	1	✱	6010D	Total/NA
Manganese	92.6		2.64		mg/Kg	1	✱	6010D	Total/NA
Nickel	19.6		2.64		mg/Kg	1	✱	6010D	Total/NA
Potassium	952		106		mg/Kg	1	✱	6010D	Total/NA
Vanadium	41.7		2.64		mg/Kg	1	✱	6010D	Total/NA
Zinc	846		5.28		mg/Kg	1	✱	6010D	Total/NA
Cobalt	5.55		0.528		mg/Kg	5	✱	6020B	Total/NA
Mercury	0.274		0.0203		mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: SB-3 (8.5-10.5)

Lab Sample ID: 310-267039-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	14500		108		mg/Kg	4	✱	6010D	Total/NA
Arsenic	27.7		17.2		mg/Kg	4	✱	6010D	Total/NA
Barium	143		4.31		mg/Kg	4	✱	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-3 (8.5-10.5) (Continued)

Lab Sample ID: 310-267039-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Calcium	2160		431		mg/Kg	4	✱		6010D	Total/NA
Chromium	67.3		4.31		mg/Kg	4	✱		6010D	Total/NA
Copper	9.98		4.31		mg/Kg	4	✱		6010D	Total/NA
Iron	64200		216		mg/Kg	4	✱		6010D	Total/NA
Lead	211		21.6		mg/Kg	4	✱		6010D	Total/NA
Magnesium	798		216		mg/Kg	4	✱		6010D	Total/NA
Manganese	572		10.8		mg/Kg	4	✱		6010D	Total/NA
Nickel	33.3		10.8		mg/Kg	4	✱		6010D	Total/NA
Potassium	704		431		mg/Kg	4	✱		6010D	Total/NA
Vanadium	58.5		10.8		mg/Kg	4	✱		6010D	Total/NA
Zinc	462		21.6		mg/Kg	4	✱		6010D	Total/NA
Cobalt	24.5		0.539		mg/Kg	5	✱		6020B	Total/NA
Mercury	0.0245		0.0238		mg/Kg	1	✱		7471B	Total/NA

Client Sample ID: SB-4 (0-3)

Lab Sample ID: 310-267039-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	2990		22.9		mg/Kg	1	✱		6010D	Total/NA
Barium	19.1		0.917		mg/Kg	1	✱		6010D	Total/NA
Cadmium	1.09		0.917		mg/Kg	1	✱		6010D	Total/NA
Calcium	359		91.7		mg/Kg	1	✱		6010D	Total/NA
Chromium	4.20		0.917		mg/Kg	1	✱		6010D	Total/NA
Copper	4.53		0.917		mg/Kg	1	✱		6010D	Total/NA
Iron	5290		45.9		mg/Kg	1	✱		6010D	Total/NA
Lead	376		4.59		mg/Kg	1	✱		6010D	Total/NA
Magnesium	275		45.9		mg/Kg	1	✱		6010D	Total/NA
Manganese	152		2.29		mg/Kg	1	✱		6010D	Total/NA
Nickel	3.79		2.29		mg/Kg	1	✱		6010D	Total/NA
Potassium	298		91.7		mg/Kg	1	✱		6010D	Total/NA
Vanadium	6.78		2.29		mg/Kg	1	✱		6010D	Total/NA
Zinc	210		4.59		mg/Kg	1	✱		6010D	Total/NA
Cobalt	2.85		0.459		mg/Kg	5	✱		6020B	Total/NA
Mercury	0.136		0.0196		mg/Kg	1	✱		7471B	Total/NA

Client Sample ID: SB-4 (8.5-10.5)

Lab Sample ID: 310-267039-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	10600		48.9		mg/Kg	2	✱		6010D	Total/NA
Arsenic	12.9		7.82		mg/Kg	2	✱		6010D	Total/NA
Barium	231		1.96		mg/Kg	2	✱		6010D	Total/NA
Calcium	2140		196		mg/Kg	2	✱		6010D	Total/NA
Chromium	32.6		1.96		mg/Kg	2	✱		6010D	Total/NA
Copper	6.82		1.96		mg/Kg	2	✱		6010D	Total/NA
Iron	29900		97.8		mg/Kg	2	✱		6010D	Total/NA
Lead	144		9.78		mg/Kg	2	✱		6010D	Total/NA
Magnesium	778		97.8		mg/Kg	2	✱		6010D	Total/NA
Manganese	1050		4.89		mg/Kg	2	✱		6010D	Total/NA
Nickel	26.1		4.89		mg/Kg	2	✱		6010D	Total/NA
Potassium	590		196		mg/Kg	2	✱		6010D	Total/NA
Vanadium	64.0		4.89		mg/Kg	2	✱		6010D	Total/NA
Zinc	80.8		9.78		mg/Kg	2	✱		6010D	Total/NA
Cobalt	14.0		0.489		mg/Kg	5	✱		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-5 (0-3)

Lab Sample ID: 310-267039-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	1190		27.5		mg/Kg	1	✱		6010D	Total/NA
Arsenic	4.78		4.39		mg/Kg	1	✱		6010D	Total/NA
Barium	17.7		1.10		mg/Kg	1	✱		6010D	Total/NA
Cadmium	23.5		1.10		mg/Kg	1	✱		6010D	Total/NA
Calcium	22100		110		mg/Kg	1	✱		6010D	Total/NA
Chromium	4.40		1.10		mg/Kg	1	✱		6010D	Total/NA
Copper	17.2		1.10		mg/Kg	1	✱		6010D	Total/NA
Iron	5970		54.9		mg/Kg	1	✱		6010D	Total/NA
Lead	417		5.49		mg/Kg	1	✱		6010D	Total/NA
Magnesium	6510		54.9		mg/Kg	1	✱		6010D	Total/NA
Manganese	108		2.75		mg/Kg	1	✱		6010D	Total/NA
Nickel	8.23		2.75		mg/Kg	1	✱		6010D	Total/NA
Potassium	156		110		mg/Kg	1	✱		6010D	Total/NA
Vanadium	4.13		2.75		mg/Kg	1	✱		6010D	Total/NA
Zinc	4970		5.49		mg/Kg	1	✱		6010D	Total/NA
Cobalt	1.70		0.549		mg/Kg	5	✱		6020B	Total/NA
Mercury	0.0347		0.0206		mg/Kg	1	✱		7471B	Total/NA

Client Sample ID: SB-5 (6-8)

Lab Sample ID: 310-267039-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	15800		85.3		mg/Kg	3	✱		6010D	Total/NA
Arsenic	33.9		13.7		mg/Kg	3	✱		6010D	Total/NA
Barium	147		3.41		mg/Kg	3	✱		6010D	Total/NA
Calcium	2650		341		mg/Kg	3	✱		6010D	Total/NA
Chromium	49.0		3.41		mg/Kg	3	✱		6010D	Total/NA
Copper	10.2		3.41		mg/Kg	3	✱		6010D	Total/NA
Iron	50700		171		mg/Kg	3	✱		6010D	Total/NA
Lead	198		17.1		mg/Kg	3	✱		6010D	Total/NA
Magnesium	979		171		mg/Kg	3	✱		6010D	Total/NA
Manganese	268		8.53		mg/Kg	3	✱		6010D	Total/NA
Nickel	18.7		8.53		mg/Kg	3	✱		6010D	Total/NA
Potassium	959		341		mg/Kg	3	✱		6010D	Total/NA
Vanadium	140		8.53		mg/Kg	3	✱		6010D	Total/NA
Zinc	80.6		17.1		mg/Kg	3	✱		6010D	Total/NA
Cobalt	40.0		0.569		mg/Kg	5	✱		6020B	Total/NA

Client Sample ID: SB-6 (0-3)

Lab Sample ID: 310-267039-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
TPH-ORO (C21-C35)	262000		79600		ug/Kg	5	✱		8270E	Total/NA
Aluminum	4830		22.4		mg/Kg	1	✱		6010D	Total/NA
Arsenic	7.81		3.59		mg/Kg	1	✱		6010D	Total/NA
Barium	27.7		0.897		mg/Kg	1	✱		6010D	Total/NA
Cadmium	13.5		0.897		mg/Kg	1	✱		6010D	Total/NA
Calcium	12400		89.7		mg/Kg	1	✱		6010D	Total/NA
Chromium	9.56		0.897		mg/Kg	1	✱		6010D	Total/NA
Copper	14.6		0.897		mg/Kg	1	✱		6010D	Total/NA
Iron	17600		44.8		mg/Kg	1	✱		6010D	Total/NA
Lead	499		4.48		mg/Kg	1	✱		6010D	Total/NA
Magnesium	4350		44.8		mg/Kg	1	✱		6010D	Total/NA
Manganese	197		2.24		mg/Kg	1	✱		6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-6 (0-3) (Continued)

Lab Sample ID: 310-267039-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nickel	21.3		2.24		mg/Kg	1	✱	6010D	Total/NA
Potassium	603		89.7		mg/Kg	1	✱	6010D	Total/NA
Vanadium	14.1		2.24		mg/Kg	1	✱	6010D	Total/NA
Zinc	3260		4.48		mg/Kg	1	✱	6010D	Total/NA
Cobalt	6.05		0.448		mg/Kg	5	✱	6020B	Total/NA
Mercury	0.0337		0.0192		mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: SB-6 (6-8)

Lab Sample ID: 310-267039-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	26100		49.0		mg/Kg	2	✱	6010D	Total/NA
Barium	201		1.96		mg/Kg	2	✱	6010D	Total/NA
Calcium	6770		196		mg/Kg	2	✱	6010D	Total/NA
Chromium	28.9		1.96		mg/Kg	2	✱	6010D	Total/NA
Copper	9.03		1.96		mg/Kg	2	✱	6010D	Total/NA
Iron	24900		97.9		mg/Kg	2	✱	6010D	Total/NA
Lead	91.3		9.79		mg/Kg	2	✱	6010D	Total/NA
Magnesium	1960		97.9		mg/Kg	2	✱	6010D	Total/NA
Manganese	155		4.90		mg/Kg	2	✱	6010D	Total/NA
Nickel	15.4		4.90		mg/Kg	2	✱	6010D	Total/NA
Potassium	1830		196		mg/Kg	2	✱	6010D	Total/NA
Vanadium	44.8		4.90		mg/Kg	2	✱	6010D	Total/NA
Zinc	237		9.79		mg/Kg	2	✱	6010D	Total/NA
Cobalt	11.0		0.490		mg/Kg	5	✱	6020B	Total/NA
Mercury	0.0242		0.0218		mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: SB-7 (0-3)

Lab Sample ID: 310-267039-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	5230		27.1		mg/Kg	1	✱	6010D	Total/NA
Barium	43.4		1.09		mg/Kg	1	✱	6010D	Total/NA
Calcium	684		109		mg/Kg	1	✱	6010D	Total/NA
Chromium	6.95		1.09		mg/Kg	1	✱	6010D	Total/NA
Copper	3.44		1.09		mg/Kg	1	✱	6010D	Total/NA
Iron	6580		54.3		mg/Kg	1	✱	6010D	Total/NA
Lead	221		5.43		mg/Kg	1	✱	6010D	Total/NA
Magnesium	421		54.3		mg/Kg	1	✱	6010D	Total/NA
Manganese	138		2.71		mg/Kg	1	✱	6010D	Total/NA
Nickel	8.13		2.71		mg/Kg	1	✱	6010D	Total/NA
Potassium	440		109		mg/Kg	1	✱	6010D	Total/NA
Vanadium	10.7		2.71		mg/Kg	1	✱	6010D	Total/NA
Zinc	36.1		5.43		mg/Kg	1	✱	6010D	Total/NA
Cobalt	4.92		0.543		mg/Kg	5	✱	6020B	Total/NA
Mercury	0.0274		0.0218		mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: SB-7 (6-8)

Lab Sample ID: 310-267039-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	16300		27.9		mg/Kg	1	✱	6010D	Total/NA
Arsenic	12.5		4.46		mg/Kg	1	✱	6010D	Total/NA
Barium	72.3		1.11		mg/Kg	1	✱	6010D	Total/NA
Beryllium	0.780		0.557		mg/Kg	1	✱	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-7 (6-8) (Continued)

Lab Sample ID: 310-267039-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Cadmium	1.35		1.11		mg/Kg	1	✱		6010D	Total/NA
Calcium	2080		111		mg/Kg	1	✱		6010D	Total/NA
Chromium	19.5		1.11		mg/Kg	1	✱		6010D	Total/NA
Copper	6.10		1.11		mg/Kg	1	✱		6010D	Total/NA
Iron	17300		55.7		mg/Kg	1	✱		6010D	Total/NA
Lead	1060		5.57		mg/Kg	1	✱		6010D	Total/NA
Magnesium	1220		55.7		mg/Kg	1	✱		6010D	Total/NA
Manganese	510		2.79		mg/Kg	1	✱		6010D	Total/NA
Nickel	28.4		2.79		mg/Kg	1	✱		6010D	Total/NA
Potassium	1320		111		mg/Kg	1	✱		6010D	Total/NA
Sodium	127		111		mg/Kg	1	✱		6010D	Total/NA
Vanadium	27.7		2.79		mg/Kg	1	✱		6010D	Total/NA
Zinc	487		5.57		mg/Kg	1	✱		6010D	Total/NA
Cobalt	7.67		0.557		mg/Kg	5	✱		6020B	Total/NA
Mercury	0.0769		0.0241		mg/Kg	1	✱		7471B	Total/NA

Client Sample ID: SB-8 (0-3)

Lab Sample ID: 310-267039-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	10700		26.9		mg/Kg	1	✱		6010D	Total/NA
Arsenic	10.6		4.30		mg/Kg	1	✱		6010D	Total/NA
Barium	35.9		1.08		mg/Kg	1	✱		6010D	Total/NA
Beryllium	0.604		0.538		mg/Kg	1	✱		6010D	Total/NA
Calcium	1270		108		mg/Kg	1	✱		6010D	Total/NA
Chromium	19.3		1.08		mg/Kg	1	✱		6010D	Total/NA
Copper	11.6		1.08		mg/Kg	1	✱		6010D	Total/NA
Iron	20200		53.8		mg/Kg	1	✱		6010D	Total/NA
Lead	3360		5.38		mg/Kg	1	✱		6010D	Total/NA
Magnesium	654		53.8		mg/Kg	1	✱		6010D	Total/NA
Manganese	735		2.69		mg/Kg	1	✱		6010D	Total/NA
Nickel	42.8		2.69		mg/Kg	1	✱		6010D	Total/NA
Potassium	1490		108		mg/Kg	1	✱		6010D	Total/NA
Vanadium	21.9		2.69		mg/Kg	1	✱		6010D	Total/NA
Zinc	291		5.38		mg/Kg	1	✱		6010D	Total/NA
Cobalt	26.1		0.538		mg/Kg	5	✱		6020B	Total/NA
Mercury	0.0458		0.0245		mg/Kg	1	✱		7471B	Total/NA

Client Sample ID: SB-8 (4.5-6.5)

Lab Sample ID: 310-267039-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	31000		98.5		mg/Kg	3	✱		6010D	Total/NA
Arsenic	49.1		15.8		mg/Kg	3	✱		6010D	Total/NA
Barium	77.1		3.94		mg/Kg	3	✱		6010D	Total/NA
Calcium	3160		394		mg/Kg	3	✱		6010D	Total/NA
Chromium	70.5		3.94		mg/Kg	3	✱		6010D	Total/NA
Copper	31.1		3.94		mg/Kg	3	✱		6010D	Total/NA
Iron	56900		197		mg/Kg	3	✱		6010D	Total/NA
Lead	6500		19.7		mg/Kg	3	✱		6010D	Total/NA
Magnesium	1900		197		mg/Kg	3	✱		6010D	Total/NA
Manganese	763		9.85		mg/Kg	3	✱		6010D	Total/NA
Nickel	104		9.85		mg/Kg	3	✱		6010D	Total/NA
Potassium	2500		394		mg/Kg	3	✱		6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-8 (4.5-6.5) (Continued)

Lab Sample ID: 310-267039-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Vanadium	81.2		9.85		mg/Kg	3		✱	6010D	Total/NA
Zinc	1660		19.7		mg/Kg	3		✱	6010D	Total/NA
Cobalt	81.9		0.657		mg/Kg	5		✱	6020B	Total/NA
Mercury	0.0939		0.0238		mg/Kg	1		✱	7471B	Total/NA

Client Sample ID: SB-2 (6-8) Dup

Lab Sample ID: 310-267039-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	10700		28.9		mg/Kg	1		✱	6010D	Total/NA
Arsenic	17.6		4.63		mg/Kg	1		✱	6010D	Total/NA
Barium	366		1.16		mg/Kg	1		✱	6010D	Total/NA
Beryllium	1.85		0.578		mg/Kg	1		✱	6010D	Total/NA
Calcium	2690		116		mg/Kg	1		✱	6010D	Total/NA
Chromium	24.4		1.16		mg/Kg	1		✱	6010D	Total/NA
Copper	3.43		1.16		mg/Kg	1		✱	6010D	Total/NA
Iron	21300		57.8		mg/Kg	1		✱	6010D	Total/NA
Magnesium	2620		57.8		mg/Kg	1		✱	6010D	Total/NA
Manganese	141		2.89		mg/Kg	1		✱	6010D	Total/NA
Nickel	86.9		2.89		mg/Kg	1		✱	6010D	Total/NA
Potassium	1670		116		mg/Kg	1		✱	6010D	Total/NA
Vanadium	17.4		2.89		mg/Kg	1		✱	6010D	Total/NA
Zinc	44.9		5.78		mg/Kg	1		✱	6010D	Total/NA
Cobalt	25.2		0.578		mg/Kg	5		✱	6020B	Total/NA
Mercury	0.0390		0.0239		mg/Kg	1		✱	7471B	Total/NA

Client Sample ID: GW-2

Lab Sample ID: 310-267039-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	7.34		0.0500		mg/L	1			6020B	Total/NA
Arsenic	0.0118		0.00200		mg/L	1			6020B	Total/NA
Barium	0.460		0.00200		mg/L	1			6020B	Total/NA
Beryllium	0.00633		0.00100		mg/L	1			6020B	Total/NA
Cadmium	0.0507		0.000200		mg/L	1			6020B	Total/NA
Calcium	468		2.00		mg/L	4			6020B	Total/NA
Chromium	0.0117		0.00500		mg/L	1			6020B	Total/NA
Cobalt	0.446		0.00200		mg/L	4			6020B	Total/NA
Copper	0.0198		0.00500		mg/L	1			6020B	Total/NA
Iron	7.57		0.100		mg/L	1			6020B	Total/NA
Lead	0.0767		0.000500		mg/L	1			6020B	Total/NA
Magnesium	34.6		0.500		mg/L	1			6020B	Total/NA
Manganese	4.49		0.0400		mg/L	4			6020B	Total/NA
Nickel	0.304		0.00500		mg/L	1			6020B	Total/NA
Potassium	11.9		0.500		mg/L	1			6020B	Total/NA
Sodium	20.5		1.00		mg/L	1			6020B	Total/NA
Vanadium	0.0117		0.00500		mg/L	1			6020B	Total/NA
Zinc	7.81		0.200		mg/L	10			6020B	Total/NA
Arsenic	0.00604		0.00200		mg/L	1			6020B	Dissolved
Barium	0.0353		0.00200		mg/L	1			6020B	Dissolved
Cadmium	0.00120		0.000200		mg/L	1			6020B	Dissolved
Calcium	95.8		0.500		mg/L	1			6020B	Dissolved
Cobalt	0.0233		0.000500		mg/L	1			6020B	Dissolved
Copper	0.00901		0.00500		mg/L	1			6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2 (Continued)

Lab Sample ID: 310-267039-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.340		0.100		mg/L	1		6020B	Dissolved
Lead	0.00115		0.000500		mg/L	1		6020B	Dissolved
Magnesium	13.7		0.500		mg/L	1		6020B	Dissolved
Manganese	0.914		0.0100		mg/L	1		6020B	Dissolved
Nickel	0.0244		0.00500		mg/L	1		6020B	Dissolved
Potassium	6.01		0.500		mg/L	1		6020B	Dissolved
Sodium	17.0		1.00		mg/L	1		6020B	Dissolved
Zinc	0.116		0.0200		mg/L	1		6020B	Dissolved

Client Sample ID: GW-2 DUP

Lab Sample ID: 310-267039-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	1.63		1.00		ug/L	1		8260D	Total/NA
Aluminum	8.51		0.0500		mg/L	1		6020B	Total/NA
Arsenic	0.0138		0.00200		mg/L	1		6020B	Total/NA
Barium	0.483		0.00200		mg/L	1		6020B	Total/NA
Beryllium	0.00920		0.00100		mg/L	1		6020B	Total/NA
Cadmium	0.0561		0.000200		mg/L	1		6020B	Total/NA
Calcium	416		0.500		mg/L	1		6020B	Total/NA
Chromium	0.0100		0.00500		mg/L	1		6020B	Total/NA
Cobalt	0.517		0.00200		mg/L	4		6020B	Total/NA
Copper	0.0177		0.00500		mg/L	1		6020B	Total/NA
Iron	12.9		0.100		mg/L	1		6020B	Total/NA
Lead	0.0620		0.000500		mg/L	1		6020B	Total/NA
Magnesium	33.0		0.500		mg/L	1		6020B	Total/NA
Manganese	4.28		0.0400		mg/L	4		6020B	Total/NA
Nickel	0.374		0.00500		mg/L	1		6020B	Total/NA
Potassium	10.3		0.500		mg/L	1		6020B	Total/NA
Sodium	19.1		1.00		mg/L	1		6020B	Total/NA
Vanadium	0.0117		0.00500		mg/L	1		6020B	Total/NA
Zinc	9.28		0.200		mg/L	10		6020B	Total/NA
Arsenic	0.00784		0.00200		mg/L	1		6020B	Dissolved
Barium	0.0356		0.00200		mg/L	1		6020B	Dissolved
Cadmium	0.00113		0.000200		mg/L	1		6020B	Dissolved
Calcium	97.2		0.500		mg/L	1		6020B	Dissolved
Cobalt	0.0273		0.000500		mg/L	1		6020B	Dissolved
Iron	0.984		0.100		mg/L	1		6020B	Dissolved
Magnesium	13.4		0.500		mg/L	1		6020B	Dissolved
Manganese	0.980		0.0100		mg/L	1		6020B	Dissolved
Nickel	0.0271		0.00500		mg/L	1		6020B	Dissolved
Potassium	5.34		0.500		mg/L	1		6020B	Dissolved
Sodium	15.5		1.00		mg/L	1		6020B	Dissolved
Zinc	0.124		0.0200		mg/L	1		6020B	Dissolved

Client Sample ID: GW-5

Lab Sample ID: 310-267039-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	7.30		0.0500		mg/L	1		6020B	Total/NA
Arsenic	0.00765		0.00200		mg/L	1		6020B	Total/NA
Barium	0.331		0.00200		mg/L	1		6020B	Total/NA
Beryllium	0.00805		0.00100		mg/L	1		6020B	Total/NA
Cadmium	0.186		0.000200		mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-5 (Continued)

Lab Sample ID: 310-267039-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	239		0.500		mg/L	1		6020B	Total/NA
Chromium	0.145		0.00500		mg/L	1		6020B	Total/NA
Cobalt	0.154		0.000500		mg/L	1		6020B	Total/NA
Copper	0.111		0.00500		mg/L	1		6020B	Total/NA
Iron	42.4		0.100		mg/L	1		6020B	Total/NA
Lead	0.934		0.000500		mg/L	1		6020B	Total/NA
Magnesium	19.7		0.500		mg/L	1		6020B	Total/NA
Manganese	7.88		0.100		mg/L	10		6020B	Total/NA
Nickel	0.115		0.00500		mg/L	1		6020B	Total/NA
Potassium	3.60		0.500		mg/L	1		6020B	Total/NA
Sodium	3.65		1.00		mg/L	1		6020B	Total/NA
Vanadium	0.0267		0.00500		mg/L	1		6020B	Total/NA
Zinc	14.3		0.200		mg/L	10		6020B	Total/NA
Barium	0.121		0.00200		mg/L	1		6020B	Dissolved
Cadmium	0.00248		0.000200		mg/L	1		6020B	Dissolved
Calcium	162		0.500		mg/L	1		6020B	Dissolved
Cobalt	0.0161		0.000500		mg/L	1		6020B	Dissolved
Iron	0.355		0.100		mg/L	1		6020B	Dissolved
Magnesium	9.11		0.500		mg/L	1		6020B	Dissolved
Manganese	2.70		0.0100		mg/L	1		6020B	Dissolved
Nickel	0.0109		0.00500		mg/L	1		6020B	Dissolved
Potassium	2.85		0.500		mg/L	1		6020B	Dissolved
Sodium	4.57		1.00		mg/L	1		6020B	Dissolved
Zinc	0.0873		0.0200		mg/L	1		6020B	Dissolved

Client Sample ID: GW-6

Lab Sample ID: 310-267039-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	14.4		10.0		ug/L	1		8260D	Total/NA
Aluminum	6.73		0.0500		mg/L	1		6020B	Total/NA
Arsenic	0.00581		0.00200		mg/L	1		6020B	Total/NA
Barium	0.694		0.00200		mg/L	1		6020B	Total/NA
Beryllium	0.0133		0.00100		mg/L	1		6020B	Total/NA
Cadmium	0.158		0.000200		mg/L	1		6020B	Total/NA
Calcium	369		0.500		mg/L	1		6020B	Total/NA
Chromium	0.135		0.00500		mg/L	1		6020B	Total/NA
Cobalt	0.208		0.000500		mg/L	1		6020B	Total/NA
Copper	0.0706		0.00500		mg/L	1		6020B	Total/NA
Iron	41.2		0.100		mg/L	1		6020B	Total/NA
Lead	1.20		0.000500		mg/L	1		6020B	Total/NA
Magnesium	25.8		0.500		mg/L	1		6020B	Total/NA
Manganese	13.1		0.200		mg/L	20		6020B	Total/NA
Nickel	0.221		0.00500		mg/L	1		6020B	Total/NA
Potassium	5.57		0.500		mg/L	1		6020B	Total/NA
Sodium	5.09		1.00		mg/L	1		6020B	Total/NA
Vanadium	0.0510		0.00500		mg/L	1		6020B	Total/NA
Zinc	17.8		0.400		mg/L	20		6020B	Total/NA
Barium	0.0885		0.00200		mg/L	1		6020B	Dissolved
Cadmium	0.00533		0.000200		mg/L	1		6020B	Dissolved
Calcium	133		0.500		mg/L	1		6020B	Dissolved
Cobalt	0.0155		0.000500		mg/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-6 (Continued)

Lab Sample ID: 310-267039-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00947		0.00500		mg/L	1		6020B	Dissolved
Iron	0.672		0.100		mg/L	1		6020B	Dissolved
Lead	0.00193		0.000500		mg/L	1		6020B	Dissolved
Magnesium	8.53		0.500		mg/L	1		6020B	Dissolved
Manganese	2.36		0.0100		mg/L	1		6020B	Dissolved
Nickel	0.00593		0.00500		mg/L	1		6020B	Dissolved
Potassium	2.67		0.500		mg/L	1		6020B	Dissolved
Sodium	4.55		1.00		mg/L	1		6020B	Dissolved
Zinc	0.371		0.0200		mg/L	1		6020B	Dissolved

Client Sample ID: GW-7

Lab Sample ID: 310-267039-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	2.47		0.0500		mg/L	1		6020B	Total/NA
Arsenic	0.00207		0.00200		mg/L	1		6020B	Total/NA
Barium	0.591		0.00200		mg/L	1		6020B	Total/NA
Beryllium	0.00174		0.00100		mg/L	1		6020B	Total/NA
Cadmium	0.204		0.000200		mg/L	1		6020B	Total/NA
Calcium	203		25.0		mg/L	50		6020B	Total/NA
Chromium	0.0157		0.00500		mg/L	1		6020B	Total/NA
Cobalt	0.121		0.000500		mg/L	1		6020B	Total/NA
Copper	0.0265		0.00500		mg/L	1		6020B	Total/NA
Iron	0.838		0.100		mg/L	1		6020B	Total/NA
Lead	1.37		0.000500		mg/L	1		6020B	Total/NA
Magnesium	27.5		0.500		mg/L	1		6020B	Total/NA
Manganese	9.96		0.500		mg/L	50		6020B	Total/NA
Nickel	0.163		0.00500		mg/L	1		6020B	Total/NA
Potassium	5.13		0.500		mg/L	1		6020B	Total/NA
Sodium	36.0		1.00		mg/L	1		6020B	Total/NA
Zinc	27.1		1.00		mg/L	50		6020B	Total/NA
Barium	0.127		0.00200		mg/L	1		6020B	Dissolved
Cadmium	0.00927		0.000200		mg/L	1		6020B	Dissolved
Calcium	127		0.500		mg/L	1		6020B	Dissolved
Cobalt	0.00542		0.000500		mg/L	1		6020B	Dissolved
Lead	0.00520		0.000500		mg/L	1		6020B	Dissolved
Magnesium	10.9		0.500		mg/L	1		6020B	Dissolved
Manganese	1.18		0.0100		mg/L	1		6020B	Dissolved
Potassium	3.48		0.500		mg/L	1		6020B	Dissolved
Sodium	35.1		1.00		mg/L	1		6020B	Dissolved
Zinc	0.829		0.0200		mg/L	1		6020B	Dissolved
Mercury	0.000695		0.000200		mg/L	1		7470A	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 310-267039-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00127		0.000500		mg/L	1		6020B	Total/NA
Manganese	0.0146		0.0100		mg/L	1		6020B	Total/NA
Zinc	0.0499		0.0200		mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-2

Lab Sample ID: 310-267039-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	11.4		10.0		ug/L	1		8260D	Total/NA

Client Sample ID: EB-1

Lab Sample ID: 310-267039-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.00528		0.00500		mg/L	1		6020B	Total/NA
Iron	0.290		0.100		mg/L	1		6020B	Total/NA
Lead	0.000597		0.000500		mg/L	1		6020B	Total/NA
Iron	0.190		0.100		mg/L	1		6020B	Dissolved

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-267039-26

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-1 (0-3)

Lab Sample ID: 310-267039-1

Date Collected: 10/10/23 12:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 79.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,1,1-Trichloroethane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,1,2,2-Tetrachloroethane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,1,2-Trichloroethane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,1-Dichloroethane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,1-Dichloroethene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,1-Dichloropropene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,2,3-Trichlorobenzene	<9.40		9.40		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,2,3-Trichloropropane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,2,4-Trichlorobenzene	<9.40		9.40		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,2,4-Trimethylbenzene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,2-Dibromo-3-chloropropane	<9.40		9.40		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,2-Dibromoethane (EDB)	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,2-Dichlorobenzene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,2-Dichloroethane (EDC)	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,2-Dichloropropane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,3,5-Trimethylbenzene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,3-Dichlorobenzene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,3-Dichloropropane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
1,4-Dichlorobenzene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
2,2-Dichloropropane	<18.8		18.8		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
2-Butanone (MEK)	<18.8		18.8		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
2-Chlorotoluene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
4-Chlorotoluene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Acetone	<47.0		47.0		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Benzene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Bromobenzene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Bromochloromethane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Bromodichloromethane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Bromoform	<9.40		9.40		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Bromomethane	<18.8		18.8		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Carbon disulfide	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Carbon tetrachloride	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Chlorobenzene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Chlorodibromomethane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Chloroethane	<18.8		18.8		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Chloroform	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Chloromethane	<18.8		18.8		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
cis-1,2-Dichloroethene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
cis-1,3-Dichloropropene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Dibromomethane	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Dichlorodifluoromethane	<14.1		14.1		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Ethylbenzene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Hexachlorobutadiene	<23.5		23.5		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Hexane	<23.5		23.5		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Isopropylbenzene	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Methyl-tert-butyl Ether (MTBE)	<4.70		4.70		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Methylene chloride	<47.0		47.0		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1
Naphthalene	<23.5		23.5		ug/Kg	☼	10/17/23 11:19	10/18/23 12:55	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-1 (0-3)

Lab Sample ID: 310-267039-1

Date Collected: 10/10/23 12:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 79.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
n-Propylbenzene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
p-Isopropyltoluene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
sec-Butylbenzene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
Styrene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
tert-Butylbenzene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
Tetrachloroethene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
Toluene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
trans-1,2-Dichloroethene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
trans-1,3-Dichloropropene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
Trichloroethene	<4.70		4.70		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
Trichlorofluoromethane	<18.8		18.8		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
Vinyl chloride	<9.40		9.40		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
Xylenes, Total	<9.40		9.40		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1
TPH-GRO (C6-C10)	<1880		1880		ug/Kg	✱	10/17/23 11:19	10/18/23 12:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	108		80 - 131	10/17/23 11:19	10/18/23 12:55	1
Toluene-d8 (Surr)	93		80 - 120	10/17/23 11:19	10/18/23 12:55	1
4-Bromofluorobenzene (Surr)	98		78 - 120	10/17/23 11:19	10/18/23 12:55	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
1,2-Dichlorobenzene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
1,3-Dichlorobenzene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
1,4-Dichlorobenzene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2,4,5-Trichlorophenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2,4,6-Trichlorophenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2,4-Dichlorophenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2,4-Dimethylphenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2,4-Dinitrophenol	<492		492		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2,4-Dinitrotoluene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2,6-Dinitrotoluene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2-Chloronaphthalene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2-Chlorophenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2-Methylnaphthalene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2-Methylphenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2-Nitroaniline	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
2-Nitrophenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
3,3'-Dichlorobenzidine	<492		492		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
3-Nitroaniline	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
4,6-Dinitro-2-methylphenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
4-Bromophenyl phenyl ether	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
4-Chloro-3-methylphenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
4-Chloroaniline	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
4-Chlorophenyl phenyl ether	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
4-Methylphenol (and/or 3-Methylphenol)	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
4-Nitroaniline	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-1 (0-3)

Lab Sample ID: 310-267039-1

Date Collected: 10/10/23 12:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 79.5

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Acenaphthene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Acenaphthylene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Anthracene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Benzidine	<492		492		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Benzo(a)anthracene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Benzo(a)pyrene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Benzo(b)fluoranthene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Benzo(g,h,i)perylene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Benzo(k)fluoranthene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Benzoic acid	<1230		1230		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Benzyl alcohol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Bis(2-chloroethoxy)methane	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Bis(2-chloroethyl)ether	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
bis(2-chloroisopropyl) ether	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Bis(2-ethylhexyl) phthalate	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Butyl benzyl phthalate	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Carbazole	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Chrysene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Dibenzo(a,h)anthracene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Dibenzofuran	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Diethyl phthalate	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Dimethyl phthalate	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Di-n-butyl phthalate	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Di-n-octyl phthalate	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Fluoranthene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Fluorene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Hexachlorobenzene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Hexachlorobutadiene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Hexachlorocyclopentadiene	<492		492		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Hexachloroethane	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Indeno(1,2,3-cd)pyrene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Isophorone	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Naphthalene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Nitrobenzene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
N-Nitrosodimethylamine	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
N-Nitrosodi-n-propylamine	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
N-Nitrosodiphenylamine	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Pentachlorophenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Phenanthrene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Phenol	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Pyrene	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Pyridine	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
Total Cresols	<246		246		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
TPH-DRO (C10-C21)	21600	F1	18500		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1
TPH-ORO (C21-C35)	<18500		18500		ug/Kg	✱	10/18/23 10:16	10/19/23 14:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	84		18 - 126	10/18/23 10:16	10/19/23 14:32	1
Phenol-d5 (Surr)	76		25 - 119	10/18/23 10:16	10/19/23 14:32	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-1 (0-3)

Lab Sample ID: 310-267039-1

Date Collected: 10/10/23 12:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 79.5

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	73		15 - 131	10/18/23 10:16	10/19/23 14:32	1
2-Fluorobiphenyl (Surr)	60		28 - 116	10/18/23 10:16	10/19/23 14:32	1
2,4,6-Tribromophenol (Surr)	66		10 - 121	10/18/23 10:16	10/19/23 14:32	1
Terphenyl-d14 (Surr)	69		24 - 132	10/18/23 10:16	10/19/23 14:32	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	5670		50.0		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Antimony	<10.0		10.0		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Arsenic	14.8		8.00		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Barium	137		2.00		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Beryllium	<1.00		1.00		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Cadmium	29.8		2.00		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Calcium	28300		200		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Chromium	12.8		2.00		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Copper	12.1		2.00		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Iron	28600		100		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Lead	152		10.0		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Magnesium	3880		100		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Manganese	62.3		5.00		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Nickel	23.8		5.00		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Potassium	2130		200		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Selenium	<10.0		10.0		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Silver	<2.00		2.00		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Sodium	<200		200		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Thallium	<10.0		10.0		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Vanadium	10.2		5.00		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2
Zinc	5000		10.0		mg/Kg	☆	10/16/23 10:35	10/17/23 15:20	2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	9.52		0.500		mg/Kg	☆	10/16/23 10:35	10/24/23 15:52	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0497		0.0238		mg/Kg	☆	10/16/23 18:18	10/24/23 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	20.5		0.1		%			10/13/23 13:12	1
Percent Solids (EPA Moisture)	79.5		0.1		%			10/13/23 13:12	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-1 (3.5-5.5)

Lab Sample ID: 310-267039-2

Date Collected: 10/10/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 80.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,1,1-Trichloroethane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,1,2,2-Tetrachloroethane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,1,2-Trichloroethane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,1-Dichloroethane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,1-Dichloroethene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,1-Dichloropropene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,2,3-Trichlorobenzene	<9.88		9.88		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,2,3-Trichloropropane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,2,4-Trichlorobenzene	<9.88		9.88		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,2,4-Trimethylbenzene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,2-Dibromo-3-chloropropane	<9.88		9.88		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,2-Dibromoethane (EDB)	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,2-Dichlorobenzene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,2-Dichloroethane (EDC)	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,2-Dichloropropane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,3,5-Trimethylbenzene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,3-Dichlorobenzene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,3-Dichloropropane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
1,4-Dichlorobenzene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
2,2-Dichloropropane	<19.8		19.8		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
2-Butanone (MEK)	<19.8		19.8		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
2-Chlorotoluene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
4-Chlorotoluene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Acetone	<49.4		49.4		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Benzene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Bromobenzene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Bromochloromethane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Bromodichloromethane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Bromoform	<9.88		9.88		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Bromomethane	<19.8		19.8		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Carbon disulfide	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Carbon tetrachloride	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Chlorobenzene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Chlorodibromomethane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Chloroethane	<19.8		19.8		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Chloroform	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Chloromethane	<19.8		19.8		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
cis-1,2-Dichloroethene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
cis-1,3-Dichloropropene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Dibromomethane	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Dichlorodifluoromethane	<14.8		14.8		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Ethylbenzene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Hexachlorobutadiene	<24.7		24.7		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Hexane	<24.7		24.7		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Isopropylbenzene	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Methyl-tert-butyl Ether (MTBE)	<4.94		4.94		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Methylene chloride	<49.4		49.4		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1
Naphthalene	<24.7		24.7		ug/Kg	☼	10/17/23 11:19	10/18/23 06:22	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-1 (3.5-5.5)

Lab Sample ID: 310-267039-2

Date Collected: 10/10/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 80.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
n-Propylbenzene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
p-Isopropyltoluene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
sec-Butylbenzene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
Styrene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
tert-Butylbenzene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
Tetrachloroethene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
Toluene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
trans-1,2-Dichloroethene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
trans-1,3-Dichloropropene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
Trichloroethene	<4.94		4.94		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
Trichlorofluoromethane	<19.8		19.8		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
Vinyl chloride	<9.88		9.88		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
Xylenes, Total	<9.88		9.88		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1
TPH-GRO (C6-C10)	<1980		1980		ug/Kg	✱	10/17/23 11:19	10/18/23 06:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		80 - 131	10/17/23 11:19	10/18/23 06:22	1
Toluene-d8 (Surr)	94		80 - 120	10/17/23 11:19	10/18/23 06:22	1
4-Bromofluorobenzene (Surr)	99		78 - 120	10/17/23 11:19	10/18/23 06:22	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
1,2-Dichlorobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
1,3-Dichlorobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
1,4-Dichlorobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2,4,5-Trichlorophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2,4,6-Trichlorophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2,4-Dichlorophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2,4-Dimethylphenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2,4-Dinitrophenol	<2430		2430		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2,4-Dinitrotoluene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2,6-Dinitrotoluene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2-Chloronaphthalene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2-Chlorophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2-Methylnaphthalene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2-Methylphenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2-Nitroaniline	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
2-Nitrophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
3,3'-Dichlorobenzidine	<2430		2430		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
3-Nitroaniline	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
4,6-Dinitro-2-methylphenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
4-Bromophenyl phenyl ether	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
4-Chloro-3-methylphenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
4-Chloroaniline	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
4-Chlorophenyl phenyl ether	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
4-Methylphenol (and/or 3-Methylphenol)	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
4-Nitroaniline	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-1 (3.5-5.5)

Lab Sample ID: 310-267039-2

Date Collected: 10/10/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 80.2

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Acenaphthene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Acenaphthylene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Anthracene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Benzidine	<2430		2430		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Benzo(a)anthracene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Benzo(a)pyrene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Benzo(b)fluoranthene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Benzo(g,h,i)perylene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Benzo(k)fluoranthene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Benzoic acid	<6070		6070		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Benzyl alcohol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Bis(2-chloroethoxy)methane	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Bis(2-chloroethyl)ether	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
bis(2-chloroisopropyl) ether	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Bis(2-ethylhexyl) phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Butyl benzyl phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Carbazole	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Chrysene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Dibenzo(a,h)anthracene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Dibenzofuran	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Diethyl phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Dimethyl phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Di-n-butyl phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Di-n-octyl phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Fluoranthene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Fluorene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Hexachlorobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Hexachlorobutadiene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Hexachlorocyclopentadiene	<2430		2430		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Hexachloroethane	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Indeno(1,2,3-cd)pyrene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Isophorone	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Naphthalene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Nitrobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
N-Nitrosodimethylamine	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
N-Nitrosodi-n-propylamine	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
N-Nitrosodiphenylamine	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Pentachlorophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Phenanthrene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Phenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Pyrene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Pyridine	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
Total Cresols	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
TPH-DRO (C10-C21)	<91100		91100		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5
TPH-ORO (C21-C35)	<91100		91100		ug/Kg	✱	10/18/23 10:16	10/19/23 14:59	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	58		18 - 126	10/18/23 10:16	10/19/23 14:59	5
Phenol-d5 (Surr)	66		25 - 119	10/18/23 10:16	10/19/23 14:59	5

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-1 (3.5-5.5)

Lab Sample ID: 310-267039-2

Date Collected: 10/10/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 80.2

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	61		15 - 131	10/18/23 10:16	10/19/23 14:59	5
2-Fluorobiphenyl (Surr)	63		28 - 116	10/18/23 10:16	10/19/23 14:59	5
2,4,6-Tribromophenol (Surr)	59		10 - 121	10/18/23 10:16	10/19/23 14:59	5
Terphenyl-d14 (Surr)	70		24 - 132	10/18/23 10:16	10/19/23 14:59	5

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1730		28.3		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Antimony	<5.67		5.67		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Arsenic	<4.54		4.54		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Barium	32.3		1.13		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Beryllium	<0.567		0.567		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Cadmium	<1.13		1.13		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Calcium	886		113		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Chromium	2.38		1.13		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Copper	1.54		1.13		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Iron	3010		56.7		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Lead	<5.67		5.67		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Magnesium	141		56.7		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Manganese	47.1		2.83		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Nickel	<2.83		2.83		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Potassium	923		113		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Selenium	<5.67		5.67		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Silver	<1.13		1.13		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Sodium	154		113		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Thallium	<5.67		5.67		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Vanadium	<2.83		2.83		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1
Zinc	18.8		5.67		mg/Kg	✱	10/16/23 10:35	10/17/23 14:32	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	9.37		0.567		mg/Kg	✱	10/16/23 10:35	10/24/23 15:56	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0217		0.0217		mg/Kg	✱	10/16/23 18:18	10/24/23 13:32	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	19.8		0.1		%			10/13/23 13:12	1
Percent Solids (EPA Moisture)	80.2		0.1		%			10/13/23 13:12	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (0-3)

Lab Sample ID: 310-267039-3

Date Collected: 10/10/23 14:20

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 83.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,1,1-Trichloroethane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,1,2,2-Tetrachloroethane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,1,2-Trichloroethane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,1-Dichloroethane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,1-Dichloroethene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,1-Dichloropropene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,2,3-Trichlorobenzene	<7.87		7.87		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,2,3-Trichloropropane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,2,4-Trichlorobenzene	<7.87		7.87		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,2,4-Trimethylbenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,2-Dibromo-3-chloropropane	<7.87		7.87		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,2-Dibromoethane (EDB)	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,2-Dichlorobenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,2-Dichloroethane (EDC)	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,2-Dichloropropane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,3,5-Trimethylbenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,3-Dichlorobenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,3-Dichloropropane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
1,4-Dichlorobenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
2,2-Dichloropropane	<15.7		15.7		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
2-Butanone (MEK)	<15.7		15.7		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
2-Chlorotoluene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
4-Chlorotoluene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Acetone	<39.3		39.3		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Benzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Bromobenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Bromochloromethane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Bromodichloromethane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Bromoform	<7.87		7.87		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Bromomethane	<15.7		15.7		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Carbon disulfide	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Carbon tetrachloride	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Chlorobenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Chlorodibromomethane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Chloroethane	<15.7		15.7		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Chloroform	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Chloromethane	<15.7		15.7		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
cis-1,2-Dichloroethene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
cis-1,3-Dichloropropene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Dibromomethane	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Dichlorodifluoromethane	<11.8		11.8		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Ethylbenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Hexachlorobutadiene	<19.7		19.7		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Hexane	<19.7		19.7		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Isopropylbenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Methyl-tert-butyl Ether (MTBE)	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Methylene chloride	<39.3		39.3		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Naphthalene	<19.7		19.7		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (0-3)

