TETRA TECH

May 27, 2014

Mr. Todd Davis
Site Assessment Manager
U.S. Environmental Protection Agency, Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

**Subject:** **Phase II Targeted Brownfields Assessment**
**KCMO Public Works East Garage (also known as Municipal Farms Area 7)**
**Kansas City, Jackson County, Missouri**
**EPA Region 7, START 4, Contract No. EP-S7-13-06, Task Order No. 0002.019.001**
**Monitor: Todd Davis, Site Assessment Team Leader**

Dear Mr. Davis:

Tetra Tech, Inc. is submitting the attached Phase II Targeted Brownfields Assessment (TBA) report regarding the KCMO Public Works East Garage site in Kansas City, Missouri. The TBA includes an investigation to confirm or eliminate recognized environmental conditions specified in the Phase I TBA report finalized by Tetra Tech, Inc., in January 2014.

If you have any questions or comments regarding this submittal, please call the project manager at (816)-412-1778.

Sincerely,

for Kumud Pyakuryal
START Project Manager

Ted Faile, PG, CHMM
START Program Manager

Enclosures



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# PHASE II TARGETED BROWNFIELDS ASSESSMENT REPORT

# KANSAS CITY PUBLIC WORKS EAST GARAGE SITE
# 4635 AND 4725 EAST COAL MINE ROAD, KANSAS CITY, MISSOURI

**Superfund Technical Assessment and Response Team (START) 4**

**EP-S7-13-06, Task Order No. 0002.019.001**

Prepared For:

U.S. Environmental Protection Agency
Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

May 27, 2014

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## EXECUTIVE SUMMARY

The Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) was tasked by the U.S. Environmental Protection Agency (EPA) Region 7 Superfund Division to conduct a Phase II Targeted Brownfields Assessment (TBA) of the approximately 14.5-acre Kansas City Missouri Public Works East Garage site at 4635 East Coal Mine Road and 4725 East Coal Mine Road in Kansas City, Jackson County, Missouri (subject property); this site is also referred to as Municipal Farm Area 7 in its Conceptual Land Use Plan (CLUP). The City of Kansas City, Missouri (City) requested assessment assistance under the TBA program from EPA Region 7 for assessing current environmental conditions at the site with intent to create a permanent farm location for a non-profit youth agricultural program to grow produce for harvest and production of food products to be sold in local groceries and markets. START conducted this Phase II TBA in accordance with the *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, ASTM International (ASTM) designation E1903-97-11, and otherwise in compliance with EPA's "All Appropriate Inquiries" Rule (AAI Rule) (40 *Code of Federal Regulations* [CFR] Part 312).

A Phase I TBA of the subject property completed in January 2014 resulted in findings and specifications of recognized environmental conditions (REC) to the subject property that appear in detail in Section 2.5.

The purpose of this Phase II TBA was to determine if historical activities at the subject property had impacted surface soil, sediment, subsurface soil, and/or groundwater. During this Phase II TBA at the subject property, soil, groundwater, and sediment samples were collected to assess environmental impacts. Analytical results were compared to Missouri Risk-Based Corrective Action (MRBCA) Tier 1 risk-based target levels (RBTL) for residential and non-residential land use for sandy soil types.

Findings and recommendations from the Phase II TBA are as follows:

Based on sampling during this Phase II TBA, elevated levels of arsenic and lead are present in the soil at the former landfill area, and elevated levels of metals are present in the groundwater. No soil, sediment, or water sample contained concentrations of VOCs above respective MRBCA lowest default target levels (LDTL) (Missouri Department of Natural Resource [MDNR] 2006). Concentrations of three SVOCs exceeded the respective LDTLs in two soil samples, but only benzo(a)pyrene and bis(2-chloroisopropyl)ether exceeded the respective Tier 1 RBTLs for residential soil. Of the metals in soil and sediment that exceeded LDTLs, none exceeded its Tier 1 RBTL for non-residential land use.

Concentrations of arsenic (dissolved and total), cadmium, chromium, and lead exceeded the respective LDTLs in groundwater at sample location GW-04. A groundwater sample was collected at only one location; groundwater was not encountered at other locations. Nevertheless, review of results from that groundwater sample suggests possible impacts on groundwater at the site from past on-site activities. All other RECs listed in the Phase I TBA (Tetra Tech 2014) were eliminated by examination of results from the Phase II sampling.

Use of groundwater at the subject property as drinking water is unlikely, because the subject property is within city limits and utilizes city water. However, if a decision to use the groundwater for drinking purposes occurs in the future, and metals contamination continues to be a concern after the decision regarding future use of the subject property, further investigation may be necessary.

# 1.0 INTRODUCTION

The Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) was tasked by the U.S. Environmental Protection Agency (EPA) Region 7 Superfund Division to conduct a Phase II Targeted Brownfields Assessment (TBA) of the approximately 14.5-acre Kansas City Missouri Public Works East Garage site at 4635 East Coal Mine Road and 4725 East Coal Mine Road in Kansas City, Jackson County, Missouri. The City of Kansas City, Missouri (City) requested assessment assistance under the TBA program from EPA Region 7 for assessing current environmental conditions at the site with intent to create a permanent farm location for a non-profit youth agricultural program to grow produce for harvest and production of food products to be sold in local groceries and markets. START conducted this Phase II TBA in accordance with the *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, ASTM International (ASTM) designation E1903-97-11, and otherwise in compliance with EPA's "All Appropriate Inquiries" Rule (AAI Rule) (40 *Code of Federal Regulations* [CFR] Part 312).