Lab Sample ID: 310-267039-3

Date Collected: 10/10/23 14:20

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 83.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
n-Propylbenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
p-Isopropyltoluene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
sec-Butylbenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Styrene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
tert-Butylbenzene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Tetrachloroethene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Toluene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
trans-1,2-Dichloroethene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
trans-1,3-Dichloropropene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Trichloroethene	<3.93		3.93		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Trichlorofluoromethane	<15.7		15.7		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Vinyl chloride	<7.87		7.87		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
Xylenes, Total	<7.87		7.87		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1
TPH-GRO (C6-C10)	<1570		1570		ug/Kg	✱	10/17/23 11:19	10/18/23 06:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	104		80 - 131	10/17/23 11:19	10/18/23 06:46	1
Toluene-d8 (Surr)	93		80 - 120	10/17/23 11:19	10/18/23 06:46	1
4-Bromofluorobenzene (Surr)	98		78 - 120	10/17/23 11:19	10/18/23 06:46	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
1,2-Dichlorobenzene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
1,3-Dichlorobenzene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
1,4-Dichlorobenzene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2,4,5-Trichlorophenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2,4,6-Trichlorophenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2,4-Dichlorophenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2,4-Dimethylphenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2,4-Dinitrophenol	<464		464		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2,4-Dinitrotoluene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2,6-Dinitrotoluene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2-Chloronaphthalene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2-Chlorophenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2-Methylnaphthalene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2-Methylphenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2-Nitroaniline	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
2-Nitrophenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
3,3'-Dichlorobenzidine	<464		464		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
3-Nitroaniline	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
4,6-Dinitro-2-methylphenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
4-Bromophenyl phenyl ether	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
4-Chloro-3-methylphenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
4-Chloroaniline	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
4-Chlorophenyl phenyl ether	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
4-Methylphenol (and/or 3-Methylphenol)	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
4-Nitroaniline	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (0-3)

Lab Sample ID: 310-267039-3

Date Collected: 10/10/23 14:20

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 83.7

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Acenaphthene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Acenaphthylene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Anthracene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Benzidine	<464		464		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Benzo(a)anthracene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Benzo(a)pyrene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Benzo(b)fluoranthene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Benzo(g,h,i)perylene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Benzo(k)fluoranthene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Benzoic acid	<1160		1160		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Benzyl alcohol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Bis(2-chloroethoxy)methane	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Bis(2-chloroethyl)ether	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
bis(2-chloroisopropyl) ether	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Bis(2-ethylhexyl) phthalate	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Butyl benzyl phthalate	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Carbazole	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Chrysene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Dibenzo(a,h)anthracene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Dibenzofuran	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Diethyl phthalate	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Dimethyl phthalate	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Di-n-butyl phthalate	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Di-n-octyl phthalate	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Fluoranthene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Fluorene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Hexachlorobenzene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Hexachlorobutadiene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Hexachlorocyclopentadiene	<464		464		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Hexachloroethane	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Indeno(1,2,3-cd)pyrene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Isophorone	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Naphthalene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Nitrobenzene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
N-Nitrosodimethylamine	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
N-Nitrosodi-n-propylamine	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
N-Nitrosodiphenylamine	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Pentachlorophenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Phenanthrene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Phenol	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Pyrene	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Pyridine	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
Total Cresols	<232		232		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
TPH-DRO (C10-C21)	23200		17400		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1
TPH-ORO (C21-C35)	20800		17400		ug/Kg	✱	10/18/23 10:16	10/19/23 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	64		18 - 126	10/18/23 10:16	10/19/23 15:27	1
Phenol-d5 (Surr)	71		25 - 119	10/18/23 10:16	10/19/23 15:27	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (0-3)

Lab Sample ID: 310-267039-3

Date Collected: 10/10/23 14:20

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 83.7

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	81		15 - 131	10/18/23 10:16	10/19/23 15:27	1
2-Fluorobiphenyl (Surr)	56		28 - 116	10/18/23 10:16	10/19/23 15:27	1
2,4,6-Tribromophenol (Surr)	72		10 - 121	10/18/23 10:16	10/19/23 15:27	1
Terphenyl-d14 (Surr)	66		24 - 132	10/18/23 10:16	10/19/23 15:27	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	11300		22.8		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Antimony	<4.57		4.57		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Arsenic	7.80		3.65		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Barium	80.0		0.913		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Beryllium	<0.457		0.457		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Cadmium	<0.913		0.913		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Calcium	3010		91.3		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Chromium	15.8		0.913		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Copper	4.99		0.913		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Iron	12300		45.7		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Lead	170		4.57		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Magnesium	866		45.7		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Manganese	40.5		2.28		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Nickel	9.44		2.28		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Potassium	1050		91.3		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Selenium	<4.57		4.57		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Silver	<0.913		0.913		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Sodium	108		91.3		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Thallium	<4.57		4.57		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Vanadium	29.4		2.28		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1
Zinc	111		4.57		mg/Kg	☆	10/16/23 10:35	10/17/23 14:35	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	6.02		0.457		mg/Kg	☆	10/16/23 10:35	10/24/23 15:58	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0811		0.0196		mg/Kg	☆	10/16/23 18:18	10/24/23 13:34	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	16.3		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	83.7		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (6-8)

Lab Sample ID: 310-267039-4

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,1,1-Trichloroethane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,1,2,2-Tetrachloroethane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,1,2-Trichloroethane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,1-Dichloroethane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,1-Dichloroethene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,1-Dichloropropene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,2,3-Trichlorobenzene	<8.07		8.07		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,2,3-Trichloropropane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,2,4-Trichlorobenzene	<8.07		8.07		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,2,4-Trimethylbenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,2-Dibromo-3-chloropropane	<8.07		8.07		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,2-Dibromoethane (EDB)	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,2-Dichlorobenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,2-Dichloroethane (EDC)	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,2-Dichloropropane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,3,5-Trimethylbenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,3-Dichlorobenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,3-Dichloropropane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
1,4-Dichlorobenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
2,2-Dichloropropane	<16.1		16.1		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
2-Butanone (MEK)	<16.1		16.1		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
2-Chlorotoluene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
4-Chlorotoluene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Acetone	<40.4		40.4		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Benzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Bromobenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Bromochloromethane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Bromodichloromethane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Bromoform	<8.07		8.07		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Bromomethane	<16.1		16.1		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Carbon disulfide	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Carbon tetrachloride	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Chlorobenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Chlorodibromomethane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Chloroethane	<16.1		16.1		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Chloroform	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Chloromethane	<16.1		16.1		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
cis-1,2-Dichloroethene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
cis-1,3-Dichloropropene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Dibromomethane	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Dichlorodifluoromethane	<12.1		12.1		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Ethylbenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Hexachlorobutadiene	<20.2		20.2		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Hexane	<20.2		20.2		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Isopropylbenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Methyl-tert-butyl Ether (MTBE)	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Methylene chloride	<40.4		40.4		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Naphthalene	<20.2		20.2		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (6-8)

Lab Sample ID: 310-267039-4

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
n-Propylbenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
p-Isopropyltoluene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
sec-Butylbenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Styrene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
tert-Butylbenzene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Tetrachloroethene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Toluene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
trans-1,2-Dichloroethene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
trans-1,3-Dichloropropene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Trichloroethene	<4.04		4.04		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Trichlorofluoromethane	<16.1		16.1		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Vinyl chloride	<8.07		8.07		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
Xylenes, Total	<8.07		8.07		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1
TPH-GRO (C6-C10)	<1610		1610		ug/Kg	☼	10/17/23 11:19	10/18/23 07:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	105		80 - 131	10/17/23 11:19	10/18/23 07:11	1
Toluene-d8 (Surr)	94		80 - 120	10/17/23 11:19	10/18/23 07:11	1
4-Bromofluorobenzene (Surr)	98		78 - 120	10/17/23 11:19	10/18/23 07:11	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
1,2-Dichlorobenzene	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
1,3-Dichlorobenzene	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
1,4-Dichlorobenzene	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2,4,5-Trichlorophenol	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2,4,6-Trichlorophenol	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2,4-Dichlorophenol	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2,4-Dimethylphenol	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2,4-Dinitrophenol	<437		437		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2,4-Dinitrotoluene	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2,6-Dinitrotoluene	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2-Chloronaphthalene	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2-Chlorophenol	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2-Methylnaphthalene	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2-Methylphenol	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2-Nitroaniline	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
2-Nitrophenol	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
3,3'-Dichlorobenzidine	<437		437		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
3-Nitroaniline	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
4,6-Dinitro-2-methylphenol	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
4-Bromophenyl phenyl ether	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
4-Chloro-3-methylphenol	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
4-Chloroaniline	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
4-Chlorophenyl phenyl ether	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
4-Methylphenol (and/or 3-Methylphenol)	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1
4-Nitroaniline	<218		218		ug/Kg	☼	10/18/23 10:16	10/19/23 15:54	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (6-8)

Lab Sample ID: 310-267039-4

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.5

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Acenaphthene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Acenaphthylene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Anthracene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Benzidine	<437		437		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Benzo(a)anthracene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Benzo(a)pyrene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Benzo(b)fluoranthene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Benzo(g,h,i)perylene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Benzo(k)fluoranthene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Benzoic acid	<1090		1090		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Benzyl alcohol	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Bis(2-chloroethoxy)methane	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Bis(2-chloroethyl)ether	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
bis(2-chloroisopropyl) ether	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Bis(2-ethylhexyl) phthalate	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Butyl benzyl phthalate	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Carbazole	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Chrysene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Dibenzo(a,h)anthracene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Dibenzofuran	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Diethyl phthalate	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Dimethyl phthalate	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Di-n-butyl phthalate	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Di-n-octyl phthalate	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Fluoranthene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Fluorene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Hexachlorobenzene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Hexachlorobutadiene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Hexachlorocyclopentadiene	<437		437		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Hexachloroethane	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Indeno(1,2,3-cd)pyrene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Isophorone	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Naphthalene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Nitrobenzene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
N-Nitrosodimethylamine	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
N-Nitrosodi-n-propylamine	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
N-Nitrosodiphenylamine	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Pentachlorophenol	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Phenanthrene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Phenol	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Pyrene	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Pyridine	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
Total Cresols	<218		218		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
TPH-DRO (C10-C21)	<16400		16400		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1
TPH-ORO (C21-C35)	<16400		16400		ug/Kg	✱	10/18/23 10:16	10/19/23 15:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	108		18 - 126	10/18/23 10:16	10/19/23 15:54	1
Phenol-d5 (Surr)	78		25 - 119	10/18/23 10:16	10/19/23 15:54	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (6-8)

Lab Sample ID: 310-267039-4

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.5

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	64		15 - 131	10/18/23 10:16	10/19/23 15:54	1
2-Fluorobiphenyl (Surr)	58		28 - 116	10/18/23 10:16	10/19/23 15:54	1
2,4,6-Tribromophenol (Surr)	63		10 - 121	10/18/23 10:16	10/19/23 15:54	1
Terphenyl-d14 (Surr)	67		24 - 132	10/18/23 10:16	10/19/23 15:54	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9070		46.8		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Antimony	<9.36		9.36		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Arsenic	14.1		7.49		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Barium	20.5		1.87		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Beryllium	1.51		0.936		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Cadmium	<1.87		1.87		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Calcium	2410		187		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Chromium	16.4		1.87		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Copper	3.24		1.87		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Iron	20900		93.6		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Lead	<9.36		9.36		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Magnesium	2460		93.6		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Manganese	188		4.68		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Nickel	67.6		4.68		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Potassium	1070		187		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Selenium	<9.36		9.36		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Silver	<1.87		1.87		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Sodium	<187		187		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Thallium	<9.36		9.36		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Vanadium	11.2		4.68		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2
Zinc	41.2		9.36		mg/Kg	☆	10/16/23 10:35	10/17/23 15:22	2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	44.3		0.468		mg/Kg	☆	10/16/23 10:35	10/24/23 16:01	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0199		0.0199		mg/Kg	☆	10/16/23 18:18	10/24/23 13:36	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	11.5		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	88.5		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-3 (0-3)

Lab Sample ID: 310-267039-5

Date Collected: 10/10/23 15:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 86.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,1,1-Trichloroethane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,1,2,2-Tetrachloroethane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,1,2-Trichloroethane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,1-Dichloroethane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,1-Dichloroethene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,1-Dichloropropene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,2,3-Trichlorobenzene	<8.69		8.69		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,2,3-Trichloropropane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,2,4-Trichlorobenzene	<8.69		8.69		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,2,4-Trimethylbenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,2-Dibromo-3-chloropropane	<8.69		8.69		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,2-Dibromoethane (EDB)	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,2-Dichlorobenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,2-Dichloroethane (EDC)	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,2-Dichloropropane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,3,5-Trimethylbenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,3-Dichlorobenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,3-Dichloropropane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
1,4-Dichlorobenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
2,2-Dichloropropane	<17.4		17.4		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
2-Butanone (MEK)	<17.4		17.4		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
2-Chlorotoluene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
4-Chlorotoluene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Acetone	<43.4		43.4		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Benzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Bromobenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Bromochloromethane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Bromodichloromethane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Bromoform	<8.69		8.69		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Bromomethane	<17.4		17.4		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Carbon disulfide	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Carbon tetrachloride	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Chlorobenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Chlorodibromomethane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Chloroethane	<17.4		17.4		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Chloroform	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Chloromethane	<17.4		17.4		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
cis-1,2-Dichloroethene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
cis-1,3-Dichloropropene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Dibromomethane	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Dichlorodifluoromethane	<13.0		13.0		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Ethylbenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Hexachlorobutadiene	<21.7		21.7		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Hexane	<21.7		21.7		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Isopropylbenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Methyl-tert-butyl Ether (MTBE)	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Methylene chloride	<43.4		43.4		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Naphthalene	<21.7		21.7		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-3 (0-3)

Lab Sample ID: 310-267039-5

Date Collected: 10/10/23 15:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 86.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
n-Propylbenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
p-Isopropyltoluene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
sec-Butylbenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Styrene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
tert-Butylbenzene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Tetrachloroethene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Toluene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
trans-1,2-Dichloroethene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
trans-1,3-Dichloropropene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Trichloroethene	<4.34		4.34		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Trichlorofluoromethane	<17.4		17.4		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Vinyl chloride	<8.69		8.69		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
Xylenes, Total	<8.69		8.69		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1
TPH-GRO (C6-C10)	<1740		1740		ug/Kg	✱	10/17/23 11:19	10/18/23 07:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		80 - 131	10/17/23 11:19	10/18/23 07:35	1
Toluene-d8 (Surr)	93		80 - 120	10/17/23 11:19	10/18/23 07:35	1
4-Bromofluorobenzene (Surr)	97		78 - 120	10/17/23 11:19	10/18/23 07:35	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
1,2-Dichlorobenzene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
1,3-Dichlorobenzene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
1,4-Dichlorobenzene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2,4,5-Trichlorophenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2,4,6-Trichlorophenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2,4-Dichlorophenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2,4-Dimethylphenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2,4-Dinitrophenol	<2260		2260		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2,4-Dinitrotoluene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2,6-Dinitrotoluene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2-Chloronaphthalene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2-Chlorophenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2-Methylnaphthalene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2-Methylphenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2-Nitroaniline	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
2-Nitrophenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
3,3'-Dichlorobenzidine	<2260		2260		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
3-Nitroaniline	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
4,6-Dinitro-2-methylphenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
4-Bromophenyl phenyl ether	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
4-Chloro-3-methylphenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
4-Chloroaniline	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
4-Chlorophenyl phenyl ether	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
4-Methylphenol (and/or 3-Methylphenol)	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
4-Nitroaniline	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-3 (0-3)

Lab Sample ID: 310-267039-5

Date Collected: 10/10/23 15:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 86.9

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Acenaphthene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Acenaphthylene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Anthracene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Benzidine	<2260		2260		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Benzo(a)anthracene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Benzo(a)pyrene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Benzo(b)fluoranthene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Benzo(g,h,i)perylene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Benzo(k)fluoranthene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Benzoic acid	<5640		5640		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Benzyl alcohol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Bis(2-chloroethoxy)methane	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Bis(2-chloroethyl)ether	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
bis(2-chloroisopropyl) ether	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Bis(2-ethylhexyl) phthalate	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Butyl benzyl phthalate	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Carbazole	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Chrysene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Dibenzo(a,h)anthracene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Dibenzofuran	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Diethyl phthalate	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Dimethyl phthalate	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Di-n-butyl phthalate	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Di-n-octyl phthalate	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Fluoranthene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Fluorene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Hexachlorobenzene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Hexachlorobutadiene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Hexachlorocyclopentadiene	<2260		2260		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Hexachloroethane	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Indeno(1,2,3-cd)pyrene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Isophorone	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Naphthalene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Nitrobenzene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
N-Nitrosodimethylamine	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
N-Nitrosodi-n-propylamine	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
N-Nitrosodiphenylamine	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Pentachlorophenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Phenanthrene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Phenol	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Pyrene	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Pyridine	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
Total Cresols	<1130		1130		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
TPH-DRO (C10-C21)	<84600		84600		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5
TPH-ORO (C21-C35)	<84600		84600		ug/Kg	✱	10/18/23 10:16	10/19/23 16:22	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	65		18 - 126	10/18/23 10:16	10/19/23 16:22	5
Phenol-d5 (Surr)	70		25 - 119	10/18/23 10:16	10/19/23 16:22	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-3 (0-3)

Lab Sample ID: 310-267039-5

Date Collected: 10/10/23 15:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 86.9

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	70		15 - 131	10/18/23 10:16	10/19/23 16:22	5
2-Fluorobiphenyl (Surr)	66		28 - 116	10/18/23 10:16	10/19/23 16:22	5
2,4,6-Tribromophenol (Surr)	54		10 - 121	10/18/23 10:16	10/19/23 16:22	5
Terphenyl-d14 (Surr)	75		24 - 132	10/18/23 10:16	10/19/23 16:22	5

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	15300		26.4		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Antimony	<5.28		5.28		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Arsenic	11.3		4.23		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Barium	74.0		1.06		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Beryllium	<0.528		0.528		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Cadmium	5.01		1.06		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Calcium	3040		106		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Chromium	30.8		1.06		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Copper	11.7		1.06		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Iron	22100		52.8		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Lead	354		5.28		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Magnesium	1000		52.8		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Manganese	92.6		2.64		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Nickel	19.6		2.64		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Potassium	952		106		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Selenium	<5.28		5.28		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Silver	<1.06		1.06		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Sodium	<106		106		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Thallium	<5.28		5.28		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Vanadium	41.7		2.64		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1
Zinc	846		5.28		mg/Kg	✱	10/16/23 10:35	10/17/23 14:39	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	5.55		0.528		mg/Kg	✱	10/16/23 10:35	10/24/23 16:03	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.274		0.0203		mg/Kg	✱	10/16/23 18:18	10/24/23 13:38	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	13.1		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	86.9		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-3 (8.5-10.5)

Lab Sample ID: 310-267039-6

Date Collected: 10/10/23 16:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 82.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,1,1-Trichloroethane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,1,2,2-Tetrachloroethane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,1,2-Trichloroethane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,1-Dichloroethane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,1-Dichloroethene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,1-Dichloropropene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,2,3-Trichlorobenzene	<7.81		7.81		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,2,3-Trichloropropane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,2,4-Trichlorobenzene	<7.81		7.81		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,2,4-Trimethylbenzene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,2-Dibromo-3-chloropropane	<7.81		7.81		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,2-Dibromoethane (EDB)	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,2-Dichlorobenzene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,2-Dichloroethane (EDC)	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,2-Dichloropropane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,3,5-Trimethylbenzene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,3-Dichlorobenzene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,3-Dichloropropane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
1,4-Dichlorobenzene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
2,2-Dichloropropane	<15.6		15.6		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
2-Butanone (MEK)	<15.6		15.6		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
2-Chlorotoluene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
4-Chlorotoluene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Acetone	<39.0		39.0		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Benzene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Bromobenzene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Bromochloromethane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Bromodichloromethane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Bromoform	<7.81		7.81		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Bromomethane	<15.6		15.6		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Carbon disulfide	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Carbon tetrachloride	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Chlorobenzene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Chlorodibromomethane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Chloroethane	<15.6		15.6		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Chloroform	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Chloromethane	<15.6		15.6		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
cis-1,2-Dichloroethene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
cis-1,3-Dichloropropene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Dibromomethane	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Dichlorodifluoromethane	<11.7		11.7		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Ethylbenzene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Hexachlorobutadiene	<19.5		19.5		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Hexane	<19.5		19.5		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Isopropylbenzene	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Methyl-tert-butyl Ether (MTBE)	<3.90		3.90		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Methylene chloride	<39.0		39.0		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1
Naphthalene	<19.5		19.5		ug/Kg	✱	10/17/23 11:19	10/18/23 07:59	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-3 (8.5-10.5)

Lab Sample ID: 310-267039-6

Date Collected: 10/10/23 16:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 82.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
n-Propylbenzene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
p-Isopropyltoluene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
sec-Butylbenzene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
Styrene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
tert-Butylbenzene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
Tetrachloroethene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
Toluene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
trans-1,2-Dichloroethene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
trans-1,3-Dichloropropene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
Trichloroethene	<3.90		3.90		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
Trichlorofluoromethane	<15.6		15.6		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
Vinyl chloride	<7.81		7.81		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
Xylenes, Total	<7.81		7.81		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1
TPH-GRO (C6-C10)	<1560		1560		ug/Kg	✳	10/17/23 11:19	10/18/23 07:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	105		80 - 131	10/17/23 11:19	10/18/23 07:59	1
Toluene-d8 (Surr)	94		80 - 120	10/17/23 11:19	10/18/23 07:59	1
4-Bromofluorobenzene (Surr)	98		78 - 120	10/17/23 11:19	10/18/23 07:59	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
1,2-Dichlorobenzene	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
1,3-Dichlorobenzene	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
1,4-Dichlorobenzene	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2,4,5-Trichlorophenol	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2,4,6-Trichlorophenol	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2,4-Dichlorophenol	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2,4-Dimethylphenol	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2,4-Dinitrophenol	<478	*3	478		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2,4-Dinitrotoluene	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2,6-Dinitrotoluene	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2-Chloronaphthalene	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2-Chlorophenol	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2-Methylnaphthalene	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2-Methylphenol	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2-Nitroaniline	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
2-Nitrophenol	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
3,3'-Dichlorobenzidine	<478	*3	478		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
3-Nitroaniline	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
4,6-Dinitro-2-methylphenol	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
4-Bromophenyl phenyl ether	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
4-Chloro-3-methylphenol	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
4-Chloroaniline	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
4-Chlorophenyl phenyl ether	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
4-Methylphenol (and/or 3-Methylphenol)	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1
4-Nitroaniline	<239	*3	239		ug/Kg	✳	10/18/23 10:16	10/19/23 16:49	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-3 (8.5-10.5)

Lab Sample ID: 310-267039-6

Date Collected: 10/10/23 16:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 82.2

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Acenaphthene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Acenaphthylene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Anthracene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Benzidine	<478	*3	478		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Benzo(a)anthracene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Benzo(a)pyrene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Benzo(b)fluoranthene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Benzo(g,h,i)perylene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Benzo(k)fluoranthene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Benzoic acid	<1200	*3	1200		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Benzyl alcohol	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Bis(2-chloroethoxy)methane	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Bis(2-chloroethyl)ether	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
bis(2-chloroisopropyl) ether	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Bis(2-ethylhexyl) phthalate	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Butyl benzyl phthalate	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Carbazole	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Chrysene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Dibenzo(a,h)anthracene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Dibenzofuran	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Diethyl phthalate	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Dimethyl phthalate	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Di-n-butyl phthalate	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Di-n-octyl phthalate	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Fluoranthene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Fluorene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Hexachlorobenzene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Hexachlorobutadiene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Hexachlorocyclopentadiene	<478	*3	478		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Hexachloroethane	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Indeno(1,2,3-cd)pyrene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Isophorone	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Naphthalene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Nitrobenzene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
N-Nitrosodimethylamine	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
N-Nitrosodi-n-propylamine	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
N-Nitrosodiphenylamine	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Pentachlorophenol	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Phenanthrene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Phenol	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Pyrene	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Pyridine	<239	*3	239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
Total Cresols	<239		239		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
TPH-DRO (C10-C21)	<17900		17900		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1
TPH-ORO (C21-C35)	<17900		17900		ug/Kg	✱	10/18/23 10:16	10/19/23 16:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	269	*3 S1+	18 - 126	10/18/23 10:16	10/19/23 16:49	1
Phenol-d5 (Surr)	157	*3 S1+	25 - 119	10/18/23 10:16	10/19/23 16:49	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-3 (8.5-10.5)

Lab Sample ID: 310-267039-6

Date Collected: 10/10/23 16:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 82.2

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	149	*3 S1+	15 - 131	10/18/23 10:16	10/19/23 16:49	1
2-Fluorobiphenyl (Surr)	155	*3 S1+	28 - 116	10/18/23 10:16	10/19/23 16:49	1
2,4,6-Tribromophenol (Surr)	166	*3 S1+	10 - 121	10/18/23 10:16	10/19/23 16:49	1
Terphenyl-d14 (Surr)	200	*3 S1+	24 - 132	10/18/23 10:16	10/19/23 16:49	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14500		108		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Antimony	<21.6		21.6		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Arsenic	27.7		17.2		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Barium	143		4.31		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Beryllium	<2.16		2.16		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Cadmium	<4.31		4.31		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Calcium	2160		431		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Chromium	67.3		4.31		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Copper	9.98		4.31		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Iron	64200		216		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Lead	211		21.6		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Magnesium	798		216		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Manganese	572		10.8		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Nickel	33.3		10.8		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Potassium	704		431		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Selenium	<21.6		21.6		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Silver	<4.31		4.31		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Sodium	<431		431		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Thallium	<21.6		21.6		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Vanadium	58.5		10.8		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4
Zinc	462		21.6		mg/Kg	✱	10/16/23 10:35	10/17/23 15:24	4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	24.5		0.539		mg/Kg	✱	10/16/23 10:35	10/24/23 16:05	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0245		0.0238		mg/Kg	✱	10/16/23 18:18	10/24/23 13:41	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	17.8		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	82.2		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-4 (0-3)

Lab Sample ID: 310-267039-7

Date Collected: 10/11/23 08:50

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 85.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,1,1-Trichloroethane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,1,2,2-Tetrachloroethane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,1,2-Trichloroethane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,1-Dichloroethane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,1-Dichloroethene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,1-Dichloropropene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,2,3-Trichlorobenzene	<10.1		10.1		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,2,3-Trichloropropane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,2,4-Trichlorobenzene	<10.1		10.1		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,2,4-Trimethylbenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,2-Dibromo-3-chloropropane	<10.1		10.1		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,2-Dibromoethane (EDB)	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,2-Dichlorobenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,2-Dichloroethane (EDC)	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,2-Dichloropropane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,3,5-Trimethylbenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,3-Dichlorobenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,3-Dichloropropane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
1,4-Dichlorobenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
2,2-Dichloropropane	<20.2		20.2		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
2-Butanone (MEK)	<20.2		20.2		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
2-Chlorotoluene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
4-Chlorotoluene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Acetone	<50.4		50.4		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Benzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Bromobenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Bromochloromethane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Bromodichloromethane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Bromoform	<10.1		10.1		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Bromomethane	<20.2		20.2		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Carbon disulfide	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Carbon tetrachloride	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Chlorobenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Chlorodibromomethane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Chloroethane	<20.2		20.2		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Chloroform	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Chloromethane	<20.2		20.2		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
cis-1,2-Dichloroethene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
cis-1,3-Dichloropropene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Dibromomethane	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Dichlorodifluoromethane	<15.1		15.1		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Ethylbenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Hexachlorobutadiene	<25.2		25.2		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Hexane	<25.2		25.2		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Isopropylbenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Methyl-tert-butyl Ether (MTBE)	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Methylene chloride	<50.4		50.4		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Naphthalene	<25.2		25.2		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-4 (0-3)

Lab Sample ID: 310-267039-7

Date Collected: 10/11/23 08:50

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 85.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
n-Propylbenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
p-Isopropyltoluene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
sec-Butylbenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Styrene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
tert-Butylbenzene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Tetrachloroethene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Toluene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
trans-1,2-Dichloroethene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
trans-1,3-Dichloropropene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Trichloroethene	<5.04		5.04		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Trichlorofluoromethane	<20.2		20.2		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Vinyl chloride	<10.1		10.1		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
Xylenes, Total	<10.1		10.1		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1
TPH-GRO (C6-C10)	<2020		2020		ug/Kg	✱	10/17/23 11:19	10/18/23 08:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		80 - 131	10/17/23 11:19	10/18/23 08:24	1
Toluene-d8 (Surr)	94		80 - 120	10/17/23 11:19	10/18/23 08:24	1
4-Bromofluorobenzene (Surr)	97		78 - 120	10/17/23 11:19	10/18/23 08:24	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
1,2-Dichlorobenzene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
1,3-Dichlorobenzene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
1,4-Dichlorobenzene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2,4,5-Trichlorophenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2,4,6-Trichlorophenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2,4-Dichlorophenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2,4-Dimethylphenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2,4-Dinitrophenol	<446		446		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2,4-Dinitrotoluene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2,6-Dinitrotoluene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2-Chloronaphthalene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2-Chlorophenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2-Methylnaphthalene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2-Methylphenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2-Nitroaniline	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
2-Nitrophenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
3,3'-Dichlorobenzidine	<446		446		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
3-Nitroaniline	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
4,6-Dinitro-2-methylphenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
4-Bromophenyl phenyl ether	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
4-Chloro-3-methylphenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
4-Chloroaniline	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
4-Chlorophenyl phenyl ether	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
4-Methylphenol (and/or 3-Methylphenol)	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
4-Nitroaniline	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-4 (0-3)

Lab Sample ID: 310-267039-7

Date Collected: 10/11/23 08:50

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 85.6

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Acenaphthene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Acenaphthylene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Anthracene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Benzidine	<446		446		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Benzo(a)anthracene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Benzo(a)pyrene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Benzo(b)fluoranthene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Benzo(g,h,i)perylene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Benzo(k)fluoranthene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Benzoic acid	<1120		1120		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Benzyl alcohol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Bis(2-chloroethoxy)methane	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Bis(2-chloroethyl)ether	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
bis(2-chloroisopropyl) ether	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Bis(2-ethylhexyl) phthalate	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Butyl benzyl phthalate	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Carbazole	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Chrysene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Dibenzo(a,h)anthracene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Dibenzofuran	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Diethyl phthalate	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Dimethyl phthalate	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Di-n-butyl phthalate	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Di-n-octyl phthalate	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Fluoranthene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Fluorene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Hexachlorobenzene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Hexachlorobutadiene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Hexachlorocyclopentadiene	<446		446		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Hexachloroethane	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Indeno(1,2,3-cd)pyrene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Isophorone	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Naphthalene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Nitrobenzene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
N-Nitrosodimethylamine	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
N-Nitrosodi-n-propylamine	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
N-Nitrosodiphenylamine	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Pentachlorophenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Phenanthrene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Phenol	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Pyrene	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Pyridine	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
Total Cresols	<223		223		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
TPH-DRO (C10-C21)	<16700		16700		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1
TPH-ORO (C21-C35)	<16700		16700		ug/Kg	✱	10/18/23 10:16	10/19/23 17:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	72		18 - 126	10/18/23 10:16	10/19/23 17:17	1
Phenol-d5 (Surr)	78		25 - 119	10/18/23 10:16	10/19/23 17:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-4 (0-3)

Lab Sample ID: 310-267039-7

Date Collected: 10/11/23 08:50

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 85.6

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	81		15 - 131	10/18/23 10:16	10/19/23 17:17	1
2-Fluorobiphenyl (Surr)	64		28 - 116	10/18/23 10:16	10/19/23 17:17	1
2,4,6-Tribromophenol (Surr)	76		10 - 121	10/18/23 10:16	10/19/23 17:17	1
Terphenyl-d14 (Surr)	71		24 - 132	10/18/23 10:16	10/19/23 17:17	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2990		22.9		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Antimony	<4.59		4.59		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Arsenic	<3.67		3.67		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Barium	19.1		0.917		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Beryllium	<0.459		0.459		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Cadmium	1.09		0.917		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Calcium	359		91.7		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Chromium	4.20		0.917		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Copper	4.53		0.917		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Iron	5290		45.9		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Lead	376		4.59		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Magnesium	275		45.9		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Manganese	152		2.29		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Nickel	3.79		2.29		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Potassium	298		91.7		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Selenium	<4.59		4.59		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Silver	<0.917		0.917		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Sodium	<91.7		91.7		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Thallium	<4.59		4.59		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Vanadium	6.78		2.29		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1
Zinc	210		4.59		mg/Kg	✱	10/16/23 10:35	10/17/23 14:43	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	2.85		0.459		mg/Kg	✱	10/16/23 10:35	10/24/23 16:08	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.136		0.0196		mg/Kg	✱	10/16/23 18:18	10/24/23 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	14.4		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	85.6		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-4 (8.5-10.5)

Lab Sample ID: 310-267039-8

Date Collected: 10/11/23 08:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,1,1-Trichloroethane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,1,2,2-Tetrachloroethane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,1,2-Trichloroethane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,1-Dichloroethane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,1-Dichloroethene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,1-Dichloropropene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,2,3-Trichlorobenzene	<8.52		8.52		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,2,3-Trichloropropane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,2,4-Trichlorobenzene	<8.52		8.52		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,2,4-Trimethylbenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,2-Dibromo-3-chloropropane	<8.52		8.52		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,2-Dibromoethane (EDB)	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,2-Dichlorobenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,2-Dichloroethane (EDC)	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,2-Dichloropropane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,3,5-Trimethylbenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,3-Dichlorobenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,3-Dichloropropane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
1,4-Dichlorobenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
2,2-Dichloropropane	<17.0		17.0		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
2-Butanone (MEK)	<17.0		17.0		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
2-Chlorotoluene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
4-Chlorotoluene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Acetone	<42.6		42.6		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Benzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Bromobenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Bromochloromethane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Bromodichloromethane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Bromoform	<8.52		8.52		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Bromomethane	<17.0		17.0		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Carbon disulfide	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Carbon tetrachloride	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Chlorobenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Chlorodibromomethane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Chloroethane	<17.0		17.0		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Chloroform	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Chloromethane	<17.0		17.0		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
cis-1,2-Dichloroethene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
cis-1,3-Dichloropropene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Dibromomethane	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Dichlorodifluoromethane	<12.8		12.8		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Ethylbenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Hexachlorobutadiene	<21.3		21.3		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Hexane	<21.3		21.3		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Isopropylbenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Methyl-tert-butyl Ether (MTBE)	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Methylene chloride	<42.6		42.6		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Naphthalene	<21.3		21.3		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-4 (8.5-10.5)

Lab Sample ID: 310-267039-8

Date Collected: 10/11/23 08:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
n-Propylbenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
p-Isopropyltoluene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
sec-Butylbenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Styrene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
tert-Butylbenzene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Tetrachloroethene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Toluene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
trans-1,2-Dichloroethene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
trans-1,3-Dichloropropene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Trichloroethene	<4.26		4.26		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Trichlorofluoromethane	<17.0		17.0		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Vinyl chloride	<8.52		8.52		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
Xylenes, Total	<8.52		8.52		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1
TPH-GRO (C6-C10)	<1700		1700		ug/Kg	☼	10/17/23 11:19	10/18/23 08:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		80 - 131	10/17/23 11:19	10/18/23 08:48	1
Toluene-d8 (Surr)	93		80 - 120	10/17/23 11:19	10/18/23 08:48	1
4-Bromofluorobenzene (Surr)	97		78 - 120	10/17/23 11:19	10/18/23 08:48	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
1,2-Dichlorobenzene	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
1,3-Dichlorobenzene	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
1,4-Dichlorobenzene	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2,4,5-Trichlorophenol	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2,4,6-Trichlorophenol	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2,4-Dichlorophenol	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2,4-Dimethylphenol	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2,4-Dinitrophenol	<427		427		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2,4-Dinitrotoluene	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2,6-Dinitrotoluene	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2-Chloronaphthalene	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2-Chlorophenol	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2-Methylnaphthalene	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2-Methylphenol	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2-Nitroaniline	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
2-Nitrophenol	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
3,3'-Dichlorobenzidine	<427		427		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
3-Nitroaniline	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
4,6-Dinitro-2-methylphenol	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
4-Bromophenyl phenyl ether	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
4-Chloro-3-methylphenol	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
4-Chloroaniline	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
4-Chlorophenyl phenyl ether	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
4-Methylphenol (and/or 3-Methylphenol)	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1
4-Nitroaniline	<213		213		ug/Kg	☼	10/18/23 10:16	10/19/23 17:44	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-4 (8.5-10.5)

Lab Sample ID: 310-267039-8

Date Collected: 10/11/23 08:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.4

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Acenaphthene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Acenaphthylene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Anthracene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Benzidine	<427		427		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Benzo(a)anthracene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Benzo(a)pyrene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Benzo(b)fluoranthene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Benzo(g,h,i)perylene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Benzo(k)fluoranthene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Benzoic acid	<1070		1070		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Benzyl alcohol	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Bis(2-chloroethoxy)methane	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Bis(2-chloroethyl)ether	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
bis(2-chloroisopropyl) ether	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Bis(2-ethylhexyl) phthalate	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Butyl benzyl phthalate	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Carbazole	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Chrysene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Dibenzo(a,h)anthracene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Dibenzofuran	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Diethyl phthalate	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Dimethyl phthalate	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Di-n-butyl phthalate	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Di-n-octyl phthalate	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Fluoranthene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Fluorene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Hexachlorobenzene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Hexachlorobutadiene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Hexachlorocyclopentadiene	<427		427		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Hexachloroethane	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Indeno(1,2,3-cd)pyrene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Isophorone	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Naphthalene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Nitrobenzene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
N-Nitrosodimethylamine	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
N-Nitrosodi-n-propylamine	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
N-Nitrosodiphenylamine	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Pentachlorophenol	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Phenanthrene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Phenol	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Pyrene	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Pyridine	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
Total Cresols	<213		213		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
TPH-DRO (C10-C21)	<16000		16000		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1
TPH-ORO (C21-C35)	<16000		16000		ug/Kg	✱	10/18/23 10:16	10/19/23 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	96		18 - 126	10/18/23 10:16	10/19/23 17:44	1
Phenol-d5 (Surr)	103		25 - 119	10/18/23 10:16	10/19/23 17:44	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-4 (8.5-10.5)

Lab Sample ID: 310-267039-8

Date Collected: 10/11/23 08:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.4

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	65		15 - 131	10/18/23 10:16	10/19/23 17:44	1
2-Fluorobiphenyl (Surr)	64		28 - 116	10/18/23 10:16	10/19/23 17:44	1
2,4,6-Tribromophenol (Surr)	68		10 - 121	10/18/23 10:16	10/19/23 17:44	1
Terphenyl-d14 (Surr)	70		24 - 132	10/18/23 10:16	10/19/23 17:44	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	10600		48.9		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Antimony	<9.78		9.78		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Arsenic	12.9		7.82		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Barium	231		1.96		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Beryllium	<0.978		0.978		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Cadmium	<1.96		1.96		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Calcium	2140		196		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Chromium	32.6		1.96		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Copper	6.82		1.96		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Iron	29900		97.8		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Lead	144		9.78		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Magnesium	778		97.8		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Manganese	1050		4.89		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Nickel	26.1		4.89		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Potassium	590		196		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Selenium	<9.78		9.78		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Silver	<1.96		1.96		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Sodium	<196		196		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Thallium	<9.78		9.78		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Vanadium	64.0		4.89		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2
Zinc	80.8		9.78		mg/Kg	✱	10/16/23 10:35	10/17/23 15:27	2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	14.0		0.489		mg/Kg	✱	10/16/23 10:35	10/25/23 14:04	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0194		0.0194		mg/Kg	✱	10/16/23 18:18	10/24/23 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	11.6		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	88.4		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-5 (0-3)

Lab Sample ID: 310-267039-9

Date Collected: 10/11/23 10:15

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,1,1-Trichloroethane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,1,2,2-Tetrachloroethane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,1,2-Trichloroethane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,1-Dichloroethane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,1-Dichloroethene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,1-Dichloropropene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,2,3-Trichlorobenzene	<8.75		8.75		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,2,3-Trichloropropane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,2,4-Trichlorobenzene	<8.75		8.75		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,2,4-Trimethylbenzene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,2-Dibromo-3-chloropropane	<8.75		8.75		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,2-Dibromoethane (EDB)	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,2-Dichlorobenzene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,2-Dichloroethane (EDC)	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,2-Dichloropropane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,3,5-Trimethylbenzene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,3-Dichlorobenzene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,3-Dichloropropane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
1,4-Dichlorobenzene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
2,2-Dichloropropane	<17.5		17.5		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
2-Butanone (MEK)	<17.5		17.5		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
2-Chlorotoluene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
4-Chlorotoluene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Acetone	<43.7		43.7		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Benzene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Bromobenzene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Bromochloromethane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Bromodichloromethane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Bromoform	<8.75		8.75		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Bromomethane	<17.5		17.5		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Carbon disulfide	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Carbon tetrachloride	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Chlorobenzene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Chlorodibromomethane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Chloroethane	<17.5		17.5		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Chloroform	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Chloromethane	<17.5		17.5		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
cis-1,2-Dichloroethene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
cis-1,3-Dichloropropene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Dibromomethane	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Dichlorodifluoromethane	<13.1		13.1		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Ethylbenzene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Hexachlorobutadiene	<21.9		21.9		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Hexane	<21.9		21.9		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Isopropylbenzene	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Methyl-tert-butyl Ether (MTBE)	<4.37		4.37		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Methylene chloride	<43.7		43.7		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1
Naphthalene	<21.9		21.9		ug/Kg	☼	10/17/23 11:19	10/18/23 09:12	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-5 (0-3)

Lab Sample ID: 310-267039-9

Date Collected: 10/11/23 10:15

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
n-Propylbenzene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
p-Isopropyltoluene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
sec-Butylbenzene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
Styrene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
tert-Butylbenzene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
Tetrachloroethene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
Toluene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
trans-1,2-Dichloroethene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
trans-1,3-Dichloropropene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
Trichloroethene	<4.37		4.37		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
Trichlorofluoromethane	<17.5		17.5		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
Vinyl chloride	<8.75		8.75		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
Xylenes, Total	<8.75		8.75		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1
TPH-GRO (C6-C10)	<1750		1750		ug/Kg	✱	10/17/23 11:19	10/18/23 09:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	105		80 - 131	10/17/23 11:19	10/18/23 09:12	1
Toluene-d8 (Surr)	96		80 - 120	10/17/23 11:19	10/18/23 09:12	1
4-Bromofluorobenzene (Surr)	94		78 - 120	10/17/23 11:19	10/18/23 09:12	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
1,2-Dichlorobenzene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
1,3-Dichlorobenzene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
1,4-Dichlorobenzene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2,4,5-Trichlorophenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2,4,6-Trichlorophenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2,4-Dichlorophenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2,4-Dimethylphenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2,4-Dinitrophenol	<439		439		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2,4-Dinitrotoluene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2,6-Dinitrotoluene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2-Chloronaphthalene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2-Chlorophenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2-Methylnaphthalene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2-Methylphenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2-Nitroaniline	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
2-Nitrophenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
3,3'-Dichlorobenzidine	<439		439		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
3-Nitroaniline	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
4,6-Dinitro-2-methylphenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
4-Bromophenyl phenyl ether	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
4-Chloro-3-methylphenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
4-Chloroaniline	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
4-Chlorophenyl phenyl ether	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
4-Methylphenol (and/or 3-Methylphenol)	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
4-Nitroaniline	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-5 (0-3)

Lab Sample ID: 310-267039-9

Date Collected: 10/11/23 10:15

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.7

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Acenaphthene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Acenaphthylene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Anthracene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Benzidine	<439		439		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Benzo(a)anthracene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Benzo(a)pyrene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Benzo(b)fluoranthene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Benzo(g,h,i)perylene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Benzo(k)fluoranthene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Benzoic acid	<1100		1100		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Benzyl alcohol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Bis(2-chloroethoxy)methane	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Bis(2-chloroethyl)ether	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
bis(2-chloroisopropyl) ether	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Bis(2-ethylhexyl) phthalate	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Butyl benzyl phthalate	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Carbazole	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Chrysene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Dibenzo(a,h)anthracene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Dibenzofuran	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Diethyl phthalate	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Dimethyl phthalate	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Di-n-butyl phthalate	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Di-n-octyl phthalate	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Fluoranthene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Fluorene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Hexachlorobenzene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Hexachlorobutadiene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Hexachlorocyclopentadiene	<439		439		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Hexachloroethane	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Indeno(1,2,3-cd)pyrene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Isophorone	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Naphthalene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Nitrobenzene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
N-Nitrosodimethylamine	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
N-Nitrosodi-n-propylamine	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
N-Nitrosodiphenylamine	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Pentachlorophenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Phenanthrene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Phenol	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Pyrene	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Pyridine	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
Total Cresols	<219		219		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
TPH-DRO (C10-C21)	<16400		16400		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1
TPH-ORO (C21-C35)	<16400		16400		ug/Kg	✱	10/18/23 10:16	10/19/23 18:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	84		18 - 126	10/18/23 10:16	10/19/23 18:12	1
Phenol-d5 (Surr)	87		25 - 119	10/18/23 10:16	10/19/23 18:12	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-5 (0-3)

Lab Sample ID: 310-267039-9

Date Collected: 10/11/23 10:15

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.7

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	90		15 - 131	10/18/23 10:16	10/19/23 18:12	1
2-Fluorobiphenyl (Surr)	76		28 - 116	10/18/23 10:16	10/19/23 18:12	1
2,4,6-Tribromophenol (Surr)	80		10 - 121	10/18/23 10:16	10/19/23 18:12	1
Terphenyl-d14 (Surr)	78		24 - 132	10/18/23 10:16	10/19/23 18:12	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1190		27.5		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Antimony	<5.49		5.49		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Arsenic	4.78		4.39		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Barium	17.7		1.10		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Beryllium	<0.549		0.549		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Cadmium	23.5		1.10		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Calcium	22100		110		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Chromium	4.40		1.10		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Copper	17.2		1.10		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Iron	5970		54.9		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Lead	417		5.49		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Magnesium	6510		54.9		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Manganese	108		2.75		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Nickel	8.23		2.75		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Potassium	156		110		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Selenium	<5.49		5.49		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Silver	<1.10		1.10		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Sodium	<110		110		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Thallium	<5.49		5.49		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Vanadium	4.13		2.75		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1
Zinc	4970		5.49		mg/Kg	✱	10/16/23 10:35	10/17/23 14:47	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	1.70		0.549		mg/Kg	✱	10/16/23 10:35	10/24/23 16:30	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0347		0.0206		mg/Kg	✱	10/16/23 18:18	10/24/23 13:48	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	11.3		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	88.7		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-5 (6-8)

Lab Sample ID: 310-267039-10

Date Collected: 10/11/23 10:20

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 80.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,1,1-Trichloroethane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,1,2,2-Tetrachloroethane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,1,2-Trichloroethane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,1-Dichloroethane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,1-Dichloroethene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,1-Dichloropropene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,2,3-Trichlorobenzene	<9.10		9.10		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,2,3-Trichloropropane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,2,4-Trichlorobenzene	<9.10		9.10		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,2,4-Trimethylbenzene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,2-Dibromo-3-chloropropane	<9.10		9.10		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,2-Dibromoethane (EDB)	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,2-Dichlorobenzene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,2-Dichloroethane (EDC)	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,2-Dichloropropane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,3,5-Trimethylbenzene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,3-Dichlorobenzene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,3-Dichloropropane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
1,4-Dichlorobenzene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
2,2-Dichloropropane	<18.2		18.2		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
2-Butanone (MEK)	<18.2		18.2		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
2-Chlorotoluene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
4-Chlorotoluene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Acetone	<45.5		45.5		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Benzene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Bromobenzene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Bromochloromethane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Bromodichloromethane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Bromoform	<9.10		9.10		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Bromomethane	<18.2		18.2		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Carbon disulfide	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Carbon tetrachloride	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Chlorobenzene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Chlorodibromomethane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Chloroethane	<18.2		18.2		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Chloroform	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Chloromethane	<18.2		18.2		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
cis-1,2-Dichloroethene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
cis-1,3-Dichloropropene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Dibromomethane	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Dichlorodifluoromethane	<13.7		13.7		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Ethylbenzene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Hexachlorobutadiene	<22.8		22.8		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Hexane	<22.8		22.8		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Isopropylbenzene	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Methyl-tert-butyl Ether (MTBE)	<4.55		4.55		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Methylene chloride	<45.5		45.5		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1
Naphthalene	<22.8		22.8		ug/Kg	☼	10/17/23 11:19	10/18/23 09:37	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-5 (6-8)

Lab Sample ID: 310-267039-10

Date Collected: 10/11/23 10:20

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 80.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
n-Propylbenzene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
p-Isopropyltoluene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
sec-Butylbenzene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
Styrene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
tert-Butylbenzene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
Tetrachloroethene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
Toluene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
trans-1,2-Dichloroethene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
trans-1,3-Dichloropropene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
Trichloroethene	<4.55		4.55		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
Trichlorofluoromethane	<18.2		18.2		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
Vinyl chloride	<9.10		9.10		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
Xylenes, Total	<9.10		9.10		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1
TPH-GRO (C6-C10)	<1820		1820		ug/Kg	✱	10/17/23 11:19	10/18/23 09:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	104		80 - 131	10/17/23 11:19	10/18/23 09:37	1
Toluene-d8 (Surr)	92		80 - 120	10/17/23 11:19	10/18/23 09:37	1
4-Bromofluorobenzene (Surr)	96		78 - 120	10/17/23 11:19	10/18/23 09:37	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
1,2-Dichlorobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
1,3-Dichlorobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
1,4-Dichlorobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2,4,5-Trichlorophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2,4,6-Trichlorophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2,4-Dichlorophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2,4-Dimethylphenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2,4-Dinitrophenol	<2420		2420		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2,4-Dinitrotoluene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2,6-Dinitrotoluene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2-Chloronaphthalene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2-Chlorophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2-Methylnaphthalene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2-Methylphenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2-Nitroaniline	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
2-Nitrophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
3,3'-Dichlorobenzidine	<2420		2420		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
3-Nitroaniline	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
4,6-Dinitro-2-methylphenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
4-Bromophenyl phenyl ether	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
4-Chloro-3-methylphenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
4-Chloroaniline	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
4-Chlorophenyl phenyl ether	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
4-Methylphenol (and/or 3-Methylphenol)	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
4-Nitroaniline	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-5 (6-8)

Lab Sample ID: 310-267039-10

Date Collected: 10/11/23 10:20

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 80.5

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Acenaphthene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Acenaphthylene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Anthracene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Benzidine	<2420		2420		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Benzo(a)anthracene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Benzo(a)pyrene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Benzo(b)fluoranthene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Benzo(g,h,i)perylene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Benzo(k)fluoranthene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Benzoic acid	<6040		6040		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Benzyl alcohol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Bis(2-chloroethoxy)methane	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Bis(2-chloroethyl)ether	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
bis(2-chloroisopropyl) ether	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Bis(2-ethylhexyl) phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Butyl benzyl phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Carbazole	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Chrysene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Dibenzo(a,h)anthracene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Dibenzofuran	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Diethyl phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Dimethyl phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Di-n-butyl phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Di-n-octyl phthalate	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Fluoranthene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Fluorene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Hexachlorobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Hexachlorobutadiene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Hexachlorocyclopentadiene	<2420		2420		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Hexachloroethane	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Indeno(1,2,3-cd)pyrene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Isophorone	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Naphthalene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Nitrobenzene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
N-Nitrosodimethylamine	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
N-Nitrosodi-n-propylamine	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
N-Nitrosodiphenylamine	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Pentachlorophenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Phenanthrene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Phenol	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Pyrene	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Pyridine	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
Total Cresols	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
TPH-DRO (C10-C21)	<90700		90700		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5
TPH-ORO (C21-C35)	<90700		90700		ug/Kg	✱	10/18/23 10:16	10/19/23 18:39	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	59		18 - 126	10/18/23 10:16	10/19/23 18:39	5
Phenol-d5 (Surr)	63		25 - 119	10/18/23 10:16	10/19/23 18:39	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-5 (6-8)

Lab Sample ID: 310-267039-10

Date Collected: 10/11/23 10:20

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 80.5

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	62		15 - 131	10/18/23 10:16	10/19/23 18:39	5
2-Fluorobiphenyl (Surr)	58		28 - 116	10/18/23 10:16	10/19/23 18:39	5
2,4,6-Tribromophenol (Surr)	47		10 - 121	10/18/23 10:16	10/19/23 18:39	5
Terphenyl-d14 (Surr)	66		24 - 132	10/18/23 10:16	10/19/23 18:39	5

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	15800		85.3		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Antimony	<17.1		17.1		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Arsenic	33.9		13.7		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Barium	147		3.41		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Beryllium	<1.71		1.71		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Cadmium	<3.41		3.41		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Calcium	2650		341		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Chromium	49.0		3.41		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Copper	10.2		3.41		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Iron	50700		171		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Lead	198		17.1		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Magnesium	979		171		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Manganese	268		8.53		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Nickel	18.7		8.53		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Potassium	959		341		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Selenium	<17.1		17.1		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Silver	<3.41		3.41		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Sodium	<341		341		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Thallium	<17.1		17.1		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Vanadium	140		8.53		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3
Zinc	80.6		17.1		mg/Kg	✱	10/16/23 10:35	10/17/23 15:29	3

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	40.0		0.569		mg/Kg	✱	10/16/23 10:35	10/24/23 16:32	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0207		0.0207		mg/Kg	✱	10/16/23 18:18	10/24/23 13:50	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	19.5		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	80.5		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-6 (0-3)

Lab Sample ID: 310-267039-11

Date Collected: 10/11/23 11:50

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 92.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,1,1-Trichloroethane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,1,2,2-Tetrachloroethane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,1,2-Trichloroethane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,1-Dichloroethane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,1-Dichloroethene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,1-Dichloropropene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,2,3-Trichlorobenzene	<9.04		9.04		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,2,3-Trichloropropane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,2,4-Trichlorobenzene	<9.04		9.04		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,2,4-Trimethylbenzene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,2-Dibromo-3-chloropropane	<9.04		9.04		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,2-Dibromoethane (EDB)	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,2-Dichlorobenzene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,2-Dichloroethane (EDC)	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,2-Dichloropropane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,3,5-Trimethylbenzene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,3-Dichlorobenzene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,3-Dichloropropane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
1,4-Dichlorobenzene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
2,2-Dichloropropane	<18.1		18.1		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
2-Butanone (MEK)	<18.1		18.1		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
2-Chlorotoluene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
4-Chlorotoluene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Acetone	<45.2		45.2		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Benzene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Bromobenzene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Bromochloromethane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Bromodichloromethane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Bromoform	<9.04		9.04		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Bromomethane	<18.1		18.1		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Carbon disulfide	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Carbon tetrachloride	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Chlorobenzene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Chlorodibromomethane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Chloroethane	<18.1		18.1		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Chloroform	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Chloromethane	<18.1		18.1		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
cis-1,2-Dichloroethene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
cis-1,3-Dichloropropene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Dibromomethane	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Dichlorodifluoromethane	<13.6		13.6		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Ethylbenzene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Hexachlorobutadiene	<22.6		22.6		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Hexane	<22.6		22.6		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Isopropylbenzene	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Methyl-tert-butyl Ether (MTBE)	<4.52		4.52		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Methylene chloride	<45.2		45.2		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1
Naphthalene	<22.6		22.6		ug/Kg	☼	10/17/23 11:19	10/18/23 10:01	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-6 (0-3)

Lab Sample ID: 310-267039-11

Date Collected: 10/11/23 11:50

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 92.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
n-Propylbenzene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
p-Isopropyltoluene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
sec-Butylbenzene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
Styrene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
tert-Butylbenzene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
Tetrachloroethene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
Toluene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
trans-1,2-Dichloroethene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
trans-1,3-Dichloropropene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
Trichloroethene	<4.52		4.52		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
Trichlorofluoromethane	<18.1		18.1		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
Vinyl chloride	<9.04		9.04		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
Xylenes, Total	<9.04		9.04		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1
TPH-GRO (C6-C10)	<1810		1810		ug/Kg	✱	10/17/23 11:19	10/18/23 10:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		80 - 131	10/17/23 11:19	10/18/23 10:01	1
Toluene-d8 (Surr)	96		80 - 120	10/17/23 11:19	10/18/23 10:01	1
4-Bromofluorobenzene (Surr)	93		78 - 120	10/17/23 11:19	10/18/23 10:01	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
1,2-Dichlorobenzene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
1,3-Dichlorobenzene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
1,4-Dichlorobenzene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2,4,5-Trichlorophenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2,4,6-Trichlorophenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2,4-Dichlorophenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2,4-Dimethylphenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2,4-Dinitrophenol	<2120		2120		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2,4-Dinitrotoluene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2,6-Dinitrotoluene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2-Chloronaphthalene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2-Chlorophenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2-Methylnaphthalene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2-Methylphenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2-Nitroaniline	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
2-Nitrophenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
3,3'-Dichlorobenzidine	<2120		2120		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
3-Nitroaniline	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
4,6-Dinitro-2-methylphenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
4-Bromophenyl phenyl ether	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
4-Chloro-3-methylphenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
4-Chloroaniline	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
4-Chlorophenyl phenyl ether	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
4-Methylphenol (and/or 3-Methylphenol)	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
4-Nitroaniline	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-6 (0-3)

Lab Sample ID: 310-267039-11

Date Collected: 10/11/23 11:50

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 92.2

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Acenaphthene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Acenaphthylene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Anthracene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Benzidine	<2120		2120		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Benzo(a)anthracene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Benzo(a)pyrene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Benzo(b)fluoranthene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Benzo(g,h,i)perylene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Benzo(k)fluoranthene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Benzoic acid	<5310		5310		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Benzyl alcohol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Bis(2-chloroethoxy)methane	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Bis(2-chloroethyl)ether	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
bis(2-chloroisopropyl) ether	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Bis(2-ethylhexyl) phthalate	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Butyl benzyl phthalate	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Carbazole	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Chrysene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Dibenzo(a,h)anthracene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Dibenzofuran	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Diethyl phthalate	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Dimethyl phthalate	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Di-n-butyl phthalate	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Di-n-octyl phthalate	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Fluoranthene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Fluorene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Hexachlorobenzene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Hexachlorobutadiene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Hexachlorocyclopentadiene	<2120		2120		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Hexachloroethane	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Indeno(1,2,3-cd)pyrene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Isophorone	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Naphthalene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Nitrobenzene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
N-Nitrosodimethylamine	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
N-Nitrosodi-n-propylamine	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
N-Nitrosodiphenylamine	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Pentachlorophenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Phenanthrene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Phenol	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Pyrene	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Pyridine	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
Total Cresols	<1060		1060		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
TPH-DRO (C10-C21)	<79600		79600		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5
TPH-ORO (C21-C35)	262000		79600		ug/Kg	✱	10/18/23 10:16	10/19/23 19:06	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	52		18 - 126	10/18/23 10:16	10/19/23 19:06	5
Phenol-d5 (Surr)	56		25 - 119	10/18/23 10:16	10/19/23 19:06	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-6 (0-3)

Lab Sample ID: 310-267039-11

Date Collected: 10/11/23 11:50

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 92.2

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	57		15 - 131	10/18/23 10:16	10/19/23 19:06	5
2-Fluorobiphenyl (Surr)	55		28 - 116	10/18/23 10:16	10/19/23 19:06	5
2,4,6-Tribromophenol (Surr)	41		10 - 121	10/18/23 10:16	10/19/23 19:06	5
Terphenyl-d14 (Surr)	51		24 - 132	10/18/23 10:16	10/19/23 19:06	5

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	4830		22.4		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Antimony	<4.48		4.48		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Arsenic	7.81		3.59		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Barium	27.7		0.897		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Beryllium	<0.448		0.448		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Cadmium	13.5		0.897		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Calcium	12400		89.7		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Chromium	9.56		0.897		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Copper	14.6		0.897		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Iron	17600		44.8		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Lead	499		4.48		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Magnesium	4350		44.8		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Manganese	197		2.24		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Nickel	21.3		2.24		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Potassium	603		89.7		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Selenium	<4.48		4.48		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Silver	<0.897		0.897		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Sodium	<89.7		89.7		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Thallium	<4.48		4.48		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Vanadium	14.1		2.24		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1
Zinc	3260		4.48		mg/Kg	✱	10/16/23 10:35	10/17/23 14:58	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	6.05		0.448		mg/Kg	✱	10/16/23 10:35	10/24/23 16:37	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0337		0.0192		mg/Kg	✱	10/16/23 18:18	10/24/23 13:57	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	7.8		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	92.2		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-6 (6-8)

Lab Sample ID: 310-267039-12

Date Collected: 10/11/23 11:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 77.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,1,1-Trichloroethane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,1,2,2-Tetrachloroethane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,1,2-Trichloroethane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,1-Dichloroethane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,1-Dichloroethene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,1-Dichloropropene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,2,3-Trichlorobenzene	<9.51		9.51		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,2,3-Trichloropropane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,2,4-Trichlorobenzene	<9.51		9.51		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,2,4-Trimethylbenzene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,2-Dibromo-3-chloropropane	<9.51		9.51		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,2-Dibromoethane (EDB)	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,2-Dichlorobenzene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,2-Dichloroethane (EDC)	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,2-Dichloropropane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,3,5-Trimethylbenzene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,3-Dichlorobenzene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,3-Dichloropropane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
1,4-Dichlorobenzene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
2,2-Dichloropropane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
2-Butanone (MEK)	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
2-Chlorotoluene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
4-Chlorotoluene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Acetone	<47.5		47.5		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Benzene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Bromobenzene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Bromochloromethane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Bromodichloromethane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Bromoform	<9.51		9.51		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Bromomethane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Carbon disulfide	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Carbon tetrachloride	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Chlorobenzene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Chlorodibromomethane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Chloroethane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Chloroform	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Chloromethane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
cis-1,2-Dichloroethene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
cis-1,3-Dichloropropene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Dibromomethane	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Dichlorodifluoromethane	<14.3		14.3		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Ethylbenzene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Hexachlorobutadiene	<23.8		23.8		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Hexane	<23.8		23.8		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Isopropylbenzene	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Methyl-tert-butyl Ether (MTBE)	<4.75		4.75		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Methylene chloride	<47.5		47.5		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1
Naphthalene	<23.8		23.8		ug/Kg	☼	10/17/23 11:19	10/18/23 13:19	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-6 (6-8)

Lab Sample ID: 310-267039-12

Date Collected: 10/11/23 11:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 77.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
n-Propylbenzene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
p-Isopropyltoluene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
sec-Butylbenzene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
Styrene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
tert-Butylbenzene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
Tetrachloroethene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
Toluene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
trans-1,2-Dichloroethene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
trans-1,3-Dichloropropene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
Trichloroethene	<4.75		4.75		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
Trichlorofluoromethane	<19.0		19.0		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
Vinyl chloride	<9.51		9.51		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
Xylenes, Total	<9.51		9.51		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1
TPH-GRO (C6-C10)	<1900		1900		ug/Kg	✱	10/17/23 11:19	10/18/23 13:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		80 - 131	10/17/23 11:19	10/18/23 13:19	1
Toluene-d8 (Surr)	94		80 - 120	10/17/23 11:19	10/18/23 13:19	1
4-Bromofluorobenzene (Surr)	96		78 - 120	10/17/23 11:19	10/18/23 13:19	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
1,2-Dichlorobenzene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
1,3-Dichlorobenzene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
1,4-Dichlorobenzene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2,4,5-Trichlorophenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2,4,6-Trichlorophenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2,4-Dichlorophenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2,4-Dimethylphenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2,4-Dinitrophenol	<502		502		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2,4-Dinitrotoluene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2,6-Dinitrotoluene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2-Chloronaphthalene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2-Chlorophenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2-Methylnaphthalene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2-Methylphenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2-Nitroaniline	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
2-Nitrophenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
3,3'-Dichlorobenzidine	<502		502		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
3-Nitroaniline	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
4,6-Dinitro-2-methylphenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
4-Bromophenyl phenyl ether	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
4-Chloro-3-methylphenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
4-Chloroaniline	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
4-Chlorophenyl phenyl ether	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
4-Methylphenol (and/or 3-Methylphenol)	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
4-Nitroaniline	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-6 (6-8)

Lab Sample ID: 310-267039-12

Date Collected: 10/11/23 11:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 77.4

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Acenaphthene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Acenaphthylene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Anthracene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Benzidine	<502		502		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Benzo(a)anthracene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Benzo(a)pyrene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Benzo(b)fluoranthene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Benzo(g,h,i)perylene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Benzo(k)fluoranthene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Benzoic acid	<1250		1250		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Benzyl alcohol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Bis(2-chloroethoxy)methane	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Bis(2-chloroethyl)ether	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
bis(2-chloroisopropyl) ether	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Bis(2-ethylhexyl) phthalate	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Butyl benzyl phthalate	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Carbazole	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Chrysene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Dibenzo(a,h)anthracene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Dibenzofuran	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Diethyl phthalate	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Dimethyl phthalate	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Di-n-butyl phthalate	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Di-n-octyl phthalate	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Fluoranthene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Fluorene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Hexachlorobenzene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Hexachlorobutadiene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Hexachlorocyclopentadiene	<502		502		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Hexachloroethane	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Indeno(1,2,3-cd)pyrene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Isophorone	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Naphthalene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Nitrobenzene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
N-Nitrosodimethylamine	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
N-Nitrosodi-n-propylamine	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
N-Nitrosodiphenylamine	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Pentachlorophenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Phenanthrene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Phenol	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Pyrene	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Pyridine	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
Total Cresols	<251		251		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
TPH-DRO (C10-C21)	<18800		18800		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1
TPH-ORO (C21-C35)	<18800		18800		ug/Kg	✱	10/18/23 10:16	10/19/23 19:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	82		18 - 126	10/18/23 10:16	10/19/23 19:34	1
Phenol-d5 (Surr)	77		25 - 119	10/18/23 10:16	10/19/23 19:34	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-6 (6-8)

Lab Sample ID: 310-267039-12

Date Collected: 10/11/23 11:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 77.4

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	65		15 - 131	10/18/23 10:16	10/19/23 19:34	1
2-Fluorobiphenyl (Surr)	60		28 - 116	10/18/23 10:16	10/19/23 19:34	1
2,4,6-Tribromophenol (Surr)	63		10 - 121	10/18/23 10:16	10/19/23 19:34	1
Terphenyl-d14 (Surr)	71		24 - 132	10/18/23 10:16	10/19/23 19:34	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	26100		49.0		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Antimony	<9.79		9.79		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Arsenic	<7.83		7.83		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Barium	201		1.96		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Beryllium	<0.979		0.979		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Cadmium	<1.96		1.96		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Calcium	6770		196		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Chromium	28.9		1.96		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Copper	9.03		1.96		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Iron	24900		97.9		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Lead	91.3		9.79		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Magnesium	1960		97.9		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Manganese	155		4.90		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Nickel	15.4		4.90		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Potassium	1830		196		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Selenium	<9.79		9.79		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Silver	<1.96		1.96		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Sodium	<196		196		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Thallium	<9.79		9.79		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Vanadium	44.8		4.90		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2
Zinc	237		9.79		mg/Kg	☆	10/16/23 10:35	10/17/23 15:33	2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	11.0		0.490		mg/Kg	☆	10/16/23 10:35	10/24/23 16:39	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0242		0.0218		mg/Kg	☆	10/16/23 18:18	10/24/23 13:59	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	22.6		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	77.4		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-7 (0-3)

Lab Sample ID: 310-267039-13

Date Collected: 10/11/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 87.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,1,1-Trichloroethane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,1,2,2-Tetrachloroethane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,1,2-Trichloroethane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,1-Dichloroethane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,1-Dichloroethene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,1-Dichloropropene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,2,3-Trichlorobenzene	<12.5		12.5		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,2,3-Trichloropropane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,2,4-Trichlorobenzene	<12.5		12.5		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,2,4-Trimethylbenzene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,2-Dibromo-3-chloropropane	<12.5		12.5		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,2-Dibromoethane (EDB)	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,2-Dichlorobenzene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,2-Dichloroethane (EDC)	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,2-Dichloropropane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,3,5-Trimethylbenzene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,3-Dichlorobenzene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,3-Dichloropropane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
1,4-Dichlorobenzene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
2,2-Dichloropropane	<25.0		25.0		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
2-Butanone (MEK)	<25.0		25.0		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
2-Chlorotoluene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
4-Chlorotoluene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Acetone	<62.4		62.4		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Benzene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Bromobenzene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Bromochloromethane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Bromodichloromethane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Bromoform	<12.5		12.5		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Bromomethane	<25.0		25.0		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Carbon disulfide	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Carbon tetrachloride	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Chlorobenzene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Chlorodibromomethane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Chloroethane	<25.0		25.0		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Chloroform	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Chloromethane	<25.0		25.0		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
cis-1,2-Dichloroethene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
cis-1,3-Dichloropropene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Dibromomethane	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Dichlorodifluoromethane	<18.7		18.7		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Ethylbenzene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Hexachlorobutadiene	<31.2		31.2		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Hexane	<31.2		31.2		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Isopropylbenzene	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Methyl-tert-butyl Ether (MTBE)	<6.24		6.24		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Methylene chloride	<62.4		62.4		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1
Naphthalene	<31.2		31.2		ug/Kg	☼	10/17/23 11:19	10/18/23 10:50	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-7 (0-3)

Lab Sample ID: 310-267039-13

Date Collected: 10/11/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 87.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
n-Propylbenzene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
p-Isopropyltoluene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
sec-Butylbenzene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
Styrene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
tert-Butylbenzene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
Tetrachloroethene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
Toluene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
trans-1,2-Dichloroethene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
trans-1,3-Dichloropropene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
Trichloroethene	<6.24		6.24		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
Trichlorofluoromethane	<25.0		25.0		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
Vinyl chloride	<12.5		12.5		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
Xylenes, Total	<12.5		12.5		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1
TPH-GRO (C6-C10)	<2500		2500		ug/Kg	✱	10/17/23 11:19	10/18/23 10:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		80 - 131	10/17/23 11:19	10/18/23 10:50	1
Toluene-d8 (Surr)	92		80 - 120	10/17/23 11:19	10/18/23 10:50	1
4-Bromofluorobenzene (Surr)	95		78 - 120	10/17/23 11:19	10/18/23 10:50	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
1,2-Dichlorobenzene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
1,3-Dichlorobenzene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
1,4-Dichlorobenzene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2,4,5-Trichlorophenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2,4,6-Trichlorophenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2,4-Dichlorophenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2,4-Dimethylphenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2,4-Dinitrophenol	<441		441		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2,4-Dinitrotoluene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2,6-Dinitrotoluene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2-Chloronaphthalene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2-Chlorophenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2-Methylnaphthalene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2-Methylphenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2-Nitroaniline	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
2-Nitrophenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
3,3'-Dichlorobenzidine	<441		441		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
3-Nitroaniline	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
4,6-Dinitro-2-methylphenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
4-Bromophenyl phenyl ether	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
4-Chloro-3-methylphenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
4-Chloroaniline	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
4-Chlorophenyl phenyl ether	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
4-Methylphenol (and/or 3-Methylphenol)	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
4-Nitroaniline	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-7 (0-3)

Lab Sample ID: 310-267039-13

Date Collected: 10/11/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 87.9

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Acenaphthene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Acenaphthylene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Anthracene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Benzidine	<441		441		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Benzo(a)anthracene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Benzo(a)pyrene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Benzo(b)fluoranthene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Benzo(g,h,i)perylene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Benzo(k)fluoranthene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Benzoic acid	<1100		1100		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Benzyl alcohol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Bis(2-chloroethoxy)methane	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Bis(2-chloroethyl)ether	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
bis(2-chloroisopropyl) ether	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Bis(2-ethylhexyl) phthalate	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Butyl benzyl phthalate	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Carbazole	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Chrysene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Dibenzo(a,h)anthracene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Dibenzofuran	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Diethyl phthalate	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Dimethyl phthalate	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Di-n-butyl phthalate	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Di-n-octyl phthalate	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Fluoranthene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Fluorene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Hexachlorobenzene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Hexachlorobutadiene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Hexachlorocyclopentadiene	<441		441		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Hexachloroethane	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Indeno(1,2,3-cd)pyrene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Isophorone	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Naphthalene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Nitrobenzene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
N-Nitrosodimethylamine	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
N-Nitrosodi-n-propylamine	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
N-Nitrosodiphenylamine	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Pentachlorophenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Phenanthrene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Phenol	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Pyrene	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Pyridine	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
Total Cresols	<220		220		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
TPH-DRO (C10-C21)	<16500		16500		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1
TPH-ORO (C21-C35)	<16500		16500		ug/Kg	✱	10/18/23 10:16	10/19/23 20:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	77		18 - 126	10/18/23 10:16	10/19/23 20:01	1
Phenol-d5 (Surr)	83		25 - 119	10/18/23 10:16	10/19/23 20:01	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-7 (0-3)

Lab Sample ID: 310-267039-13

Date Collected: 10/11/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 87.9

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	80		15 - 131	10/18/23 10:16	10/19/23 20:01	1
2-Fluorobiphenyl (Surr)	64		28 - 116	10/18/23 10:16	10/19/23 20:01	1
2,4,6-Tribromophenol (Surr)	59		10 - 121	10/18/23 10:16	10/19/23 20:01	1
Terphenyl-d14 (Surr)	76		24 - 132	10/18/23 10:16	10/19/23 20:01	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	5230		27.1		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Antimony	<5.43		5.43		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Arsenic	<4.34		4.34		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Barium	43.4		1.09		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Beryllium	<0.543		0.543		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Cadmium	<1.09		1.09		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Calcium	684		109		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Chromium	6.95		1.09		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Copper	3.44		1.09		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Iron	6580		54.3		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Lead	221		5.43		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Magnesium	421		54.3		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Manganese	138		2.71		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Nickel	8.13		2.71		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Potassium	440		109		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Selenium	<5.43		5.43		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Silver	<1.09		1.09		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Sodium	<109		109		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Thallium	<5.43		5.43		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Vanadium	10.7		2.71		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1
Zinc	36.1		5.43		mg/Kg	☆	10/16/23 10:35	10/17/23 15:02	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	4.92		0.543		mg/Kg	☆	10/16/23 10:35	10/24/23 16:41	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0274		0.0218		mg/Kg	☆	10/16/23 18:18	10/24/23 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	12.1		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	87.9		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-7 (6-8)

Lab Sample ID: 310-267039-14

Date Collected: 10/11/23 13:05

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 76.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,1,1-Trichloroethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,1,2,2-Tetrachloroethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,1,2-Trichloroethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,1-Dichloroethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,1-Dichloroethene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,1-Dichloropropene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,2,3-Trichlorobenzene	<9.52		9.52		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,2,3-Trichloropropane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,2,4-Trichlorobenzene	<9.52		9.52		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,2,4-Trimethylbenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,2-Dibromo-3-chloropropane	<9.52		9.52		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,2-Dibromoethane (EDB)	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,2-Dichlorobenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,2-Dichloroethane (EDC)	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,2-Dichloropropane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,3,5-Trimethylbenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,3-Dichlorobenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,3-Dichloropropane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
1,4-Dichlorobenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
2,2-Dichloropropane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
2-Butanone (MEK)	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
2-Chlorotoluene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
4-Chlorotoluene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Acetone	<47.6		47.6		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Benzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Bromobenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Bromochloromethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Bromodichloromethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Bromoform	<9.52		9.52		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Bromomethane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Carbon disulfide	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Carbon tetrachloride	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Chlorobenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Chlorodibromomethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Chloroethane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Chloroform	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Chloromethane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
cis-1,2-Dichloroethene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
cis-1,3-Dichloropropene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Dibromomethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Dichlorodifluoromethane	<14.3		14.3		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Ethylbenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Hexachlorobutadiene	<23.8		23.8		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Hexane	<23.8		23.8		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Isopropylbenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Methyl-tert-butyl Ether (MTBE)	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Methylene chloride	<47.6		47.6		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1
Naphthalene	<23.8		23.8		ug/Kg	☼	10/17/23 11:19	10/18/23 11:14	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-7 (6-8)

Lab Sample ID: 310-267039-14

Date Collected: 10/11/23 13:05

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 76.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
n-Propylbenzene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
p-Isopropyltoluene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
sec-Butylbenzene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
Styrene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
tert-Butylbenzene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
Tetrachloroethene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
Toluene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
trans-1,2-Dichloroethene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
trans-1,3-Dichloropropene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
Trichloroethene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
Trichlorofluoromethane	<19.0		19.0		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
Vinyl chloride	<9.52		9.52		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
Xylenes, Total	<9.52		9.52		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1
TPH-GRO (C6-C10)	<1900		1900		ug/Kg	✱	10/17/23 11:19	10/18/23 11:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		80 - 131	10/17/23 11:19	10/18/23 11:14	1
Toluene-d8 (Surr)	92		80 - 120	10/17/23 11:19	10/18/23 11:14	1
4-Bromofluorobenzene (Surr)	96		78 - 120	10/17/23 11:19	10/18/23 11:14	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
1,2-Dichlorobenzene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
1,3-Dichlorobenzene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
1,4-Dichlorobenzene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2,4,5-Trichlorophenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2,4,6-Trichlorophenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2,4-Dichlorophenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2,4-Dimethylphenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2,4-Dinitrophenol	<496		496		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2,4-Dinitrotoluene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2,6-Dinitrotoluene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2-Chloronaphthalene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2-Chlorophenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2-Methylnaphthalene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2-Methylphenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2-Nitroaniline	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
2-Nitrophenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
3,3'-Dichlorobenzidine	<496		496		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
3-Nitroaniline	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
4,6-Dinitro-2-methylphenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
4-Bromophenyl phenyl ether	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
4-Chloro-3-methylphenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
4-Chloroaniline	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
4-Chlorophenyl phenyl ether	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
4-Methylphenol (and/or 3-Methylphenol)	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
4-Nitroaniline	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-7 (6-8)

Lab Sample ID: 310-267039-14

Date Collected: 10/11/23 13:05

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 76.3

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Acenaphthene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Acenaphthylene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Anthracene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Benzidine	<496		496		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Benzo(a)anthracene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Benzo(a)pyrene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Benzo(b)fluoranthene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Benzo(g,h,i)perylene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Benzo(k)fluoranthene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Benzoic acid	<1240		1240		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Benzyl alcohol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Bis(2-chloroethoxy)methane	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Bis(2-chloroethyl)ether	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
bis(2-chloroisopropyl) ether	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Bis(2-ethylhexyl) phthalate	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Butyl benzyl phthalate	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Carbazole	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Chrysene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Dibenzo(a,h)anthracene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Dibenzofuran	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Diethyl phthalate	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Dimethyl phthalate	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Di-n-butyl phthalate	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Di-n-octyl phthalate	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Fluoranthene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Fluorene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Hexachlorobenzene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Hexachlorobutadiene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Hexachlorocyclopentadiene	<496		496		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Hexachloroethane	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Indeno(1,2,3-cd)pyrene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Isophorone	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Naphthalene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Nitrobenzene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
N-Nitrosodimethylamine	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
N-Nitrosodi-n-propylamine	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
N-Nitrosodiphenylamine	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Pentachlorophenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Phenanthrene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Phenol	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Pyrene	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Pyridine	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
Total Cresols	<248		248		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
TPH-DRO (C10-C21)	<18600		18600		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1
TPH-ORO (C21-C35)	<18600		18600		ug/Kg	✱	10/18/23 10:16	10/19/23 20:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	84		18 - 126	10/18/23 10:16	10/19/23 20:29	1
Phenol-d5 (Surr)	86		25 - 119	10/18/23 10:16	10/19/23 20:29	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-7 (6-8)

Lab Sample ID: 310-267039-14

Date Collected: 10/11/23 13:05

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 76.3

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	90		15 - 131	10/18/23 10:16	10/19/23 20:29	1
2-Fluorobiphenyl (Surr)	74		28 - 116	10/18/23 10:16	10/19/23 20:29	1
2,4,6-Tribromophenol (Surr)	71		10 - 121	10/18/23 10:16	10/19/23 20:29	1
Terphenyl-d14 (Surr)	74		24 - 132	10/18/23 10:16	10/19/23 20:29	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	16300		27.9		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Antimony	<5.57		5.57		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Arsenic	12.5		4.46		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Barium	72.3		1.11		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Beryllium	0.780		0.557		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Cadmium	1.35		1.11		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Calcium	2080		111		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Chromium	19.5		1.11		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Copper	6.10		1.11		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Iron	17300		55.7		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Lead	1060		5.57		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Magnesium	1220		55.7		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Manganese	510		2.79		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Nickel	28.4		2.79		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Potassium	1320		111		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Selenium	<5.57		5.57		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Silver	<1.11		1.11		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Sodium	127		111		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Thallium	<5.57		5.57		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Vanadium	27.7		2.79		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1
Zinc	487		5.57		mg/Kg	✱	10/16/23 10:35	10/17/23 15:04	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	7.67		0.557		mg/Kg	✱	10/16/23 10:35	10/24/23 16:43	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0769		0.0241		mg/Kg	✱	10/16/23 18:18	10/24/23 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.7		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	76.3		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-8 (0-3)

Lab Sample ID: 310-267039-15

Date Collected: 10/11/23 14:25

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 81.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,1,1-Trichloroethane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,1,2,2-Tetrachloroethane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,1,2-Trichloroethane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,1-Dichloroethane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,1-Dichloroethene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,1-Dichloropropene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,2,3-Trichlorobenzene	<8.76		8.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,2,3-Trichloropropane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,2,4-Trichlorobenzene	<8.76		8.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,2,4-Trimethylbenzene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,2-Dibromo-3-chloropropane	<8.76		8.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,2-Dibromoethane (EDB)	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,2-Dichlorobenzene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,2-Dichloroethane (EDC)	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,2-Dichloropropane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,3,5-Trimethylbenzene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,3-Dichlorobenzene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,3-Dichloropropane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
1,4-Dichlorobenzene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
2,2-Dichloropropane	<17.5		17.5		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
2-Butanone (MEK)	<17.5		17.5		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
2-Chlorotoluene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
4-Chlorotoluene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Acetone	<43.8		43.8		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Benzene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Bromobenzene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Bromochloromethane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Bromodichloromethane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Bromoform	<8.76		8.76		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Bromomethane	<17.5		17.5		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Carbon disulfide	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Carbon tetrachloride	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Chlorobenzene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Chlorodibromomethane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Chloroethane	<17.5		17.5		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Chloroform	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Chloromethane	<17.5		17.5		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
cis-1,2-Dichloroethene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
cis-1,3-Dichloropropene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Dibromomethane	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Dichlorodifluoromethane	<13.1		13.1		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Ethylbenzene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Hexachlorobutadiene	<21.9		21.9		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Hexane	<21.9		21.9		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Isopropylbenzene	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Methyl-tert-butyl Ether (MTBE)	<4.38		4.38		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Methylene chloride	<43.8		43.8		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1
Naphthalene	<21.9		21.9		ug/Kg	☼	10/17/23 11:19	10/18/23 11:39	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-8 (0-3)

Lab Sample ID: 310-267039-15

Date Collected: 10/11/23 14:25

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 81.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
n-Propylbenzene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
p-Isopropyltoluene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
sec-Butylbenzene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
Styrene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
tert-Butylbenzene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
Tetrachloroethene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
Toluene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
trans-1,2-Dichloroethene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
trans-1,3-Dichloropropene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
Trichloroethene	<4.38		4.38		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
Trichlorofluoromethane	<17.5		17.5		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
Vinyl chloride	<8.76		8.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
Xylenes, Total	<8.76		8.76		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1
TPH-GRO (C6-C10)	<1750		1750		ug/Kg	✱	10/17/23 11:19	10/18/23 11:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		80 - 131	10/17/23 11:19	10/18/23 11:39	1
Toluene-d8 (Surr)	92		80 - 120	10/17/23 11:19	10/18/23 11:39	1
4-Bromofluorobenzene (Surr)	96		78 - 120	10/17/23 11:19	10/18/23 11:39	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
1,2-Dichlorobenzene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
1,3-Dichlorobenzene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
1,4-Dichlorobenzene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2,4,5-Trichlorophenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2,4,6-Trichlorophenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2,4-Dichlorophenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2,4-Dimethylphenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2,4-Dinitrophenol	<467		467		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2,4-Dinitrotoluene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2,6-Dinitrotoluene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2-Chloronaphthalene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2-Chlorophenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2-Methylnaphthalene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2-Methylphenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2-Nitroaniline	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
2-Nitrophenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
3,3'-Dichlorobenzidine	<467		467		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
3-Nitroaniline	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
4,6-Dinitro-2-methylphenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
4-Bromophenyl phenyl ether	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
4-Chloro-3-methylphenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
4-Chloroaniline	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
4-Chlorophenyl phenyl ether	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
4-Methylphenol (and/or 3-Methylphenol)	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
4-Nitroaniline	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-8 (0-3)

Lab Sample ID: 310-267039-15

Date Collected: 10/11/23 14:25

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 81.6

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Acenaphthene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Acenaphthylene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Anthracene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Benzidine	<467		467		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Benzo(a)anthracene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Benzo(a)pyrene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Benzo(b)fluoranthene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Benzo(g,h,i)perylene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Benzo(k)fluoranthene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Benzoic acid	<1170		1170		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Benzyl alcohol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Bis(2-chloroethoxy)methane	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Bis(2-chloroethyl)ether	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
bis(2-chloroisopropyl) ether	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Bis(2-ethylhexyl) phthalate	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Butyl benzyl phthalate	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Carbazole	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Chrysene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Dibenzo(a,h)anthracene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Dibenzofuran	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Diethyl phthalate	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Dimethyl phthalate	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Di-n-butyl phthalate	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Di-n-octyl phthalate	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Fluoranthene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Fluorene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Hexachlorobenzene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Hexachlorobutadiene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Hexachlorocyclopentadiene	<467		467		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Hexachloroethane	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Indeno(1,2,3-cd)pyrene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Isophorone	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Naphthalene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Nitrobenzene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
N-Nitrosodimethylamine	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
N-Nitrosodi-n-propylamine	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
N-Nitrosodiphenylamine	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Pentachlorophenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Phenanthrene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Phenol	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Pyrene	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Pyridine	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
Total Cresols	<234		234		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
TPH-DRO (C10-C21)	<17500		17500		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1
TPH-ORO (C21-C35)	<17500		17500		ug/Kg	✱	10/18/23 10:16	10/19/23 20:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	53		18 - 126	10/18/23 10:16	10/19/23 20:56	1
Phenol-d5 (Surr)	53		25 - 119	10/18/23 10:16	10/19/23 20:56	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-8 (0-3)

Lab Sample ID: 310-267039-15

Date Collected: 10/11/23 14:25

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 81.6

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	49		15 - 131	10/18/23 10:16	10/19/23 20:56	1
2-Fluorobiphenyl (Surr)	41		28 - 116	10/18/23 10:16	10/19/23 20:56	1
2,4,6-Tribromophenol (Surr)	42		10 - 121	10/18/23 10:16	10/19/23 20:56	1
Terphenyl-d14 (Surr)	58		24 - 132	10/18/23 10:16	10/19/23 20:56	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	10700		26.9		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Antimony	<5.38		5.38		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Arsenic	10.6		4.30		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Barium	35.9		1.08		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Beryllium	0.604		0.538		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Cadmium	<1.08		1.08		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Calcium	1270		108		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Chromium	19.3		1.08		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Copper	11.6		1.08		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Iron	20200		53.8		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Lead	3360		5.38		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Magnesium	654		53.8		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Manganese	735		2.69		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Nickel	42.8		2.69		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Potassium	1490		108		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Selenium	<5.38		5.38		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Silver	<1.08		1.08		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Sodium	<108		108		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Thallium	<5.38		5.38		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Vanadium	21.9		2.69		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1
Zinc	291		5.38		mg/Kg	✱	10/16/23 10:35	10/17/23 15:06	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	26.1		0.538		mg/Kg	✱	10/16/23 10:35	10/24/23 16:46	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0458		0.0245		mg/Kg	✱	10/16/23 18:18	10/24/23 14:05	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	18.4		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	81.6		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-8 (4.5-6.5)

Lab Sample ID: 310-267039-16

Date Collected: 10/11/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 73.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,1,1-Trichloroethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,1,2,2-Tetrachloroethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,1,2-Trichloroethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,1-Dichloroethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,1-Dichloroethene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,1-Dichloropropene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,2,3-Trichlorobenzene	<9.52		9.52		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,2,3-Trichloropropane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,2,4-Trichlorobenzene	<9.52		9.52		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,2,4-Trimethylbenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,2-Dibromo-3-chloropropane	<9.52		9.52		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,2-Dibromoethane (EDB)	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,2-Dichlorobenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,2-Dichloroethane (EDC)	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,2-Dichloropropane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,3,5-Trimethylbenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,3-Dichlorobenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,3-Dichloropropane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
1,4-Dichlorobenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
2,2-Dichloropropane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
2-Butanone (MEK)	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
2-Chlorotoluene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
4-Chlorotoluene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Acetone	<47.6		47.6		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Benzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Bromobenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Bromochloromethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Bromodichloromethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Bromoform	<9.52		9.52		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Bromomethane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Carbon disulfide	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Carbon tetrachloride	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Chlorobenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Chlorodibromomethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Chloroethane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Chloroform	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Chloromethane	<19.0		19.0		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
cis-1,2-Dichloroethene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
cis-1,3-Dichloropropene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Dibromomethane	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Dichlorodifluoromethane	<14.3		14.3		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Ethylbenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Hexachlorobutadiene	<23.8		23.8		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Hexane	<23.8		23.8		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Isopropylbenzene	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Methyl-tert-butyl Ether (MTBE)	<4.76		4.76		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Methylene chloride	<47.6		47.6		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1
Naphthalene	<23.8		23.8		ug/Kg	☼	10/17/23 11:19	10/18/23 12:06	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-8 (4.5-6.5)

Lab Sample ID: 310-267039-16

Date Collected: 10/11/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 73.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
n-Propylbenzene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
p-Isopropyltoluene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
sec-Butylbenzene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
Styrene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
tert-Butylbenzene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
Tetrachloroethene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
Toluene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
trans-1,2-Dichloroethene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
trans-1,3-Dichloropropene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
Trichloroethene	<4.76		4.76		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
Trichlorofluoromethane	<19.0		19.0		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
Vinyl chloride	<9.52		9.52		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
Xylenes, Total	<9.52		9.52		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1
TPH-GRO (C6-C10)	<1900		1900		ug/Kg	✱	10/17/23 11:19	10/18/23 12:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		80 - 131	10/17/23 11:19	10/18/23 12:06	1
Toluene-d8 (Surr)	92		80 - 120	10/17/23 11:19	10/18/23 12:06	1
4-Bromofluorobenzene (Surr)	97		78 - 120	10/17/23 11:19	10/18/23 12:06	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
1,2-Dichlorobenzene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
1,3-Dichlorobenzene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
1,4-Dichlorobenzene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2,4,5-Trichlorophenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2,4,6-Trichlorophenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2,4-Dichlorophenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2,4-Dimethylphenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2,4-Dinitrophenol	<2540		2540		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2,4-Dinitrotoluene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2,6-Dinitrotoluene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2-Chloronaphthalene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2-Chlorophenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2-Methylnaphthalene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2-Methylphenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2-Nitroaniline	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
2-Nitrophenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
3,3'-Dichlorobenzidine	<2540		2540		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
3-Nitroaniline	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
4,6-Dinitro-2-methylphenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
4-Bromophenyl phenyl ether	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
4-Chloro-3-methylphenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
4-Chloroaniline	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
4-Chlorophenyl phenyl ether	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
4-Methylphenol (and/or 3-Methylphenol)	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
4-Nitroaniline	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-8 (4.5-6.5)