## 1.1 PURPOSE

The purpose of this Phase II TBA was to determine if historical activities at the subject property had impacted surface soil, sediment, subsurface soil, or groundwater at and around items posing recognized environmental conditions (REC) that Tetra Tech had identified during the January 2014 Phase I TBA. During this Phase II TBA at the subject property, soil, groundwater, and sediment samples were collected to confirm or eliminate RECs. Analytical results were compared to Missouri Risk-Based Corrective Action (MRBCA) lowest default target levels (LDTL), and to Tier 1 risk-based target levels (RBTL) for residential and non-residential land use for sandy soil types.

## 1.2 SPECIAL TERMS AND CONDITIONS

There were no special terms or conditions for the TBA.

## 2.0 BACKGROUND AND SITE HISTORY

This section provides a brief description of the subject property: the physical setting, including geology, hydrogeology, and hydrology; site history and land use; adjacent land use; and a summary of previous assessments.

### 2.1 SITE DESCRIPTION AND FEATURES

For the purposes of the TBA, the subject property encompasses approximately 14.5 acres of land associated with the street addresses of 4725 and 4635 East Coal Mine Road in Kansas City, Jackson County, Missouri (see Figure 1, Appendix A), currently owned by the City. The subject property encompasses three whole City parcels (I, II, and III [see below]) and approximately 7 acres of undeveloped land at the southwest corner of Parcel IV. According to the City of Kansas City, Missouri KC Mapper website, legal descriptions of the parcels included in the subject property are as follows (City 2013 and Tetra Tech 2014a):

> Parcel I – JA31620040200000000
>
> SEC 25-49-33 S1/2 NW1/4 ALL TH PT OF NW 1/4 SE 1/4 25-49-33 LY S OF K C S RY (EX PT DAF: BEG AT SW COR NW 1/4 TH N 514' TH E 332' TH SELY 1000' MOL TO A PT 15' N OF S LI OF E LI OF W 1/I SD 1/4 SEC TH S 15' TH W 1315' TO POB)
>
> Parcel II – JA31610060200000000
>
> SEC 25-49-33 NW1/4 NE1/4 BEG 1115' S OF NW COR NE TH E 1475' TH N 18' TH NWLY 350'P/M TO SPUR TRACK TH CONT NWLY ALG SD SPUR TO SLY LI KCS RY TH SWLY ALG SD LI TO W LI OF 1/4 SEC TH S 310' TO BEG Parcel III - JA31620040300000000
>
> Parcel III
>
> SEC 25-49-33 SW1/4 NE1/4 BEG 935.22' N OF SW COR OF NE 1/4 TH N 615.78' TH E 1485' TH S 615.78' TH W 1485' TO POB.

The subject property is depicted on the United States Geological Survey (USGS) 7.5-minute series Kansas City, Missouri topographic quadrangle map (USGS 1996) in northern ½ of Section 25, Township 49 north, Range 33 west (see Figure 1, Appendix A). Coordinates at the approximate center of the property are 39° 2’ 33.36” north latitude and 94° 30’29.52” west longitude (Google Earth 2013).

### 2.2 PHYSICAL SETTING

As described in Section 2.1, the subject property encompasses approximately 14.5 acres south of East Coal Mine Road in Kansas City, Jackson County, Missouri. The subject property is bounded north by East Coal

Mine Road and divided into east and west plots by an unimproved road used to access the existing Botts Radio Communications Towers south of the subject property. A pond and lagoon, respectively, border the eastern and western boundaries of the subject property. It includes lightly forested land and former agricultural land, with an unimproved driveway extending southward from East Coal Mine Road.

Jackson County is within the west-central part of Missouri, in the Iowa and Missouri Deep Loess Hills Resource Area of the Central Feed Grains and Livestock Region of the United States. The Missouri River is the northern boundary of the county. The northern part of the county is the nearly level flood plain of the Missouri River. Adjacent to the flood plain and south are moderately sloping to steep, loess-covered bluffs and hills. The rest of the county consists of gently sloping to moderately sloping uplands and flood plains of the Blue River, Little Blue River, Sni-A-Bar Creek, and their tributaries (U.S. Department of Agriculture [USDA] 1984).

Elevations in Jackson County range from 1,105 feet above mean sea level (amsl) on the divide in the south-central part of the county to 690 feet amsl at normal water level on the Missouri River at the county line on the eastern side of the county (USDA 1984). Based on a review of the USGS 7.5-minute series Independence, Missouri, topographic quadrangle map (USGS 1996), the subject property ranges from approximately 760 to 860 feet amsl. The subject property consists of relatively even terrain, with the highest location over the area of land near the northern portion of the subject property, next to East Coal Mine Road. However, area topography in the site area generally slopes west and north toward the Blue River.

### 2.2.1 Geologic Setting

Soils on the subject property are of Snead-Menfro-Oska association. This association occurs at strongly dissected uplands adjacent to flood plains of intermediate and small streams, with plenty of rock outcrops. The Snead-Menfro-Oska association covers about 20 percent of Jackson County, and percentages of areas taken up within that 20 percent by components of the association are as follows: 32 percent Snead soils, 25 percent Menfro soils, 11 percent Oska soils, and 32 percent other soils (USDA 1984).

The upper bedrock formation in the vicinity of the subject property consists of the middle Kansas City Group, Missourian Series, Pennsylvania System (Missouri Bureau of Geology and Mines 1917). Underlying the Kansas City Group are the shales of the Pleasanton Group. Underlying the Pleasanton Group are predominantly shales of the Marmaton and Cherokee Groups of the Desmoinesian Series (Missouri Department of Natural Resources [MDNR] 1997). Maximum thicknesses of these groups are as

follows: 135 feet for the Kansas City Group, 150 feet for the Pleasanton Group, and 190 feet for the Marmaton Group (Stohr, St. Ivany, and Williams 1981).

### 2.2.2 Hydrogeology

Local Pennsylvanian-age bedrock units generally yield low quantities of marginal quality groundwater high in dissolved solids—particularly chlorides, iron, and bicarbonates (Stohr, St. Ivany, and Williams 1981). According to the user-provided information in the area-wide Brownfields sustainable reuse plan, although the subject property is close to major utility lines, future water demands should be determined to indicate whether the 8-inch line feeding the nearby Public Works Facility and Lift Station can be extended for future needs within the subject property. Nearby water supplied by the City of Kansas City, Missouri, Water Department is obtained from the Missouri River and groundwater sources near the river.

Mississippian and Pennsylvania formations form the bedrock aquifers in this region. The Pennsylvanian aquifers are characterized by water table conditions; however, because of the geologic structure in the region, artesian conditions may exist locally in shallow wells. Artesian conditions exist in deeper wells that were drilled to Ordovician bedrock. Water yields are low (1 to 15 gallons per minute [gpm]), and the water is high in chlorides, sodium, iron, bicarbonates, and other dissolved solids. Water yields increase in deeper wells, but quality decreases significantly with depth. Water table depths in the alluvium and terraces of the flood plains in the region are 20 to 30 feet (Stohr, St. Ivany, and Williams 1981).

Mississippian and older bedrock aquifers exhibit leaky artesian conditions; however, water table conditions exist near the border of the Ozark Plateaus. Water yields vary from 25 to a few hundred gpm. The water quality is highest near the eastern border of the Osage Plains, and decreases toward the northwest, with increasing concentrations of chlorides, sodium, and other dissolved solids. Recharge is by regional water movement from the Ozark Plateaus and by limited infiltration of precipitation (Stohr, St. Ivany, and Williams 1981).

Numerous drainageways dissect the bedrock in this area and flow into the Blue River. Transient water also may be encountered within fracture zones and along bedding planes, and frequently discharges at bedrock outcrops.

Environmental Data Resources, Inc. (EDR), a START subcontractor, identified two federal USGS wells and one state database well within 1 mile of the subject property by searching state and USGS database listings. The reported total depths of the wells ranged from 615 to 652 feet below ground surface (bgs); total depth of the second USGS well was not reported. Static water levels at the wells were not provided,

and EDR extracted no data on groundwater flow and velocity (Tetra Tech 2014a). In the absence of site-specific data or other indicators, the direction of groundwater flow may be inferred from the regional topographic gradient. Therefore, the deeper groundwater flow is inferred to the north in the direction of the topographic gradient and surface water flow toward the Blue River (see Appendix A, Figure 2) The lagoon and pond east and west of the subject property, respectively, may also capture some shallow groundwater infiltration at the subject property.

### 2.2.3 Hydrology

Based on the USGS map, surface water on the subject property appears to follow surface topography and either infiltrates the ground or flows east (toward the lagoon) or west (toward the pond). The northern boundary of the subject property is topographically only about 40 feet higher than the Blue River.

## 2.3 SITE HISTORY AND LAND USE

According to the TBA application completed by the City, the subject property was used for agricultural purposes between the 1940s and 1970s. In addition, the application states that a 3- to 5-acre landfill constructed around 1991-1995 on the subject property received sediments dredged from the Blue River near the former ARMCO steel plant; after placement of those sediments, the landfill was covered with 2 feet of clay soil.

## 2.4 ADJACENT PROPERTY USE

The subject property is bounded north by East Coal Mine Road, with the Blue River beyond; east by a lagoon, with forestland and open lands beyond; south by the Botts Radio communication towers; and west by an unnamed pond. No known information indicates use of the lagoon as a surface impoundment to store waste materials. A review of historical documents indicated that the area surrounding the subject property has been used for a variety of residential and municipal purposes (Tetra Tech 2014a).

## 2.5 SUMMARY OF PREVIOUS ASSESSMENTS

Environmental Advisors and Engineers (EAE) prepared an Area-Wide Brownfields Plan (AWBP) regarding the Municipal Farms properties for facilitating sustainable reuse and development of the area (EAE 2012). Based on available information about the CLUP areas that include the subject property, the most likely contaminants present were identified as polychlorinated biphenyls (PCB), metals, and

herbicides/pesticides. In January 2014, Tetra Tech prepared a Phase I TBA on behalf of the EPA for this site in Kansas City, Missouri. The following findings resulted:

- Several 1-quart petroleum containers were observed around the subject property. An empty 5-gallon bucket and automobile-related trash were observed along the driveway, on the subject property. Although no staining was observed around the drums, because the original contents are unknown, and because materials from any of the containers may have leaked onto the ground, presence of these containers poses an environmental concern to the subject property.

- Review of historical aerial photographs and site documents provided by the City of Kansas City confirmed presence of a landfill area, which is a REC, that has since been re-vegetated. According to Mr. Bracker at the City of Kansas City, the subject property was used for agricultural purposes. However, a portion of it served as a landfill between 1991 and 1995 to receive sediments dredged from the Blue River near the former ARMCO steel plant. The application also indicated that the sediments contained total recoverable petroleum hydrocarbons at concentrations ranging from 50 to at least 200 parts per million (ppm) and possibly up to 500 to 1,000 ppm. A 2-foot clay soil cover was placed over the landfill. Historical aerial photographs from the early- to mid-1990s show the distressed areas associated the landfill. No analytical data packages were available for review during this Phase I.