Lab Sample ID: 310-267039-16

Date Collected: 10/11/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 73.9

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Acenaphthene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Acenaphthylene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Anthracene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Benzidine	<2540		2540		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Benzo(a)anthracene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Benzo(a)pyrene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Benzo(b)fluoranthene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Benzo(g,h,i)perylene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Benzo(k)fluoranthene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Benzoic acid	<6340		6340		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Benzyl alcohol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Bis(2-chloroethoxy)methane	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Bis(2-chloroethyl)ether	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
bis(2-chloroisopropyl) ether	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Bis(2-ethylhexyl) phthalate	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Butyl benzyl phthalate	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Carbazole	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Chrysene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Dibenzo(a,h)anthracene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Dibenzofuran	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Diethyl phthalate	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Dimethyl phthalate	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Di-n-butyl phthalate	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Di-n-octyl phthalate	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Fluoranthene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Fluorene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Hexachlorobenzene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Hexachlorobutadiene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Hexachlorocyclopentadiene	<2540		2540		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Hexachloroethane	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Indeno(1,2,3-cd)pyrene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Isophorone	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Naphthalene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Nitrobenzene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
N-Nitrosodimethylamine	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
N-Nitrosodi-n-propylamine	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
N-Nitrosodiphenylamine	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Pentachlorophenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Phenanthrene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Phenol	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Pyrene	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Pyridine	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Total Cresols	<1270		1270		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
TPH-DRO (C10-C21)	<95100		95100		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
TPH-ORO (C21-C35)	<95100		95100		ug/Kg	✱	10/18/23 10:16	10/19/23 21:23	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	77		18 - 126				10/18/23 10:16	10/19/23 21:23	5
Phenol-d5 (Surr)	85		25 - 119				10/18/23 10:16	10/19/23 21:23	5

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-8 (4.5-6.5)

Lab Sample ID: 310-267039-16

Date Collected: 10/11/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 73.9

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	84		15 - 131	10/18/23 10:16	10/19/23 21:23	5
2-Fluorobiphenyl (Surr)	76		28 - 116	10/18/23 10:16	10/19/23 21:23	5
2,4,6-Tribromophenol (Surr)	54		10 - 121	10/18/23 10:16	10/19/23 21:23	5
Terphenyl-d14 (Surr)	78		24 - 132	10/18/23 10:16	10/19/23 21:23	5

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	31000		98.5		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Antimony	<19.7		19.7		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Arsenic	49.1		15.8		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Barium	77.1		3.94		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Beryllium	<1.97		1.97		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Cadmium	<3.94		3.94		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Calcium	3160		394		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Chromium	70.5		3.94		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Copper	31.1		3.94		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Iron	56900		197		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Lead	6500		19.7		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Magnesium	1900		197		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Manganese	763		9.85		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Nickel	104		9.85		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Potassium	2500		394		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Selenium	<19.7		19.7		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Silver	<3.94		3.94		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Sodium	<394		394		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Thallium	<19.7		19.7		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Vanadium	81.2		9.85		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3
Zinc	1660		19.7		mg/Kg	✱	10/16/23 10:35	10/17/23 15:35	3

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	81.9		0.657		mg/Kg	✱	10/16/23 10:35	10/24/23 16:53	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0939		0.0238		mg/Kg	✱	10/16/23 18:18	10/24/23 14:07	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	26.1		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	73.9		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (6-8) Dup

Lab Sample ID: 310-267039-17

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 79.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,1,1-Trichloroethane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,1,2,2-Tetrachloroethane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,1,2-Trichloroethane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,1-Dichloroethane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,1-Dichloroethene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,1-Dichloropropene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,2,3-Trichlorobenzene	<7.78		7.78		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,2,3-Trichloropropane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,2,4-Trichlorobenzene	<7.78		7.78		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,2,4-Trimethylbenzene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,2-Dibromo-3-chloropropane	<7.78		7.78		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,2-Dibromoethane (EDB)	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,2-Dichlorobenzene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,2-Dichloroethane (EDC)	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,2-Dichloropropane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,3,5-Trimethylbenzene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,3-Dichlorobenzene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,3-Dichloropropane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
1,4-Dichlorobenzene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
2,2-Dichloropropane	<15.6		15.6		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
2-Butanone (MEK)	<15.6		15.6		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
2-Chlorotoluene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
4-Chlorotoluene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Acetone	<38.9		38.9		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Benzene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Bromobenzene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Bromochloromethane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Bromodichloromethane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Bromoform	<7.78		7.78		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Bromomethane	<15.6		15.6		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Carbon disulfide	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Carbon tetrachloride	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Chlorobenzene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Chlorodibromomethane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Chloroethane	<15.6		15.6		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Chloroform	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Chloromethane	<15.6		15.6		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
cis-1,2-Dichloroethene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
cis-1,3-Dichloropropene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Dibromomethane	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Dichlorodifluoromethane	<11.7		11.7		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Ethylbenzene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Hexachlorobutadiene	<19.5		19.5		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Hexane	<19.5		19.5		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Isopropylbenzene	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Methyl-tert-butyl Ether (MTBE)	<3.89		3.89		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Methylene chloride	<38.9		38.9		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1
Naphthalene	<19.5		19.5		ug/Kg	☼	10/17/23 11:19	10/18/23 12:30	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (6-8) Dup

Lab Sample ID: 310-267039-17

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 79.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
n-Propylbenzene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
p-Isopropyltoluene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
sec-Butylbenzene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
Styrene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
tert-Butylbenzene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
Tetrachloroethene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
Toluene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
trans-1,2-Dichloroethene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
trans-1,3-Dichloropropene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
Trichloroethene	<3.89		3.89		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
Trichlorofluoromethane	<15.6		15.6		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
Vinyl chloride	<7.78		7.78		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
Xylenes, Total	<7.78		7.78		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1
TPH-GRO (C6-C10)	<1560		1560		ug/Kg	✱	10/17/23 11:19	10/18/23 12:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	108		80 - 131	10/17/23 11:19	10/18/23 12:30	1
Toluene-d8 (Surr)	93		80 - 120	10/17/23 11:19	10/18/23 12:30	1
4-Bromofluorobenzene (Surr)	96		78 - 120	10/17/23 11:19	10/18/23 12:30	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
1,2-Dichlorobenzene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
1,3-Dichlorobenzene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
1,4-Dichlorobenzene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2,4,5-Trichlorophenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2,4,6-Trichlorophenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2,4-Dichlorophenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2,4-Dimethylphenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2,4-Dinitrophenol	<484		484		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2,4-Dinitrotoluene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2,6-Dinitrotoluene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2-Chloronaphthalene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2-Chlorophenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2-Methylnaphthalene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2-Methylphenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2-Nitroaniline	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
2-Nitrophenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
3,3'-Dichlorobenzidine	<484		484		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
3-Nitroaniline	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
4,6-Dinitro-2-methylphenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
4-Bromophenyl phenyl ether	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
4-Chloro-3-methylphenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
4-Chloroaniline	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
4-Chlorophenyl phenyl ether	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
4-Methylphenol (and/or 3-Methylphenol)	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
4-Nitroaniline	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (6-8) Dup

Lab Sample ID: 310-267039-17

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 79.1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Acenaphthene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Acenaphthylene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Anthracene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Benzidine	<484		484		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Benzo(a)anthracene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Benzo(a)pyrene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Benzo(b)fluoranthene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Benzo(g,h,i)perylene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Benzo(k)fluoranthene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Benzoic acid	<1210		1210		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Benzyl alcohol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Bis(2-chloroethoxy)methane	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Bis(2-chloroethyl)ether	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
bis(2-chloroisopropyl) ether	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Bis(2-ethylhexyl) phthalate	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Butyl benzyl phthalate	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Carbazole	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Chrysene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Dibenzo(a,h)anthracene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Dibenzofuran	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Diethyl phthalate	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Dimethyl phthalate	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Di-n-butyl phthalate	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Di-n-octyl phthalate	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Fluoranthene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Fluorene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Hexachlorobenzene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Hexachlorobutadiene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Hexachlorocyclopentadiene	<484		484		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Hexachloroethane	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Indeno(1,2,3-cd)pyrene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Isophorone	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Naphthalene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Nitrobenzene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
N-Nitrosodimethylamine	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
N-Nitrosodi-n-propylamine	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
N-Nitrosodiphenylamine	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Pentachlorophenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Phenanthrene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Phenol	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Pyrene	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Pyridine	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
Total Cresols	<242		242		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
TPH-DRO (C10-C21)	<18100		18100		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1
TPH-ORO (C21-C35)	<18100		18100		ug/Kg	✱	10/18/23 10:16	10/19/23 21:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	91		18 - 126	10/18/23 10:16	10/19/23 21:50	1
Phenol-d5 (Surr)	64		25 - 119	10/18/23 10:16	10/19/23 21:50	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (6-8) Dup

Lab Sample ID: 310-267039-17

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 79.1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	65		15 - 131	10/18/23 10:16	10/19/23 21:50	1
2-Fluorobiphenyl (Surr)	57		28 - 116	10/18/23 10:16	10/19/23 21:50	1
2,4,6-Tribromophenol (Surr)	57		10 - 121	10/18/23 10:16	10/19/23 21:50	1
Terphenyl-d14 (Surr)	66		24 - 132	10/18/23 10:16	10/19/23 21:50	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	10700		28.9		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Antimony	<5.78		5.78		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Arsenic	17.6		4.63		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Barium	366		1.16		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Beryllium	1.85		0.578		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Cadmium	<1.16		1.16		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Calcium	2690		116		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Chromium	24.4		1.16		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Copper	3.43		1.16		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Iron	21300		57.8		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Lead	<5.78		5.78		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Magnesium	2620		57.8		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Manganese	141		2.89		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Nickel	86.9		2.89		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Potassium	1670		116		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Selenium	<5.78		5.78		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Silver	<1.16		1.16		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Sodium	<116		116		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Thallium	<5.78		5.78		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Vanadium	17.4		2.89		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1
Zinc	44.9		5.78		mg/Kg	✱	10/16/23 10:35	10/17/23 15:10	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	25.2		0.578		mg/Kg	✱	10/16/23 10:35	10/24/23 16:55	5

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0390		0.0239		mg/Kg	✱	10/16/23 18:18	10/24/23 14:09	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	20.9		0.1		%			10/16/23 05:17	1
Percent Solids (EPA Moisture)	79.1		0.1		%			10/16/23 05:17	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2

Lab Sample ID: 310-267039-18

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<5.00		5.00		ug/L			10/13/23 15:27	5
1,1,1-Trichloroethane	<5.00		5.00		ug/L			10/13/23 15:27	5
1,1,2,2-Tetrachloroethane	<5.00		5.00		ug/L			10/13/23 15:27	5
1,1,2-Trichloroethane	<5.00		5.00		ug/L			10/13/23 15:27	5
1,1-Dichloroethane	<5.00		5.00		ug/L			10/13/23 15:27	5
1,1-Dichloroethene	<10.0		10.0		ug/L			10/13/23 15:27	5
1,1-Dichloropropene	<5.00		5.00		ug/L			10/13/23 15:27	5
1,2,3-Trichlorobenzene	<25.0		25.0		ug/L			10/13/23 15:27	5
1,2,3-Trichloropropane	<5.00		5.00		ug/L			10/13/23 15:27	5
1,2,4-Trichlorobenzene	<25.0		25.0		ug/L			10/13/23 15:27	5
1,2,4-Trimethylbenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
1,2-Dibromo-3-chloropropane	<25.0		25.0		ug/L			10/13/23 15:27	5
1,2-Dibromoethane (EDB)	<5.00		5.00		ug/L			10/13/23 15:27	5
1,2-Dichlorobenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
1,2-Dichloroethane	<5.00		5.00		ug/L			10/13/23 15:27	5
1,2-Dichloropropane	<5.00		5.00		ug/L			10/13/23 15:27	5
1,3,5-Trimethylbenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
1,3-Dichlorobenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
1,3-Dichloropropane	<5.00		5.00		ug/L			10/13/23 15:27	5
1,4-Dichlorobenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
2,2-Dichloropropane	<20.0		20.0		ug/L			10/13/23 15:27	5
2-Butanone (MEK)	<50.0		50.0		ug/L			10/13/23 15:27	5
2-Chlorotoluene	<5.00		5.00		ug/L			10/13/23 15:27	5
4-Chlorotoluene	<5.00		5.00		ug/L			10/13/23 15:27	5
Acetone	<50.0		50.0		ug/L			10/13/23 15:27	5
Benzene	<2.50		2.50		ug/L			10/13/23 15:27	5
Bromobenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
Bromochloromethane	<25.0		25.0		ug/L			10/13/23 15:27	5
Bromodichloromethane	<5.00		5.00		ug/L			10/13/23 15:27	5
Bromoform	<25.0		25.0		ug/L			10/13/23 15:27	5
Bromomethane	<20.0		20.0		ug/L			10/13/23 15:27	5
Carbon disulfide	<5.00		5.00		ug/L			10/13/23 15:27	5
Carbon tetrachloride	<10.0		10.0		ug/L			10/13/23 15:27	5
Chlorobenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
Chlorodibromomethane	<25.0		25.0		ug/L			10/13/23 15:27	5
Chloroethane	<20.0		20.0		ug/L			10/13/23 15:27	5
Chloroform	<15.0		15.0		ug/L			10/13/23 15:27	5
Chloromethane	<15.0		15.0		ug/L			10/13/23 15:27	5
cis-1,2-Dichloroethene	<5.00		5.00		ug/L			10/13/23 15:27	5
cis-1,3-Dichloropropene	<25.0		25.0		ug/L			10/13/23 15:27	5
Dibromomethane	<5.00		5.00		ug/L			10/13/23 15:27	5
Dichlorodifluoromethane	<15.0		15.0		ug/L			10/13/23 15:27	5
Ethylbenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
Hexachlorobutadiene	<25.0		25.0		ug/L			10/13/23 15:27	5
Hexane	<5.00		5.00		ug/L			10/13/23 15:27	5
Isopropylbenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
Methyl tert-butyl ether	<5.00		5.00		ug/L			10/13/23 15:27	5
Methylene chloride	<25.0		25.0		ug/L			10/13/23 15:27	5
Naphthalene	<25.0		25.0		ug/L			10/13/23 15:27	5

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2

Lab Sample ID: 310-267039-18

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
n-Propylbenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
p-Isopropyltoluene	<5.00		5.00		ug/L			10/13/23 15:27	5
sec-Butylbenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
Styrene	<5.00		5.00		ug/L			10/13/23 15:27	5
tert-Butylbenzene	<5.00		5.00		ug/L			10/13/23 15:27	5
Tetrachloroethene	<5.00		5.00		ug/L			10/13/23 15:27	5
Toluene	<5.00		5.00		ug/L			10/13/23 15:27	5
trans-1,2-Dichloroethene	<5.00		5.00		ug/L			10/13/23 15:27	5
trans-1,3-Dichloropropene	<25.0		25.0		ug/L			10/13/23 15:27	5
Trichloroethene	<5.00		5.00		ug/L			10/13/23 15:27	5
Trichlorofluoromethane	<20.0		20.0		ug/L			10/13/23 15:27	5
Vinyl chloride	<5.00		5.00		ug/L			10/13/23 15:27	5
Xylenes, Total	<15.0		15.0		ug/L			10/13/23 15:27	5
TPH-GRO (C6-C10)	<2000		2000		ug/L			10/13/23 15:27	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		80 - 128		10/13/23 15:27	5
Toluene-d8 (Surr)	99		80 - 120		10/13/23 15:27	5
4-Bromofluorobenzene (Surr)	105		80 - 120		10/13/23 15:27	5

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
1,2-Dichlorobenzene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
1,3-Dichlorobenzene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
1,4-Dichlorobenzene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2,4,5-Trichlorophenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2,4,6-Trichlorophenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2,4-Dichlorophenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2,4-Dimethylphenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2,4-Dinitrophenol	<114		114		ug/L		10/13/23 05:36	10/17/23 15:35	5
2,4-Dinitrotoluene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2,6-Dinitrotoluene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2-Chloronaphthalene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2-Chlorophenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2-Methylnaphthalene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2-Methylphenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2-Nitroaniline	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
2-Nitrophenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
3,3'-Dichlorobenzidine	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
3-Nitroaniline	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
4,6-Dinitro-2-methylphenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
4-Bromophenyl phenyl ether	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
4-Chloro-3-methylphenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
4-Chloroaniline	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
4-Chlorophenyl phenyl ether	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
4-Methylphenol (and/or 3-Methylphenol)	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
4-Nitroaniline	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2

Lab Sample ID: 310-267039-18

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Acenaphthene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Acenaphthylene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Anthracene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Benzidine	<114		114		ug/L		10/13/23 05:36	10/17/23 15:35	5
Benzo(a)anthracene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Benzo(a)pyrene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Benzo(b)fluoranthene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Benzo(g,h,i)perylene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Benzo(k)fluoranthene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Benzoic acid	<568		568		ug/L		10/13/23 05:36	10/17/23 15:35	5
Benzyl alcohol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Bis(2-chloroethoxy)methane	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Bis(2-chloroethyl)ether	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
bis(2-chloroisopropyl) ether	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Bis(2-ethylhexyl) phthalate	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Butyl benzyl phthalate	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Carbazole	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Chrysene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Dibenzo(a,h)anthracene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Dibenzofuran	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Diethyl phthalate	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Dimethyl phthalate	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Di-n-butyl phthalate	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Di-n-octyl phthalate	<114		114		ug/L		10/13/23 05:36	10/17/23 15:35	5
Fluoranthene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Fluorene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Hexachlorobenzene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Hexachlorobutadiene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Hexachlorocyclopentadiene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Hexachloroethane	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Indeno(1,2,3-cd)pyrene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Isophorone	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Naphthalene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Nitrobenzene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
N-Nitrosodimethylamine	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
N-Nitrosodi-n-propylamine	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
N-Nitrosodiphenylamine	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Pentachlorophenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Phenanthrene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Phenol	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Pyrene	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Pyridine	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
Total Cresols	<56.8		56.8		ug/L		10/13/23 05:36	10/17/23 15:35	5
TPH-DRO (C10-C21)	<2840	+	2840		ug/L		10/13/23 05:36	10/17/23 15:35	5
TPH-ORO (C21-C35)	<2840	-	2840		ug/L		10/13/23 05:36	10/17/23 15:35	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	0.2	S1-	25 - 110	10/13/23 05:36	10/17/23 15:35	5
Phenol-d5 (Surr)	1	S1-	21 - 110	10/13/23 05:36	10/17/23 15:35	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2

Lab Sample ID: 310-267039-18

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	83		45 - 129	10/13/23 05:36	10/17/23 15:35	5
2-Fluorobiphenyl (Surr)	77		39 - 118	10/13/23 05:36	10/17/23 15:35	5
2,4,6-Tribromophenol (Surr)	0	S1-	27 - 136	10/13/23 05:36	10/17/23 15:35	5
Terphenyl-d14 (Surr)	46		12 - 144	10/13/23 05:36	10/17/23 15:35	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7.34		0.0500		mg/L		10/16/23 09:15	10/17/23 15:48	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 15:48	1
Arsenic	0.0118		0.00200		mg/L		10/16/23 09:15	10/17/23 15:48	1
Barium	0.460		0.00200		mg/L		10/16/23 09:15	10/17/23 15:48	1
Beryllium	0.00633		0.00100		mg/L		10/16/23 09:15	10/17/23 15:48	1
Cadmium	0.0507		0.000200		mg/L		10/16/23 09:15	10/17/23 15:48	1
Calcium	468		2.00		mg/L		10/16/23 09:15	10/17/23 22:45	4
Chromium	0.0117		0.00500		mg/L		10/16/23 09:15	10/17/23 15:48	1
Cobalt	0.446		0.00200		mg/L		10/16/23 09:15	10/17/23 22:45	4
Copper	0.0198		0.00500		mg/L		10/16/23 09:15	10/17/23 15:48	1
Iron	7.57		0.100		mg/L		10/16/23 09:15	10/17/23 15:48	1
Lead	0.0767		0.000500		mg/L		10/16/23 09:15	10/17/23 15:48	1
Magnesium	34.6		0.500		mg/L		10/16/23 09:15	10/17/23 15:48	1
Manganese	4.49		0.0400		mg/L		10/16/23 09:15	10/17/23 22:45	4
Nickel	0.304		0.00500		mg/L		10/16/23 09:15	10/17/23 15:48	1
Potassium	11.9		0.500		mg/L		10/16/23 09:15	10/17/23 15:48	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:48	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:48	1
Sodium	20.5		1.00		mg/L		10/16/23 09:15	10/17/23 15:48	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:48	1
Vanadium	0.0117		0.00500		mg/L		10/16/23 09:15	10/17/23 15:48	1
Zinc	7.81		0.200		mg/L		10/16/23 09:15	10/19/23 13:51	10

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 17:41	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:41	1
Arsenic	0.00604		0.00200		mg/L		10/16/23 09:15	10/17/23 17:41	1
Barium	0.0353		0.00200		mg/L		10/16/23 09:15	10/17/23 17:41	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:41	1
Cadmium	0.00120		0.000200		mg/L		10/16/23 09:15	10/17/23 17:41	1
Calcium	95.8		0.500		mg/L		10/16/23 09:15	10/17/23 17:41	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:41	1
Cobalt	0.0233		0.000500		mg/L		10/16/23 09:15	10/17/23 17:41	1
Copper	0.00901		0.00500		mg/L		10/16/23 09:15	10/17/23 17:41	1
Iron	0.340		0.100		mg/L		10/16/23 09:15	10/17/23 17:41	1
Lead	0.00115		0.000500		mg/L		10/16/23 09:15	10/17/23 17:41	1
Magnesium	13.7		0.500		mg/L		10/16/23 09:15	10/17/23 17:41	1
Manganese	0.914		0.0100		mg/L		10/16/23 09:15	10/17/23 17:41	1
Nickel	0.0244		0.00500		mg/L		10/16/23 09:15	10/17/23 17:41	1
Potassium	6.01		0.500		mg/L		10/16/23 09:15	10/17/23 17:41	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:41	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2

Lab Sample ID: 310-267039-18

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:41	1
Sodium	17.0		1.00		mg/L		10/16/23 09:15	10/17/23 17:41	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:41	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:41	1
Zinc	0.116		0.0200		mg/L		10/16/23 09:15	10/17/23 17:41	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:42	10/23/23 10:43	1

Method: SW846 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:47	10/23/23 11:09	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2 DUP

Lab Sample ID: 310-267039-19

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 15:50	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			10/13/23 15:50	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 15:50	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			10/13/23 15:50	1
1,1-Dichloroethane	<1.00		1.00		ug/L			10/13/23 15:50	1
1,1-Dichloroethene	<2.00		2.00		ug/L			10/13/23 15:50	1
1,1-Dichloropropene	<1.00		1.00		ug/L			10/13/23 15:50	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 15:50	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			10/13/23 15:50	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 15:50	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			10/13/23 15:50	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			10/13/23 15:50	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
1,2-Dichloroethane	<1.00		1.00		ug/L			10/13/23 15:50	1
1,2-Dichloropropane	<1.00		1.00		ug/L			10/13/23 15:50	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
1,3-Dichloropropane	<1.00		1.00		ug/L			10/13/23 15:50	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
2,2-Dichloropropane	<4.00		4.00		ug/L			10/13/23 15:50	1
2-Butanone (MEK)	<10.0		10.0		ug/L			10/13/23 15:50	1
2-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 15:50	1
4-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 15:50	1
Acetone	<10.0		10.0		ug/L			10/13/23 15:50	1
Benzene	<0.500		0.500		ug/L			10/13/23 15:50	1
Bromobenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
Bromochloromethane	<5.00		5.00		ug/L			10/13/23 15:50	1
Bromodichloromethane	<1.00		1.00		ug/L			10/13/23 15:50	1
Bromoform	<5.00		5.00		ug/L			10/13/23 15:50	1
Bromomethane	<4.00		4.00		ug/L			10/13/23 15:50	1
Carbon disulfide	<1.00		1.00		ug/L			10/13/23 15:50	1
Carbon tetrachloride	<2.00		2.00		ug/L			10/13/23 15:50	1
Chlorobenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
Chlorodibromomethane	<5.00		5.00		ug/L			10/13/23 15:50	1
Chloroethane	<4.00		4.00		ug/L			10/13/23 15:50	1
Chloroform	<3.00		3.00		ug/L			10/13/23 15:50	1
Chloromethane	<3.00		3.00		ug/L			10/13/23 15:50	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 15:50	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 15:50	1
Dibromomethane	<1.00		1.00		ug/L			10/13/23 15:50	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			10/13/23 15:50	1
Ethylbenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
Hexachlorobutadiene	<5.00		5.00		ug/L			10/13/23 15:50	1
Hexane	<1.00		1.00		ug/L			10/13/23 15:50	1
Isopropylbenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
Methyl tert-butyl ether	1.63		1.00		ug/L			10/13/23 15:50	1
Methylene chloride	<5.00		5.00		ug/L			10/13/23 15:50	1
Naphthalene	<5.00		5.00		ug/L			10/13/23 15:50	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2 DUP

Lab Sample ID: 310-267039-19

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
n-Propylbenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
p-Isopropyltoluene	<1.00		1.00		ug/L			10/13/23 15:50	1
sec-Butylbenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
Styrene	<1.00		1.00		ug/L			10/13/23 15:50	1
tert-Butylbenzene	<1.00		1.00		ug/L			10/13/23 15:50	1
Tetrachloroethene	<1.00		1.00		ug/L			10/13/23 15:50	1
Toluene	<1.00		1.00		ug/L			10/13/23 15:50	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 15:50	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 15:50	1
Trichloroethene	<1.00		1.00		ug/L			10/13/23 15:50	1
Trichlorofluoromethane	<4.00		4.00		ug/L			10/13/23 15:50	1
Vinyl chloride	<1.00		1.00		ug/L			10/13/23 15:50	1
Xylenes, Total	<3.00		3.00		ug/L			10/13/23 15:50	1
TPH-GRO (C6-C10)	<400		400		ug/L			10/13/23 15:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		80 - 128		10/13/23 15:50	1
Toluene-d8 (Surr)	99		80 - 120		10/13/23 15:50	1
4-Bromofluorobenzene (Surr)	106		80 - 120		10/13/23 15:50	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
1,2-Dichlorobenzene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
1,3-Dichlorobenzene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
1,4-Dichlorobenzene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2,4,5-Trichlorophenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2,4,6-Trichlorophenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2,4-Dichlorophenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2,4-Dimethylphenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2,4-Dinitrophenol	<109		109		ug/L		10/13/23 05:36	10/17/23 16:02	5
2,4-Dinitrotoluene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2,6-Dinitrotoluene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2-Chloronaphthalene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2-Chlorophenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2-Methylnaphthalene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2-Methylphenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2-Nitroaniline	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
2-Nitrophenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
3,3'-Dichlorobenzidine	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
3-Nitroaniline	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
4,6-Dinitro-2-methylphenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
4-Bromophenyl phenyl ether	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
4-Chloro-3-methylphenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
4-Chloroaniline	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
4-Chlorophenyl phenyl ether	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
4-Methylphenol (and/or 3-Methylphenol)	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
4-Nitroaniline	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2 DUP

Lab Sample ID: 310-267039-19

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Acenaphthene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Acenaphthylene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Anthracene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Benzidine	<109		109		ug/L		10/13/23 05:36	10/17/23 16:02	5
Benzo(a)anthracene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Benzo(a)pyrene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Benzo(b)fluoranthene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Benzo(g,h,i)perylene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Benzo(k)fluoranthene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Benzoic acid	<543		543		ug/L		10/13/23 05:36	10/17/23 16:02	5
Benzyl alcohol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Bis(2-chloroethoxy)methane	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Bis(2-chloroethyl)ether	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
bis(2-chloroisopropyl) ether	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Bis(2-ethylhexyl) phthalate	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Butyl benzyl phthalate	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Carbazole	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Chrysene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Dibenzo(a,h)anthracene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Dibenzofuran	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Diethyl phthalate	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Dimethyl phthalate	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Di-n-butyl phthalate	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Di-n-octyl phthalate	<109		109		ug/L		10/13/23 05:36	10/17/23 16:02	5
Fluoranthene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Fluorene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Hexachlorobenzene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Hexachlorobutadiene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Hexachlorocyclopentadiene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Hexachloroethane	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Indeno(1,2,3-cd)pyrene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Isophorone	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Naphthalene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Nitrobenzene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
N-Nitrosodimethylamine	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
N-Nitrosodi-n-propylamine	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
N-Nitrosodiphenylamine	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Pentachlorophenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Phenanthrene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Phenol	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Pyrene	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Pyridine	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
Total Cresols	<54.3		54.3		ug/L		10/13/23 05:36	10/17/23 16:02	5
TPH-DRO (C10-C21)	<2720	+	2720		ug/L		10/13/23 05:36	10/17/23 16:02	5
TPH-ORO (C21-C35)	<2720	-	2720		ug/L		10/13/23 05:36	10/17/23 16:02	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	0	S1-	25 - 110	10/13/23 05:36	10/17/23 16:02	5
Phenol-d5 (Surr)	1	S1-	21 - 110	10/13/23 05:36	10/17/23 16:02	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2 DUP

Lab Sample ID: 310-267039-19

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	73		45 - 129	10/13/23 05:36	10/17/23 16:02	5
2-Fluorobiphenyl (Surr)	64		39 - 118	10/13/23 05:36	10/17/23 16:02	5
2,4,6-Tribromophenol (Surr)	0	S1-	27 - 136	10/13/23 05:36	10/17/23 16:02	5
Terphenyl-d14 (Surr)	39		12 - 144	10/13/23 05:36	10/17/23 16:02	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8.51		0.0500		mg/L		10/16/23 09:15	10/17/23 15:50	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 15:50	1
Arsenic	0.0138		0.00200		mg/L		10/16/23 09:15	10/17/23 15:50	1
Barium	0.483		0.00200		mg/L		10/16/23 09:15	10/17/23 15:50	1
Beryllium	0.00920		0.00100		mg/L		10/16/23 09:15	10/17/23 15:50	1
Cadmium	0.0561		0.000200		mg/L		10/16/23 09:15	10/17/23 15:50	1
Calcium	416		0.500		mg/L		10/16/23 09:15	10/17/23 15:50	1
Chromium	0.0100		0.00500		mg/L		10/16/23 09:15	10/17/23 15:50	1
Cobalt	0.517		0.00200		mg/L		10/16/23 09:15	10/17/23 22:47	4
Copper	0.0177		0.00500		mg/L		10/16/23 09:15	10/17/23 15:50	1
Iron	12.9		0.100		mg/L		10/16/23 09:15	10/17/23 15:50	1
Lead	0.0620		0.000500		mg/L		10/16/23 09:15	10/17/23 15:50	1
Magnesium	33.0		0.500		mg/L		10/16/23 09:15	10/17/23 15:50	1
Manganese	4.28		0.0400		mg/L		10/16/23 09:15	10/17/23 22:47	4
Nickel	0.374		0.00500		mg/L		10/16/23 09:15	10/17/23 15:50	1
Potassium	10.3		0.500		mg/L		10/16/23 09:15	10/17/23 15:50	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:50	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:50	1
Sodium	19.1		1.00		mg/L		10/16/23 09:15	10/17/23 15:50	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:50	1
Vanadium	0.0117		0.00500		mg/L		10/16/23 09:15	10/17/23 15:50	1
Zinc	9.28		0.200		mg/L		10/16/23 09:15	10/19/23 13:55	10

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 17:43	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:43	1
Arsenic	0.00784		0.00200		mg/L		10/16/23 09:15	10/17/23 17:43	1
Barium	0.0356		0.00200		mg/L		10/16/23 09:15	10/17/23 17:43	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:43	1
Cadmium	0.00113		0.000200		mg/L		10/16/23 09:15	10/17/23 17:43	1
Calcium	97.2		0.500		mg/L		10/16/23 09:15	10/17/23 17:43	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:43	1
Cobalt	0.0273		0.000500		mg/L		10/16/23 09:15	10/17/23 17:43	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:43	1
Iron	0.984		0.100		mg/L		10/16/23 09:15	10/17/23 17:43	1
Lead	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 17:43	1
Magnesium	13.4		0.500		mg/L		10/16/23 09:15	10/17/23 17:43	1
Manganese	0.980		0.0100		mg/L		10/16/23 09:15	10/17/23 17:43	1
Nickel	0.0271		0.00500		mg/L		10/16/23 09:15	10/17/23 17:43	1
Potassium	5.34		0.500		mg/L		10/16/23 09:15	10/17/23 17:43	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:43	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2 DUP

Lab Sample ID: 310-267039-19

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:43	1
Sodium	15.5		1.00		mg/L		10/16/23 09:15	10/17/23 17:43	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:43	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:43	1
Zinc	0.124		0.0200		mg/L		10/16/23 09:15	10/17/23 17:43	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:42	10/23/23 10:45	1

Method: SW846 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:47	10/23/23 11:11	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-5

Lab Sample ID: 310-267039-20

Date Collected: 10/11/23 10:25

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 16:12	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			10/13/23 16:12	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 16:12	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			10/13/23 16:12	1
1,1-Dichloroethane	<1.00		1.00		ug/L			10/13/23 16:12	1
1,1-Dichloroethene	<2.00		2.00		ug/L			10/13/23 16:12	1
1,1-Dichloropropene	<1.00		1.00		ug/L			10/13/23 16:12	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 16:12	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			10/13/23 16:12	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 16:12	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			10/13/23 16:12	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			10/13/23 16:12	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
1,2-Dichloroethane	<1.00		1.00		ug/L			10/13/23 16:12	1
1,2-Dichloropropane	<1.00		1.00		ug/L			10/13/23 16:12	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
1,3-Dichloropropane	<1.00		1.00		ug/L			10/13/23 16:12	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
2,2-Dichloropropane	<4.00		4.00		ug/L			10/13/23 16:12	1
2-Butanone (MEK)	<10.0		10.0		ug/L			10/13/23 16:12	1
2-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 16:12	1
4-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 16:12	1
Acetone	<10.0		10.0		ug/L			10/13/23 16:12	1
Benzene	<0.500		0.500		ug/L			10/13/23 16:12	1
Bromobenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
Bromochloromethane	<5.00		5.00		ug/L			10/13/23 16:12	1
Bromodichloromethane	<1.00		1.00		ug/L			10/13/23 16:12	1
Bromoform	<5.00		5.00		ug/L			10/13/23 16:12	1
Bromomethane	<4.00		4.00		ug/L			10/13/23 16:12	1
Carbon disulfide	<1.00		1.00		ug/L			10/13/23 16:12	1
Carbon tetrachloride	<2.00		2.00		ug/L			10/13/23 16:12	1
Chlorobenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
Chlorodibromomethane	<5.00		5.00		ug/L			10/13/23 16:12	1
Chloroethane	<4.00		4.00		ug/L			10/13/23 16:12	1
Chloroform	<3.00		3.00		ug/L			10/13/23 16:12	1
Chloromethane	<3.00		3.00		ug/L			10/13/23 16:12	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 16:12	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 16:12	1
Dibromomethane	<1.00		1.00		ug/L			10/13/23 16:12	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			10/13/23 16:12	1
Ethylbenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
Hexachlorobutadiene	<5.00		5.00		ug/L			10/13/23 16:12	1
Hexane	<1.00		1.00		ug/L			10/13/23 16:12	1
Isopropylbenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			10/13/23 16:12	1
Methylene chloride	<5.00		5.00		ug/L			10/13/23 16:12	1
Naphthalene	<5.00		5.00		ug/L			10/13/23 16:12	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-5

Lab Sample ID: 310-267039-20

Date Collected: 10/11/23 10:25

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
n-Propylbenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
p-Isopropyltoluene	<1.00		1.00		ug/L			10/13/23 16:12	1
sec-Butylbenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
Styrene	<1.00		1.00		ug/L			10/13/23 16:12	1
tert-Butylbenzene	<1.00		1.00		ug/L			10/13/23 16:12	1
Tetrachloroethene	<1.00		1.00		ug/L			10/13/23 16:12	1
Toluene	<1.00		1.00		ug/L			10/13/23 16:12	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 16:12	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 16:12	1
Trichloroethene	<1.00		1.00		ug/L			10/13/23 16:12	1
Trichlorofluoromethane	<4.00		4.00		ug/L			10/13/23 16:12	1
Vinyl chloride	<1.00		1.00		ug/L			10/13/23 16:12	1
Xylenes, Total	<3.00		3.00		ug/L			10/13/23 16:12	1
TPH-GRO (C6-C10)	<400		400		ug/L			10/13/23 16:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		80 - 128		10/13/23 16:12	1
Toluene-d8 (Surr)	102		80 - 120		10/13/23 16:12	1
4-Bromofluorobenzene (Surr)	106		80 - 120		10/13/23 16:12	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
1,2-Dichlorobenzene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
1,3-Dichlorobenzene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
1,4-Dichlorobenzene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2,4,5-Trichlorophenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2,4,6-Trichlorophenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2,4-Dichlorophenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2,4-Dimethylphenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2,4-Dinitrophenol	<20.8		20.8		ug/L		10/13/23 05:36	10/17/23 16:30	1
2,4-Dinitrotoluene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2,6-Dinitrotoluene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2-Chloronaphthalene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2-Chlorophenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2-Methylnaphthalene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2-Methylphenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2-Nitroaniline	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
2-Nitrophenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
3,3'-Dichlorobenzidine	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
3-Nitroaniline	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
4,6-Dinitro-2-methylphenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
4-Bromophenyl phenyl ether	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
4-Chloro-3-methylphenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
4-Chloroaniline	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
4-Chlorophenyl phenyl ether	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
4-Methylphenol (and/or 3-Methylphenol)	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
4-Nitroaniline	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-5

Lab Sample ID: 310-267039-20

Date Collected: 10/11/23 10:25

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Acenaphthene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Acenaphthylene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Anthracene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Benzidine	<20.8		20.8		ug/L		10/13/23 05:36	10/17/23 16:30	1
Benzo(a)anthracene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Benzo(a)pyrene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Benzo(b)fluoranthene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Benzo(g,h,i)perylene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Benzo(k)fluoranthene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Benzoic acid	<104		104		ug/L		10/13/23 05:36	10/17/23 16:30	1
Benzyl alcohol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Bis(2-chloroethoxy)methane	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Bis(2-chloroethyl)ether	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
bis(2-chloroisopropyl) ether	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Bis(2-ethylhexyl) phthalate	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Butyl benzyl phthalate	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Carbazole	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Chrysene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Dibenzo(a,h)anthracene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Dibenzofuran	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Diethyl phthalate	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Dimethyl phthalate	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Di-n-butyl phthalate	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Di-n-octyl phthalate	<20.8		20.8		ug/L		10/13/23 05:36	10/17/23 16:30	1
Fluoranthene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Fluorene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Hexachlorobenzene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Hexachlorobutadiene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Hexachlorocyclopentadiene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Hexachloroethane	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Indeno(1,2,3-cd)pyrene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Isophorone	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Naphthalene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Nitrobenzene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
N-Nitrosodimethylamine	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
N-Nitrosodi-n-propylamine	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
N-Nitrosodiphenylamine	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Pentachlorophenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Phenanthrene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Phenol	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Pyrene	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Pyridine	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
Total Cresols	<10.4		10.4		ug/L		10/13/23 05:36	10/17/23 16:30	1
TPH-DRO (C10-C21)	<521	+	521		ug/L		10/13/23 05:36	10/17/23 16:30	1
TPH-ORO (C21-C35)	<521	-	521		ug/L		10/13/23 05:36	10/17/23 16:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	0.2	S1-	25 - 110	10/13/23 05:36	10/17/23 16:30	1
Phenol-d5 (Surr)	1	S1-	21 - 110	10/13/23 05:36	10/17/23 16:30	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-5

Lab Sample ID: 310-267039-20

Date Collected: 10/11/23 10:25

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	88		45 - 129	10/13/23 05:36	10/17/23 16:30	1
2-Fluorobiphenyl (Surr)	75		39 - 118	10/13/23 05:36	10/17/23 16:30	1
2,4,6-Tribromophenol (Surr)	0	S1-	27 - 136	10/13/23 05:36	10/17/23 16:30	1
Terphenyl-d14 (Surr)	47		12 - 144	10/13/23 05:36	10/17/23 16:30	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7.30		0.0500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 15:52	1
Arsenic	0.00765		0.00200		mg/L		10/16/23 09:15	10/17/23 15:52	1
Barium	0.331		0.00200		mg/L		10/16/23 09:15	10/17/23 15:52	1
Beryllium	0.00805		0.00100		mg/L		10/16/23 09:15	10/17/23 15:52	1
Cadmium	0.186		0.000200		mg/L		10/16/23 09:15	10/17/23 15:52	1
Calcium	239		0.500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Chromium	0.145		0.00500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Cobalt	0.154		0.000500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Copper	0.111		0.00500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Iron	42.4		0.100		mg/L		10/16/23 09:15	10/17/23 15:52	1
Lead	0.934		0.000500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Magnesium	19.7		0.500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Manganese	7.88		0.100		mg/L		10/16/23 09:15	10/17/23 22:49	10
Nickel	0.115		0.00500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Potassium	3.60		0.500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:52	1
Sodium	3.65		1.00		mg/L		10/16/23 09:15	10/17/23 15:52	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:52	1
Vanadium	0.0267		0.00500		mg/L		10/16/23 09:15	10/17/23 15:52	1
Zinc	14.3		0.200		mg/L		10/16/23 09:15	10/17/23 22:49	10

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 17:45	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:45	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:45	1
Barium	0.121		0.00200		mg/L		10/16/23 09:15	10/17/23 17:45	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:45	1
Cadmium	0.00248		0.000200		mg/L		10/16/23 09:15	10/17/23 17:45	1
Calcium	162		0.500		mg/L		10/16/23 09:15	10/17/23 17:45	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:45	1
Cobalt	0.0161		0.000500		mg/L		10/16/23 09:15	10/17/23 17:45	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:45	1
Iron	0.355		0.100		mg/L		10/16/23 09:15	10/17/23 17:45	1
Lead	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 17:45	1
Magnesium	9.11		0.500		mg/L		10/16/23 09:15	10/17/23 17:45	1
Manganese	2.70		0.0100		mg/L		10/16/23 09:15	10/17/23 17:45	1
Nickel	0.0109		0.00500		mg/L		10/16/23 09:15	10/17/23 17:45	1
Potassium	2.85		0.500		mg/L		10/16/23 09:15	10/17/23 17:45	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:45	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-5

Lab Sample ID: 310-267039-20

Date Collected: 10/11/23 10:25

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:45	1
Sodium	4.57		1.00		mg/L		10/16/23 09:15	10/17/23 17:45	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:45	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:45	1
Zinc	0.0873		0.0200		mg/L		10/16/23 09:15	10/17/23 17:45	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:42	10/23/23 10:52	1

Method: SW846 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:47	10/23/23 11:17	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-6

Lab Sample ID: 310-267039-21

Date Collected: 10/11/23 12:00

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 16:35	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			10/13/23 16:35	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 16:35	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			10/13/23 16:35	1
1,1-Dichloroethane	<1.00		1.00		ug/L			10/13/23 16:35	1
1,1-Dichloroethene	<2.00		2.00		ug/L			10/13/23 16:35	1
1,1-Dichloropropene	<1.00		1.00		ug/L			10/13/23 16:35	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 16:35	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			10/13/23 16:35	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 16:35	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			10/13/23 16:35	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			10/13/23 16:35	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
1,2-Dichloroethane	<1.00		1.00		ug/L			10/13/23 16:35	1
1,2-Dichloropropane	<1.00		1.00		ug/L			10/13/23 16:35	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
1,3-Dichloropropane	<1.00		1.00		ug/L			10/13/23 16:35	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
2,2-Dichloropropane	<4.00		4.00		ug/L			10/13/23 16:35	1
2-Butanone (MEK)	<10.0		10.0		ug/L			10/13/23 16:35	1
2-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 16:35	1
4-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 16:35	1
Acetone	14.4		10.0		ug/L			10/13/23 16:35	1
Benzene	<0.500		0.500		ug/L			10/13/23 16:35	1
Bromobenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
Bromochloromethane	<5.00		5.00		ug/L			10/13/23 16:35	1
Bromodichloromethane	<1.00		1.00		ug/L			10/13/23 16:35	1
Bromoform	<5.00		5.00		ug/L			10/13/23 16:35	1
Bromomethane	<4.00		4.00		ug/L			10/13/23 16:35	1
Carbon disulfide	<1.00		1.00		ug/L			10/13/23 16:35	1
Carbon tetrachloride	<2.00		2.00		ug/L			10/13/23 16:35	1
Chlorobenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
Chlorodibromomethane	<5.00		5.00		ug/L			10/13/23 16:35	1
Chloroethane	<4.00		4.00		ug/L			10/13/23 16:35	1
Chloroform	<3.00		3.00		ug/L			10/13/23 16:35	1
Chloromethane	<3.00		3.00		ug/L			10/13/23 16:35	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 16:35	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 16:35	1
Dibromomethane	<1.00		1.00		ug/L			10/13/23 16:35	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			10/13/23 16:35	1
Ethylbenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
Hexachlorobutadiene	<5.00		5.00		ug/L			10/13/23 16:35	1
Hexane	<1.00		1.00		ug/L			10/13/23 16:35	1
Isopropylbenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			10/13/23 16:35	1
Methylene chloride	<5.00		5.00		ug/L			10/13/23 16:35	1
Naphthalene	<5.00		5.00		ug/L			10/13/23 16:35	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-6

Lab Sample ID: 310-267039-21

Date Collected: 10/11/23 12:00

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
n-Propylbenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
p-Isopropyltoluene	<1.00		1.00		ug/L			10/13/23 16:35	1
sec-Butylbenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
Styrene	<1.00		1.00		ug/L			10/13/23 16:35	1
tert-Butylbenzene	<1.00		1.00		ug/L			10/13/23 16:35	1
Tetrachloroethene	<1.00		1.00		ug/L			10/13/23 16:35	1
Toluene	<1.00		1.00		ug/L			10/13/23 16:35	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 16:35	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 16:35	1
Trichloroethene	<1.00		1.00		ug/L			10/13/23 16:35	1
Trichlorofluoromethane	<4.00		4.00		ug/L			10/13/23 16:35	1
Vinyl chloride	<1.00		1.00		ug/L			10/13/23 16:35	1
Xylenes, Total	<3.00		3.00		ug/L			10/13/23 16:35	1
TPH-GRO (C6-C10)	<400		400		ug/L			10/13/23 16:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	100		80 - 128		10/13/23 16:35	1
Toluene-d8 (Surr)	100		80 - 120		10/13/23 16:35	1
4-Bromofluorobenzene (Surr)	104		80 - 120		10/13/23 16:35	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
1,2-Dichlorobenzene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
1,3-Dichlorobenzene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
1,4-Dichlorobenzene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2,4,5-Trichlorophenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2,4,6-Trichlorophenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2,4-Dichlorophenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2,4-Dimethylphenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2,4-Dinitrophenol	<20.4		20.4		ug/L		10/13/23 05:36	10/17/23 16:57	1
2,4-Dinitrotoluene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2,6-Dinitrotoluene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2-Chloronaphthalene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2-Chlorophenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2-Methylnaphthalene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2-Methylphenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2-Nitroaniline	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
2-Nitrophenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
3,3'-Dichlorobenzidine	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
3-Nitroaniline	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
4,6-Dinitro-2-methylphenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
4-Bromophenyl phenyl ether	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
4-Chloro-3-methylphenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
4-Chloroaniline	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
4-Chlorophenyl phenyl ether	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
4-Methylphenol (and/or 3-Methylphenol)	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
4-Nitroaniline	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-6

Lab Sample ID: 310-267039-21

Date Collected: 10/11/23 12:00

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Acenaphthene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Acenaphthylene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Anthracene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Benzidine	<20.4		20.4		ug/L		10/13/23 05:36	10/17/23 16:57	1
Benzo(a)anthracene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Benzo(a)pyrene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Benzo(b)fluoranthene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Benzo(g,h,i)perylene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Benzo(k)fluoranthene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Benzoic acid	<102		102		ug/L		10/13/23 05:36	10/17/23 16:57	1
Benzyl alcohol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Bis(2-chloroethoxy)methane	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Bis(2-chloroethyl)ether	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
bis(2-chloroisopropyl) ether	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Bis(2-ethylhexyl) phthalate	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Butyl benzyl phthalate	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Carbazole	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Chrysene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Dibenzo(a,h)anthracene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Dibenzofuran	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Diethyl phthalate	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Dimethyl phthalate	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Di-n-butyl phthalate	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Di-n-octyl phthalate	<20.4		20.4		ug/L		10/13/23 05:36	10/17/23 16:57	1
Fluoranthene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Fluorene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Hexachlorobenzene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Hexachlorobutadiene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Hexachlorocyclopentadiene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Hexachloroethane	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Indeno(1,2,3-cd)pyrene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Isophorone	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Naphthalene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Nitrobenzene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
N-Nitrosodimethylamine	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
N-Nitrosodi-n-propylamine	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
N-Nitrosodiphenylamine	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Pentachlorophenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Phenanthrene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Phenol	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Pyrene	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Pyridine	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
Total Cresols	<10.2		10.2		ug/L		10/13/23 05:36	10/17/23 16:57	1
TPH-DRO (C10-C21)	<510	+	510		ug/L		10/13/23 05:36	10/17/23 16:57	1
TPH-ORO (C21-C35)	<510	-	510		ug/L		10/13/23 05:36	10/17/23 16:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	0.2	S1-	25 - 110	10/13/23 05:36	10/17/23 16:57	1
Phenol-d5 (Surr)	0.9	S1-	21 - 110	10/13/23 05:36	10/17/23 16:57	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-6

Lab Sample ID: 310-267039-21

Date Collected: 10/11/23 12:00

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	98		45 - 129	10/13/23 05:36	10/17/23 16:57	1
2-Fluorobiphenyl (Surr)	83		39 - 118	10/13/23 05:36	10/17/23 16:57	1
2,4,6-Tribromophenol (Surr)	0	S1-	27 - 136	10/13/23 05:36	10/17/23 16:57	1
Terphenyl-d14 (Surr)	49		12 - 144	10/13/23 05:36	10/17/23 16:57	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	6.73		0.0500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 15:54	1
Arsenic	0.00581		0.00200		mg/L		10/16/23 09:15	10/17/23 15:54	1
Barium	0.694		0.00200		mg/L		10/16/23 09:15	10/17/23 15:54	1
Beryllium	0.0133		0.00100		mg/L		10/16/23 09:15	10/17/23 15:54	1
Cadmium	0.158		0.000200		mg/L		10/16/23 09:15	10/17/23 15:54	1
Calcium	369		0.500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Chromium	0.135		0.00500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Cobalt	0.208		0.000500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Copper	0.0706		0.00500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Iron	41.2		0.100		mg/L		10/16/23 09:15	10/17/23 15:54	1
Lead	1.20		0.000500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Magnesium	25.8		0.500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Manganese	13.1		0.200		mg/L		10/16/23 09:15	10/17/23 22:52	20
Nickel	0.221		0.00500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Potassium	5.57		0.500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:54	1
Sodium	5.09		1.00		mg/L		10/16/23 09:15	10/17/23 15:54	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:54	1
Vanadium	0.0510		0.00500		mg/L		10/16/23 09:15	10/17/23 15:54	1
Zinc	17.8		0.400		mg/L		10/16/23 09:15	10/17/23 22:52	20

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 17:48	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:48	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:48	1
Barium	0.0885		0.00200		mg/L		10/16/23 09:15	10/17/23 17:48	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:48	1
Cadmium	0.00533		0.000200		mg/L		10/16/23 09:15	10/17/23 17:48	1
Calcium	133		0.500		mg/L		10/16/23 09:15	10/17/23 17:48	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:48	1
Cobalt	0.0155		0.000500		mg/L		10/16/23 09:15	10/17/23 17:48	1
Copper	0.00947		0.00500		mg/L		10/16/23 09:15	10/17/23 17:48	1
Iron	0.672		0.100		mg/L		10/16/23 09:15	10/17/23 17:48	1
Lead	0.00193		0.000500		mg/L		10/16/23 09:15	10/17/23 17:48	1
Magnesium	8.53		0.500		mg/L		10/16/23 09:15	10/17/23 17:48	1
Manganese	2.36		0.0100		mg/L		10/16/23 09:15	10/17/23 17:48	1
Nickel	0.00593		0.00500		mg/L		10/16/23 09:15	10/17/23 17:48	1
Potassium	2.67		0.500		mg/L		10/16/23 09:15	10/17/23 17:48	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:48	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-6

Lab Sample ID: 310-267039-21

Date Collected: 10/11/23 12:00

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:48	1
Sodium	4.55		1.00		mg/L		10/16/23 09:15	10/17/23 17:48	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:48	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:48	1
Zinc	0.371		0.0200		mg/L		10/16/23 09:15	10/17/23 17:48	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:42	10/23/23 10:54	1

Method: SW846 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:47	10/23/23 11:19	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-7

Lab Sample ID: 310-267039-22

Date Collected: 10/11/23 13:10

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 16:57	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			10/13/23 16:57	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 16:57	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			10/13/23 16:57	1
1,1-Dichloroethane	<1.00		1.00		ug/L			10/13/23 16:57	1
1,1-Dichloroethene	<2.00		2.00		ug/L			10/13/23 16:57	1
1,1-Dichloropropene	<1.00		1.00		ug/L			10/13/23 16:57	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 16:57	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			10/13/23 16:57	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 16:57	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			10/13/23 16:57	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			10/13/23 16:57	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
1,2-Dichloroethane	<1.00		1.00		ug/L			10/13/23 16:57	1
1,2-Dichloropropane	<1.00		1.00		ug/L			10/13/23 16:57	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
1,3-Dichloropropane	<1.00		1.00		ug/L			10/13/23 16:57	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
2,2-Dichloropropane	<4.00		4.00		ug/L			10/13/23 16:57	1
2-Butanone (MEK)	<10.0		10.0		ug/L			10/13/23 16:57	1
2-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 16:57	1
4-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 16:57	1
Acetone	<10.0		10.0		ug/L			10/13/23 16:57	1
Benzene	<0.500		0.500		ug/L			10/13/23 16:57	1
Bromobenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
Bromochloromethane	<5.00		5.00		ug/L			10/13/23 16:57	1
Bromodichloromethane	<1.00		1.00		ug/L			10/13/23 16:57	1
Bromoform	<5.00		5.00		ug/L			10/13/23 16:57	1
Bromomethane	<4.00		4.00		ug/L			10/13/23 16:57	1
Carbon disulfide	<1.00		1.00		ug/L			10/13/23 16:57	1
Carbon tetrachloride	<2.00		2.00		ug/L			10/13/23 16:57	1
Chlorobenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
Chlorodibromomethane	<5.00		5.00		ug/L			10/13/23 16:57	1
Chloroethane	<4.00		4.00		ug/L			10/13/23 16:57	1
Chloroform	<3.00		3.00		ug/L			10/13/23 16:57	1
Chloromethane	<3.00		3.00		ug/L			10/13/23 16:57	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 16:57	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 16:57	1
Dibromomethane	<1.00		1.00		ug/L			10/13/23 16:57	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			10/13/23 16:57	1
Ethylbenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
Hexachlorobutadiene	<5.00		5.00		ug/L			10/13/23 16:57	1
Hexane	<1.00		1.00		ug/L			10/13/23 16:57	1
Isopropylbenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			10/13/23 16:57	1
Methylene chloride	<5.00		5.00		ug/L			10/13/23 16:57	1
Naphthalene	<5.00		5.00		ug/L			10/13/23 16:57	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-7

Lab Sample ID: 310-267039-22

Date Collected: 10/11/23 13:10

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
n-Propylbenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
p-Isopropyltoluene	<1.00		1.00		ug/L			10/13/23 16:57	1
sec-Butylbenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
Styrene	<1.00		1.00		ug/L			10/13/23 16:57	1
tert-Butylbenzene	<1.00		1.00		ug/L			10/13/23 16:57	1
Tetrachloroethene	<1.00		1.00		ug/L			10/13/23 16:57	1
Toluene	<1.00		1.00		ug/L			10/13/23 16:57	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 16:57	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 16:57	1
Trichloroethene	<1.00		1.00		ug/L			10/13/23 16:57	1
Trichlorofluoromethane	<4.00		4.00		ug/L			10/13/23 16:57	1
Vinyl chloride	<1.00		1.00		ug/L			10/13/23 16:57	1
Xylenes, Total	<3.00		3.00		ug/L			10/13/23 16:57	1
TPH-GRO (C6-C10)	<400		400		ug/L			10/13/23 16:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		80 - 128		10/13/23 16:57	1
Toluene-d8 (Surr)	102		80 - 120		10/13/23 16:57	1
4-Bromofluorobenzene (Surr)	105		80 - 120		10/13/23 16:57	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
1,2-Dichlorobenzene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
1,3-Dichlorobenzene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
1,4-Dichlorobenzene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2,4,5-Trichlorophenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2,4,6-Trichlorophenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2,4-Dichlorophenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2,4-Dimethylphenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2,4-Dinitrophenol	<106		106		ug/L		10/13/23 05:36	10/17/23 17:24	5
2,4-Dinitrotoluene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2,6-Dinitrotoluene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2-Chloronaphthalene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2-Chlorophenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2-Methylnaphthalene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2-Methylphenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2-Nitroaniline	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
2-Nitrophenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
3,3'-Dichlorobenzidine	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
3-Nitroaniline	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
4,6-Dinitro-2-methylphenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
4-Bromophenyl phenyl ether	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
4-Chloro-3-methylphenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
4-Chloroaniline	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
4-Chlorophenyl phenyl ether	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
4-Methylphenol (and/or 3-Methylphenol)	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
4-Nitroaniline	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-7

Lab Sample ID: 310-267039-22

Date Collected: 10/11/23 13:10

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Acenaphthene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Acenaphthylene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Anthracene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Benzidine	<106		106		ug/L		10/13/23 05:36	10/17/23 17:24	5
Benzo(a)anthracene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Benzo(a)pyrene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Benzo(b)fluoranthene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Benzo(g,h,i)perylene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Benzo(k)fluoranthene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Benzoic acid	<532		532		ug/L		10/13/23 05:36	10/17/23 17:24	5
Benzyl alcohol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Bis(2-chloroethoxy)methane	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Bis(2-chloroethyl)ether	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
bis(2-chloroisopropyl) ether	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Bis(2-ethylhexyl) phthalate	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Butyl benzyl phthalate	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Carbazole	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Chrysene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Dibenzo(a,h)anthracene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Dibenzofuran	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Diethyl phthalate	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Dimethyl phthalate	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Di-n-butyl phthalate	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Di-n-octyl phthalate	<106		106		ug/L		10/13/23 05:36	10/17/23 17:24	5
Fluoranthene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Fluorene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Hexachlorobenzene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Hexachlorobutadiene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Hexachlorocyclopentadiene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Hexachloroethane	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Indeno(1,2,3-cd)pyrene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Isophorone	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Naphthalene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Nitrobenzene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
N-Nitrosodimethylamine	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
N-Nitrosodi-n-propylamine	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
N-Nitrosodiphenylamine	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Pentachlorophenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Phenanthrene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Phenol	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Pyrene	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Pyridine	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
Total Cresols	<53.2		53.2		ug/L		10/13/23 05:36	10/17/23 17:24	5
TPH-DRO (C10-C21)	<2660	+	2660		ug/L		10/13/23 05:36	10/17/23 17:24	5
TPH-ORO (C21-C35)	<2660	-	2660		ug/L		10/13/23 05:36	10/17/23 17:24	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	0	S1-	25 - 110	10/13/23 05:36	10/17/23 17:24	5
Phenol-d5 (Surr)	1	S1-	21 - 110	10/13/23 05:36	10/17/23 17:24	5

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-7

Lab Sample ID: 310-267039-22

Date Collected: 10/11/23 13:10

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	59		45 - 129	10/13/23 05:36	10/17/23 17:24	5
2-Fluorobiphenyl (Surr)	52		39 - 118	10/13/23 05:36	10/17/23 17:24	5
2,4,6-Tribromophenol (Surr)	0	S1-	27 - 136	10/13/23 05:36	10/17/23 17:24	5
Terphenyl-d14 (Surr)	27		12 - 144	10/13/23 05:36	10/17/23 17:24	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2.47		0.0500		mg/L		10/16/23 09:15	10/17/23 15:56	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 15:56	1
Arsenic	0.00207		0.00200		mg/L		10/16/23 09:15	10/17/23 15:56	1
Barium	0.591		0.00200		mg/L		10/16/23 09:15	10/17/23 15:56	1
Beryllium	0.00174		0.00100		mg/L		10/16/23 09:15	10/17/23 15:56	1
Cadmium	0.204		0.000200		mg/L		10/16/23 09:15	10/17/23 15:56	1
Calcium	203		25.0		mg/L		10/16/23 09:15	10/17/23 22:54	50
Chromium	0.0157		0.00500		mg/L		10/16/23 09:15	10/17/23 15:56	1
Cobalt	0.121		0.000500		mg/L		10/16/23 09:15	10/17/23 15:56	1
Copper	0.0265		0.00500		mg/L		10/16/23 09:15	10/17/23 15:56	1
Iron	0.838		0.100		mg/L		10/16/23 09:15	10/17/23 15:56	1
Lead	1.37		0.000500		mg/L		10/16/23 09:15	10/17/23 15:56	1
Magnesium	27.5		0.500		mg/L		10/16/23 09:15	10/17/23 15:56	1
Manganese	9.96		0.500		mg/L		10/16/23 09:15	10/17/23 22:54	50
Nickel	0.163		0.00500		mg/L		10/16/23 09:15	10/17/23 15:56	1
Potassium	5.13		0.500		mg/L		10/16/23 09:15	10/17/23 15:56	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:56	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:56	1
Sodium	36.0		1.00		mg/L		10/16/23 09:15	10/17/23 15:56	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:56	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:56	1
Zinc	27.1		1.00		mg/L		10/16/23 09:15	10/17/23 22:54	50

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 17:50	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:50	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:50	1
Barium	0.127		0.00200		mg/L		10/16/23 09:15	10/17/23 17:50	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:50	1
Cadmium	0.00927		0.000200		mg/L		10/16/23 09:15	10/17/23 17:50	1
Calcium	127		0.500		mg/L		10/16/23 09:15	10/17/23 17:50	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:50	1
Cobalt	0.00542		0.000500		mg/L		10/16/23 09:15	10/17/23 17:50	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:50	1
Iron	<0.100		0.100		mg/L		10/16/23 09:15	10/17/23 17:50	1
Lead	0.00520		0.000500		mg/L		10/16/23 09:15	10/17/23 17:50	1
Magnesium	10.9		0.500		mg/L		10/16/23 09:15	10/17/23 17:50	1
Manganese	1.18		0.0100		mg/L		10/16/23 09:15	10/17/23 17:50	1
Nickel	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:50	1
Potassium	3.48		0.500		mg/L		10/16/23 09:15	10/17/23 17:50	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:50	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-7

Lab Sample ID: 310-267039-22

Date Collected: 10/11/23 13:10

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:50	1
Sodium	35.1		1.00		mg/L		10/16/23 09:15	10/17/23 17:50	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:50	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:50	1
Zinc	0.829		0.0200		mg/L		10/16/23 09:15	10/17/23 17:50	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000695		0.000200		mg/L		10/20/23 10:42	10/23/23 10:56	1

Method: SW846 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:47	10/23/23 11:21	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-1

Lab Sample ID: 310-267039-23

Date Collected: 10/10/23 15:45

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 14:42	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			10/13/23 14:42	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 14:42	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			10/13/23 14:42	1
1,1-Dichloroethane	<1.00		1.00		ug/L			10/13/23 14:42	1
1,1-Dichloroethene	<2.00		2.00		ug/L			10/13/23 14:42	1
1,1-Dichloropropene	<1.00		1.00		ug/L			10/13/23 14:42	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 14:42	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			10/13/23 14:42	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 14:42	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			10/13/23 14:42	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			10/13/23 14:42	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
1,2-Dichloroethane	<1.00		1.00		ug/L			10/13/23 14:42	1
1,2-Dichloropropane	<1.00		1.00		ug/L			10/13/23 14:42	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
1,3-Dichloropropane	<1.00		1.00		ug/L			10/13/23 14:42	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
2,2-Dichloropropane	<4.00		4.00		ug/L			10/13/23 14:42	1
2-Butanone (MEK)	<10.0		10.0		ug/L			10/13/23 14:42	1
2-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 14:42	1
4-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 14:42	1
Acetone	<10.0		10.0		ug/L			10/13/23 14:42	1
Benzene	<0.500		0.500		ug/L			10/13/23 14:42	1
Bromobenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
Bromochloromethane	<5.00		5.00		ug/L			10/13/23 14:42	1
Bromodichloromethane	<1.00		1.00		ug/L			10/13/23 14:42	1
Bromoform	<5.00		5.00		ug/L			10/13/23 14:42	1
Bromomethane	<4.00		4.00		ug/L			10/13/23 14:42	1
Carbon disulfide	<1.00		1.00		ug/L			10/13/23 14:42	1
Carbon tetrachloride	<2.00		2.00		ug/L			10/13/23 14:42	1
Chlorobenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
Chlorodibromomethane	<5.00		5.00		ug/L			10/13/23 14:42	1
Chloroethane	<4.00		4.00		ug/L			10/13/23 14:42	1
Chloroform	<3.00		3.00		ug/L			10/13/23 14:42	1
Chloromethane	<3.00		3.00		ug/L			10/13/23 14:42	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 14:42	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 14:42	1
Dibromomethane	<1.00		1.00		ug/L			10/13/23 14:42	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			10/13/23 14:42	1
Ethylbenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
Hexachlorobutadiene	<5.00		5.00		ug/L			10/13/23 14:42	1
Hexane	<1.00		1.00		ug/L			10/13/23 14:42	1
Isopropylbenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			10/13/23 14:42	1
Methylene chloride	<5.00		5.00		ug/L			10/13/23 14:42	1
Naphthalene	<5.00		5.00		ug/L			10/13/23 14:42	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-1

Lab Sample ID: 310-267039-23

Date Collected: 10/10/23 15:45

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
n-Propylbenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
p-Isopropyltoluene	<1.00		1.00		ug/L			10/13/23 14:42	1
sec-Butylbenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
Styrene	<1.00		1.00		ug/L			10/13/23 14:42	1
tert-Butylbenzene	<1.00		1.00		ug/L			10/13/23 14:42	1
Tetrachloroethene	<1.00		1.00		ug/L			10/13/23 14:42	1
Toluene	<1.00		1.00		ug/L			10/13/23 14:42	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 14:42	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 14:42	1
Trichloroethene	<1.00		1.00		ug/L			10/13/23 14:42	1
Trichlorofluoromethane	<4.00		4.00		ug/L			10/13/23 14:42	1
Vinyl chloride	<1.00		1.00		ug/L			10/13/23 14:42	1
Xylenes, Total	<3.00		3.00		ug/L			10/13/23 14:42	1
TPH-GRO (C6-C10)	<400		400		ug/L			10/13/23 14:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		80 - 128		10/13/23 14:42	1
Toluene-d8 (Surr)	100		80 - 120		10/13/23 14:42	1
4-Bromofluorobenzene (Surr)	106		80 - 120		10/13/23 14:42	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
1,2-Dichlorobenzene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
1,3-Dichlorobenzene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
1,4-Dichlorobenzene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2,4,5-Trichlorophenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2,4,6-Trichlorophenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2,4-Dichlorophenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2,4-Dimethylphenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2,4-Dinitrophenol	<18.9		18.9		ug/L		10/13/23 05:36	10/17/23 17:52	1
2,4-Dinitrotoluene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2,6-Dinitrotoluene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2-Chloronaphthalene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2-Chlorophenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2-Methylnaphthalene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2-Methylphenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2-Nitroaniline	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
2-Nitrophenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
3,3'-Dichlorobenzidine	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
3-Nitroaniline	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
4,6-Dinitro-2-methylphenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
4-Bromophenyl phenyl ether	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
4-Chloro-3-methylphenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
4-Chloroaniline	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
4-Chlorophenyl phenyl ether	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
4-Methylphenol (and/or 3-Methylphenol)	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
4-Nitroaniline	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-1

Lab Sample ID: 310-267039-23

Date Collected: 10/10/23 15:45

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Acenaphthene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Acenaphthylene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Anthracene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Benzidine	<18.9		18.9		ug/L		10/13/23 05:36	10/17/23 17:52	1
Benzo(a)anthracene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Benzo(a)pyrene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Benzo(b)fluoranthene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Benzo(g,h,i)perylene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Benzo(k)fluoranthene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Benzoic acid	<94.3		94.3		ug/L		10/13/23 05:36	10/17/23 17:52	1
Benzyl alcohol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Bis(2-chloroethoxy)methane	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Bis(2-chloroethyl)ether	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
bis(2-chloroisopropyl) ether	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Bis(2-ethylhexyl) phthalate	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Butyl benzyl phthalate	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Carbazole	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Chrysene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Dibenzo(a,h)anthracene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Dibenzofuran	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Diethyl phthalate	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Dimethyl phthalate	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Di-n-butyl phthalate	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Di-n-octyl phthalate	<18.9		18.9		ug/L		10/13/23 05:36	10/17/23 17:52	1
Fluoranthene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Fluorene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Hexachlorobenzene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Hexachlorobutadiene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Hexachlorocyclopentadiene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Hexachloroethane	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Indeno(1,2,3-cd)pyrene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Isophorone	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Naphthalene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Nitrobenzene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
N-Nitrosodimethylamine	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
N-Nitrosodi-n-propylamine	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
N-Nitrosodiphenylamine	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Pentachlorophenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Phenanthrene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Phenol	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Pyrene	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Pyridine	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
Total Cresols	<9.43		9.43		ug/L		10/13/23 05:36	10/17/23 17:52	1
TPH-DRO (C10-C21)	<472	+	472		ug/L		10/13/23 05:36	10/17/23 17:52	1
TPH-ORO (C21-C35)	<472	-	472		ug/L		10/13/23 05:36	10/17/23 17:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	0.2	S1-	25 - 110	10/13/23 05:36	10/17/23 17:52	1
Phenol-d5 (Surr)	1	S1-	21 - 110	10/13/23 05:36	10/17/23 17:52	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-1

Lab Sample ID: 310-267039-23

Date Collected: 10/10/23 15:45

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	85		45 - 129	10/13/23 05:36	10/17/23 17:52	1
2-Fluorobiphenyl (Surr)	75		39 - 118	10/13/23 05:36	10/17/23 17:52	1
2,4,6-Tribromophenol (Surr)	0.2	S1-	27 - 136	10/13/23 05:36	10/17/23 17:52	1
Terphenyl-d14 (Surr)	58		12 - 144	10/13/23 05:36	10/17/23 17:52	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 15:59	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 15:59	1
Barium	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 15:59	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:59	1
Cadmium	<0.000200		0.000200		mg/L		10/16/23 09:15	10/17/23 15:59	1
Calcium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Cobalt	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Iron	<0.100		0.100		mg/L		10/16/23 09:15	10/17/23 15:59	1
Lead	0.00127		0.000500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Magnesium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Manganese	0.0146		0.0100		mg/L		10/16/23 09:15	10/17/23 15:59	1
Nickel	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Potassium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:59	1
Sodium	<1.00		1.00		mg/L		10/16/23 09:15	10/17/23 15:59	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 15:59	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 15:59	1
Zinc	0.0499		0.0200		mg/L		10/16/23 09:15	10/17/23 15:59	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 17:52	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:52	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:52	1
Barium	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:52	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:52	1
Cadmium	<0.000200		0.000200		mg/L		10/16/23 09:15	10/17/23 17:52	1
Calcium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 17:52	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:52	1
Cobalt	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 17:52	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:52	1
Iron	<0.100		0.100		mg/L		10/16/23 09:15	10/17/23 17:52	1
Lead	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 17:52	1
Magnesium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 17:52	1
Manganese	<0.0100		0.0100		mg/L		10/16/23 09:15	10/17/23 17:52	1
Nickel	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:52	1
Potassium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 17:52	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:52	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-1

Lab Sample ID: 310-267039-23

Date Collected: 10/10/23 15:45

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:52	1
Sodium	<1.00		1.00		mg/L		10/16/23 09:15	10/17/23 17:52	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:52	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:52	1
Zinc	<0.0200		0.0200		mg/L		10/16/23 09:15	10/17/23 17:52	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:42	10/23/23 10:58	1

Method: SW846 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:47	10/23/23 11:24	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-2

Lab Sample ID: 310-267039-24

Date Collected: 10/11/23 12:05

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 15:05	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			10/13/23 15:05	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 15:05	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			10/13/23 15:05	1
1,1-Dichloroethane	<1.00		1.00		ug/L			10/13/23 15:05	1
1,1-Dichloroethene	<2.00		2.00		ug/L			10/13/23 15:05	1
1,1-Dichloropropene	<1.00		1.00		ug/L			10/13/23 15:05	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 15:05	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			10/13/23 15:05	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 15:05	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			10/13/23 15:05	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			10/13/23 15:05	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
1,2-Dichloroethane	<1.00		1.00		ug/L			10/13/23 15:05	1
1,2-Dichloropropane	<1.00		1.00		ug/L			10/13/23 15:05	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
1,3-Dichloropropane	<1.00		1.00		ug/L			10/13/23 15:05	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
2,2-Dichloropropane	<4.00		4.00		ug/L			10/13/23 15:05	1
2-Butanone (MEK)	<10.0		10.0		ug/L			10/13/23 15:05	1
2-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 15:05	1
4-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 15:05	1
Acetone	11.4		10.0		ug/L			10/13/23 15:05	1
Benzene	<0.500		0.500		ug/L			10/13/23 15:05	1
Bromobenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
Bromochloromethane	<5.00		5.00		ug/L			10/13/23 15:05	1
Bromodichloromethane	<1.00		1.00		ug/L			10/13/23 15:05	1
Bromoform	<5.00		5.00		ug/L			10/13/23 15:05	1
Bromomethane	<4.00		4.00		ug/L			10/13/23 15:05	1
Carbon disulfide	<1.00		1.00		ug/L			10/13/23 15:05	1
Carbon tetrachloride	<2.00		2.00		ug/L			10/13/23 15:05	1
Chlorobenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
Chlorodibromomethane	<5.00		5.00		ug/L			10/13/23 15:05	1
Chloroethane	<4.00		4.00		ug/L			10/13/23 15:05	1
Chloroform	<3.00		3.00		ug/L			10/13/23 15:05	1
Chloromethane	<3.00		3.00		ug/L			10/13/23 15:05	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 15:05	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 15:05	1
Dibromomethane	<1.00		1.00		ug/L			10/13/23 15:05	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			10/13/23 15:05	1
Ethylbenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
Hexachlorobutadiene	<5.00		5.00		ug/L			10/13/23 15:05	1
Hexane	<1.00		1.00		ug/L			10/13/23 15:05	1
Isopropylbenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			10/13/23 15:05	1
Methylene chloride	<5.00		5.00		ug/L			10/13/23 15:05	1
Naphthalene	<5.00		5.00		ug/L			10/13/23 15:05	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-2

Lab Sample ID: 310-267039-24

Date Collected: 10/11/23 12:05

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
n-Propylbenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
p-Isopropyltoluene	<1.00		1.00		ug/L			10/13/23 15:05	1
sec-Butylbenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
Styrene	<1.00		1.00		ug/L			10/13/23 15:05	1
tert-Butylbenzene	<1.00		1.00		ug/L			10/13/23 15:05	1
Tetrachloroethene	<1.00		1.00		ug/L			10/13/23 15:05	1
Toluene	<1.00		1.00		ug/L			10/13/23 15:05	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 15:05	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 15:05	1
Trichloroethene	<1.00		1.00		ug/L			10/13/23 15:05	1
Trichlorofluoromethane	<4.00		4.00		ug/L			10/13/23 15:05	1
Vinyl chloride	<1.00		1.00		ug/L			10/13/23 15:05	1
Xylenes, Total	<3.00		3.00		ug/L			10/13/23 15:05	1
TPH-GRO (C6-C10)	<400		400		ug/L			10/13/23 15:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	101		80 - 128		10/13/23 15:05	1
Toluene-d8 (Surr)	101		80 - 120		10/13/23 15:05	1
4-Bromofluorobenzene (Surr)	107		80 - 120		10/13/23 15:05	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
1,2-Dichlorobenzene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
1,3-Dichlorobenzene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
1,4-Dichlorobenzene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2,4,5-Trichlorophenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2,4,6-Trichlorophenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2,4-Dichlorophenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2,4-Dimethylphenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2,4-Dinitrophenol	<18.9		18.9		ug/L		10/18/23 07:20	10/19/23 16:09	1
2,4-Dinitrotoluene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2,6-Dinitrotoluene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2-Chloronaphthalene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2-Chlorophenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2-Methylnaphthalene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2-Methylphenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2-Nitroaniline	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
2-Nitrophenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
3,3'-Dichlorobenzidine	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
3-Nitroaniline	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
4,6-Dinitro-2-methylphenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
4-Bromophenyl phenyl ether	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
4-Chloro-3-methylphenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
4-Chloroaniline	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
4-Chlorophenyl phenyl ether	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
4-Methylphenol (and/or 3-Methylphenol)	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
4-Nitroaniline	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-2

Lab Sample ID: 310-267039-24

Date Collected: 10/11/23 12:05

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Acenaphthene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Acenaphthylene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Anthracene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Benzidine	<18.9		18.9		ug/L		10/18/23 07:20	10/19/23 16:09	1
Benzo(a)anthracene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Benzo(a)pyrene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Benzo(b)fluoranthene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Benzo(g,h,i)perylene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Benzo(k)fluoranthene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Benzoic acid	<94.3		94.3		ug/L		10/18/23 07:20	10/19/23 16:09	1
Benzyl alcohol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Bis(2-chloroethoxy)methane	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Bis(2-chloroethyl)ether	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
bis(2-chloroisopropyl) ether	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Bis(2-ethylhexyl) phthalate	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Butyl benzyl phthalate	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Carbazole	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Chrysene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Dibenzo(a,h)anthracene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Dibenzofuran	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Diethyl phthalate	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Dimethyl phthalate	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Di-n-butyl phthalate	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Di-n-octyl phthalate	<18.9		18.9		ug/L		10/18/23 07:20	10/19/23 16:09	1
Fluoranthene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Fluorene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Hexachlorobenzene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Hexachlorobutadiene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Hexachlorocyclopentadiene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Hexachloroethane	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Indeno(1,2,3-cd)pyrene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Isophorone	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Naphthalene	<9.43 *1		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Nitrobenzene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
N-Nitrosodimethylamine	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
N-Nitrosodi-n-propylamine	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
N-Nitrosodiphenylamine	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Pentachlorophenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Phenanthrene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Phenol	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Pyrene	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Pyridine	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
Total Cresols	<9.43		9.43		ug/L		10/18/23 07:20	10/19/23 16:09	1
TPH-DRO (C10-C21)	<472 *+		472		ug/L		10/13/23 05:36	10/17/23 18:19	1
TPH-ORO (C21-C35)	<472 *-		472		ug/L		10/13/23 05:36	10/17/23 18:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	0.2	S1-	25 - 110	10/13/23 05:36	10/17/23 18:19	1
2-Fluorophenol (Surr)	63		25 - 110	10/18/23 07:20	10/19/23 16:09	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-2

Lab Sample ID: 310-267039-24

Date Collected: 10/11/23 12:05

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	1	S1-	21 - 110	10/13/23 05:36	10/17/23 18:19	1
Phenol-d5 (Surr)	53		21 - 110	10/18/23 07:20	10/19/23 16:09	1
Nitrobenzene-d5 (Surr)	90		45 - 129	10/13/23 05:36	10/17/23 18:19	1
Nitrobenzene-d5 (Surr)	96		45 - 129	10/18/23 07:20	10/19/23 16:09	1
2-Fluorobiphenyl (Surr)	78		39 - 118	10/13/23 05:36	10/17/23 18:19	1
2-Fluorobiphenyl (Surr)	86		39 - 118	10/18/23 07:20	10/19/23 16:09	1
2,4,6-Tribromophenol (Surr)	0.2	S1-	27 - 136	10/13/23 05:36	10/17/23 18:19	1
2,4,6-Tribromophenol (Surr)	80		27 - 136	10/18/23 07:20	10/19/23 16:09	1
Terphenyl-d14 (Surr)	54		12 - 144	10/13/23 05:36	10/17/23 18:19	1
Terphenyl-d14 (Surr)	108		12 - 144	10/18/23 07:20	10/19/23 16:09	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 16:01	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 16:01	1
Barium	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 16:01	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 16:01	1
Cadmium	<0.000200		0.000200		mg/L		10/16/23 09:15	10/17/23 16:01	1
Calcium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Cobalt	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Iron	<0.100		0.100		mg/L		10/16/23 09:15	10/17/23 16:01	1
Lead	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Magnesium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Manganese	<0.0100		0.0100		mg/L		10/16/23 09:15	10/17/23 16:01	1
Nickel	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Potassium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 16:01	1
Sodium	<1.00		1.00		mg/L		10/16/23 09:15	10/17/23 16:01	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 16:01	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:01	1
Zinc	<0.0200		0.0200		mg/L		10/16/23 09:15	10/17/23 16:01	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:54	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:54	1
Barium	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:54	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:54	1
Cadmium	<0.000200		0.000200		mg/L		10/16/23 09:15	10/17/23 17:54	1
Calcium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Cobalt	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Iron	<0.100		0.100		mg/L		10/16/23 09:15	10/17/23 17:54	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-2

Lab Sample ID: 310-267039-24

Date Collected: 10/11/23 12:05

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Magnesium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Manganese	<0.0100		0.0100		mg/L		10/16/23 09:15	10/17/23 17:54	1
Nickel	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Potassium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:54	1
Sodium	<1.00		1.00		mg/L		10/16/23 09:15	10/17/23 17:54	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:54	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:54	1
Zinc	<0.0200		0.0200		mg/L		10/16/23 09:15	10/17/23 17:54	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:42	10/23/23 11:00	1

Method: SW846 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:47	10/23/23 11:26	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: EB-1

Lab Sample ID: 310-267039-25

Date Collected: 10/11/23 14:40

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 17:20	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			10/13/23 17:20	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 17:20	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			10/13/23 17:20	1
1,1-Dichloroethane	<1.00		1.00		ug/L			10/13/23 17:20	1
1,1-Dichloroethene	<2.00		2.00		ug/L			10/13/23 17:20	1
1,1-Dichloropropene	<1.00		1.00		ug/L			10/13/23 17:20	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 17:20	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			10/13/23 17:20	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 17:20	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			10/13/23 17:20	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			10/13/23 17:20	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
1,2-Dichloroethane	<1.00		1.00		ug/L			10/13/23 17:20	1
1,2-Dichloropropane	<1.00		1.00		ug/L			10/13/23 17:20	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
1,3-Dichloropropane	<1.00		1.00		ug/L			10/13/23 17:20	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
2,2-Dichloropropane	<4.00		4.00		ug/L			10/13/23 17:20	1
2-Butanone (MEK)	<10.0		10.0		ug/L			10/13/23 17:20	1
2-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 17:20	1
4-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 17:20	1
Acetone	<10.0		10.0		ug/L			10/13/23 17:20	1
Benzene	<0.500		0.500		ug/L			10/13/23 17:20	1
Bromobenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
Bromochloromethane	<5.00		5.00		ug/L			10/13/23 17:20	1
Bromodichloromethane	<1.00		1.00		ug/L			10/13/23 17:20	1
Bromoform	<5.00		5.00		ug/L			10/13/23 17:20	1
Bromomethane	<4.00		4.00		ug/L			10/13/23 17:20	1
Carbon disulfide	<1.00		1.00		ug/L			10/13/23 17:20	1
Carbon tetrachloride	<2.00		2.00		ug/L			10/13/23 17:20	1
Chlorobenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
Chlorodibromomethane	<5.00		5.00		ug/L			10/13/23 17:20	1
Chloroethane	<4.00		4.00		ug/L			10/13/23 17:20	1
Chloroform	<3.00		3.00		ug/L			10/13/23 17:20	1
Chloromethane	<3.00		3.00		ug/L			10/13/23 17:20	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 17:20	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 17:20	1
Dibromomethane	<1.00		1.00		ug/L			10/13/23 17:20	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			10/13/23 17:20	1
Ethylbenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
Hexachlorobutadiene	<5.00		5.00		ug/L			10/13/23 17:20	1
Hexane	<1.00		1.00		ug/L			10/13/23 17:20	1
Isopropylbenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			10/13/23 17:20	1
Methylene chloride	<5.00		5.00		ug/L			10/13/23 17:20	1
Naphthalene	<5.00		5.00		ug/L			10/13/23 17:20	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: EB-1

Lab Sample ID: 310-267039-25

Date Collected: 10/11/23 14:40

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
n-Propylbenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
p-Isopropyltoluene	<1.00		1.00		ug/L			10/13/23 17:20	1
sec-Butylbenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
Styrene	<1.00		1.00		ug/L			10/13/23 17:20	1
tert-Butylbenzene	<1.00		1.00		ug/L			10/13/23 17:20	1
Tetrachloroethene	<1.00		1.00		ug/L			10/13/23 17:20	1
Toluene	<1.00		1.00		ug/L			10/13/23 17:20	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 17:20	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 17:20	1
Trichloroethene	<1.00		1.00		ug/L			10/13/23 17:20	1
Trichlorofluoromethane	<4.00		4.00		ug/L			10/13/23 17:20	1
Vinyl chloride	<1.00		1.00		ug/L			10/13/23 17:20	1
Xylenes, Total	<3.00		3.00		ug/L			10/13/23 17:20	1
TPH-GRO (C6-C10)	<400		400		ug/L			10/13/23 17:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	100		80 - 128		10/13/23 17:20	1
Toluene-d8 (Surr)	98		80 - 120		10/13/23 17:20	1
4-Bromofluorobenzene (Surr)	109		80 - 120		10/13/23 17:20	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
1,2-Dichlorobenzene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
1,3-Dichlorobenzene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
1,4-Dichlorobenzene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2,4,5-Trichlorophenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2,4,6-Trichlorophenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2,4-Dichlorophenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2,4-Dimethylphenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2,4-Dinitrophenol	<19.2		19.2		ug/L		10/18/23 07:20	10/19/23 16:35	1
2,4-Dinitrotoluene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2,6-Dinitrotoluene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2-Chloronaphthalene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2-Chlorophenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2-Methylnaphthalene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2-Methylphenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2-Nitroaniline	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
2-Nitrophenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
3,3'-Dichlorobenzidine	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
3-Nitroaniline	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
4,6-Dinitro-2-methylphenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
4-Bromophenyl phenyl ether	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
4-Chloro-3-methylphenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
4-Chloroaniline	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
4-Chlorophenyl phenyl ether	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
4-Methylphenol (and/or 3-Methylphenol)	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
4-Nitroaniline	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: EB-1

Lab Sample ID: 310-267039-25

Date Collected: 10/11/23 14:40

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Acenaphthene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Acenaphthylene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Anthracene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Benzidine	<19.2		19.2		ug/L		10/18/23 07:20	10/19/23 16:35	1
Benzo(a)anthracene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Benzo(a)pyrene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Benzo(b)fluoranthene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Benzo(g,h,i)perylene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Benzo(k)fluoranthene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Benzoic acid	<96.2		96.2		ug/L		10/18/23 07:20	10/19/23 16:35	1
Benzyl alcohol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Bis(2-chloroethoxy)methane	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Bis(2-chloroethyl)ether	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
bis(2-chloroisopropyl) ether	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Bis(2-ethylhexyl) phthalate	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Butyl benzyl phthalate	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Carbazole	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Chrysene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Dibenzo(a,h)anthracene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Dibenzofuran	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Diethyl phthalate	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Dimethyl phthalate	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Di-n-butyl phthalate	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Di-n-octyl phthalate	<19.2		19.2		ug/L		10/18/23 07:20	10/19/23 16:35	1
Fluoranthene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Fluorene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Hexachlorobenzene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Hexachlorobutadiene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Hexachlorocyclopentadiene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Hexachloroethane	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Indeno(1,2,3-cd)pyrene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Isophorone	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Naphthalene	<9.62 *1		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Nitrobenzene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
N-Nitrosodimethylamine	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
N-Nitrosodi-n-propylamine	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
N-Nitrosodiphenylamine	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Pentachlorophenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Phenanthrene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Phenol	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Pyrene	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Pyridine	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
Total Cresols	<9.62		9.62		ug/L		10/18/23 07:20	10/19/23 16:35	1
TPH-DRO (C10-C21)	<472 *+		472		ug/L		10/13/23 05:36	10/17/23 18:46	1
TPH-ORO (C21-C35)	<472 *-		472		ug/L		10/13/23 05:36	10/17/23 18:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	0.2	S1-	25 - 110	10/13/23 05:36	10/17/23 18:46	1
2-Fluorophenol (Surr)	58		25 - 110	10/18/23 07:20	10/19/23 16:35	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: EB-1

Lab Sample ID: 310-267039-25

Date Collected: 10/11/23 14:40

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	0.9	S1-	21 - 110	10/13/23 05:36	10/17/23 18:46	1
Phenol-d5 (Surr)	48		21 - 110	10/18/23 07:20	10/19/23 16:35	1
Nitrobenzene-d5 (Surr)	91		45 - 129	10/13/23 05:36	10/17/23 18:46	1
Nitrobenzene-d5 (Surr)	85		45 - 129	10/18/23 07:20	10/19/23 16:35	1
2-Fluorobiphenyl (Surr)	78		39 - 118	10/13/23 05:36	10/17/23 18:46	1
2-Fluorobiphenyl (Surr)	78		39 - 118	10/18/23 07:20	10/19/23 16:35	1
2,4,6-Tribromophenol (Surr)	0.08	S1-	27 - 136	10/13/23 05:36	10/17/23 18:46	1
2,4,6-Tribromophenol (Surr)	73		27 - 136	10/18/23 07:20	10/19/23 16:35	1
Terphenyl-d14 (Surr)	64		12 - 144	10/13/23 05:36	10/17/23 18:46	1
Terphenyl-d14 (Surr)	93		12 - 144	10/18/23 07:20	10/19/23 16:35	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 16:26	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 16:26	1
Barium	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 16:26	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 16:26	1
Cadmium	<0.000200		0.000200		mg/L		10/16/23 09:15	10/17/23 16:26	1
Calcium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Chromium	0.00528		0.00500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Cobalt	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Iron	0.290		0.100		mg/L		10/16/23 09:15	10/17/23 16:26	1
Lead	0.000597		0.000500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Magnesium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Manganese	<0.0100		0.0100		mg/L		10/16/23 09:15	10/17/23 16:26	1
Nickel	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Potassium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 16:26	1
Sodium	<1.00		1.00		mg/L		10/16/23 09:15	10/17/23 16:26	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 16:26	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:26	1
Zinc	<0.0200		0.0200		mg/L		10/16/23 09:15	10/17/23 16:26	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:57	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:57	1
Barium	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 17:57	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:57	1
Cadmium	<0.000200		0.000200		mg/L		10/16/23 09:15	10/17/23 17:57	1
Calcium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Cobalt	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Iron	0.190		0.100		mg/L		10/16/23 09:15	10/17/23 17:57	1