- Two 10,000-gallon aboveground storage tanks (AST) were observed west of the subject property in the Public Works facilities. Because the contents of the ASTs could be hazardous, presence of the ASTs poses an environmental concern to the subject property.

- At the time of the reconnaissance, solid waste and debris consisting of tires, electronics, organic waste, and general solid waste items were observed on the subject property. This area of solid waste storage poses an environmental concern to the subject property.

  To summarize, likelihood of releases of hazardous material or hazardous waste releases from the drums, containers, and former landfill pose RECs or environmental concerns to the subject property. Based on identifications of these RECs, START recommended a Phase II TBA at the subject property to assess presence of contaminants via collection of sediment, groundwater, surface, and subsurface soil samples for laboratory analysis. Tetra Tech recommended analyzing these samples for PCBs, volatile organic compounds (VOC), semivolatile organic compounds (SVOC), herbicides/pesticides, the eight Resource Conservation and Recovery Act (RCRA) metals, total petroleum hydrocarbons (TPH)-diesel range organics (DRO), TPH-gasoline range organics (GRO), and TPH-oil range organics (ORO).

## 3.0 PHASE II TARGETED BROWNFIELDS ASSESSMENT ACTIVITIES

The purpose of this Phase II TBA was to determine if historical activities at the subject property had impacted surface soil, sediment, subsurface soil, or groundwater at and around items posing RECs.

The following sections describe the scope of the Phase II TBA, and field exploration and methods. START members (SM) Kumud Pyakuryal and Cosmo Canacari conducted sampling activities on March 31 and April 1, 2014.

### 3.1 SCOPE OF THE ASSESSMENT

STMs conducted environmental sampling to determine if surface soil, sediment, subsurface soil, and/or groundwater had been impacted by current or historical activities at the subject property. Photographs taken to document the Phase II TBA field activities are included in Appendix B. Chain-of-custody records, analytical data packages, and a data validation report are in Appendix C. Analytical summary tables appear in Appendix D. The sampling proceeded in accordance with an approved Quality Assurance Project Plan (QAPP) completed under Task Order 019.001 (Tetra Tech 2014b).

#### 3.1.1 Conceptual Site Model and Sampling Plan

The QAPP issued in January 2014 was consistent with standard practice within the ASTM Phase II process, proposing a sampling scheme for collection of soil, water, and sediment samples that was biased/judgmental, in accordance with the *Guidance for Performing Site Inspections under Comprehensive Environmental Response Compensation and Liability Act (CERCLA)*, Office of Solid Waste and Emergency Response (OSWER) Directive #9345.1-05, September 1992; and the *Removal Program Representative Sampling Guidance, Volume 1: Soil*, OSWER Directive 9360.4-10, November 1991 (Tetra Tech 2014b). The objectives were to characterize possible historical releases to the environment prior to future development of the property. Surface soil, subsurface soil, sediment, and groundwater samples were collected to identify contamination possibly present at the subject property. START attempted to sample groundwater at several locations; however, groundwater was encountered and sampled at only one location. Table D-1 summarizes samples collected during the Phase II TBA and the analyses performed.

### 3.1.2 Chemical Testing Plan

All samples were submitted to a START-contracted ALS Environmental (ALS) laboratory for analysis. The soil, sediment, and groundwater samples were analyzed for PCBs, VOCs, SVOCs, total RCRA metals (including mercury), TPH-GRO, TPH DRO, TPH-ORO, pesticides, and herbicides. The groundwater sample was also submitted for analysis for dissolved metals. All samples were analyzed according to standard operating procedures (SOP) and methods specified in the January 2014 QAPP, which was subsequently approved by EPA. START selected a laboratory with analytical detection limits below applicable MRBCA default target levels for all analytes. Appropriate containers and physical/chemical preservation techniques were employed during the field activities to help ensure that representative analytical results would be obtained. Samples were shipped to ALS on April 1, 2014; the samples were received by the laboratory on April 2, 2014.

### 3.1.3 Deviations from the QAPP

Deviations from the QAPP and rationales for these are as follows:

- START was able to collect groundwater samples by use of direct-push technology (DPT) at only one location because no groundwater was encountered at other locations where groundwater sampling was attempted.
- Two sampling locations (SO-01 and SO-02) had to be moved because the DPT-mounted truck would not have been able to access these locations without clearance of existing trees and overgrowth.

## 3.2 FIELD EXPLORATION AND METHODS

Field activities at the subject property occurred on March 31 and April 1, 2014. The sections below summarize sample collections that occurred.

### 3.2.1 Sediment Sampling

During Phase II TBA activities, two sediment samples were collected—one each at locations adjacent to the lagoon and pond (east and west, respectively, of the subject property) (see Appendix A, Figure 2). Sediment samples are designated on the map as "SED." At each location, a sediment sample was collected from the top 6 inches by use of a clean, dedicated, stainless steel spoon, and was placed in 8-ounce jars. The samples were subsequently analyzed for RCRA metals (including mercury), PCBs, and herbicides/pesticides. Pertinent data, including sample locations, were recorded in the field log book. All sediment samples were stored in coolers maintained at temperatures at or below 4 degrees Celsius (°C).