Eurofins Cedar Falls

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: EB-1

Lab Sample ID: 310-267039-25

Date Collected: 10/11/23 14:40

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Magnesium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Manganese	<0.0100		0.0100		mg/L		10/16/23 09:15	10/17/23 17:57	1
Nickel	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Potassium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:57	1
Sodium	<1.00		1.00		mg/L		10/16/23 09:15	10/17/23 17:57	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 17:57	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 17:57	1
Zinc	<0.0200		0.0200		mg/L		10/16/23 09:15	10/17/23 17:57	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:42	10/23/23 11:02	1

Method: SW846 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:47	10/23/23 11:28	1

Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-267039-26

Date Collected: 10/11/23 00:00

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 14:20	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			10/13/23 14:20	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 14:20	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			10/13/23 14:20	1
1,1-Dichloroethane	<1.00		1.00		ug/L			10/13/23 14:20	1
1,1-Dichloroethene	<2.00		2.00		ug/L			10/13/23 14:20	1
1,1-Dichloropropene	<1.00		1.00		ug/L			10/13/23 14:20	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 14:20	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			10/13/23 14:20	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 14:20	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			10/13/23 14:20	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			10/13/23 14:20	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
1,2-Dichloroethane	<1.00		1.00		ug/L			10/13/23 14:20	1
1,2-Dichloropropane	<1.00		1.00		ug/L			10/13/23 14:20	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
1,3-Dichloropropane	<1.00		1.00		ug/L			10/13/23 14:20	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
2,2-Dichloropropane	<4.00		4.00		ug/L			10/13/23 14:20	1
2-Butanone (MEK)	<10.0		10.0		ug/L			10/13/23 14:20	1
2-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 14:20	1
4-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 14:20	1
Acetone	<10.0		10.0		ug/L			10/13/23 14:20	1
Benzene	<0.500		0.500		ug/L			10/13/23 14:20	1
Bromobenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
Bromochloromethane	<5.00		5.00		ug/L			10/13/23 14:20	1
Bromodichloromethane	<1.00		1.00		ug/L			10/13/23 14:20	1
Bromoform	<5.00		5.00		ug/L			10/13/23 14:20	1
Bromomethane	<4.00		4.00		ug/L			10/13/23 14:20	1
Carbon disulfide	<1.00		1.00		ug/L			10/13/23 14:20	1
Carbon tetrachloride	<2.00		2.00		ug/L			10/13/23 14:20	1
Chlorobenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
Chlorodibromomethane	<5.00		5.00		ug/L			10/13/23 14:20	1
Chloroethane	<4.00		4.00		ug/L			10/13/23 14:20	1
Chloroform	<3.00		3.00		ug/L			10/13/23 14:20	1
Chloromethane	<3.00		3.00		ug/L			10/13/23 14:20	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 14:20	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 14:20	1
Dibromomethane	<1.00		1.00		ug/L			10/13/23 14:20	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			10/13/23 14:20	1
Ethylbenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
Hexachlorobutadiene	<5.00		5.00		ug/L			10/13/23 14:20	1
Hexane	<1.00		1.00		ug/L			10/13/23 14:20	1
Isopropylbenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			10/13/23 14:20	1
Methylene chloride	<5.00		5.00		ug/L			10/13/23 14:20	1
Naphthalene	<5.00		5.00		ug/L			10/13/23 14:20	1

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Client Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-267039-26

Date Collected: 10/11/23 00:00

Matrix: Water

Date Received: 10/12/23 09:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
n-Propylbenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
p-Isopropyltoluene	<1.00		1.00		ug/L			10/13/23 14:20	1
sec-Butylbenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
Styrene	<1.00		1.00		ug/L			10/13/23 14:20	1
tert-Butylbenzene	<1.00		1.00		ug/L			10/13/23 14:20	1
Tetrachloroethene	<1.00		1.00		ug/L			10/13/23 14:20	1
Toluene	<1.00		1.00		ug/L			10/13/23 14:20	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 14:20	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 14:20	1
Trichloroethene	<1.00		1.00		ug/L			10/13/23 14:20	1
Trichlorofluoromethane	<4.00		4.00		ug/L			10/13/23 14:20	1
Vinyl chloride	<1.00		1.00		ug/L			10/13/23 14:20	1
Xylenes, Total	<3.00		3.00		ug/L			10/13/23 14:20	1
TPH-GRO (C6-C10)	<400		400		ug/L			10/13/23 14:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	104		80 - 128		10/13/23 14:20	1
Toluene-d8 (Surr)	102		80 - 120		10/13/23 14:20	1
4-Bromofluorobenzene (Surr)	107		80 - 120		10/13/23 14:20	1

Definitions/Glossary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
*3	ISTD response or retention time outside acceptable limits.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F3	Duplicate RPD exceeds the control limit

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

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

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Definitions/Glossary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Surrogate Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (80-131)	TOL (80-120)	BFB (78-120)
310-267039-1	SB-1 (0-3)	108	93	98
310-267039-2	SB-1 (3.5-5.5)	107	94	99
310-267039-3	SB-2 (0-3)	104	93	98
310-267039-4	SB-2 (6-8)	105	94	98
310-267039-5	SB-3 (0-3)	106	93	97
310-267039-6	SB-3 (8.5-10.5)	105	94	98
310-267039-7	SB-4 (0-3)	106	94	97
310-267039-8	SB-4 (8.5-10.5)	106	93	97
310-267039-9	SB-5 (0-3)	105	96	94
310-267039-10	SB-5 (6-8)	104	92	96
310-267039-11	SB-6 (0-3)	107	96	93
310-267039-12	SB-6 (6-8)	103	94	96
310-267039-13	SB-7 (0-3)	103	92	95
310-267039-14	SB-7 (6-8)	106	92	96
310-267039-15	SB-8 (0-3)	107	92	96
310-267039-16	SB-8 (4.5-6.5)	106	92	97
310-267039-17	SB-2 (6-8) Dup	108	93	96
LCS 310-402793/2-A	Lab Control Sample	105	95	97
LCS 310-402793/3-A	Lab Control Sample	104	97	98
MB 310-402793/1-A	Method Blank	104	94	98
Surrogate Legend				
DBFM = Dibromofluoromethane (Surr)				
TOL = Toluene-d8 (Surr)				
BFB = 4-Bromofluorobenzene (Surr)				

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (80-128)	TOL (80-120)	BFB (80-120)
310-267039-18	GW-2	102	99	105
310-267039-19	GW-2 DUP	102	99	106
310-267039-20	GW-5	103	102	106
310-267039-21	GW-6	100	100	104
310-267039-22	GW-7	103	102	105
310-267039-23	FB-1	103	100	106
310-267039-24	FB-2	101	101	107
310-267039-25	EB-1	100	98	109
310-267039-26	Trip Blank 1	104	102	107
LCS 310-402486/10	Lab Control Sample	97	104	100
LCS 310-402486/8	Lab Control Sample	101	101	99
LCS 310-402486/9	Lab Control Sample	101	99	104
MB 310-402486/7	Method Blank	102	100	105
Surrogate Legend				
DBFM = Dibromofluoromethane (Surr)				
TOL = Toluene-d8 (Surr)				
BFB = 4-Bromofluorobenzene (Surr)				

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Surrogate Summary

Client: Tetra Tech EM Inc.

Job ID: 310-267039-1

Project/Site: Joplin MO Union Depot Site

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (18-126)	PHL (25-119)	NBZ (15-131)	FBP (28-116)	TBP (10-121)	TPHL (24-132)
310-267039-1	SB-1 (0-3)	84	76	73	60	66	69
310-267039-1 MS	SB-1 (0-3)	123	80	76	65	73	75
310-267039-1 MS	SB-1 (0-3)	77	75	78	67	71	81
310-267039-1 MSD	SB-1 (0-3)	66	74	74	61	69	67
310-267039-1 MSD	SB-1 (0-3)	76	80	78	70	75	82
310-267039-2	SB-1 (3.5-5.5)	58	66	61	63	59	70
310-267039-3	SB-2 (0-3)	64	71	81	56	72	66
310-267039-4	SB-2 (6-8)	108	78	64	58	63	67
310-267039-5	SB-3 (0-3)	65	70	70	66	54	75
310-267039-6	SB-3 (8.5-10.5)	269 *3	157 *3	149 *3	155 *3	166 *3	200 *3
		S1+	S1+	S1+	S1+	S1+	S1+
310-267039-7	SB-4 (0-3)	72	78	81	64	76	71
310-267039-8	SB-4 (8.5-10.5)	96	103	65	64	68	70
310-267039-9	SB-5 (0-3)	84	87	90	76	80	78
310-267039-10	SB-5 (6-8)	59	63	62	58	47	66
310-267039-11	SB-6 (0-3)	52	56	57	55	41	51
310-267039-12	SB-6 (6-8)	82	77	65	60	63	71
310-267039-13	SB-7 (0-3)	77	83	80	64	59	76
310-267039-14	SB-7 (6-8)	84	86	90	74	71	74
310-267039-15	SB-8 (0-3)	53	53	49	41	42	58
310-267039-16	SB-8 (4.5-6.5)	77	85	84	76	54	78
310-267039-17	SB-2 (6-8) Dup	91	64	65	57	57	66
LCS 310-402911/2-A	Lab Control Sample	71	58	55	47	55	58
LCS 310-402911/5-A	Lab Control Sample	74	75	73	60	62	72
MB 310-402911/1-A	Method Blank	135 S1+	145 S1+	153 S1+	102	102	83

Surrogate Legend

2FP = 2-Fluorophenol (Surr)

PHL = Phenol-d5 (Surr)

NBZ = Nitrobenzene-d5 (Surr)

FBP = 2-Fluorobiphenyl (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

TPHL = Terphenyl-d14 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (25-110)	PHL (21-110)	NBZ (45-129)	FBP (39-118)	TBP (27-136)	TPHL (12-144)
310-267039-18	GW-2	0.2 S1-	1 S1-	83	77	0 S1-	46
310-267039-18	GW-2	58	56	86	82	71	62
310-267039-19	GW-2 DUP	0 S1-	1 S1-	73	64	0 S1-	39
310-267039-19	GW-2 DUP	48	45	75	71	55	42
310-267039-20	GW-5	0.2 S1-	1 S1-	88	75	0 S1-	47
310-267039-20	GW-5	55	46	90	79	72	84
310-267039-21	GW-6	0.2 S1-	0.9 S1-	98	83	0 S1-	49
310-267039-21	GW-6	53	51	89	84	69	81
310-267039-22	GW-7	0 S1-	1 S1-	59	52	0 S1-	27
310-267039-22	GW-7	53	48	81	79	53	62
310-267039-23	FB-1	0.2 S1-	1 S1-	85	75	0.2 S1-	58

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Surrogate Summary

Client: Tetra Tech EM Inc.

Job ID: 310-267039-1

Project/Site: Joplin MO Union Depot Site

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (25-110)	PHL (21-110)	NBZ (45-129)	FBP (39-118)	TBP (27-136)	TPHL (12-144)
310-267039-23	FB-1	64	56	97	90	82	109
310-267039-24	FB-2	0.2 S1-	1 S1-	90	78	0.2 S1-	54
310-267039-24	FB-2	63	53	96	86	80	108
310-267039-25	EB-1	0.2 S1-	0.9 S1-	91	78	0.08 S1-	64
310-267039-25	EB-1	58	48	85	78	73	93
LCS 310-402395/2-A	Lab Control Sample	0.2 S1-	2 S1-	109	92	0.2 S1-	77
LCS 310-402860/2-A	Lab Control Sample	69	61	95	80	97	113
LCSD 310-402395/3-A	Lab Control Sample Dup	0.3 S1-	2 S1-	97	82	0.06 S1-	68
LCSD 310-402860/3-A	Lab Control Sample Dup	74	64	106	90	100	116
MB 310-402395/1-A	Method Blank	0.5 S1-	2 S1-	90	73	0.4 S1-	66
MB 310-402860/1-A	Method Blank	74	65	103	81	88	111

Surrogate Legend

2FP = 2-Fluorophenol (Surr)

PHL = Phenol-d5 (Surr)

NBZ = Nitrobenzene-d5 (Surr)

FBP = 2-Fluorobiphenyl (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

TPHL = Terphenyl-d14 (Surr)

QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 310-402486/7

Matrix: Water

Analysis Batch: 402486

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 12:27	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			10/13/23 12:27	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			10/13/23 12:27	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			10/13/23 12:27	1
1,1-Dichloroethane	<1.00		1.00		ug/L			10/13/23 12:27	1
1,1-Dichloroethene	<2.00		2.00		ug/L			10/13/23 12:27	1
1,1-Dichloropropene	<1.00		1.00		ug/L			10/13/23 12:27	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 12:27	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			10/13/23 12:27	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			10/13/23 12:27	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			10/13/23 12:27	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			10/13/23 12:27	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
1,2-Dichloroethane	<1.00		1.00		ug/L			10/13/23 12:27	1
1,2-Dichloropropane	<1.00		1.00		ug/L			10/13/23 12:27	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
1,3-Dichloropropane	<1.00		1.00		ug/L			10/13/23 12:27	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
2,2-Dichloropropane	<4.00		4.00		ug/L			10/13/23 12:27	1
2-Butanone (MEK)	<10.0		10.0		ug/L			10/13/23 12:27	1
2-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 12:27	1
4-Chlorotoluene	<1.00		1.00		ug/L			10/13/23 12:27	1
Acetone	<10.0		10.0		ug/L			10/13/23 12:27	1
Benzene	<0.500		0.500		ug/L			10/13/23 12:27	1
Bromobenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
Bromochloromethane	<5.00		5.00		ug/L			10/13/23 12:27	1
Bromodichloromethane	<1.00		1.00		ug/L			10/13/23 12:27	1
Bromoform	<5.00		5.00		ug/L			10/13/23 12:27	1
Bromomethane	<4.00		4.00		ug/L			10/13/23 12:27	1
Carbon disulfide	<1.00		1.00		ug/L			10/13/23 12:27	1
Carbon tetrachloride	<2.00		2.00		ug/L			10/13/23 12:27	1
Chlorobenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
Chlorodibromomethane	<5.00		5.00		ug/L			10/13/23 12:27	1
Chloroethane	<4.00		4.00		ug/L			10/13/23 12:27	1
Chloroform	<3.00		3.00		ug/L			10/13/23 12:27	1
Chloromethane	<3.00		3.00		ug/L			10/13/23 12:27	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 12:27	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 12:27	1
Dibromomethane	<1.00		1.00		ug/L			10/13/23 12:27	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			10/13/23 12:27	1
Ethylbenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
Hexachlorobutadiene	<5.00		5.00		ug/L			10/13/23 12:27	1
Hexane	<1.00		1.00		ug/L			10/13/23 12:27	1
Isopropylbenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			10/13/23 12:27	1
Methylene chloride	<5.00		5.00		ug/L			10/13/23 12:27	1

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: MB 310-402486/7

Matrix: Water

Analysis Batch: 402486

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	<5.00		5.00		ug/L			10/13/23 12:27	1
n-Butylbenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
n-Propylbenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
p-Isopropyltoluene	<1.00		1.00		ug/L			10/13/23 12:27	1
sec-Butylbenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
Styrene	<1.00		1.00		ug/L			10/13/23 12:27	1
tert-Butylbenzene	<1.00		1.00		ug/L			10/13/23 12:27	1
Tetrachloroethene	<1.00		1.00		ug/L			10/13/23 12:27	1
Toluene	<1.00		1.00		ug/L			10/13/23 12:27	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			10/13/23 12:27	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			10/13/23 12:27	1
Trichloroethene	<1.00		1.00		ug/L			10/13/23 12:27	1
Trichlorofluoromethane	<4.00		4.00		ug/L			10/13/23 12:27	1
Vinyl chloride	<1.00		1.00		ug/L			10/13/23 12:27	1
Xylenes, Total	<3.00		3.00		ug/L			10/13/23 12:27	1
TPH-GRO (C6-C10)	<400		400		ug/L			10/13/23 12:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		80 - 128		10/13/23 12:27	1
Toluene-d8 (Surr)	100		80 - 120		10/13/23 12:27	1
4-Bromofluorobenzene (Surr)	105		80 - 120		10/13/23 12:27	1

Lab Sample ID: LCS 310-402486/10

Matrix: Water

Analysis Batch: 402486

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TPH-GRO (C6-C10)	1000	981.4		ug/L		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	97		80 - 128
Toluene-d8 (Surr)	104		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120

Lab Sample ID: LCS 310-402486/8

Matrix: Water

Analysis Batch: 402486

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.0	16.80		ug/L		84	68 - 123
1,1,1-Trichloroethane	20.0	21.00		ug/L		105	71 - 128
1,1,2,2-Tetrachloroethane	20.0	20.56		ug/L		103	64 - 124
1,1,2-Trichloroethane	20.0	22.13		ug/L		111	70 - 124
1,1-Dichloroethane	20.0	21.51		ug/L		108	71 - 123
1,1-Dichloroethene	20.0	21.27		ug/L		106	61 - 129
1,1-Dichloropropene	20.0	20.97		ug/L		105	70 - 131
1,2,3-Trichlorobenzene	20.0	19.81		ug/L		99	50 - 150
1,2,3-Trichloropropane	20.0	19.98		ug/L		100	64 - 125

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCS 310-402486/8

Matrix: Water

Analysis Batch: 402486

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	20.0	20.02		ug/L		100	61 - 124
1,2,4-Trimethylbenzene	20.0	20.33		ug/L		102	65 - 125
1,2-Dibromo-3-chloropropane	20.0	21.06		ug/L		105	50 - 150
1,2-Dibromoethane (EDB)	20.0	21.14		ug/L		106	73 - 125
1,2-Dichlorobenzene	20.0	20.11		ug/L		101	68 - 120
1,2-Dichloroethane	20.0	19.26		ug/L		96	70 - 124
1,2-Dichloropropane	20.0	20.97		ug/L		105	73 - 121
1,3,5-Trimethylbenzene	20.0	20.87		ug/L		104	65 - 124
1,3-Dichlorobenzene	20.0	20.36		ug/L		102	67 - 123
1,3-Dichloropropane	20.0	20.45		ug/L		102	72 - 124
1,4-Dichlorobenzene	20.0	20.19		ug/L		101	67 - 120
2,2-Dichloropropane	20.0	23.25		ug/L		116	50 - 150
2-Butanone (MEK)	40.0	43.31		ug/L		108	50 - 150
2-Chlorotoluene	20.0	19.50		ug/L		98	66 - 122
4-Chlorotoluene	20.0	19.84		ug/L		99	65 - 122
Acetone	40.0	44.39		ug/L		111	50 - 150
Benzene	20.0	20.69		ug/L		103	73 - 122
Bromobenzene	20.0	19.26		ug/L		96	67 - 124
Bromochloromethane	20.0	19.06		ug/L		95	68 - 132
Bromodichloromethane	20.0	20.71		ug/L		104	72 - 121
Bromoform	20.0	18.80		ug/L		94	55 - 129
Carbon disulfide	20.0	21.10		ug/L		105	58 - 131
Carbon tetrachloride	20.0	21.16		ug/L		106	67 - 132
Chlorobenzene	20.0	20.08		ug/L		100	69 - 121
Chlorodibromomethane	20.0	19.26		ug/L		96	69 - 122
Chloroform	20.0	19.88		ug/L		99	72 - 120
cis-1,2-Dichloroethene	20.0	20.26		ug/L		101	74 - 120
cis-1,3-Dichloropropene	20.0	20.16		ug/L		101	71 - 126
Dibromomethane	20.0	19.15		ug/L		96	72 - 123
Ethylbenzene	20.0	19.94		ug/L		100	69 - 122
Hexachlorobutadiene	20.0	20.33		ug/L		102	49 - 150
Hexane	20.0	23.39		ug/L		117	35 - 150
Isopropylbenzene	20.0	20.45		ug/L		102	66 - 126
Methyl tert-butyl ether	20.0	20.85		ug/L		104	68 - 127
Methylene chloride	20.0	20.03		ug/L		100	50 - 150
Naphthalene	20.0	20.32		ug/L		102	50 - 150
n-Butylbenzene	20.0	21.30		ug/L		106	54 - 138
n-Propylbenzene	20.0	20.21		ug/L		101	65 - 127
p-Isopropyltoluene	20.0	20.48		ug/L		102	61 - 128
sec-Butylbenzene	20.0	21.27		ug/L		106	62 - 132
Styrene	20.0	20.14		ug/L		101	67 - 125
tert-Butylbenzene	20.0	20.67		ug/L		103	64 - 127
Tetrachloroethene	20.0	19.83		ug/L		99	69 - 131
Toluene	20.0	20.63		ug/L		103	72 - 121
trans-1,2-Dichloroethene	20.0	20.03		ug/L		100	68 - 125
trans-1,3-Dichloropropene	20.0	19.98		ug/L		100	68 - 124
Trichloroethene	20.0	20.50		ug/L		103	73 - 126
Xylenes, Total	40.0	40.63		ug/L		102	68 - 124

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCS 310-402486/8

Matrix: Water

Analysis Batch: 402486

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	101		80 - 128
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

Lab Sample ID: LCS 310-402486/9

Matrix: Water

Analysis Batch: 402486

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	16.86		ug/L		84	24 - 150
Chloroethane	20.0	18.82		ug/L		94	51 - 137
Chloromethane	20.0	20.35		ug/L		102	37 - 150
Dichlorodifluoromethane	20.0	17.70		ug/L		89	37 - 150
Trichlorofluoromethane	20.0	19.34		ug/L		97	56 - 144
Vinyl chloride	20.0	19.85		ug/L		99	57 - 136

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	101		80 - 128
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120

Lab Sample ID: MB 310-402793/1-A

Matrix: Solid

Analysis Batch: 402794

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402793

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,1,1,1-Trichloroethane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,1,1,2,2-Tetrachloroethane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,1,1,2-Trichloroethane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,1-Dichloroethane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,1-Dichloroethene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,1-Dichloropropene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,2,3-Trichlorobenzene	<18.4		18.4		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,2,3-Trichloropropane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,2,4-Trichlorobenzene	<18.4		18.4		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,2,4-Trimethylbenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,2-Dibromo-3-chloropropane	<18.4		18.4		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,2-Dibromoethane (EDB)	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,2-Dichlorobenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,2-Dichloroethane (EDC)	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,2-Dichloropropane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,3,5-Trimethylbenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,3-Dichlorobenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,3-Dichloropropane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
1,4-Dichlorobenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
2,2-Dichloropropane	<36.9		36.9		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
2-Butanone (MEK)	<36.9		36.9		ug/Kg		10/17/23 11:19	10/18/23 04:45	1

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: MB 310-402793/1-A

Matrix: Solid

Analysis Batch: 402794

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402793

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
4-Chlorotoluene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Acetone	<92.2		92.2		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Benzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Bromobenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Bromochloromethane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Bromodichloromethane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Bromoform	<18.4		18.4		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Bromomethane	<36.9		36.9		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Carbon disulfide	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Carbon tetrachloride	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Chlorobenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Chlorodibromomethane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Chloroethane	<36.9		36.9		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Chloroform	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Chloromethane	<36.9		36.9		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
cis-1,2-Dichloroethene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
cis-1,3-Dichloropropene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Dibromomethane	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Dichlorodifluoromethane	<27.7		27.7		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Ethylbenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Hexachlorobutadiene	<46.1		46.1		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Hexane	<46.1		46.1		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Isopropylbenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Methyl-tert-butyl Ether (MTBE)	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Methylene chloride	<92.2		92.2		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Naphthalene	<46.1		46.1		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
n-Butylbenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
n-Propylbenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
p-Isopropyltoluene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
sec-Butylbenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Styrene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
tert-Butylbenzene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Tetrachloroethene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Toluene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
trans-1,2-Dichloroethene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
trans-1,3-Dichloropropene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Trichloroethene	<9.22		9.22		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Trichlorofluoromethane	<36.9		36.9		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Vinyl chloride	<18.4		18.4		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
Xylenes, Total	<18.4		18.4		ug/Kg		10/17/23 11:19	10/18/23 04:45	1
TPH-GRO (C6-C10)	<3690		3690		ug/Kg		10/17/23 11:19	10/18/23 04:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	104		80 - 131	10/17/23 11:19	10/18/23 04:45	1
Toluene-d8 (Surr)	94		80 - 120	10/17/23 11:19	10/18/23 04:45	1
4-Bromofluorobenzene (Surr)	98		78 - 120	10/17/23 11:19	10/18/23 04:45	1

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCS 310-402793/2-A

Matrix: Solid

Analysis Batch: 402794

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402793

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	83.8	89.91		ug/Kg		107	75 - 129
1,1,1-Trichloroethane	83.8	92.19		ug/Kg		110	76 - 131
1,1,2,2-Tetrachloroethane	83.8	81.73		ug/Kg		98	76 - 136
1,1,2-Trichloroethane	83.8	85.94		ug/Kg		103	74 - 134
1,1-Dichloroethane	83.8	88.11		ug/Kg		105	73 - 138
1,1-Dichloroethene	83.8	89.74		ug/Kg		107	57 - 150
1,1-Dichloropropene	83.8	87.75		ug/Kg		105	73 - 134
1,2,3-Trichlorobenzene	83.8	77.21		ug/Kg		92	50 - 150
1,2,3-Trichloropropane	83.8	85.74		ug/Kg		102	77 - 131
1,2,4-Trichlorobenzene	83.8	66.38		ug/Kg		79	51 - 128
1,2,4-Trimethylbenzene	83.8	77.15		ug/Kg		92	71 - 123
1,2-Dibromo-3-chloropropane	83.8	87.93		ug/Kg		105	50 - 150
1,2-Dibromoethane (EDB)	83.8	88.77		ug/Kg		106	78 - 133
1,2-Dichlorobenzene	83.8	81.31		ug/Kg		97	72 - 122
1,2-Dichloroethane (EDC)	83.8	89.68		ug/Kg		107	72 - 136
1,2-Dichloropropane	83.8	89.39		ug/Kg		107	73 - 139
1,3,5-Trimethylbenzene	83.8	78.68		ug/Kg		94	70 - 121
1,3-Dichlorobenzene	83.8	76.45		ug/Kg		91	70 - 121
1,3-Dichloropropane	83.8	93.22		ug/Kg		111	73 - 143
1,4-Dichlorobenzene	83.8	74.27		ug/Kg		89	68 - 121
2,2-Dichloropropane	83.8	82.04		ug/Kg		98	50 - 150
2-Butanone (MEK)	168	164.7		ug/Kg		98	50 - 150
2-Chlorotoluene	83.8	79.73		ug/Kg		95	71 - 120
4-Chlorotoluene	83.8	75.44		ug/Kg		90	65 - 121
Acetone	168	162.4		ug/Kg		97	50 - 150
Benzene	83.8	90.55		ug/Kg		108	75 - 134
Bromobenzene	83.8	87.27		ug/Kg		104	74 - 121
Bromochloromethane	83.8	97.70		ug/Kg		117	77 - 136
Bromodichloromethane	83.8	81.35		ug/Kg		97	73 - 125
Bromoform	83.8	88.68		ug/Kg		106	76 - 130
Carbon disulfide	83.8	82.95		ug/Kg		99	40 - 150
Carbon tetrachloride	83.8	92.32		ug/Kg		110	74 - 131
Chlorobenzene	83.8	85.40		ug/Kg		102	72 - 120
Chlorodibromomethane	83.8	88.66		ug/Kg		106	76 - 128
Chloroform	83.8	84.27		ug/Kg		101	70 - 131
cis-1,2-Dichloroethene	83.8	93.41		ug/Kg		112	76 - 133
cis-1,3-Dichloropropene	83.8	79.28		ug/Kg		95	78 - 132
Dibromomethane	83.8	93.19		ug/Kg		111	74 - 138
Ethylbenzene	83.8	84.60		ug/Kg		101	75 - 122
Hexachlorobutadiene	83.8	80.65		ug/Kg		96	50 - 150
Hexane	83.8	73.54		ug/Kg		88	38 - 150
Isopropylbenzene	83.8	86.43		ug/Kg		103	74 - 121
Methyl-tert-butyl Ether (MTBE)	83.8	85.35		ug/Kg		102	72 - 140
Methylene chloride	83.8	78.40	J	ug/Kg		94	50 - 150
Naphthalene	83.8	89.52		ug/Kg		107	50 - 150
n-Butylbenzene	83.8	66.82		ug/Kg		80	62 - 126
n-Propylbenzene	83.8	80.25		ug/Kg		96	71 - 122
p-Isopropyltoluene	83.8	77.01		ug/Kg		92	68 - 122

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCS 310-402793/2-A

Matrix: Solid

Analysis Batch: 402794

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402793

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
sec-Butylbenzene	83.8	81.90		ug/Kg		98	74 - 122
Styrene	83.8	82.76		ug/Kg		99	74 - 122
tert-Butylbenzene	83.8	83.88		ug/Kg		100	76 - 125
Tetrachloroethene	83.8	83.74		ug/Kg		100	70 - 120
Toluene	83.8	83.06		ug/Kg		99	76 - 120
trans-1,2-Dichloroethene	83.8	87.46		ug/Kg		104	69 - 139
trans-1,3-Dichloropropene	83.8	79.48		ug/Kg		95	75 - 134
Trichloroethene	83.8	92.98		ug/Kg		111	72 - 130
Xylenes, Total	168	162.3		ug/Kg		97	69 - 126

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	105		80 - 131
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	97		78 - 120

Lab Sample ID: LCS 310-402793/3-A

Matrix: Solid

Analysis Batch: 402794

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402793

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TPH-GRO (C6-C10)	1600	<4000		ug/Kg		81	70 - 130

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	104		80 - 131
Toluene-d8 (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	98		78 - 120

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

Lab Sample ID: MB 310-402395/1-A

Matrix: Water

Analysis Batch: 402779

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402395

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
1,2-Dichlorobenzene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
1,3-Dichlorobenzene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
1,4-Dichlorobenzene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2,4,5-Trichlorophenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2,4,6-Trichlorophenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2,4-Dichlorophenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2,4-Dimethylphenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2,4-Dinitrophenol	<20.0		20.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2,4-Dinitrotoluene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2,6-Dinitrotoluene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2-Chloronaphthalene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2-Chlorophenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2-Methylnaphthalene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: MB 310-402395/1-A

Matrix: Water

Analysis Batch: 402779

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402395

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2-Nitroaniline	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
2-Nitrophenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
3,3'-Dichlorobenzidine	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
3-Nitroaniline	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
4,6-Dinitro-2-methylphenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
4-Bromophenyl phenyl ether	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
4-Chloro-3-methylphenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
4-Chloroaniline	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
4-Chlorophenyl phenyl ether	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
4-Methylphenol (and/or 3-Methylphenol)	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
4-Nitroaniline	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
4-Nitrophenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Acenaphthene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Acenaphthylene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Anthracene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Benzidine	<20.0		20.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Benzo(a)anthracene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Benzo(a)pyrene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Benzo(b)fluoranthene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Benzo(g,h,i)perylene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Benzo(k)fluoranthene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Benzoic acid	<100		100		ug/L		10/13/23 05:36	10/17/23 14:13	1
Benzyl alcohol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Bis(2-chloroethoxy)methane	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Bis(2-chloroethyl)ether	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
bis(2-chloroisopropyl) ether	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Bis(2-ethylhexyl) phthalate	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Butyl benzyl phthalate	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Carbazole	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Chrysene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Dibenzo(a,h)anthracene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Dibenzofuran	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Diethyl phthalate	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Dimethyl phthalate	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Di-n-butyl phthalate	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Di-n-octyl phthalate	<20.0		20.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Fluoranthene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Fluorene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Hexachlorobenzene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Hexachlorobutadiene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Hexachlorocyclopentadiene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Hexachloroethane	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Indeno(1,2,3-cd)pyrene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Isophorone	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Naphthalene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Nitrobenzene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
N-Nitrosodimethylamine	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: MB 310-402395/1-A

Matrix: Water

Analysis Batch: 402779

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402395

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
N-Nitrosodiphenylamine	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Pentachlorophenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Phenanthrene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Phenol	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Pyrene	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Pyridine	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
Total Cresols	<10.0		10.0		ug/L		10/13/23 05:36	10/17/23 14:13	1
TPH-DRO (C10-C21)	<500		500		ug/L		10/13/23 05:36	10/17/23 14:13	1
TPH-ORO (C21-C35)	<500		500		ug/L		10/13/23 05:36	10/17/23 14:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	0.5	S1-	25 - 110	10/13/23 05:36	10/17/23 14:13	1
Phenol-d5 (Surr)	2	S1-	21 - 110	10/13/23 05:36	10/17/23 14:13	1
Nitrobenzene-d5 (Surr)	90		45 - 129	10/13/23 05:36	10/17/23 14:13	1
2-Fluorobiphenyl (Surr)	73		39 - 118	10/13/23 05:36	10/17/23 14:13	1
2,4,6-Tribromophenol (Surr)	0.4	S1-	27 - 136	10/13/23 05:36	10/17/23 14:13	1
Terphenyl-d14 (Surr)	66		12 - 144	10/13/23 05:36	10/17/23 14:13	1

Lab Sample ID: LCS 310-402395/2-A

Matrix: Water

Analysis Batch: 402779

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402395

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TPH-DRO (C10-C21)	2000	2460	*+	ug/L		123	20 - 120
TPH-ORO (C21-C35)	2000	<400	*-	ug/L		18	20 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol (Surr)	0.2	S1-	25 - 110
Phenol-d5 (Surr)	2	S1-	21 - 110
Nitrobenzene-d5 (Surr)	109		45 - 129
2-Fluorobiphenyl (Surr)	92		39 - 118
2,4,6-Tribromophenol (Surr)	0.2	S1-	27 - 136
Terphenyl-d14 (Surr)	77		12 - 144

Lab Sample ID: LCSD 310-402395/3-A

Matrix: Water

Analysis Batch: 402779

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 402395

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH-DRO (C10-C21)	2000	1744		ug/L		87	20 - 120	34	35
TPH-ORO (C21-C35)	2000	<400	*-	ug/L		13	20 - 120	35	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorophenol (Surr)	0.3	S1-	25 - 110
Phenol-d5 (Surr)	2	S1-	21 - 110
Nitrobenzene-d5 (Surr)	97		45 - 129
2-Fluorobiphenyl (Surr)	82		39 - 118

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCSD 310-402395/3-A

Matrix: Water

Analysis Batch: 402779

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 402395

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surr)	0.06	S1-	27 - 136
Terphenyl-d14 (Surr)	68		12 - 144

Lab Sample ID: MB 310-402860/1-A

Matrix: Water

Analysis Batch: 403031

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
1,2-Dichlorobenzene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
1,3-Dichlorobenzene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
1,4-Dichlorobenzene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2,4,5-Trichlorophenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2,4,6-Trichlorophenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2,4-Dichlorophenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2,4-Dimethylphenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2,4-Dinitrophenol	<20.0		20.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2,4-Dinitrotoluene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2,6-Dinitrotoluene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2-Chloronaphthalene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2-Chlorophenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2-Methylnaphthalene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2-Methylphenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2-Nitroaniline	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
2-Nitrophenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
3,3'-Dichlorobenzidine	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
3-Nitroaniline	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
4,6-Dinitro-2-methylphenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
4-Bromophenyl phenyl ether	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
4-Chloro-3-methylphenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
4-Chloroaniline	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
4-Chlorophenyl phenyl ether	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
4-Methylphenol (and/or 3-Methylphenol)	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
4-Nitroaniline	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
4-Nitrophenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Acenaphthene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Acenaphthylene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Anthracene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Benzidine	<20.0		20.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Benzo(a)anthracene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Benzo(a)pyrene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Benzo(b)fluoranthene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Benzo(g,h,i)perylene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Benzo(k)fluoranthene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Benzoic acid	<100		100		ug/L		10/18/23 07:20	10/19/23 11:49	1
Benzyl alcohol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Bis(2-chloroethoxy)methane	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Bis(2-chloroethyl)ether	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: MB 310-402860/1-A

Matrix: Water

Analysis Batch: 403031

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
bis(2-chloroisopropyl) ether	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Bis(2-ethylhexyl) phthalate	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Butyl benzyl phthalate	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Carbazole	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Chrysene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Dibenzo(a,h)anthracene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Dibenzofuran	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Diethyl phthalate	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Dimethyl phthalate	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Di-n-butyl phthalate	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Di-n-octyl phthalate	<20.0		20.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Fluoranthene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Fluorene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Hexachlorobenzene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Hexachlorobutadiene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Hexachlorocyclopentadiene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Hexachloroethane	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Indeno(1,2,3-cd)pyrene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Isophorone	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Naphthalene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Nitrobenzene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
N-Nitrosodimethylamine	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
N-Nitrosodi-n-propylamine	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
N-Nitrosodiphenylamine	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Pentachlorophenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Phenanthrene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Phenol	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Pyrene	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Pyridine	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
Total Cresols	<10.0		10.0		ug/L		10/18/23 07:20	10/19/23 11:49	1
TPH-DRO (C10-C21)	NC		500		ug/L		10/18/23 07:20	10/19/23 11:49	1
TPH-ORO (C21-C35)	NC		500		ug/L		10/18/23 07:20	10/19/23 11:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	74		25 - 110	10/18/23 07:20	10/19/23 11:49	1
Phenol-d5 (Surr)	65		21 - 110	10/18/23 07:20	10/19/23 11:49	1
Nitrobenzene-d5 (Surr)	103		45 - 129	10/18/23 07:20	10/19/23 11:49	1
2-Fluorobiphenyl (Surr)	81		39 - 118	10/18/23 07:20	10/19/23 11:49	1
2,4,6-Tribromophenol (Surr)	88		27 - 136	10/18/23 07:20	10/19/23 11:49	1
Terphenyl-d14 (Surr)	111		12 - 144	10/18/23 07:20	10/19/23 11:49	1

Lab Sample ID: LCS 310-402860/2-A

Matrix: Water

Analysis Batch: 403031

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	100	63.41		ug/L		63	33 - 110
1,2-Dichlorobenzene	100	63.16		ug/L		63	33 - 110

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCS 310-402860/2-A

Matrix: Water

Analysis Batch: 403031

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichlorobenzene	100	57.92		ug/L		58	31 - 110
1,4-Dichlorobenzene	100	61.37		ug/L		61	32 - 110
2,4,5-Trichlorophenol	100	96.15		ug/L		96	35 - 133
2,4,6-Trichlorophenol	100	92.34		ug/L		92	28 - 139
2,4-Dichlorophenol	100	93.12		ug/L		93	41 - 124
2,4-Dimethylphenol	100	88.14		ug/L		88	31 - 142
2,4-Dinitrophenol	200	173.0		ug/L		86	10 - 138
2,4-Dinitrotoluene	100	102.6		ug/L		103	47 - 137
2,6-Dinitrotoluene	100	100.9		ug/L		101	51 - 130
2-Chloronaphthalene	100	68.17		ug/L		68	37 - 110
2-Chlorophenol	100	88.33		ug/L		88	44 - 117
2-Methylnaphthalene	100	77.55		ug/L		78	33 - 110
2-Methylphenol	100	92.68		ug/L		93	47 - 118
2-Nitroaniline	100	108.2		ug/L		108	50 - 135
2-Nitrophenol	100	89.44		ug/L		89	41 - 129
3,3'-Dichlorobenzidine	100	101.1		ug/L		101	37 - 150
3-Nitroaniline	100	104.9		ug/L		105	42 - 139
4,6-Dinitro-2-methylphenol	200	216.1		ug/L		108	22 - 143
4-Bromophenyl phenyl ether	100	86.73		ug/L		87	45 - 119
4-Chloro-3-methylphenol	100	109.6		ug/L		110	49 - 130
4-Chloroaniline	100	93.65		ug/L		94	21 - 139
4-Chlorophenyl phenyl ether	100	84.72		ug/L		85	44 - 116
4-Methylphenol (and/or 3-Methylphenol)	100	91.27		ug/L		91	46 - 117
4-Nitroaniline	100	100.5		ug/L		100	31 - 145
4-Nitrophenol	200	167.6		ug/L		84	18 - 110
Acenaphthene	100	77.77		ug/L		78	43 - 110
Acenaphthylene	100	81.11		ug/L		81	40 - 110
Anthracene	100	95.49		ug/L		95	51 - 120
Benzidine	100	57.08		ug/L		57	5 - 145
Benzo(a)anthracene	100	96.96		ug/L		97	51 - 123
Benzo(a)pyrene	100	96.09		ug/L		96	48 - 125
Benzo(b)fluoranthene	100	94.14		ug/L		94	49 - 129
Benzo(g,h,i)perylene	100	96.49		ug/L		96	43 - 139
Benzo(k)fluoranthene	100	102.2		ug/L		102	47 - 130
Benzyl alcohol	100	102.6		ug/L		103	39 - 128
Bis(2-chloroethoxy)methane	100	92.73		ug/L		93	48 - 121
Bis(2-chloroethyl)ether	100	86.32		ug/L		86	43 - 123
bis(2-chloroisopropyl) ether	100	80.53		ug/L		81	34 - 123
Bis(2-ethylhexyl) phthalate	100	103.8		ug/L		104	43 - 143
Butyl benzyl phthalate	100	104.9		ug/L		105	46 - 135
Carbazole	100	102.4		ug/L		102	51 - 126
Chrysene	100	97.65		ug/L		98	51 - 125
Dibenzo(a,h)anthracene	100	85.80		ug/L		86	38 - 149
Dibenzofuran	100	82.87		ug/L		83	45 - 112
Diethyl phthalate	100	113.9		ug/L		114	43 - 135
Dimethyl phthalate	100	96.18		ug/L		96	43 - 129
Di-n-butyl phthalate	100	100.6		ug/L		101	50 - 133
Di-n-octyl phthalate	100	86.78		ug/L		87	34 - 150

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCS 310-402860/2-A

Matrix: Water

Analysis Batch: 403031

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoranthene	100	98.02		ug/L		98	47 - 128
Fluorene	100	89.25		ug/L		89	45 - 119
Hexachlorobenzene	100	91.54		ug/L		92	48 - 119
Hexachlorobutadiene	100	60.50		ug/L		60	32 - 110
Hexachlorocyclopentadiene	100	48.81		ug/L		49	10 - 110
Hexachloroethane	100	53.79		ug/L		54	31 - 110
Indeno(1,2,3-cd)pyrene	100	89.61		ug/L		90	37 - 150
Isophorone	100	92.62		ug/L		93	50 - 125
Naphthalene	100	53.65		ug/L		54	38 - 110
Nitrobenzene	100	90.43		ug/L		90	47 - 116
N-Nitrosodimethylamine	100	76.13		ug/L		76	37 - 110
N-Nitrosodi-n-propylamine	100	92.86		ug/L		93	45 - 130
N-Nitrosodiphenylamine	100	98.49		ug/L		98	49 - 121
Pentachlorophenol	200	201.2		ug/L		101	26 - 133
Phenanthrene	100	94.81		ug/L		95	51 - 117
Phenol	100	60.79		ug/L		61	29 - 110
Pyrene	100	113.8		ug/L		114	48 - 127
Pyridine	200	97.41		ug/L		49	10 - 110

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol (Surr)	69		25 - 110
Phenol-d5 (Surr)	61		21 - 110
Nitrobenzene-d5 (Surr)	95		45 - 129
2-Fluorobiphenyl (Surr)	80		39 - 118
2,4,6-Tribromophenol (Surr)	97		27 - 136
Terphenyl-d14 (Surr)	113		12 - 144

Lab Sample ID: LCSD 310-402860/3-A

Matrix: Water

Analysis Batch: 403031

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 402860

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	100	70.50		ug/L		70	33 - 110	11	35
1,2-Dichlorobenzene	100	70.41		ug/L		70	33 - 110	11	35
1,3-Dichlorobenzene	100	66.82		ug/L		67	31 - 110	14	35
1,4-Dichlorobenzene	100	69.19		ug/L		69	32 - 110	12	35
2,4,5-Trichlorophenol	100	96.56		ug/L		97	35 - 133	0	35
2,4,6-Trichlorophenol	100	90.58		ug/L		91	28 - 139	2	35
2,4-Dichlorophenol	100	93.33		ug/L		93	41 - 124	0	35
2,4-Dimethylphenol	100	87.66		ug/L		88	31 - 142	1	35
2,4-Dinitrophenol	200	186.2		ug/L		93	10 - 138	7	35
2,4-Dinitrotoluene	100	104.7		ug/L		105	47 - 137	2	35
2,6-Dinitrotoluene	100	100.4		ug/L		100	51 - 130	0	35
2-Chloronaphthalene	100	71.67		ug/L		72	37 - 110	5	35
2-Chlorophenol	100	91.14		ug/L		91	44 - 117	3	35
2-Methylnaphthalene	100	83.60		ug/L		84	33 - 110	8	35
2-Methylphenol	100	92.65		ug/L		93	47 - 118	0	35
2-Nitroaniline	100	110.0		ug/L		110	50 - 135	2	35