### 3.2.2 Subsurface Soil Sampling

Subsurface soil samples were collected at two depths at six boring locations (maximum collection depth of 20 feet bgs) (see Table D-1 and Appendix A, Figure 2). Subsurface soils are designated on the map as "SO." Sample numbers are designated as SO-S-XX-XX and SO-D-XX-XX, with the latter specifying sampling at greater depth than the former. Each borehole was advanced by use of a Geoprobe™ 4-foot-long Macro-Core® sampler fitted with a disposable polyvinyl chloride (PVC) liner. Soil samples were collected in accordance with Region 7 EPA Standard Operating Procedure (SOP) 4230.07: Geoprobe™ operations. A hand-held photoionization detector (PID) was used to screen each 4-foot core interval for volatile organics, and a sample was collected from the interval inducing the highest PID readings or showing other evidence of contamination. If no elevated PID readings or other signs of contamination were noted, a sample was collected from the base of the boring. Each sample for laboratory analysis included a grab sample for analysis for VOCs collected in accordance with EPA SW 846 Method 5035, and consisted of two 5-gram soil aliquots in separate 40-milliliter (mL) vials preserved with sodium bisulfate, and one 5-gram soil aliquot in a 40-mL vial preserved with methanol. After collection of the grab samples, the remaining soil from each sample interval was placed in a disposable aluminum pie pan for homogenization, and then transferred to the appropriate number of 4-ounce jars for analysis for TPH-GRO and TPH-DRO. The Geoprobe™ Macro-Core® sampler was decontaminated using an alconox/water solution, followed by a fresh water rinse. Pertinent data, including analyses to be performed and sample locations, were recorded in the field log book. All soil samples were stored in coolers maintained at temperatures at or below 4 °C.

### 3.2.3 Groundwater Sampling

A groundwater sample was collected from one temporary monitoring well on the subject property. Groundwater was encountered between 28 and 30 feet bgs. The sample was collected by use of a Geoprobe Screen Point 15 sampling apparatus equipped with reusable, 4-foot-long, stainless steel screen. The sampler was advanced to the maximum depth (32 feet bgs); then the screen was exposed to the aquifer. After the screen was deployed at the bottom of the boring, a sample was collected through disposable polyethylene tubing utilizing a peristaltic pump or check valve placed at the bottom of the tubing. The groundwater sampler and rods were decontaminated after sampling. Pertinent data, including analyses to be performed and sample locations, were recorded in the field log book. The groundwater sample was field filtered for dissolved metals. It was stored in coolers maintained at temperatures at or below 4 C.

### 3.2.4 Quality Control Sampling

Two trip blanks (one for water, one for soil) supplied by ALS Environmental were analyzed for VOCs.

# 4.0 EVALUATION AND PRESENTATION OF RESULTS

Sections 4.1 through 4.5 summarize the analytical data from the samples collected during the Phase II TBA. Based on the USDA Soil Survey of Jackson County, Missouri (USDA 1984), the soil at this location is named Bremer silt loam of the Kennebec-Colo-Bremer association (see Appendix A, Figure 2); this association covers about 10 percent of the county. Bremer silt loams are deep, nearly level, poorly drained soil on low terraces along streams. The surface layer is black silt loam, and subsoil is very dark gray and dark gray, mottled, firm, silty clay loam in the upper part; dark grayish brown, firm, silty clay loam in the middle part; and multicolored, firm, silty clay loam in the lower part. Bremer silt loam is subject to occasional flooding unless protected by levees. Individual areas are irregularly shaped and range from 5 to 30 acres. According to the MRBCA soil classification guideline (MDNR 2006), Bremer silt loam appears to qualify as Type 2, because this silty loam association consists of 50 percent or more of silt and 12 to 27 percent clay, or 50 to 80 percent silt and less than 12 percent clay. Although a Type 2 soil may be present at the site, soil sample results from this TBA were compared to more conservative MRBCA-specified values for Type 2 target levels for residential land use for sandy soil types (MDNR 2006). These values have been established to represent protective concentration thresholds of common environmental contaminants. Mercury, arsenic, lead, and selenium concentrations were also compared to mean background concentrations in Jackson County, Missouri (USGS 2012). The complete analytical data packages for all samples are included as Appendix C, and results are compared to screening values in Appendix D Tables.

## 4.1 SEDIMENT SAMPLES

The sediment samples were analyzed for metals, PCBs, and herbicides/pesticides. No PCBs or herbicides/pesticides were detected. Arsenic was detected above the LDTL in samples SED-01 and SED-02, but the concentrations were below the target level for non-residential sandy soil. Lead was detected in both sediment samples at levels above the LDTL. However, these concentrations did not exceed the target level for residential Type 1 soils.

## 4.2 SUBSURFACE SOIL SAMPLES

Except for common lab contaminants, no VOCs (including TPH-GRO) exceeded the LDTLs. Except for 2,6-dinitrotoluene (at 0.12 milligrams per kilogram [mg/kg] in sample SO-02-S-0-4), benzo(a)pyrene (at 0.96 mg/kg in sample SO-04-S-0-4), and bis(2-chloroisopropyl)ether, no other SVOCs (including TPH-ORO and TPH-DRO) exceeded the LDTLs. Arsenic and lead exceeded the LDTLs in all of the soil

samples. Arsenic and lead exceeded the LDTLs in all subsurface soil samples. Arsenic also found above the Tier 1 RBTLs for residential land use.

### 4.3 GROUNDWATER

In groundwater sample GW-04, no detected concentrations of VOCs (including TPH-GRO) or SVOCs (including TPH-ORO and TPH-DRO) exceeded sample detection limits. Total concentrations of arsenic, cadmium, chromium, and lead met or exceeded their respective LDTLs. Among the dissolved metals concentrations detected, only that of arsenic exceeded the LDTL.

### 4.4 QUALITY CONTROL SAMPLES

Trace amounts of the VOCs acetone, methylene chloride, and toluene (common laboratory contaminants) were detected in the soil trip blank. Because these common laboratory contaminants were detected at low concentrations and these contaminants were not identified at levels of concern in the field-collected samples, no qualifications to the data are required. No VOCs were detected in the water trip blank.

# 5.0 DISCUSSION OF FINDINGS AND CONCLUSIONS

This section summarizes findings and presents conclusions regarding the Phase II TBA field activities.

## 5.1 RECOGNIZED ENVIRONMENTAL CONDITIONS

No soil, sediment, or groundwater samples contained concentrations of VOCs above respective LDTLs. Three SVOCs exceeded their LDTLs in two soil samples, but only benzo(a)pyrene exceeded the Tier 1 RBTLs for residential soil. Of the metals in soil and sediment that exceeded LDTLs, none exceeded its Tier 1 RBTL for non-residential land use.

Arsenic (dissolved and total), cadmium, chromium, and lead concentrations exceeded their respective LDTLs in groundwater at sample location GW-04. Based on this information, it appears groundwater at the site has been impacted by past on-site activities. No other RECs listed in the Phase I TBA (Tetra Tech 2014a) are of concern based on the Phase II sampling results.

## 5.2 AFFECTED MEDIA

Based on sampling during this Phase II TBA, elevated levels of arsenic and lead are present in the soil at the former landfill area, and elevated levels of metals are present in the groundwater.

In the 1990s, the subject property was used as a landfill that received sediments dredged from the Blue River near the former ARMCO steel plant. This may explain the elevated levels of heavy metals—particularly lead—in soil, sediment, and groundwater. Arsenic concentrations, although above the LDTL, appear to be at the USGS-specified background concentration in soils; however, concentrations of arsenic, cadmium, chromium, and lead exceeded the respective LDTLs in groundwater. The City is assessing current environmental conditions at the site with intent to create a permanent location for a non-profit youth agricultural program to grow produce for harvest and production of food products to be sold in local groceries and markets, and will be able to determine whether further sampling is necessary according to anticipated future use.

Use of groundwater at the subject property as drinking water is unlikely because the subject property is well within city limits and utilizes city water. Overall, based on results from sampling during this Phase II TBA, no contaminant in soil, sediment, or groundwater associated with the Phase I RECs is present at the subject property at concentration likely to pose a critical threat to human health or the environment.

## 6.0 REFERENCES


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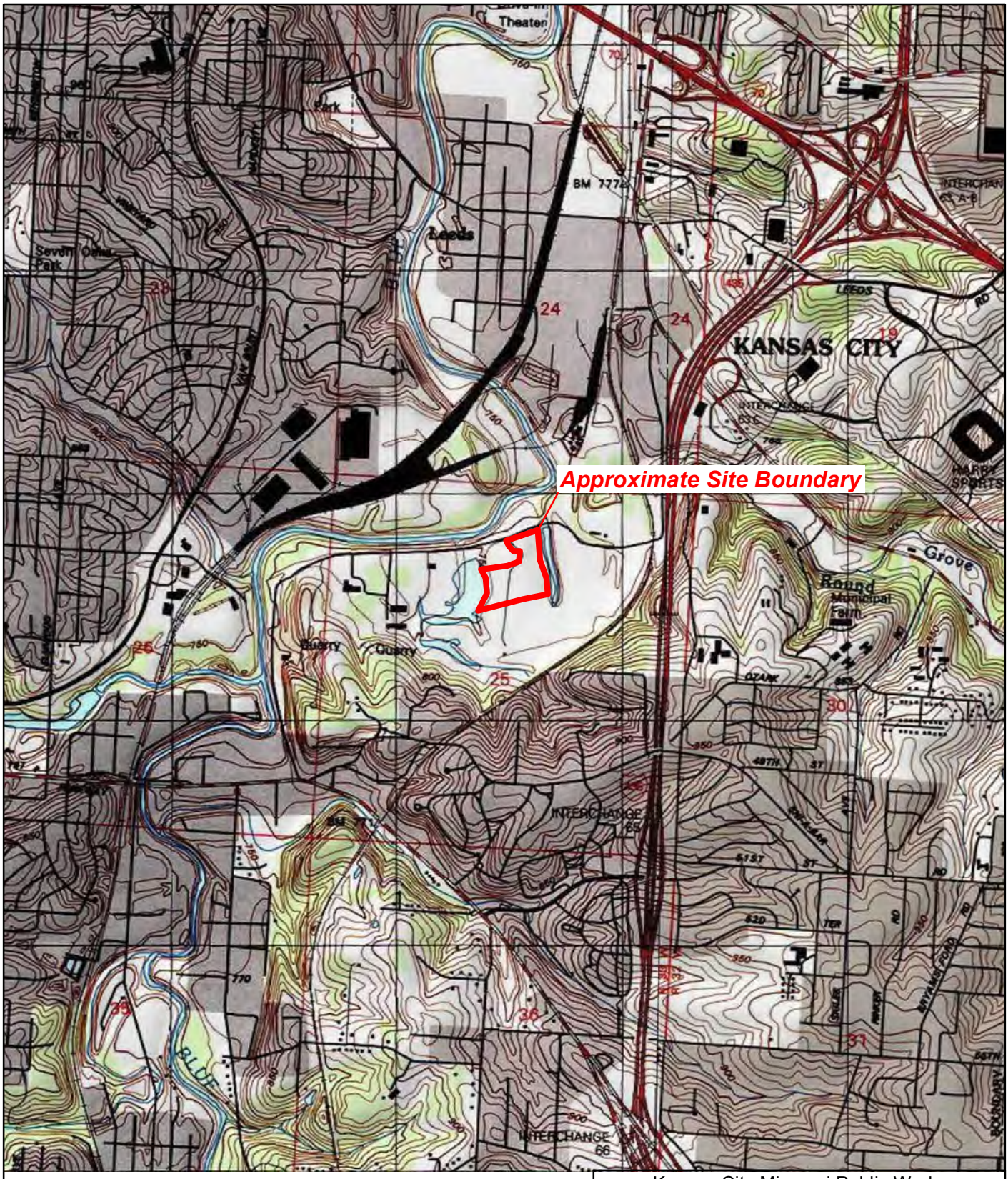
# APPENDIX A