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCSD 310-402860/3-A

Matrix: Water

Analysis Batch: 403031

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 402860

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Nitrophenol	100	89.48		ug/L		89	41 - 129	0	35
3,3'-Dichlorobenzidine	100	101.5		ug/L		101	37 - 150	0	35
3-Nitroaniline	100	107.1		ug/L		107	42 - 139	2	35
4,6-Dinitro-2-methylphenol	200	225.5		ug/L		113	22 - 143	4	35
4-Bromophenyl phenyl ether	100	85.95		ug/L		86	45 - 119	1	35
4-Chloro-3-methylphenol	100	109.7		ug/L		110	49 - 130	0	35
4-Chloroaniline	100	95.07		ug/L		95	21 - 139	2	35
4-Chlorophenyl phenyl ether	100	87.05		ug/L		87	44 - 116	3	35
4-Methylphenol (and/or 3-Methylphenol)	100	94.04		ug/L		94	46 - 117	3	35
4-Nitroaniline	100	107.8		ug/L		108	31 - 145	7	35
4-Nitrophenol	200	160.5		ug/L		80	18 - 110	4	35
Acenaphthene	100	82.68		ug/L		83	43 - 110	6	35
Acenaphthylene	100	84.26		ug/L		84	40 - 110	4	35
Anthracene	100	95.07		ug/L		95	51 - 120	0	35
Benzidine	100	67.93		ug/L		68	5 - 145	17	35
Benzo(a)anthracene	100	97.58		ug/L		98	51 - 123	1	35
Benzo(a)pyrene	100	95.93		ug/L		96	48 - 125	0	35
Benzo(b)fluoranthene	100	94.79		ug/L		95	49 - 129	1	35
Benzo(g,h,i)perylene	100	91.49		ug/L		91	43 - 139	5	35
Benzo(k)fluoranthene	100	101.5		ug/L		101	47 - 130	1	35
Benzyl alcohol	100	100.7		ug/L		101	39 - 128	2	35
Bis(2-chloroethoxy)methane	100	93.74		ug/L		94	48 - 121	1	35
Bis(2-chloroethyl)ether	100	87.64		ug/L		88	43 - 123	2	35
bis(2-chloroisopropyl) ether	100	83.30		ug/L		83	34 - 123	3	35
Bis(2-ethylhexyl) phthalate	100	99.89		ug/L		100	43 - 143	4	35
Butyl benzyl phthalate	100	101.0		ug/L		101	46 - 135	4	35
Carbazole	100	102.1		ug/L		102	51 - 126	0	35
Chrysene	100	95.54		ug/L		96	51 - 125	2	35
Dibenzo(a,h)anthracene	100	84.54		ug/L		85	38 - 149	1	35
Dibenzofuran	100	88.18		ug/L		88	45 - 112	6	35
Diethyl phthalate	100	119.8		ug/L		120	43 - 135	5	35
Dimethyl phthalate	100	98.59		ug/L		99	43 - 129	2	35
Di-n-butyl phthalate	100	99.78		ug/L		100	50 - 133	1	35
Di-n-octyl phthalate	100	83.09		ug/L		83	34 - 150	4	35
Fluoranthene	100	99.80		ug/L		100	47 - 128	2	35
Fluorene	100	93.38		ug/L		93	45 - 119	5	35
Hexachlorobenzene	100	88.63		ug/L		89	48 - 119	3	35
Hexachlorobutadiene	100	68.20		ug/L		68	32 - 110	12	35
Hexachlorocyclopentadiene	100	54.01		ug/L		54	10 - 110	10	35
Hexachloroethane	100	63.70		ug/L		64	31 - 110	17	35
Indeno(1,2,3-cd)pyrene	100	90.96		ug/L		91	37 - 150	2	35
Isophorone	100	92.20		ug/L		92	50 - 125	0	35
Naphthalene	100	80.47	*1	ug/L		80	38 - 110	40	35
Nitrobenzene	100	90.92		ug/L		91	47 - 116	1	35
N-Nitrosodimethylamine	100	76.84		ug/L		77	37 - 110	1	35
N-Nitrosodi-n-propylamine	100	96.45		ug/L		96	45 - 130	4	35
N-Nitrosodiphenylamine	100	101.1		ug/L		101	49 - 121	3	35
Pentachlorophenol	200	201.0		ug/L		100	26 - 133	0	35

Eurofins Cedar Falls

QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCSD 310-402860/3-A

Matrix: Water

Analysis Batch: 403031

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 402860

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenanthrene	100	94.97		ug/L		95	51 - 117	0	35
Phenol	100	59.13		ug/L		59	29 - 110	3	35
Pyrene	100	110.3		ug/L		110	48 - 127	3	35
Pyridine	200	83.80		ug/L		42	10 - 110	15	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorophenol (Surr)	74		25 - 110
Phenol-d5 (Surr)	64		21 - 110
Nitrobenzene-d5 (Surr)	106		45 - 129
2-Fluorobiphenyl (Surr)	90		39 - 118
2,4,6-Tribromophenol (Surr)	100		27 - 136
Terphenyl-d14 (Surr)	116		12 - 144

Lab Sample ID: MB 310-402911/1-A

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402911

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
1,2-Dichlorobenzene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
1,3-Dichlorobenzene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
1,4-Dichlorobenzene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2,4,5-Trichlorophenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2,4,6-Trichlorophenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2,4-Dichlorophenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2,4-Dimethylphenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2,4-Dinitrophenol	<389		389		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2,4-Dinitrotoluene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2,6-Dinitrotoluene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2-Chloronaphthalene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2-Chlorophenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2-Methylnaphthalene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2-Methylphenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2-Nitroaniline	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
2-Nitrophenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
3,3'-Dichlorobenzidine	<389		389		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
3-Nitroaniline	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
4,6-Dinitro-2-methylphenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
4-Bromophenyl phenyl ether	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
4-Chloro-3-methylphenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
4-Chloroaniline	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
4-Chlorophenyl phenyl ether	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
4-Methylphenol (and/or 3-Methylphenol)	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
4-Nitroaniline	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
4-Nitrophenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Acenaphthene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Acenaphthylene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Anthracene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1

Eurofins Cedar Falls

QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: MB 310-402911/1-A

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402911

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzidine	<389		389		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Benzo(a)anthracene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Benzo(a)pyrene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Benzo(b)fluoranthene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Benzo(g,h,i)perylene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Benzo(k)fluoranthene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Benzoic acid	<972		972		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Benzyl alcohol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Bis(2-chloroethoxy)methane	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Bis(2-chloroethyl)ether	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
bis(2-chloroisopropyl) ether	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Bis(2-ethylhexyl) phthalate	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Butyl benzyl phthalate	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Carbazole	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Chrysene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Dibenzo(a,h)anthracene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Dibenzofuran	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Diethyl phthalate	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Dimethyl phthalate	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Di-n-butyl phthalate	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Di-n-octyl phthalate	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Fluoranthene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Fluorene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Hexachlorobenzene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Hexachlorobutadiene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Hexachlorocyclopentadiene	<389		389		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Hexachloroethane	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Indeno(1,2,3-cd)pyrene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Isophorone	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Naphthalene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Nitrobenzene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
N-Nitrosodimethylamine	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
N-Nitrosodi-n-propylamine	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
N-Nitrosodiphenylamine	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Pentachlorophenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Phenanthrene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Phenol	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Pyrene	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Pyridine	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
Total Cresols	<194		194		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
TPH-DRO (C10-C21)	<14600		14600		ug/Kg		10/18/23 10:16	10/19/23 12:13	1
TPH-ORO (C21-C35)	<14600		14600		ug/Kg		10/18/23 10:16	10/19/23 12:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	135	S1+	18 - 126	10/18/23 10:16	10/19/23 12:13	1
Phenol-d5 (Surr)	145	S1+	25 - 119	10/18/23 10:16	10/19/23 12:13	1
Nitrobenzene-d5 (Surr)	153	S1+	15 - 131	10/18/23 10:16	10/19/23 12:13	1
2-Fluorobiphenyl (Surr)	102		28 - 116	10/18/23 10:16	10/19/23 12:13	1

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: MB 310-402911/1-A

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402911

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	102		10 - 121	10/18/23 10:16	10/19/23 12:13	1
Terphenyl-d14 (Surr)	83		24 - 132	10/18/23 10:16	10/19/23 12:13	1

Lab Sample ID: LCS 310-402911/2-A

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402911

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TPH-DRO (C10-C21)	63600	70360		ug/Kg		111	20 - 120
TPH-ORO (C21-C35)	63600	10120	J *-	ug/Kg		16	20 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol (Surr)	71		18 - 126
Phenol-d5 (Surr)	58		25 - 119
Nitrobenzene-d5 (Surr)	55		15 - 131
2-Fluorobiphenyl (Surr)	47		28 - 116
2,4,6-Tribromophenol (Surr)	55		10 - 121
Terphenyl-d14 (Surr)	58		24 - 132

Lab Sample ID: LCS 310-402911/5-A

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402911

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	3280	2100		ug/Kg		64	33 - 110
1,2-Dichlorobenzene	3280	2105		ug/Kg		64	33 - 110
1,3-Dichlorobenzene	3280	2062		ug/Kg		63	26 - 111
1,4-Dichlorobenzene	3280	2076		ug/Kg		63	33 - 110
2,4,5-Trichlorophenol	3280	1853		ug/Kg		56	33 - 110
2,4,6-Trichlorophenol	3280	2612		ug/Kg		80	33 - 110
2,4-Dichlorophenol	3280	2258		ug/Kg		69	34 - 110
2,4-Dimethylphenol	3280	2215		ug/Kg		67	31 - 115
2,4-Dinitrophenol	6570	1622		ug/Kg		25	10 - 110
2,4-Dinitrotoluene	3280	2314		ug/Kg		71	39 - 111
2,6-Dinitrotoluene	3280	2203		ug/Kg		67	39 - 110
2-Chloronaphthalene	3280	2358		ug/Kg		72	35 - 110
2-Chlorophenol	3280	2230		ug/Kg		68	36 - 110
2-Methylnaphthalene	3280	2231		ug/Kg		68	37 - 110
2-Methylphenol	3280	2375		ug/Kg		72	33 - 110
2-Nitroaniline	3280	2360		ug/Kg		72	36 - 115
2-Nitrophenol	3280	2246		ug/Kg		68	33 - 112
3-Nitroaniline	3280	2377		ug/Kg		72	30 - 110
4,6-Dinitro-2-methylphenol	6570	3303		ug/Kg		50	10 - 110
4-Bromophenyl phenyl ether	3280	2231		ug/Kg		68	41 - 110
4-Chloro-3-methylphenol	3280	2442		ug/Kg		74	38 - 110
4-Chloroaniline	3280	1667		ug/Kg		51	27 - 110
4-Chlorophenyl phenyl ether	3280	2354		ug/Kg		72	41 - 110

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCS 310-402911/5-A

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402911

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Methylphenol (and/or 3-Methylphenol)	3280	2313		ug/Kg		70	34 - 110
4-Nitroaniline	3280	2055		ug/Kg		63	15 - 115
4-Nitrophenol	6570	4774		ug/Kg		73	26 - 110
Acenaphthene	3280	2407		ug/Kg		73	40 - 110
Acenaphthylene	3280	2157		ug/Kg		66	37 - 110
Anthracene	3280	2438		ug/Kg		74	43 - 110
Benzo(a)anthracene	3280	2346		ug/Kg		71	42 - 110
Benzo(a)pyrene	3280	2609		ug/Kg		79	38 - 116
Benzo(b)fluoranthene	3280	2558		ug/Kg		78	42 - 114
Benzo(g,h,i)perylene	3280	2758		ug/Kg		84	34 - 116
Benzo(k)fluoranthene	3280	2719		ug/Kg		83	36 - 118
Benzyl alcohol	3280	2174		ug/Kg		66	16 - 118
Bis(2-chloroethoxy)methane	3280	2518		ug/Kg		77	30 - 110
Bis(2-chloroethyl)ether	3280	2421		ug/Kg		74	28 - 115
bis(2-chloroisopropyl) ether	3280	2550		ug/Kg		78	18 - 122
Bis(2-ethylhexyl) phthalate	3280	2478		ug/Kg		76	41 - 125
Butyl benzyl phthalate	3280	2492		ug/Kg		76	42 - 119
Carbazole	3280	2558		ug/Kg		78	39 - 110
Chrysene	3280	2570		ug/Kg		78	38 - 110
Dibenzo(a,h)anthracene	3280	2757		ug/Kg		84	33 - 121
Dibenzofuran	3280	2168		ug/Kg		66	40 - 110
Diethyl phthalate	3280	1992		ug/Kg		61	35 - 110
Dimethyl phthalate	3280	1997		ug/Kg		61	38 - 110
Di-n-butyl phthalate	3280	2649		ug/Kg		81	42 - 112
Di-n-octyl phthalate	3280	2449		ug/Kg		75	34 - 137
Fluoranthene	3280	2595		ug/Kg		79	39 - 110
Fluorene	3280	2184		ug/Kg		67	40 - 110
Hexachlorobenzene	3280	2383		ug/Kg		73	41 - 110
Hexachlorobutadiene	3280	1999		ug/Kg		61	30 - 110
Hexachlorocyclopentadiene	3280	1727		ug/Kg		53	18 - 128
Hexachloroethane	3280	2107		ug/Kg		64	30 - 110
Indeno(1,2,3-cd)pyrene	3280	2624		ug/Kg		80	34 - 120
Isophorone	3280	2400		ug/Kg		73	34 - 113
Naphthalene	3280	2246		ug/Kg		68	33 - 110
Nitrobenzene	3280	2334		ug/Kg		71	29 - 112
N-Nitrosodimethylamine	3280	2325		ug/Kg		71	21 - 119
N-Nitrosodi-n-propylamine	3280	2369		ug/Kg		72	36 - 112
N-Nitrosodiphenylamine	3280	2116		ug/Kg		64	37 - 110
Pentachlorophenol	6570	4561		ug/Kg		69	10 - 110
Phenanthrene	3280	2490		ug/Kg		76	42 - 110
Phenol	3280	2272		ug/Kg		69	38 - 110
Pyrene	3280	2235		ug/Kg		68	40 - 113
Pyridine	6570	4123		ug/Kg		63	10 - 110

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol (Surr)	74		18 - 126
Phenol-d5 (Surr)	75		25 - 119

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: LCS 310-402911/5-A

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402911

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Nitrobenzene-d5 (Surr)	73		15 - 131
2-Fluorobiphenyl (Surr)	60		28 - 116
2,4,6-Tribromophenol (Surr)	62		10 - 121
Terphenyl-d14 (Surr)	72		24 - 132

Lab Sample ID: 310-267039-1 MS

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: SB-1 (0-3)

Prep Type: Total/NA

Prep Batch: 402911

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
TPH-DRO (C10-C21)	21600	F1	81500	129300	F1	ug/Kg	✱	132	10 - 120	
TPH-ORO (C21-C35)	<18500		81500	22270		ug/Kg	✱	27	10 - 120	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	123		18 - 126
Phenol-d5 (Surr)	80		25 - 119
Nitrobenzene-d5 (Surr)	76		15 - 131
2-Fluorobiphenyl (Surr)	65		28 - 116
2,4,6-Tribromophenol (Surr)	73		10 - 121
Terphenyl-d14 (Surr)	75		24 - 132

Lab Sample ID: 310-267039-1 MS

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: SB-1 (0-3)

Prep Type: Total/NA

Prep Batch: 402911

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,2,4-Trichlorobenzene	<246		4130	3034		ug/Kg	✱	73	19 - 110	
1,2-Dichlorobenzene	<246		4130	2774		ug/Kg	✱	67	19 - 110	
1,3-Dichlorobenzene	<246		4130	4671		ug/Kg	✱	113	10 - 117	
1,4-Dichlorobenzene	<246		4130	2688		ug/Kg	✱	65	18 - 110	
2,4,5-Trichlorophenol	<246		4130	2928		ug/Kg	✱	71	16 - 110	
2,4,6-Trichlorophenol	<246		4130	2821		ug/Kg	✱	68	13 - 110	
2,4-Dichlorophenol	<246		4130	3032		ug/Kg	✱	73	18 - 110	
2,4-Dimethylphenol	<246		4130	3120		ug/Kg	✱	76	13 - 115	
2,4-Dinitrophenol	<492		8260	557.9	F1	ug/Kg	✱	7	10 - 110	
2,4-Dinitrotoluene	<246		4130	3604		ug/Kg	✱	87	18 - 115	
2,6-Dinitrotoluene	<246		4130	3416		ug/Kg	✱	83	21 - 113	
2-Chloronaphthalene	<246		4130	2986		ug/Kg	✱	72	22 - 110	
2-Chlorophenol	<246		4130	2926		ug/Kg	✱	71	18 - 111	
2-Methylnaphthalene	<246		4130	3382		ug/Kg	✱	82	14 - 112	
2-Methylphenol	<246		4130	3031		ug/Kg	✱	73	19 - 110	
2-Nitroaniline	<246		4130	3644		ug/Kg	✱	88	20 - 118	
2-Nitrophenol	<246		4130	3089		ug/Kg	✱	75	10 - 116	
3-Nitroaniline	<246		4130	3460		ug/Kg	✱	84	14 - 110	
4,6-Dinitro-2-methylphenol	<246		8260	1915		ug/Kg	✱	23	10 - 110	
4-Bromophenyl phenyl ether	<246		4130	3232		ug/Kg	✱	78	24 - 110	
4-Chloro-3-methylphenol	<246		4130	3394		ug/Kg	✱	82	19 - 112	
4-Chloroaniline	<246		4130	3224		ug/Kg	✱	78	10 - 110	

Eurofins Cedar Falls

QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: 310-267039-1 MS

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: SB-1 (0-3)

Prep Type: Total/NA

Prep Batch: 402911

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
4-Chlorophenyl phenyl ether	<246		4130	3368		ug/Kg	✱	82	25 - 110
4-Methylphenol (and/or 3-Methylphenol)	<246		4130	3371		ug/Kg	✱	82	20 - 110
4-Nitroaniline	<246		4130	3953		ug/Kg	✱	96	10 - 115
4-Nitrophenol	<246		8260	7289		ug/Kg	✱	88	10 - 111
Acenaphthene	<246		4130	3259		ug/Kg	✱	79	20 - 111
Acenaphthylene	<246		4130	3144		ug/Kg	✱	76	23 - 110
Anthracene	<246		4130	3632		ug/Kg	✱	88	22 - 110
Benzo(a)anthracene	<246		4130	3704		ug/Kg	✱	90	16 - 117
Benzo(a)pyrene	<246		4130	3945		ug/Kg	✱	95	13 - 118
Benzo(b)fluoranthene	<246		4130	3835		ug/Kg	✱	93	13 - 120
Benzo(g,h,i)perylene	<246		4130	4134		ug/Kg	✱	100	12 - 117
Benzo(k)fluoranthene	<246		4130	3967		ug/Kg	✱	96	16 - 118
Benzyl alcohol	<246		4130	2809		ug/Kg	✱	68	10 - 125
Bis(2-chloroethoxy)methane	<246		4130	3345		ug/Kg	✱	81	18 - 115
Bis(2-chloroethyl)ether	<246		4130	2911		ug/Kg	✱	70	10 - 128
bis(2-chloroisopropyl) ether	<246		4130	3246		ug/Kg	✱	79	10 - 127
Bis(2-ethylhexyl) phthalate	<246		4130	3790		ug/Kg	✱	92	24 - 125
Butyl benzyl phthalate	<246		4130	3832		ug/Kg	✱	93	28 - 119
Carbazole	<246		4130	3620		ug/Kg	✱	88	21 - 110
Chrysene	<246		4130	3881		ug/Kg	✱	94	17 - 116
Dibenzo(a,h)anthracene	<246		4130	3969		ug/Kg	✱	96	12 - 122
Dibenzofuran	<246		4130	3228		ug/Kg	✱	78	23 - 110
Diethyl phthalate	<246		4130	3347		ug/Kg	✱	81	22 - 112
Dimethyl phthalate	<246		4130	3151		ug/Kg	✱	76	20 - 114
Di-n-butyl phthalate	<246		4130	3742		ug/Kg	✱	91	24 - 114
Di-n-octyl phthalate	<246		4130	3783		ug/Kg	✱	92	14 - 142
Fluoranthene	<246		4130	4149		ug/Kg	✱	96	14 - 118
Fluorene	<246		4130	3310		ug/Kg	✱	80	23 - 110
Hexachlorobenzene	<246		4130	3380		ug/Kg	✱	82	22 - 110
Hexachlorobutadiene	<246		4130	3040		ug/Kg	✱	74	17 - 110
Hexachlorocyclopentadiene	<492		4130	1727		ug/Kg	✱	42	10 - 128
Hexachloroethane	<246		4130	2821		ug/Kg	✱	68	10 - 117
Indeno(1,2,3-cd)pyrene	<246		4130	3965		ug/Kg	✱	96	10 - 129
Isophorone	<246		4130	3287		ug/Kg	✱	80	17 - 121
Naphthalene	<246		4130	3394		ug/Kg	✱	82	20 - 110
Nitrobenzene	<246		4130	3356		ug/Kg	✱	81	17 - 112
N-Nitrosodimethylamine	<246		4130	4758		ug/Kg	✱	115	10 - 125
N-Nitrosodi-n-propylamine	<246		4130	3308		ug/Kg	✱	80	18 - 123
N-Nitrosodiphenylamine	<246		4130	3206		ug/Kg	✱	78	16 - 115
Pentachlorophenol	<246		8260	4670		ug/Kg	✱	57	10 - 110
Phenanthrene	<246		4130	4045		ug/Kg	✱	94	17 - 116
Phenol	<246		4130	3297		ug/Kg	✱	80	19 - 112
Pyrene	<246		4130	4044		ug/Kg	✱	94	11 - 123
Pyridine	<246		8260	8094		ug/Kg	✱	98	10 - 110

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorophenol (Surr)	77		18 - 126

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: 310-267039-1 MS

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: SB-1 (0-3)

Prep Type: Total/NA

Prep Batch: 402911

Surrogate	MS %Recovery	MS Qualifier	Limits
Phenol-d5 (Surr)	75		25 - 119
Nitrobenzene-d5 (Surr)	78		15 - 131
2-Fluorobiphenyl (Surr)	67		28 - 116
2,4,6-Tribromophenol (Surr)	71		10 - 121
Terphenyl-d14 (Surr)	81		24 - 132

Lab Sample ID: 310-267039-1 MSD

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: SB-1 (0-3)

Prep Type: Total/NA

Prep Batch: 402911

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH-DRO (C10-C21)	21600	F1	81100	97320		ug/Kg	⊛	93	10 - 120	28	40
TPH-ORO (C21-C35)	<18500		81100	19700		ug/Kg	⊛	24	10 - 120	12	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorophenol (Surr)	66		18 - 126
Phenol-d5 (Surr)	74		25 - 119
Nitrobenzene-d5 (Surr)	74		15 - 131
2-Fluorobiphenyl (Surr)	61		28 - 116
2,4,6-Tribromophenol (Surr)	69		10 - 121
Terphenyl-d14 (Surr)	67		24 - 132

Lab Sample ID: 310-267039-1 MSD

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: SB-1 (0-3)

Prep Type: Total/NA

Prep Batch: 402911

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	<246		4000	2926		ug/Kg	⊛	73	19 - 110	4	40
1,2-Dichlorobenzene	<246		4000	2766		ug/Kg	⊛	69	19 - 110	0	40
1,3-Dichlorobenzene	<246		4000	5881	F1	ug/Kg	⊛	147	10 - 117	23	40
1,4-Dichlorobenzene	<246		4000	2593		ug/Kg	⊛	65	18 - 110	4	40
2,4,5-Trichlorophenol	<246		4000	2936		ug/Kg	⊛	73	16 - 110	0	40
2,4,6-Trichlorophenol	<246		4000	2892		ug/Kg	⊛	72	13 - 110	3	40
2,4-Dichlorophenol	<246		4000	2971		ug/Kg	⊛	74	18 - 110	2	40
2,4-Dimethylphenol	<246		4000	2787		ug/Kg	⊛	70	13 - 115	11	40
2,4-Dinitrophenol	<492		8000	<480	F1	ug/Kg	⊛	6	10 - 110	23	40
2,4-Dinitrotoluene	<246		4000	3593		ug/Kg	⊛	90	18 - 115	0	40
2,6-Dinitrotoluene	<246		4000	3394		ug/Kg	⊛	85	21 - 113	1	40
2-Chloronaphthalene	<246		4000	2960		ug/Kg	⊛	74	22 - 110	1	40
2-Chlorophenol	<246		4000	2849		ug/Kg	⊛	71	18 - 111	3	40
2-Methylnaphthalene	<246		4000	2828		ug/Kg	⊛	71	14 - 112	18	40
2-Methylphenol	<246		4000	3372		ug/Kg	⊛	84	19 - 110	11	40
2-Nitroaniline	<246		4000	3542		ug/Kg	⊛	89	20 - 118	3	40
2-Nitrophenol	<246		4000	3014		ug/Kg	⊛	75	10 - 116	2	40
3-Nitroaniline	<246		4000	3553		ug/Kg	⊛	89	14 - 110	3	40
4,6-Dinitro-2-methylphenol	<246		8000	1435		ug/Kg	⊛	18	10 - 110	29	40
4-Bromophenyl phenyl ether	<246		4000	3240		ug/Kg	⊛	81	24 - 110	0	40
4-Chloro-3-methylphenol	<246		4000	3285		ug/Kg	⊛	82	19 - 112	3	40

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: 310-267039-1 MSD

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: SB-1 (0-3)

Prep Type: Total/NA

Prep Batch: 402911

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Chloroaniline	<246		4000	3110		ug/Kg	✱	78	10 - 110	4	40
4-Chlorophenyl phenyl ether	<246		4000	3325		ug/Kg	✱	83	25 - 110	1	40
4-Methylphenol (and/or 3-Methylphenol)	<246		4000	3441		ug/Kg	✱	86	20 - 110	2	40
4-Nitroaniline	<246		4000	4036		ug/Kg	✱	101	10 - 115	2	40
4-Nitrophenol	<246		8000	7475		ug/Kg	✱	93	10 - 111	3	40
Acenaphthene	<246		4000	3269		ug/Kg	✱	82	20 - 111	0	40
Acenaphthylene	<246		4000	3133		ug/Kg	✱	78	23 - 110	0	40
Anthracene	<246		4000	3531		ug/Kg	✱	88	22 - 110	3	40
Benzo(a)anthracene	<246		4000	3579		ug/Kg	✱	89	16 - 117	3	40
Benzo(a)pyrene	<246		4000	3886		ug/Kg	✱	97	13 - 118	2	40
Benzo(b)fluoranthene	<246		4000	3716		ug/Kg	✱	93	13 - 120	3	40
Benzo(g,h,i)perylene	<246		4000	4059		ug/Kg	✱	101	12 - 117	2	40
Benzo(k)fluoranthene	<246		4000	3826		ug/Kg	✱	96	16 - 118	4	40
Benzyl alcohol	<246		4000	3234		ug/Kg	✱	81	10 - 125	14	40
Bis(2-chloroethoxy)methane	<246		4000	3205		ug/Kg	✱	80	18 - 115	4	40
Bis(2-chloroethyl)ether	<246		4000	3190		ug/Kg	✱	80	10 - 128	9	40
bis(2-chloroisopropyl) ether	<246		4000	3588		ug/Kg	✱	90	10 - 127	10	40
Bis(2-ethylhexyl) phthalate	<246		4000	3792		ug/Kg	✱	95	24 - 125	0	40
Butyl benzyl phthalate	<246		4000	3790		ug/Kg	✱	95	28 - 119	1	40
Carbazole	<246		4000	3543		ug/Kg	✱	89	21 - 110	2	40
Chrysene	<246		4000	3797		ug/Kg	✱	95	17 - 116	2	40
Dibenzo(a,h)anthracene	<246		4000	4011		ug/Kg	✱	100	12 - 122	1	40
Dibenzofuran	<246		4000	3300		ug/Kg	✱	82	23 - 110	2	40
Diethyl phthalate	<246		4000	3241		ug/Kg	✱	81	22 - 112	3	40
Dimethyl phthalate	<246		4000	3033		ug/Kg	✱	76	20 - 114	4	40
Di-n-butyl phthalate	<246		4000	3689		ug/Kg	✱	92	24 - 114	1	40
Di-n-octyl phthalate	<246		4000	3794		ug/Kg	✱	95	14 - 142	0	40
Fluoranthene	<246		4000	4097		ug/Kg	✱	98	14 - 118	1	40
Fluorene	<246		4000	3299		ug/Kg	✱	82	23 - 110	0	40
Hexachlorobenzene	<246		4000	3335		ug/Kg	✱	83	22 - 110	1	40
Hexachlorobutadiene	<246		4000	3050		ug/Kg	✱	76	17 - 110	0	40
Hexachlorocyclopentadiene	<492		4000	1678		ug/Kg	✱	42	10 - 128	3	40
Hexachloroethane	<246		4000	3200		ug/Kg	✱	80	10 - 117	13	40
Indeno(1,2,3-cd)pyrene	<246		4000	3874		ug/Kg	✱	97	10 - 129	2	40
Isophorone	<246		4000	3118		ug/Kg	✱	78	17 - 121	5	40
Naphthalene	<246		4000	3348		ug/Kg	✱	84	20 - 110	1	40
Nitrobenzene	<246		4000	2926		ug/Kg	✱	73	17 - 112	14	40
N-Nitrosodimethylamine	<246		4000	5725	F1	ug/Kg	✱	143	10 - 125	18	40
N-Nitrosodi-n-propylamine	<246		4000	3349		ug/Kg	✱	84	18 - 123	1	40
N-Nitrosodiphenylamine	<246		4000	3138		ug/Kg	✱	78	16 - 115	2	40
Pentachlorophenol	<246		8000	4263		ug/Kg	✱	53	10 - 110	9	40
Phenanthrene	<246		4000	3937		ug/Kg	✱	95	17 - 116	3	40
Phenol	<246		4000	3161		ug/Kg	✱	79	19 - 112	4	40
Pyrene	<246		4000	3817		ug/Kg	✱	91	11 - 123	6	40
Pyridine	<246		8000	9865	F1	ug/Kg	✱	123	10 - 110	20	40

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

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

Lab Sample ID: 310-267039-1 MSD

Matrix: Solid

Analysis Batch: 403033

Client Sample ID: SB-1 (0-3)

Prep Type: Total/NA

Prep Batch: 402911

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
2-Fluorophenol (Surr)	76		18 - 126
Phenol-d5 (Surr)	80		25 - 119
Nitrobenzene-d5 (Surr)	78		15 - 131
2-Fluorobiphenyl (Surr)	70		28 - 116
2,4,6-Tribromophenol (Surr)	75		10 - 121
Terphenyl-d14 (Surr)	82		24 - 132

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 310-402526/1-A

Matrix: Solid

Analysis Batch: 402829

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402526

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	<22.5		22.5		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Antimony	<4.50		4.50		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Arsenic	<3.60		3.60		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Barium	<0.900		0.900		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Beryllium	<0.450		0.450		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Cadmium	<0.900		0.900		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Calcium	<90.0		90.0		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Chromium	<0.900		0.900		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Copper	<0.900		0.900		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Iron	<45.0		45.0		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Lead	<4.50		4.50		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Magnesium	<45.0		45.0		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Manganese	<2.25		2.25		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Nickel	<2.25		2.25		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Potassium	<90.0		90.0		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Selenium	<4.50		4.50		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Silver	<0.900		0.900		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Sodium	<90.0		90.0		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Thallium	<4.50		4.50		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Vanadium	<2.25		2.25		mg/Kg		10/16/23 10:35	10/17/23 13:14	1
Zinc	<4.50		4.50		mg/Kg		10/16/23 10:35	10/17/23 13:14	1

Lab Sample ID: LCS 310-402526/2-A

Matrix: Solid

Analysis Batch: 402829

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402526

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	
Aluminum	196	204.0		mg/Kg		104	80 - 120	
Antimony	196	206.3		mg/Kg		105	80 - 120	
Arsenic	196	204.5		mg/Kg		105	80 - 120	
Barium	97.8	101.2		mg/Kg		104	80 - 120	
Beryllium	97.8	105.5		mg/Kg		108	80 - 120	
Cadmium	97.8	99.44		mg/Kg		102	80 - 120	
Calcium	1960	2027		mg/Kg		104	80 - 120	
Chromium	97.8	101.3		mg/Kg		104	80 - 120	

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 310-402526/2-A

Matrix: Solid

Analysis Batch: 402829

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402526

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Copper	196	203.4		mg/Kg		104	80 - 120
Iron	196	215.0		mg/Kg		110	80 - 120
Lead	196	197.2		mg/Kg		101	80 - 120
Magnesium	1960	2037		mg/Kg		104	80 - 120
Manganese	97.8	101.0		mg/Kg		103	80 - 120
Nickel	196	199.0		mg/Kg		102	80 - 120
Potassium	1960	2056		mg/Kg		105	80 - 120
Selenium	391	406.5		mg/Kg		104	80 - 120
Silver	97.8	87.40		mg/Kg		89	80 - 120
Sodium	1960	2034		mg/Kg		104	80 - 120
Thallium	196	188.8		mg/Kg		97	80 - 120
Vanadium	97.8	102.0		mg/Kg		104	80 - 120
Zinc	196	204.6		mg/Kg		105	80 - 120

Lab Sample ID: 310-267039-10 DU

Matrix: Solid

Analysis Batch: 402829

Client Sample ID: SB-5 (6-8)

Prep Type: Total/NA

Prep Batch: 402526

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	15800		8241	F3	mg/Kg	✖	63	20
Antimony	<17.1		<17.1		mg/Kg	✖	NC	20
Arsenic	33.9		<13.7		mg/Kg	✖	NC	20
Barium	147		78.27	F3	mg/Kg	✖	61	20
Beryllium	<1.71		<1.71		mg/Kg	✖	NC	20
Cadmium	<3.41		<3.43		mg/Kg	✖	NC	20
Calcium	2650		1554	F3	mg/Kg	✖	52	20
Chromium	49.0		17.48	F3	mg/Kg	✖	95	20
Copper	10.2		4.946	F3	mg/Kg	✖	69	20
Iron	50700		17530	F3	mg/Kg	✖	97	20
Lead	198		54.39	F3	mg/Kg	✖	114	20
Magnesium	979		570.1	F3	mg/Kg	✖	53	20
Manganese	268		74.54	F3	mg/Kg	✖	113	20
Nickel	18.7		<8.57		mg/Kg	✖	NC	20
Potassium	959		584.7	F3	mg/Kg	✖	49	20
Selenium	<17.1		<17.1		mg/Kg	✖	NC	20
Silver	<3.41		<3.43		mg/Kg	✖	NC	20
Sodium	<341		<343		mg/Kg	✖	NC	20
Thallium	<17.1		<17.1		mg/Kg	✖	NC	20
Vanadium	140		43.32	F3	mg/Kg	✖	105	20
Zinc	80.6		44.70	F3	mg/Kg	✖	57	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-402526/1-A ^5

Matrix: Solid

Analysis Batch: 403606

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402526

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	<0.450		0.450		mg/Kg		10/16/23 10:35	10/24/23 15:47	5

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 310-402526/2-A ^20

Matrix: Solid

Analysis Batch: 403606

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402526

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	97.8	105.2		mg/Kg		108	80 - 120

Lab Sample ID: 310-267039-10 DU

Matrix: Solid

Analysis Batch: 403606

Client Sample ID: SB-5 (6-8)

Prep Type: Total/NA

Prep Batch: 402526

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Cobalt	40.0		13.89	F3	mg/Kg	✱	97	20

Lab Sample ID: MB 310-402547/1-A

Matrix: Water

Analysis Batch: 402835

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 14:12	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 14:12	1
Barium	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 14:12	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 14:12	1
Cadmium	<0.000200		0.000200		mg/L		10/16/23 09:15	10/17/23 14:12	1
Calcium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Cobalt	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Iron	<0.100		0.100		mg/L		10/16/23 09:15	10/17/23 14:12	1
Lead	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Magnesium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Manganese	<0.0100		0.0100		mg/L		10/16/23 09:15	10/17/23 14:12	1
Nickel	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Potassium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 14:12	1
Sodium	<1.00		1.00		mg/L		10/16/23 09:15	10/17/23 14:12	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 14:12	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 14:12	1
Zinc	<0.0200		0.0200		mg/L		10/16/23 09:15	10/17/23 14:12	1

Lab Sample ID: LCS 310-402547/2-A

Matrix: Water

Analysis Batch: 402835

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.200	0.2074		mg/L		104	80 - 120
Antimony	0.200	0.2416	*+	mg/L		121	80 - 120
Arsenic	0.200	0.2003		mg/L		100	80 - 120
Barium	0.100	0.1019		mg/L		102	80 - 120
Beryllium	0.100	0.09971		mg/L		100	80 - 120
Cadmium	0.100	0.09762		mg/L		98	80 - 120
Calcium	2.00	1.897		mg/L		95	80 - 120

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 310-402547/2-A

Matrix: Water

Analysis Batch: 402835

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402547

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
Chromium	0.100	0.1033		mg/L		103	80 - 120
Cobalt	0.100	0.1057		mg/L		106	80 - 120
Copper	0.200	0.2008		mg/L		100	80 - 120
Iron	0.200	0.2313		mg/L		116	80 - 120
Lead	0.200	0.2001		mg/L		100	80 - 120
Magnesium	2.00	2.114		mg/L		106	80 - 120
Manganese	0.100	0.09788		mg/L		98	80 - 120
Nickel	0.200	0.2028		mg/L		101	80 - 120
Potassium	2.00	2.097		mg/L		105	80 - 120
Selenium	0.400	0.3879		mg/L		97	80 - 120
Silver	0.100	0.1021		mg/L		102	80 - 120
Sodium	2.00	2.129		mg/L		106	80 - 120
Vanadium	0.100	0.09954		mg/L		100	80 - 120
Zinc	0.200	0.1945		mg/L		97	80 - 120

Lab Sample ID: LCS 310-402547/2-A

Matrix: Water

Analysis Batch: 403271

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402547

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
Thallium	0.200	0.1727		mg/L		86	80 - 120

Lab Sample ID: MB 310-402548/1-A

Matrix: Water

Analysis Batch: 402883

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 402548

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	<0.0500		0.0500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Antimony	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 16:15	1
Arsenic	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 16:15	1
Barium	<0.00200		0.00200		mg/L		10/16/23 09:15	10/17/23 16:15	1
Beryllium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 16:15	1
Cadmium	<0.000200		0.000200		mg/L		10/16/23 09:15	10/17/23 16:15	1
Calcium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Chromium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Cobalt	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Copper	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Iron	<0.100		0.100		mg/L		10/16/23 09:15	10/17/23 16:15	1
Lead	<0.000500		0.000500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Magnesium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Manganese	<0.0100		0.0100		mg/L		10/16/23 09:15	10/17/23 16:15	1
Nickel	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Potassium	<0.500		0.500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Selenium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Silver	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 16:15	1
Sodium	<1.00		1.00		mg/L		10/16/23 09:15	10/17/23 16:15	1
Thallium	<0.00100		0.00100		mg/L		10/16/23 09:15	10/17/23 16:15	1
Vanadium	<0.00500		0.00500		mg/L		10/16/23 09:15	10/17/23 16:15	1
Zinc	<0.0200		0.0200		mg/L		10/16/23 09:15	10/17/23 16:15	1

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 310-402548/2-A

Matrix: Water

Analysis Batch: 402883

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.200	0.1891		mg/L		95	80 - 120
Antimony	0.200	0.2267		mg/L		113	80 - 120
Arsenic	0.200	0.1885		mg/L		94	80 - 120
Barium	0.100	0.09582		mg/L		96	80 - 120
Beryllium	0.100	0.08927		mg/L		89	80 - 120
Cadmium	0.100	0.08917		mg/L		89	80 - 120
Calcium	2.00	1.753		mg/L		88	80 - 120
Chromium	0.100	0.09392		mg/L		94	80 - 120
Cobalt	0.100	0.09552		mg/L		96	80 - 120
Copper	0.200	0.1803		mg/L		90	80 - 120
Iron	0.200	0.1957		mg/L		98	80 - 120
Lead	0.200	0.1852		mg/L		93	80 - 120
Magnesium	2.00	1.919		mg/L		96	80 - 120
Manganese	0.100	0.09073		mg/L		91	80 - 120
Nickel	0.200	0.1825		mg/L		91	80 - 120
Potassium	2.00	1.975		mg/L		99	80 - 120
Selenium	0.400	0.3695		mg/L		92	80 - 120
Silver	0.100	0.09068		mg/L		91	80 - 120
Sodium	2.00	1.901		mg/L		95	80 - 120
Vanadium	0.100	0.08405		mg/L		84	80 - 120
Zinc	0.200	0.1784		mg/L		89	80 - 120

Lab Sample ID: LCS 310-402548/2-A

Matrix: Water

Analysis Batch: 403451

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 402548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thallium	0.200	0.1817		mg/L		91	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-403229/1-A

Matrix: Water

Analysis Batch: 403417

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 403229

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:41	10/23/23 10:05	1

Lab Sample ID: LCS 310-403229/2-A

Matrix: Water

Analysis Batch: 403417

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 403229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001914		mg/L		115	80 - 120

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QC Sample Results

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: MB 310-403230/1-A
Matrix: Water
Analysis Batch: 403417

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 403230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/20/23 10:47	10/23/23 11:04	1

Lab Sample ID: LCS 310-403230/2-A
Matrix: Water
Analysis Batch: 403417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 403230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001668		mg/L		100	80 - 120

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 310-402700/1-A
Matrix: Solid
Analysis Batch: 403580

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 402700

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0170		0.0170		mg/Kg		10/16/23 18:18	10/24/23 13:16	1

Lab Sample ID: LCS 310-402700/2-A
Matrix: Solid
Analysis Batch: 403580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 402700

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.143	0.1441		mg/Kg		101	80 - 120

Lab Sample ID: 310-267039-1 MS
Matrix: Solid
Analysis Batch: 403580

Client Sample ID: SB-1 (0-3)
Prep Type: Total/NA
Prep Batch: 402700

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.0497		0.164	0.2042		mg/Kg	⊛	94	80 - 120

Lab Sample ID: 310-267039-1 MSD
Matrix: Solid
Analysis Batch: 403580

Client Sample ID: SB-1 (0-3)
Prep Type: Total/NA
Prep Batch: 402700

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.0497		0.170	0.2074		mg/Kg	⊛	93	80 - 120	2	20

Method: Moisture - Percent Moisture

Lab Sample ID: 310-267039-11 DU
Matrix: Solid
Analysis Batch: 402585

Client Sample ID: SB-6 (0-3)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	7.8		12.5	F3	%		46	39
Percent Solids	92.2		87.5		%		5	10

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QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

GC/MS VOA

Analysis Batch: 402486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Total/NA	Water	8260D	
310-267039-19	GW-2 DUP	Total/NA	Water	8260D	
310-267039-20	GW-5	Total/NA	Water	8260D	
310-267039-21	GW-6	Total/NA	Water	8260D	
310-267039-22	GW-7	Total/NA	Water	8260D	
310-267039-23	FB-1	Total/NA	Water	8260D	
310-267039-24	FB-2	Total/NA	Water	8260D	
310-267039-25	EB-1	Total/NA	Water	8260D	
310-267039-26	Trip Blank 1	Total/NA	Water	8260D	
MB 310-402486/7	Method Blank	Total/NA	Water	8260D	
LCS 310-402486/10	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-402486/8	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-402486/9	Lab Control Sample	Total/NA	Water	8260D	

Pre Prep Batch: 402784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	Frozen Preserve	
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	Frozen Preserve	
310-267039-3	SB-2 (0-3)	Total/NA	Solid	Frozen Preserve	
310-267039-4	SB-2 (6-8)	Total/NA	Solid	Frozen Preserve	
310-267039-5	SB-3 (0-3)	Total/NA	Solid	Frozen Preserve	
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	Frozen Preserve	
310-267039-7	SB-4 (0-3)	Total/NA	Solid	Frozen Preserve	
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	Frozen Preserve	
310-267039-9	SB-5 (0-3)	Total/NA	Solid	Frozen Preserve	
310-267039-10	SB-5 (6-8)	Total/NA	Solid	Frozen Preserve	
310-267039-11	SB-6 (0-3)	Total/NA	Solid	Frozen Preserve	
310-267039-12	SB-6 (6-8)	Total/NA	Solid	Frozen Preserve	
310-267039-13	SB-7 (0-3)	Total/NA	Solid	Frozen Preserve	
310-267039-14	SB-7 (6-8)	Total/NA	Solid	Frozen Preserve	
310-267039-15	SB-8 (0-3)	Total/NA	Solid	Frozen Preserve	
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	Frozen Preserve	
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	Frozen Preserve	

Prep Batch: 402793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	5035	402784
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	5035	402784

Eurofins Cedar Falls

QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

GC/MS VOA (Continued)

Prep Batch: 402793 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-3	SB-2 (0-3)	Total/NA	Solid	5035	402784
310-267039-4	SB-2 (6-8)	Total/NA	Solid	5035	402784
310-267039-5	SB-3 (0-3)	Total/NA	Solid	5035	402784
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	5035	402784
310-267039-7	SB-4 (0-3)	Total/NA	Solid	5035	402784
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	5035	402784
310-267039-9	SB-5 (0-3)	Total/NA	Solid	5035	402784
310-267039-10	SB-5 (6-8)	Total/NA	Solid	5035	402784
310-267039-11	SB-6 (0-3)	Total/NA	Solid	5035	402784
310-267039-12	SB-6 (6-8)	Total/NA	Solid	5035	402784
310-267039-13	SB-7 (0-3)	Total/NA	Solid	5035	402784
310-267039-14	SB-7 (6-8)	Total/NA	Solid	5035	402784
310-267039-15	SB-8 (0-3)	Total/NA	Solid	5035	402784
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	5035	402784
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	5035	402784
MB 310-402793/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-402793/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 310-402793/3-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 402794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	8260D	402793
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	8260D	402793
310-267039-3	SB-2 (0-3)	Total/NA	Solid	8260D	402793
310-267039-4	SB-2 (6-8)	Total/NA	Solid	8260D	402793
310-267039-5	SB-3 (0-3)	Total/NA	Solid	8260D	402793
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	8260D	402793
310-267039-7	SB-4 (0-3)	Total/NA	Solid	8260D	402793
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	8260D	402793
310-267039-9	SB-5 (0-3)	Total/NA	Solid	8260D	402793
310-267039-10	SB-5 (6-8)	Total/NA	Solid	8260D	402793
310-267039-11	SB-6 (0-3)	Total/NA	Solid	8260D	402793
310-267039-12	SB-6 (6-8)	Total/NA	Solid	8260D	402793
310-267039-13	SB-7 (0-3)	Total/NA	Solid	8260D	402793
310-267039-14	SB-7 (6-8)	Total/NA	Solid	8260D	402793
310-267039-15	SB-8 (0-3)	Total/NA	Solid	8260D	402793
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	8260D	402793
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	8260D	402793
MB 310-402793/1-A	Method Blank	Total/NA	Solid	8260D	402793
LCS 310-402793/2-A	Lab Control Sample	Total/NA	Solid	8260D	402793
LCS 310-402793/3-A	Lab Control Sample	Total/NA	Solid	8260D	402793