# FIGURES




Source: USGS Independence, MO 7.5 Minute Topo Quad, 1996
USGS Kansas City, MO 7.5 Minute Topo Quad, 1996

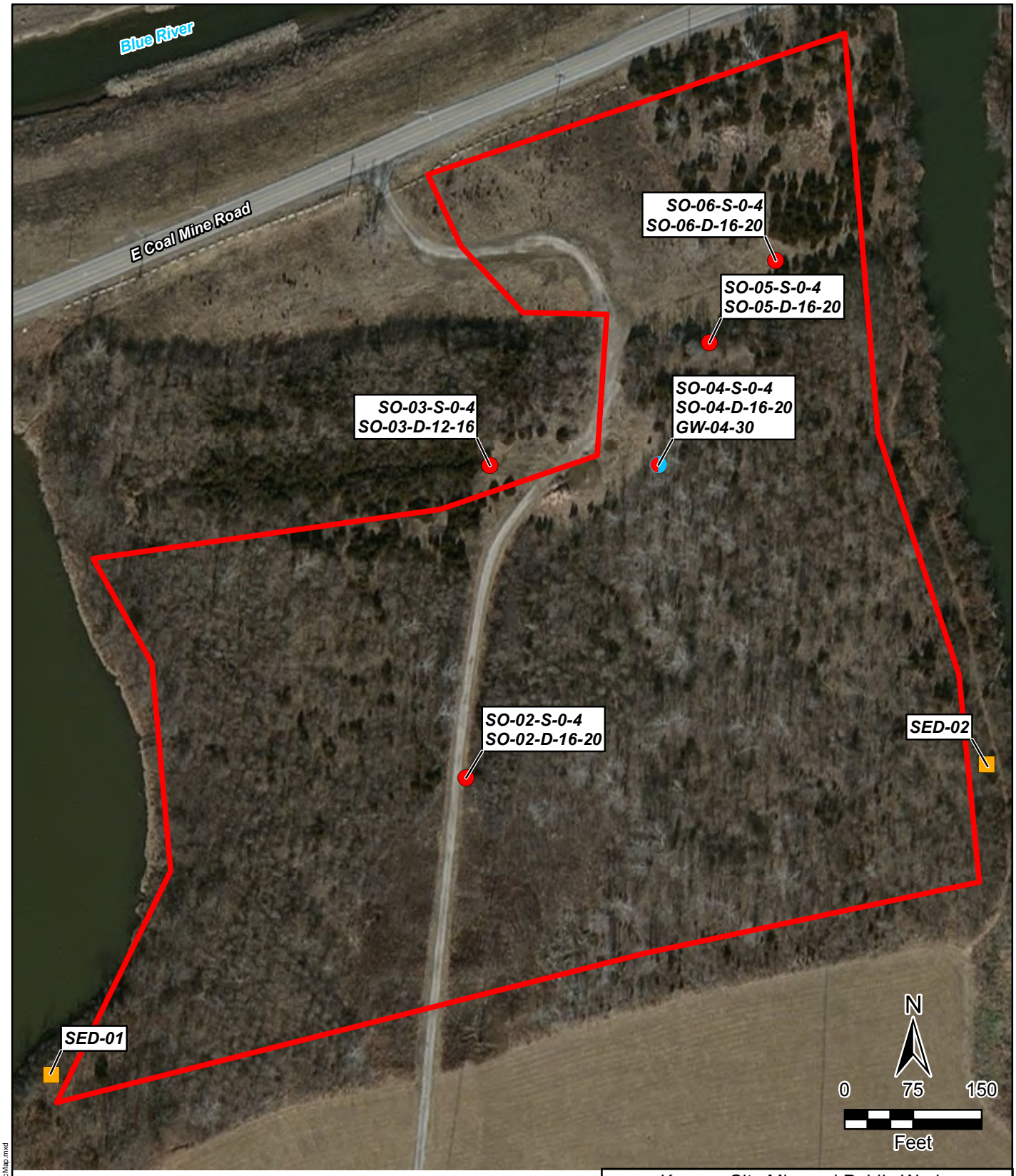
Kansas City Missouri Public Works
East Garage Site
Kansas City, Missouri

**Figure 1**
Site Location Map

TETRA TECH

Date: 4/29/14 Drawn By: Nick Wiederholt Project No: X9025.14.0002.019.001

X:\GIS\9025\0002\019.001\Projects\mxd\Figure1.mxd




Legend

Sample locations

- DPT soil (deep and shallow)
- DPT soil/groundwater (deep and shallow)
- Sediment
- Potential BoysGrow site boundary
- DPT Direct push technology