GC/MS Semi VOA

Prep Batch: 402395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Total/NA	Water	3510C	
310-267039-19	GW-2 DUP	Total/NA	Water	3510C	
310-267039-20	GW-5	Total/NA	Water	3510C	
310-267039-21	GW-6	Total/NA	Water	3510C	
310-267039-22	GW-7	Total/NA	Water	3510C	

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QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

GC/MS Semi VOA (Continued)

Prep Batch: 402395 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-23	FB-1	Total/NA	Water	3510C	
310-267039-24	FB-2	Total/NA	Water	3510C	
310-267039-25	EB-1	Total/NA	Water	3510C	
MB 310-402395/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-402395/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 310-402395/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 402779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Total/NA	Water	8270E	402395
310-267039-19	GW-2 DUP	Total/NA	Water	8270E	402395
310-267039-20	GW-5	Total/NA	Water	8270E	402395
310-267039-21	GW-6	Total/NA	Water	8270E	402395
310-267039-22	GW-7	Total/NA	Water	8270E	402395
310-267039-23	FB-1	Total/NA	Water	8270E	402395
310-267039-24	FB-2	Total/NA	Water	8270E	402395
310-267039-25	EB-1	Total/NA	Water	8270E	402395
MB 310-402395/1-A	Method Blank	Total/NA	Water	8270E	402395
LCS 310-402395/2-A	Lab Control Sample	Total/NA	Water	8270E	402395
LCSD 310-402395/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	402395

Prep Batch: 402860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Total/NA	Water	3510C	
310-267039-19	GW-2 DUP	Total/NA	Water	3510C	
310-267039-20	GW-5	Total/NA	Water	3510C	
310-267039-21	GW-6	Total/NA	Water	3510C	
310-267039-22	GW-7	Total/NA	Water	3510C	
310-267039-23	FB-1	Total/NA	Water	3510C	
310-267039-24	FB-2	Total/NA	Water	3510C	
310-267039-25	EB-1	Total/NA	Water	3510C	
MB 310-402860/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-402860/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 310-402860/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 402911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	3546	
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	3546	
310-267039-3	SB-2 (0-3)	Total/NA	Solid	3546	
310-267039-4	SB-2 (6-8)	Total/NA	Solid	3546	
310-267039-5	SB-3 (0-3)	Total/NA	Solid	3546	
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	3546	
310-267039-7	SB-4 (0-3)	Total/NA	Solid	3546	
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	3546	
310-267039-9	SB-5 (0-3)	Total/NA	Solid	3546	
310-267039-10	SB-5 (6-8)	Total/NA	Solid	3546	
310-267039-11	SB-6 (0-3)	Total/NA	Solid	3546	
310-267039-12	SB-6 (6-8)	Total/NA	Solid	3546	
310-267039-13	SB-7 (0-3)	Total/NA	Solid	3546	
310-267039-14	SB-7 (6-8)	Total/NA	Solid	3546	

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QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

GC/MS Semi VOA (Continued)

Prep Batch: 402911 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-15	SB-8 (0-3)	Total/NA	Solid	3546	
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	3546	
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	3546	
MB 310-402911/1-A	Method Blank	Total/NA	Solid	3546	
LCS 310-402911/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 310-402911/5-A	Lab Control Sample	Total/NA	Solid	3546	
310-267039-1 MS	SB-1 (0-3)	Total/NA	Solid	3546	
310-267039-1 MS	SB-1 (0-3)	Total/NA	Solid	3546	
310-267039-1 MSD	SB-1 (0-3)	Total/NA	Solid	3546	
310-267039-1 MSD	SB-1 (0-3)	Total/NA	Solid	3546	

Analysis Batch: 403031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Total/NA	Water	8270E	402860
310-267039-19	GW-2 DUP	Total/NA	Water	8270E	402860
310-267039-20	GW-5	Total/NA	Water	8270E	402860
310-267039-21	GW-6	Total/NA	Water	8270E	402860
310-267039-22	GW-7	Total/NA	Water	8270E	402860
310-267039-23	FB-1	Total/NA	Water	8270E	402860
310-267039-24	FB-2	Total/NA	Water	8270E	402860
310-267039-25	EB-1	Total/NA	Water	8270E	402860
MB 310-402860/1-A	Method Blank	Total/NA	Water	8270E	402860
LCS 310-402860/2-A	Lab Control Sample	Total/NA	Water	8270E	402860
LCSD 310-402860/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	402860

Analysis Batch: 403033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	8270E	402911
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	8270E	402911
310-267039-3	SB-2 (0-3)	Total/NA	Solid	8270E	402911
310-267039-4	SB-2 (6-8)	Total/NA	Solid	8270E	402911
310-267039-5	SB-3 (0-3)	Total/NA	Solid	8270E	402911
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	8270E	402911
310-267039-7	SB-4 (0-3)	Total/NA	Solid	8270E	402911
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	8270E	402911
310-267039-9	SB-5 (0-3)	Total/NA	Solid	8270E	402911
310-267039-10	SB-5 (6-8)	Total/NA	Solid	8270E	402911
310-267039-11	SB-6 (0-3)	Total/NA	Solid	8270E	402911
310-267039-12	SB-6 (6-8)	Total/NA	Solid	8270E	402911
310-267039-13	SB-7 (0-3)	Total/NA	Solid	8270E	402911
310-267039-14	SB-7 (6-8)	Total/NA	Solid	8270E	402911
310-267039-15	SB-8 (0-3)	Total/NA	Solid	8270E	402911
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	8270E	402911
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	8270E	402911
MB 310-402911/1-A	Method Blank	Total/NA	Solid	8270E	402911
LCS 310-402911/2-A	Lab Control Sample	Total/NA	Solid	8270E	402911
LCS 310-402911/5-A	Lab Control Sample	Total/NA	Solid	8270E	402911
310-267039-1 MS	SB-1 (0-3)	Total/NA	Solid	8270E	402911
310-267039-1 MS	SB-1 (0-3)	Total/NA	Solid	8270E	402911
310-267039-1 MSD	SB-1 (0-3)	Total/NA	Solid	8270E	402911
310-267039-1 MSD	SB-1 (0-3)	Total/NA	Solid	8270E	402911

Eurofins Cedar Falls

QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Metals

Prep Batch: 402526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	3050B	
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	3050B	
310-267039-3	SB-2 (0-3)	Total/NA	Solid	3050B	
310-267039-4	SB-2 (6-8)	Total/NA	Solid	3050B	
310-267039-5	SB-3 (0-3)	Total/NA	Solid	3050B	
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	3050B	
310-267039-7	SB-4 (0-3)	Total/NA	Solid	3050B	
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	3050B	
310-267039-9	SB-5 (0-3)	Total/NA	Solid	3050B	
310-267039-10	SB-5 (6-8)	Total/NA	Solid	3050B	
310-267039-11	SB-6 (0-3)	Total/NA	Solid	3050B	
310-267039-12	SB-6 (6-8)	Total/NA	Solid	3050B	
310-267039-13	SB-7 (0-3)	Total/NA	Solid	3050B	
310-267039-14	SB-7 (6-8)	Total/NA	Solid	3050B	
310-267039-15	SB-8 (0-3)	Total/NA	Solid	3050B	
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	3050B	
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	3050B	
MB 310-402526/1-A	Method Blank	Total/NA	Solid	3050B	
MB 310-402526/1-A ^5	Method Blank	Total/NA	Solid	3050B	
LCS 310-402526/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 310-402526/2-A ^20	Lab Control Sample	Total/NA	Solid	3050B	
310-267039-10 DU	SB-5 (6-8)	Total/NA	Solid	3050B	

Prep Batch: 402547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Total/NA	Water	3005A	
310-267039-19	GW-2 DUP	Total/NA	Water	3005A	
310-267039-20	GW-5	Total/NA	Water	3005A	
310-267039-21	GW-6	Total/NA	Water	3005A	
310-267039-22	GW-7	Total/NA	Water	3005A	
310-267039-23	FB-1	Total/NA	Water	3005A	
310-267039-24	FB-2	Total/NA	Water	3005A	
310-267039-25	EB-1	Total/NA	Water	3005A	
MB 310-402547/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-402547/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 402548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Dissolved	Water	3005A	
310-267039-19	GW-2 DUP	Dissolved	Water	3005A	
310-267039-20	GW-5	Dissolved	Water	3005A	
310-267039-21	GW-6	Dissolved	Water	3005A	
310-267039-22	GW-7	Dissolved	Water	3005A	
310-267039-23	FB-1	Dissolved	Water	3005A	
310-267039-24	FB-2	Dissolved	Water	3005A	
310-267039-25	EB-1	Dissolved	Water	3005A	
MB 310-402548/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-402548/2-A	Lab Control Sample	Total/NA	Water	3005A	

Eurofins Cedar Falls

QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Metals

Prep Batch: 402700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	7471B	
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	7471B	
310-267039-3	SB-2 (0-3)	Total/NA	Solid	7471B	
310-267039-4	SB-2 (6-8)	Total/NA	Solid	7471B	
310-267039-5	SB-3 (0-3)	Total/NA	Solid	7471B	
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	7471B	
310-267039-7	SB-4 (0-3)	Total/NA	Solid	7471B	
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	7471B	
310-267039-9	SB-5 (0-3)	Total/NA	Solid	7471B	
310-267039-10	SB-5 (6-8)	Total/NA	Solid	7471B	
310-267039-11	SB-6 (0-3)	Total/NA	Solid	7471B	
310-267039-12	SB-6 (6-8)	Total/NA	Solid	7471B	
310-267039-13	SB-7 (0-3)	Total/NA	Solid	7471B	
310-267039-14	SB-7 (6-8)	Total/NA	Solid	7471B	
310-267039-15	SB-8 (0-3)	Total/NA	Solid	7471B	
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	7471B	
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	7471B	
MB 310-402700/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 310-402700/2-A	Lab Control Sample	Total/NA	Solid	7471B	
310-267039-1 MS	SB-1 (0-3)	Total/NA	Solid	7471B	
310-267039-1 MSD	SB-1 (0-3)	Total/NA	Solid	7471B	

Analysis Batch: 402829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	6010D	402526
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	6010D	402526
310-267039-3	SB-2 (0-3)	Total/NA	Solid	6010D	402526
310-267039-4	SB-2 (6-8)	Total/NA	Solid	6010D	402526
310-267039-5	SB-3 (0-3)	Total/NA	Solid	6010D	402526
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	6010D	402526
310-267039-7	SB-4 (0-3)	Total/NA	Solid	6010D	402526
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	6010D	402526
310-267039-9	SB-5 (0-3)	Total/NA	Solid	6010D	402526
310-267039-10	SB-5 (6-8)	Total/NA	Solid	6010D	402526
310-267039-11	SB-6 (0-3)	Total/NA	Solid	6010D	402526
310-267039-12	SB-6 (6-8)	Total/NA	Solid	6010D	402526
310-267039-13	SB-7 (0-3)	Total/NA	Solid	6010D	402526
310-267039-14	SB-7 (6-8)	Total/NA	Solid	6010D	402526
310-267039-15	SB-8 (0-3)	Total/NA	Solid	6010D	402526
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	6010D	402526
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	6010D	402526
MB 310-402526/1-A	Method Blank	Total/NA	Solid	6010D	402526
LCS 310-402526/2-A	Lab Control Sample	Total/NA	Solid	6010D	402526
310-267039-10 DU	SB-5 (6-8)	Total/NA	Solid	6010D	402526

Analysis Batch: 402835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Total/NA	Water	6020B	402547
310-267039-19	GW-2 DUP	Total/NA	Water	6020B	402547
310-267039-20	GW-5	Total/NA	Water	6020B	402547
310-267039-21	GW-6	Total/NA	Water	6020B	402547

Eurofins Cedar Falls

QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Metals (Continued)

Analysis Batch: 402835 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-22	GW-7	Total/NA	Water	6020B	402547
310-267039-23	FB-1	Total/NA	Water	6020B	402547
310-267039-24	FB-2	Total/NA	Water	6020B	402547
310-267039-25	EB-1	Total/NA	Water	6020B	402547
MB 310-402547/1-A	Method Blank	Total/NA	Water	6020B	402547
LCS 310-402547/2-A	Lab Control Sample	Total/NA	Water	6020B	402547

Analysis Batch: 402883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Dissolved	Water	6020B	402548
310-267039-18	GW-2	Total/NA	Water	6020B	402547
310-267039-19	GW-2 DUP	Dissolved	Water	6020B	402548
310-267039-19	GW-2 DUP	Total/NA	Water	6020B	402547
310-267039-20	GW-5	Dissolved	Water	6020B	402548
310-267039-20	GW-5	Total/NA	Water	6020B	402547
310-267039-21	GW-6	Dissolved	Water	6020B	402548
310-267039-21	GW-6	Total/NA	Water	6020B	402547
310-267039-22	GW-7	Dissolved	Water	6020B	402548
310-267039-22	GW-7	Total/NA	Water	6020B	402547
310-267039-23	FB-1	Dissolved	Water	6020B	402548
310-267039-24	FB-2	Dissolved	Water	6020B	402548
310-267039-25	EB-1	Dissolved	Water	6020B	402548
MB 310-402548/1-A	Method Blank	Total/NA	Water	6020B	402548
LCS 310-402548/2-A	Lab Control Sample	Total/NA	Water	6020B	402548

Analysis Batch: 403140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Total/NA	Water	6020B	402547
310-267039-19	GW-2 DUP	Total/NA	Water	6020B	402547

Prep Batch: 403229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Total/NA	Water	7470A	
310-267039-19	GW-2 DUP	Total/NA	Water	7470A	
310-267039-20	GW-5	Total/NA	Water	7470A	
310-267039-21	GW-6	Total/NA	Water	7470A	
310-267039-22	GW-7	Total/NA	Water	7470A	
310-267039-23	FB-1	Total/NA	Water	7470A	
310-267039-24	FB-2	Total/NA	Water	7470A	
310-267039-25	EB-1	Total/NA	Water	7470A	
MB 310-403229/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-403229/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 403230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Dissolved	Water	7470A	
310-267039-19	GW-2 DUP	Dissolved	Water	7470A	
310-267039-20	GW-5	Dissolved	Water	7470A	
310-267039-21	GW-6	Dissolved	Water	7470A	
310-267039-22	GW-7	Dissolved	Water	7470A	
310-267039-23	FB-1	Dissolved	Water	7470A	

Eurofins Cedar Falls

QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Metals (Continued)

Prep Batch: 403230 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-24	FB-2	Dissolved	Water	7470A	
310-267039-25	EB-1	Dissolved	Water	7470A	
MB 310-403230/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-403230/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 403271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-402547/2-A	Lab Control Sample	Total/NA	Water	6020B	402547

Analysis Batch: 403417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-18	GW-2	Dissolved	Water	7470A	403230
310-267039-18	GW-2	Total/NA	Water	7470A	403229
310-267039-19	GW-2 DUP	Dissolved	Water	7470A	403230
310-267039-19	GW-2 DUP	Total/NA	Water	7470A	403229
310-267039-20	GW-5	Dissolved	Water	7470A	403230
310-267039-20	GW-5	Total/NA	Water	7470A	403229
310-267039-21	GW-6	Dissolved	Water	7470A	403230
310-267039-21	GW-6	Total/NA	Water	7470A	403229
310-267039-22	GW-7	Dissolved	Water	7470A	403230
310-267039-22	GW-7	Total/NA	Water	7470A	403229
310-267039-23	FB-1	Dissolved	Water	7470A	403230
310-267039-23	FB-1	Total/NA	Water	7470A	403229
310-267039-24	FB-2	Dissolved	Water	7470A	403230
310-267039-24	FB-2	Total/NA	Water	7470A	403229
310-267039-25	EB-1	Dissolved	Water	7470A	403230
310-267039-25	EB-1	Total/NA	Water	7470A	403229
MB 310-403229/1-A	Method Blank	Total/NA	Water	7470A	403229
MB 310-403230/1-A	Method Blank	Total/NA	Water	7470A	403230
LCS 310-403229/2-A	Lab Control Sample	Total/NA	Water	7470A	403229
LCS 310-403230/2-A	Lab Control Sample	Total/NA	Water	7470A	403230

Analysis Batch: 403451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-402548/2-A	Lab Control Sample	Total/NA	Water	6020B	402548

Analysis Batch: 403580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	7471B	402700
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	7471B	402700
310-267039-3	SB-2 (0-3)	Total/NA	Solid	7471B	402700
310-267039-4	SB-2 (6-8)	Total/NA	Solid	7471B	402700
310-267039-5	SB-3 (0-3)	Total/NA	Solid	7471B	402700
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	7471B	402700
310-267039-7	SB-4 (0-3)	Total/NA	Solid	7471B	402700
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	7471B	402700
310-267039-9	SB-5 (0-3)	Total/NA	Solid	7471B	402700
310-267039-10	SB-5 (6-8)	Total/NA	Solid	7471B	402700
310-267039-11	SB-6 (0-3)	Total/NA	Solid	7471B	402700
310-267039-12	SB-6 (6-8)	Total/NA	Solid	7471B	402700
310-267039-13	SB-7 (0-3)	Total/NA	Solid	7471B	402700

Eurofins Cedar Falls

QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Metals (Continued)

Analysis Batch: 403580 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-14	SB-7 (6-8)	Total/NA	Solid	7471B	402700
310-267039-15	SB-8 (0-3)	Total/NA	Solid	7471B	402700
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	7471B	402700
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	7471B	402700
MB 310-402700/1-A	Method Blank	Total/NA	Solid	7471B	402700
LCS 310-402700/2-A	Lab Control Sample	Total/NA	Solid	7471B	402700
310-267039-1 MS	SB-1 (0-3)	Total/NA	Solid	7471B	402700
310-267039-1 MSD	SB-1 (0-3)	Total/NA	Solid	7471B	402700

Analysis Batch: 403606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	6020B	402526
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	6020B	402526
310-267039-3	SB-2 (0-3)	Total/NA	Solid	6020B	402526
310-267039-4	SB-2 (6-8)	Total/NA	Solid	6020B	402526
310-267039-5	SB-3 (0-3)	Total/NA	Solid	6020B	402526
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	6020B	402526
310-267039-7	SB-4 (0-3)	Total/NA	Solid	6020B	402526
310-267039-9	SB-5 (0-3)	Total/NA	Solid	6020B	402526
310-267039-10	SB-5 (6-8)	Total/NA	Solid	6020B	402526
310-267039-11	SB-6 (0-3)	Total/NA	Solid	6020B	402526
310-267039-12	SB-6 (6-8)	Total/NA	Solid	6020B	402526
310-267039-13	SB-7 (0-3)	Total/NA	Solid	6020B	402526
310-267039-14	SB-7 (6-8)	Total/NA	Solid	6020B	402526
310-267039-15	SB-8 (0-3)	Total/NA	Solid	6020B	402526
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	6020B	402526
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	6020B	402526
MB 310-402526/1-A ^5	Method Blank	Total/NA	Solid	6020B	402526
LCS 310-402526/2-A ^20	Lab Control Sample	Total/NA	Solid	6020B	402526
310-267039-10 DU	SB-5 (6-8)	Total/NA	Solid	6020B	402526

Analysis Batch: 403734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	6020B	402526

General Chemistry

Analysis Batch: 402522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-1	SB-1 (0-3)	Total/NA	Solid	Moisture	
310-267039-2	SB-1 (3.5-5.5)	Total/NA	Solid	Moisture	

Analysis Batch: 402585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-3	SB-2 (0-3)	Total/NA	Solid	Moisture	
310-267039-4	SB-2 (6-8)	Total/NA	Solid	Moisture	
310-267039-5	SB-3 (0-3)	Total/NA	Solid	Moisture	
310-267039-6	SB-3 (8.5-10.5)	Total/NA	Solid	Moisture	
310-267039-7	SB-4 (0-3)	Total/NA	Solid	Moisture	
310-267039-8	SB-4 (8.5-10.5)	Total/NA	Solid	Moisture	
310-267039-9	SB-5 (0-3)	Total/NA	Solid	Moisture	

Eurofins Cedar Falls

QC Association Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

General Chemistry (Continued)

Analysis Batch: 402585 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-267039-10	SB-5 (6-8)	Total/NA	Solid	Moisture	
310-267039-11	SB-6 (0-3)	Total/NA	Solid	Moisture	
310-267039-12	SB-6 (6-8)	Total/NA	Solid	Moisture	
310-267039-13	SB-7 (0-3)	Total/NA	Solid	Moisture	
310-267039-14	SB-7 (6-8)	Total/NA	Solid	Moisture	
310-267039-15	SB-8 (0-3)	Total/NA	Solid	Moisture	
310-267039-16	SB-8 (4.5-6.5)	Total/NA	Solid	Moisture	
310-267039-17	SB-2 (6-8) Dup	Total/NA	Solid	Moisture	
310-267039-11 DU	SB-6 (0-3)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-1 (0-3)

Lab Sample ID: 310-267039-1

Date Collected: 10/10/23 12:55

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402522	WZC8	EET CF	10/13/23 13:12

Client Sample ID: SB-1 (0-3)

Lab Sample ID: 310-267039-1

Date Collected: 10/10/23 12:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 12:55
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 14:32
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		2	402829	ZRI4	EET CF	10/17/23 15:20
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 15:52
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:21

Client Sample ID: SB-1 (3.5-5.5)

Lab Sample ID: 310-267039-2

Date Collected: 10/10/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402522	WZC8	EET CF	10/13/23 13:12

Client Sample ID: SB-1 (3.5-5.5)

Lab Sample ID: 310-267039-2

Date Collected: 10/10/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 80.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 06:22
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		5	403033	L0FS	EET CF	10/19/23 14:59
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		1	402829	ZRI4	EET CF	10/17/23 14:32
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 15:56
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:32

Eurofins Cedar Falls

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (0-3)

Lab Sample ID: 310-267039-3

Date Collected: 10/10/23 14:20

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-2 (0-3)

Lab Sample ID: 310-267039-3

Date Collected: 10/10/23 14:20

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 83.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 06:46
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 15:27
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		1	402829	ZRI4	EET CF	10/17/23 14:35
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 15:58
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:34

Client Sample ID: SB-2 (6-8)

Lab Sample ID: 310-267039-4

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-2 (6-8)

Lab Sample ID: 310-267039-4

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 07:11
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 15:54
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		2	402829	ZRI4	EET CF	10/17/23 15:22
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:01
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:36

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Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-3 (0-3)

Lab Sample ID: 310-267039-5

Date Collected: 10/10/23 15:55

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-3 (0-3)

Lab Sample ID: 310-267039-5

Date Collected: 10/10/23 15:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 07:35
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		5	403033	L0FS	EET CF	10/19/23 16:22
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		1	402829	ZRI4	EET CF	10/17/23 14:39
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:03
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:38

Client Sample ID: SB-3 (8.5-10.5)

Lab Sample ID: 310-267039-6

Date Collected: 10/10/23 16:00

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-3 (8.5-10.5)

Lab Sample ID: 310-267039-6

Date Collected: 10/10/23 16:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 82.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 07:59
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 16:49
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		4	402829	ZRI4	EET CF	10/17/23 15:24
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:05
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:41

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Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-4 (0-3)

Lab Sample ID: 310-267039-7

Date Collected: 10/11/23 08:50

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-4 (0-3)

Lab Sample ID: 310-267039-7

Date Collected: 10/11/23 08:50

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 08:24
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 17:17
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		1	402829	ZRI4	EET CF	10/17/23 14:43
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:08
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:44

Client Sample ID: SB-4 (8.5-10.5)

Lab Sample ID: 310-267039-8

Date Collected: 10/11/23 08:55

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-4 (8.5-10.5)

Lab Sample ID: 310-267039-8

Date Collected: 10/11/23 08:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 08:48
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 17:44
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		2	402829	ZRI4	EET CF	10/17/23 15:27
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403734	A6US	EET CF	10/25/23 14:04
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:46

Eurofins Cedar Falls

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-5 (0-3)

Lab Sample ID: 310-267039-9

Date Collected: 10/11/23 10:15

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-5 (0-3)

Lab Sample ID: 310-267039-9

Date Collected: 10/11/23 10:15

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 09:12
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 18:12
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		1	402829	ZRI4	EET CF	10/17/23 14:47
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:30
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:48

Client Sample ID: SB-5 (6-8)

Lab Sample ID: 310-267039-10

Date Collected: 10/11/23 10:20

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-5 (6-8)

Lab Sample ID: 310-267039-10

Date Collected: 10/11/23 10:20

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 09:37
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		5	403033	L0FS	EET CF	10/19/23 18:39
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		3	402829	ZRI4	EET CF	10/17/23 15:29
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:32
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:50

Eurofins Cedar Falls

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-6 (0-3)

Lab Sample ID: 310-267039-11

Date Collected: 10/11/23 11:50

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-6 (0-3)

Lab Sample ID: 310-267039-11

Date Collected: 10/11/23 11:50

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 10:01
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		5	403033	L0FS	EET CF	10/19/23 19:06
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		1	402829	ZRI4	EET CF	10/17/23 14:58
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:37
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:57

Client Sample ID: SB-6 (6-8)

Lab Sample ID: 310-267039-12

Date Collected: 10/11/23 11:55

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-6 (6-8)

Lab Sample ID: 310-267039-12

Date Collected: 10/11/23 11:55

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 77.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 13:19
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 19:34
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		2	402829	ZRI4	EET CF	10/17/23 15:33
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:39
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 13:59

Eurofins Cedar Falls

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-7 (0-3)

Lab Sample ID: 310-267039-13

Date Collected: 10/11/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-7 (0-3)

Lab Sample ID: 310-267039-13

Date Collected: 10/11/23 13:00

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 10:50
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 20:01
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		1	402829	ZRI4	EET CF	10/17/23 15:02
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:41
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 14:01

Client Sample ID: SB-7 (6-8)

Lab Sample ID: 310-267039-14

Date Collected: 10/11/23 13:05

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-7 (6-8)

Lab Sample ID: 310-267039-14

Date Collected: 10/11/23 13:05

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 76.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 11:14
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 20:29
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		1	402829	ZRI4	EET CF	10/17/23 15:04
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:43
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 14:03

Eurofins Cedar Falls

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-8 (0-3)

Lab Sample ID: 310-267039-15

Date Collected: 10/11/23 14:25

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-8 (0-3)

Lab Sample ID: 310-267039-15

Date Collected: 10/11/23 14:25

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 81.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 11:39
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 20:56
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		1	402829	ZRI4	EET CF	10/17/23 15:06
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:46
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 14:05

Client Sample ID: SB-8 (4.5-6.5)

Lab Sample ID: 310-267039-16

Date Collected: 10/11/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-8 (4.5-6.5)

Lab Sample ID: 310-267039-16

Date Collected: 10/11/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 73.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 12:06
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		5	403033	L0FS	EET CF	10/19/23 21:23
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		3	402829	ZRI4	EET CF	10/17/23 15:35
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:53
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 14:07

Eurofins Cedar Falls

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: SB-2 (6-8) Dup

Lab Sample ID: 310-267039-17

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	402585	DGU1	EET CF	10/16/23 05:17

Client Sample ID: SB-2 (6-8) Dup

Lab Sample ID: 310-267039-17

Date Collected: 10/10/23 14:30

Matrix: Solid

Date Received: 10/12/23 09:30

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			402784	MZR8	EET CF	10/12/23 11:05
Total/NA	Prep	5035			402793	MZR8	EET CF	10/17/23 11:19
Total/NA	Analysis	8260D		1	402794	MZR8	EET CF	10/18/23 12:30
Total/NA	Prep	3546			402911	DZK8	EET CF	10/18/23 10:16
Total/NA	Analysis	8270E		1	403033	L0FS	EET CF	10/19/23 21:50
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6010D		1	402829	ZRI4	EET CF	10/17/23 15:10
Total/NA	Prep	3050B			402526	DHM5	EET CF	10/16/23 10:35
Total/NA	Analysis	6020B		5	403606	A6US	EET CF	10/24/23 16:55
Total/NA	Prep	7471B			402700	DHM5	EET CF	10/16/23 18:18
Total/NA	Analysis	7471B		1	403580	NFT2	EET CF	10/24/23 14:09

Client Sample ID: GW-2

Lab Sample ID: 310-267039-18

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		5	402486	FE5V	EET CF	10/13/23 15:27
Total/NA	Prep	3510C			402860	Y6AF	EET CF	10/18/23 07:20
Total/NA	Analysis	8270E		5	403031	L0FS	EET CF	10/19/23 13:33
Total/NA	Prep	3510C			402395	Y6AF	EET CF	10/13/23 05:36
Total/NA	Analysis	8270E		5	402779	L0FS	EET CF	10/17/23 15:35
Dissolved	Prep	3005A			402548	KCK5	EET CF	10/16/23 09:15
Dissolved	Analysis	6020B		1	402883	A6US	EET CF	10/17/23 17:41
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		10	403140	A6US	EET CF	10/19/23 13:51
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		1	402835	A6US	EET CF	10/17/23 15:48
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		4	402883	A6US	EET CF	10/17/23 22:45
Dissolved	Prep	7470A			403230	NFT2	EET CF	10/20/23 10:47
Dissolved	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 11:09
Total/NA	Prep	7470A			403229	NFT2	EET CF	10/20/23 10:42
Total/NA	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 10:43

Eurofins Cedar Falls

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-2 DUP

Lab Sample ID: 310-267039-19

Date Collected: 10/10/23 14:55

Matrix: Water

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402486	FE5V	EET CF	10/13/23 15:50
Total/NA	Prep	3510C			402860	Y6AF	EET CF	10/18/23 07:20
Total/NA	Analysis	8270E		5	403031	L0FS	EET CF	10/19/23 13:59
Total/NA	Prep	3510C			402395	Y6AF	EET CF	10/13/23 05:36
Total/NA	Analysis	8270E		5	402779	L0FS	EET CF	10/17/23 16:02
Dissolved	Prep	3005A			402548	KCK5	EET CF	10/16/23 09:15
Dissolved	Analysis	6020B		1	402883	A6US	EET CF	10/17/23 17:43
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		10	403140	A6US	EET CF	10/19/23 13:55
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		1	402835	A6US	EET CF	10/17/23 15:50
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		4	402883	A6US	EET CF	10/17/23 22:47
Dissolved	Prep	7470A			403230	NFT2	EET CF	10/20/23 10:47
Dissolved	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 11:11
Total/NA	Prep	7470A			403229	NFT2	EET CF	10/20/23 10:42
Total/NA	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 10:45

Client Sample ID: GW-5

Lab Sample ID: 310-267039-20

Date Collected: 10/11/23 10:25

Matrix: Water

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402486	FE5V	EET CF	10/13/23 16:12
Total/NA	Prep	3510C			402860	Y6AF	EET CF	10/18/23 07:20
Total/NA	Analysis	8270E		1	403031	L0FS	EET CF	10/19/23 14:26
Total/NA	Prep	3510C			402395	Y6AF	EET CF	10/13/23 05:36
Total/NA	Analysis	8270E		1	402779	L0FS	EET CF	10/17/23 16:30
Dissolved	Prep	3005A			402548	KCK5	EET CF	10/16/23 09:15
Dissolved	Analysis	6020B		1	402883	A6US	EET CF	10/17/23 17:45
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		1	402835	A6US	EET CF	10/17/23 15:52
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		10	402883	A6US	EET CF	10/17/23 22:49
Dissolved	Prep	7470A			403230	NFT2	EET CF	10/20/23 10:47
Dissolved	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 11:17
Total/NA	Prep	7470A			403229	NFT2	EET CF	10/20/23 10:42
Total/NA	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 10:52

Client Sample ID: GW-6

Lab Sample ID: 310-267039-21

Date Collected: 10/11/23 12:00

Matrix: Water

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402486	FE5V	EET CF	10/13/23 16:35

Eurofins Cedar Falls

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: GW-6

Lab Sample ID: 310-267039-21

Date Collected: 10/11/23 12:00

Matrix: Water

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			402860	Y6AF	EET CF	10/18/23 07:20
Total/NA	Analysis	8270E		1	403031	L0FS	EET CF	10/19/23 14:51
Total/NA	Prep	3510C			402395	Y6AF	EET CF	10/13/23 05:36
Total/NA	Analysis	8270E		1	402779	L0FS	EET CF	10/17/23 16:57
Dissolved	Prep	3005A			402548	KCK5	EET CF	10/16/23 09:15
Dissolved	Analysis	6020B		1	402883	A6US	EET CF	10/17/23 17:48
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		1	402835	A6US	EET CF	10/17/23 15:54
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		20	402883	A6US	EET CF	10/17/23 22:52
Dissolved	Prep	7470A			403230	NFT2	EET CF	10/20/23 10:47
Dissolved	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 11:19
Total/NA	Prep	7470A			403229	NFT2	EET CF	10/20/23 10:42
Total/NA	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 10:54

Client Sample ID: GW-7

Lab Sample ID: 310-267039-22

Date Collected: 10/11/23 13:10

Matrix: Water

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402486	FE5V	EET CF	10/13/23 16:57
Total/NA	Prep	3510C			402860	Y6AF	EET CF	10/18/23 07:20
Total/NA	Analysis	8270E		5	403031	L0FS	EET CF	10/19/23 15:17
Total/NA	Prep	3510C			402395	Y6AF	EET CF	10/13/23 05:36
Total/NA	Analysis	8270E		5	402779	L0FS	EET CF	10/17/23 17:24
Dissolved	Prep	3005A			402548	KCK5	EET CF	10/16/23 09:15
Dissolved	Analysis	6020B		1	402883	A6US	EET CF	10/17/23 17:50
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		1	402835	A6US	EET CF	10/17/23 15:56
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		50	402883	A6US	EET CF	10/17/23 22:54
Dissolved	Prep	7470A			403230	NFT2	EET CF	10/20/23 10:47
Dissolved	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 11:21
Total/NA	Prep	7470A			403229	NFT2	EET CF	10/20/23 10:42
Total/NA	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 10:56

Client Sample ID: FB-1

Lab Sample ID: 310-267039-23

Date Collected: 10/10/23 15:45

Matrix: Water

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402486	FE5V	EET CF	10/13/23 14:42
Total/NA	Prep	3510C			402860	Y6AF	EET CF	10/18/23 07:20
Total/NA	Analysis	8270E		1	403031	L0FS	EET CF	10/19/23 15:43

Eurofins Cedar Falls

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: FB-1

Lab Sample ID: 310-267039-23

Date Collected: 10/10/23 15:45

Matrix: Water

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			402395	Y6AF	EET CF	10/13/23 05:36
Total/NA	Analysis	8270E		1	402779	L0FS	EET CF	10/17/23 17:52
Dissolved	Prep	3005A			402548	KCK5	EET CF	10/16/23 09:15
Dissolved	Analysis	6020B		1	402883	A6US	EET CF	10/17/23 17:52
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		1	402835	A6US	EET CF	10/17/23 15:59
Dissolved	Prep	7470A			403230	NFT2	EET CF	10/20/23 10:47
Dissolved	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 11:24
Total/NA	Prep	7470A			403229	NFT2	EET CF	10/20/23 10:42
Total/NA	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 10:58

Client Sample ID: FB-2

Lab Sample ID: 310-267039-24

Date Collected: 10/11/23 12:05

Matrix: Water

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402486	FE5V	EET CF	10/13/23 15:05
Total/NA	Prep	3510C			402860	Y6AF	EET CF	10/18/23 07:20
Total/NA	Analysis	8270E		1	403031	L0FS	EET CF	10/19/23 16:09
Total/NA	Prep	3510C			402395	Y6AF	EET CF	10/13/23 05:36
Total/NA	Analysis	8270E		1	402779	L0FS	EET CF	10/17/23 18:19
Dissolved	Prep	3005A			402548	KCK5	EET CF	10/16/23 09:15
Dissolved	Analysis	6020B		1	402883	A6US	EET CF	10/17/23 17:54
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		1	402835	A6US	EET CF	10/17/23 16:01
Dissolved	Prep	7470A			403230	NFT2	EET CF	10/20/23 10:47
Dissolved	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 11:26
Total/NA	Prep	7470A			403229	NFT2	EET CF	10/20/23 10:42
Total/NA	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 11:00

Client Sample ID: EB-1

Lab Sample ID: 310-267039-25

Date Collected: 10/11/23 14:40

Matrix: Water

Date Received: 10/12/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402486	FE5V	EET CF	10/13/23 17:20
Total/NA	Prep	3510C			402860	Y6AF	EET CF	10/18/23 07:20
Total/NA	Analysis	8270E		1	403031	L0FS	EET CF	10/19/23 16:35
Total/NA	Prep	3510C			402395	Y6AF	EET CF	10/13/23 05:36
Total/NA	Analysis	8270E		1	402779	L0FS	EET CF	10/17/23 18:46
Dissolved	Prep	3005A			402548	KCK5	EET CF	10/16/23 09:15
Dissolved	Analysis	6020B		1	402883	A6US	EET CF	10/17/23 17:57
Total/NA	Prep	3005A			402547	KCK5	EET CF	10/16/23 09:15
Total/NA	Analysis	6020B		1	402835	A6US	EET CF	10/17/23 16:26

Eurofins Cedar Falls

Lab Chronicle

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Client Sample ID: EB-1
Date Collected: 10/11/23 14:40
Date Received: 10/12/23 09:30

Lab Sample ID: 310-267039-25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	7470A			403230	NFT2	EET CF	10/20/23 10:47
Dissolved	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 11:28
Total/NA	Prep	7470A			403229	NFT2	EET CF	10/20/23 10:42
Total/NA	Analysis	7470A		1	403417	NFT2	EET CF	10/23/23 11:02

Client Sample ID: Trip Blank 1
Date Collected: 10/11/23 00:00
Date Received: 10/12/23 09:30

Lab Sample ID: 310-267039-26
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402486	FE5V	EET CF	10/13/23 14:20

Laboratory References:
EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Laboratory: Eurofins Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-24
Georgia	State	IA100001 (OR)	09-29-24
Illinois	NELAP	200024	11-29-23
Iowa	State	007	12-01-23
Kansas	NELAP	E-10341	01-31-24
Minnesota	NELAP	019-999-319	12-31-23
Minnesota (Petrofund)	State	3349	01-18-24
North Dakota	State	R-186	09-29-24
Oregon	NELAP	IA100001	09-29-24

Method Summary

Client: Tetra Tech EM Inc.
Project/Site: Joplin MO Union Depot Site

Job ID: 310-267039-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET CF
6010D	Metals (ICP)	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
7471B	Mercury (CVAA)	SW846	EET CF
Moisture	Percent Moisture	EPA	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
3050B	Preparation, Metals	SW846	EET CF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CF
3546	Microwave Extraction	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
5035	Closed System Purge and Trap	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
7471B	Preparation, Mercury	SW846	EET CF
Frozen Preserve	Freezing Samples	None	EET CF

Protocol References:

EPA = US Environmental Protection Agency

None = None

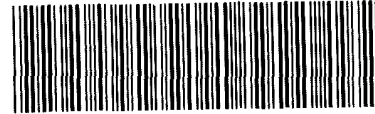
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401



Environment Testing
America



310-267039 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Tetra Tech</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>10/12/23</u>	TIME <u>0930</u>	Received By: <u>[Signature]</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>1 4</u>
Multiple Coolers?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>4</u>
Cooler Custody Seals Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?		<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<u>Water hmp (1)</u>			
<u>GW 6, 9B-1, FB2, GW 7</u>			
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>T</u>		Correction Factor (°C): <u>+0.0</u>	
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature.			
Uncorrected Temp (°C): <u>2.4</u>		Corrected Temp (°C): <u>2.6</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>1 vial H2O Road Broken FB2</u>			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Tetra Tech</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>10/12/23</u>	TIME <u>0930</u>	Received By: <u>[Signature]</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____
Multiple Coolers?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2</u> of <u>4</u>
Cooler Custody Seals Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>T</u>		Correction Factor (°C): <u>+0.0</u>	
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.9</u>		Corrected Temp (°C): <u>1.9</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Tetra Tech</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>10/12/23</u>	TIME <u>0930</u>	Received By: <u>[Signature]</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____
Multiple Coolers?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>3</u> of <u>4</u>
Cooler Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>T</u>		Correction Factor (°C): <u>400</u>	
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>21</u>		Corrected Temp (°C): <u>2.1</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Environment Testing
America

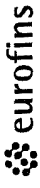
Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Tetra Tech</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>10/12/23</u>	TIME <u>0930</u>	Received By: <u>[Signature]</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____
Multiple Coolers?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>4</u> of <u>4</u>
Cooler Custody Seals Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<u>water trip(2) w/all soils</u>			
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>T</u>		Correction Factor (°C): <u>+0.0</u>	
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.5</u>		Corrected Temp (°C): <u>1.5</u>	
Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>		<u>CONTAINER 2</u>
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

Chain of Custody Record

653192

Environment Testing
America

Address

TAL-8210

Regulatory Program: ☐ DWR ☐ NPDES ☐ RCRA ☒ Other

Client Contact		Project Manager: Mary La Monecy		Site Contact:		Date:		COC No	
Company Name Tetra Tech		Tel/Email: mary.lamonecy@tetra-tech.com		Lab Contact:		Carrier:		1 of 3 COCs	
Address 415 Oak St		Analysis Turnaround Time		Analysis Turnaround Time		8260D TPH 620 40ml		Sampler Mary La Monecy	
City/State/Zip Kansas City, MO 64106		CALENDAR DAYS		WORKING DAYS		8260D TPH 620 40ml		For Lab Use Only:	
Phone 816-912-1741		TAT if different from Below		2 weeks		8260D TPH 620 40ml		Walk-in Client:	
Fax		<input type="checkbox"/> 2 weeks		<input type="checkbox"/> 1 week		8260D TPH 620 40ml		Lab Sampling	
Project Name Toplin Union Depot		<input type="checkbox"/> 2 days		<input type="checkbox"/> 1 day		8260D TPH 620 40ml		Job / SDG No	
Site Toplin, MO		<input type="checkbox"/> 1 day							
PO#									
Sample Identification		Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Sample Specific Notes.
SB-1 (0-3)		10/10	1420	G	SD	6	N	N	20A(DI) 1 MeOH/1 MeOH/504
SB-1 (3.5-5.5)			1420						
SB-2 (0-3)			1420						
SB-2 (6-8)			1430						
SB-3 (0-3)			1555						
SB-3 (8.5-10.5)			1600						
SB-4 (0-3)		10/11	0850						
SB-4 (8.5-10.5)			0855						
SB-5 (0-3)			1015						
SB-5 (6-8)			1020						
SB-6 (0-3)			1150						
SB-6 (6-8)			1155						

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☒ Unknown ☐ Poison B

Special Instructions/QC Requirements & Comments:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Custody Seal No		Cooler Temp (°C) Obs'd		Therm ID No	
Company		Company		Date/Time	
May La Monecy		tetra tech		10/12/23 0930	
Relinquished by		Received by		Date/Time	
Relinquished by		Received by		Date/Time	
Relinquished by		Received in Laboratory by		Date/Time	

1
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Page 191 of 195

Login Sample Receipt Checklist

Client: Tetra Tech EM Inc.

Job Number: 310-267039-1

Login Number: 267039

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	SB-1 (0-3) - packed in set one labeled SB-1 ((3.5-5.5) logged as the set
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	1 vial rcvd broken for FB-2
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Bob Michels

From: LaMasney, Macy <MACY.LAMASNEY@tetrattech.com>
Sent: Friday, October 13, 2023 8:33 AM
To: Bob Michels; Fisher, Emily
Subject: RE: Eurofins Environment Testing North Central, LLC Sample Login Confirmation files from 310-267039-1 Joplin MO Union Depot Site

Categories: Red Category

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins.

Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Bob,

We will need all analysis from the quote for the soil samples; TPH-GRO, DRO/ORO, Moisture, Metals, VOCs, and SVOCs.

Thanks,

Macy La Masney | Environmental Scientist

Pronouns: she, her, hers

Direct +1 (816) 412-1759 | Main: +1 (816) 412-1741 | macy.lamasney@tetrattech.com

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415 Oak Street | Kansas City, MO 64106 | tetrattech.com

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From: Bob Michels <Bob.Michels@et.eurofinsus.com>
Sent: Thursday, October 12, 2023 4:50 PM
To: Fisher, Emily <Emily.Fisher@tetrattech.com>
Cc: LaMasney, Macy <MACY.LAMASNEY@tetrattech.com>
Subject: RE: Eurofins Environment Testing North Central, LLC Sample Login Confirmation files from 310-267039-1 Joplin MO Union Depot Site

⚠ CAUTION: This email originated from an external sender. Verify the source before opening links or attachments. **⚠**

Hello,

Can you please confirm that only TPH GRO and moisture is needed on the soils samples on these? Are you not needing DRO/ORO or metals as is in the quote?

Also, one trip blank vial arrived broken so we will only be able to analyze the one that we have.

Thanks!

Bob Michels
Project Manager

Eurofins Environment Testing North Central, LLC, Cedar Falls, IA
Mobile: 319-229-8211
Office: 319-277-2401

E-mail: Bob.Michels@et.eurofinsus.com
www.eurofinsus.com/env

From: Bob Michels <Bob.Michels@et.eurofinsus.com>
Sent: Thursday, October 12, 2023 4:46 PM
To: Bob Michels <Bob.Michels@et.eurofinsus.com>
Subject: Eurofins Environment Testing North Central, LLC Sample Login Confirmation files from 310-267039-1 Joplin MO Union Depot Site

INFO: INTERNAL EMAIL - Sent from your own Eurofins email domain.

Hello,

Attached, please find the Sample Confirmation files for job 310-267039-1; Joplin MO Union Depot Site

Please feel free to contact me if you have any questions.

Thank you.

Recipients:
emily.fisher@tetrattech.com

Attachments:
Std_Tal_Login_CheckList_Receipt for 310-267039-1.pdf
COC 310-267039 (202310121230).pdf

Reference: [310-672045]