Source: ArcGIS Online, World Imagery, 2012

Kansas City Missouri Public Works
East Garage Site
Kansas City, Missouri

**Figure 2**
Sample Location Map

TETRA TECH

Date: 4/29/14 Drawn By: Nick Wiederholt Project No: X9025.14.0002.019.001

X:\G\9025\0002\019.001\Projects\mxd\Figure2_SampleLocMap.mxd

# APPENDIX B

# PHOTOGRAPHIC DOCUMENTATION

**Kansas City Missouri Public Works East Garage**
**Jackson County, Missouri**

| | | | |
|---|---|---|---|
| TETRA TECH<br>PROJECT NO.<br>X9025.14.0002.019.001<br>DIRECTION: Southwest | DESCRIPTION | This photograph shows collection of soil samples SO-06-S-0-4 and SO-06-S-16-20. | 1 |
| | CLIENT | Environmental Protection Agency - Region 7 | DATE<br>3/31/2014 |
| | PHOTOGRAPHER | Kumud Pyakuryal | |

| | | | |
|---|---|---|---|
| TETRA TECH<br>PROJECT NO.<br>X9025.14.0002.019.001<br>DIRECTION: South | DESCRIPTION | This photograph shows the U.S. Environmental Protection Agency (EPA) task monitor discussing groundwater sample depth at GW-04-30 with a member of the Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START). | 2 |
| | CLIENT | Environmental Protection Agency - Region 7 | DATE<br>3/31/2014 |
| | PHOTOGRAPHER | Kumud Pyakuryal | |

**Kansas City Missouri Public Works East Garage**
**Jackson County, Missouri**

| | | | |
|---|---|---|---|
| TETRA TECH<br>PROJECT NO.<br>X9025.14.0002.019.001<br>DIRECTION: Not Applicable | DESCRIPTION | This photograph shows soil borings from sampling location S0-04, before screening with a photoionization detector (PID). | 3 |
| | CLIENT | Environmental Protection Agency - Region 7 | DATE<br>3/31/2014 |
| | PHOTOGRAPHER | Kumud Pyakuryal | |

| | | | |
|---|---|---|---|
| TETRA TECH<br>PROJECT NO.<br>X9025.14.0002.019.001<br>DIRECTION: Not Applicable | DESCRIPTION | This photograph shows the initial attempt to collect sample SO-05 (for soil classification) before screening with a PID. | 4 |
| | CLIENT | Environmental Protection Agency - Region 7 | DATE<br>3/31/2014 |
| | PHOTOGRAPHER | Kumud Pyakuryal | |

**Kansas City Missouri Public Works East Garage**
**Jackson County, Missouri**

| | | | |
|---|---|---|---|
| TETRA TECH<br>PROJECT NO.<br>X9025.14.0002.019.001<br>DIRECTION: South | DESCRIPTION | This photograph shows a Tetra Tech team member advancing a borehole at SO-05 using a Geoprobe™. | 5 |
| | CLIENT | Environmental Protection Agency - Region 7 | DATE<br>3/31/2014 |
| | PHOTOGRAPHER | Kumud Pyakuryal | |

| | | | |
|---|---|---|---|
| TETRA TECH<br>PROJECT NO.<br>X9025.14.0002.019.001<br>DIRECTION: Northwest | DESCRIPTION | This photograph shows a Tetra Tech team member advancing a borehole at SO-03 using a Geoprobe™. | 6 |
| | CLIENT | Environmental Protection Agency - Region 7 | DATE<br>4/01/2014 |
| | PHOTOGRAPHER | Kumud Pyakuryal | |

**Kansas City Missouri Public Works East Garage**
**Jackson County, Missouri**

| | | | |
|---|---|---|---|
| TETRA TECH<br>PROJECT NO.<br>X9025.14.0002.019.001<br>DIRECTION: South | DESCRIPTION | This photograph shows an abandoned tire and electronics, adjacent and east of the access road extending southward onto the property from East Coal Mine Road. | 7 |
| | CLIENT | Environmental Protection Agency - Region 7 | DATE<br>4/01/2014 |
| | PHOTOGRAPHER | Kumud Pyakuryal | |

| | | | |
|---|---|---|---|
| TETRA TECH<br>PROJECT NO.<br>X9025.14.0002.019.001<br>DIRECTION: Southeast | DESCRIPTION | This photograph shows a Tetra Tech team member attempting to advance boring at sampling location SO-2. | 8 |
| | CLIENT | Environmental Protection Agency - Region 7 | DATE<br>4/01/2014 |
| | PHOTOGRAPHER | Kumud Pyakuryal | |

# APPENDIX C

# CHAIN-OF-CUSTODY RECORDS, ANALYTICAL DATA PACKAGES, AND DATA VALIDATION REPORT

14-Apr-2014

Kumud Pyakuryal
Tetra Tech
415 Oak Street
Kansas City, MO 64106

Re: **KCMO Public Works East Garage 3.31-4.1.14** Work Order: **1404130**

Dear Kumud,

ALS Environmental received 17 samples on 02-Apr-2014 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 158.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786



ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

# ALS Group USA, Corp

Date: 14-Apr-14

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Work Order:** **1404130**

## Work Order Sample Summary

| Lab Samp ID | Client Sample ID | Matrix | Tag Number | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| 1404130-01 | SO-01-S-0-4 | Soil | | 4/1/2014 15:30 | 4/2/2014 09:30 | ☐ |
| 1404130-02 | SO-01-D-16-20 | Soil | | 4/1/2014 16:00 | 4/2/2014 09:30 | ☐ |
| 1404130-03 | SO-02-S-0-4 | Soil | | 4/1/2014 12:15 | 4/2/2014 09:30 | ☐ |
| 1404130-04 | SO-02-D-16-20 | Soil | | 4/1/2014 12:40 | 4/2/2014 09:30 | ☐ |
| 1404130-05 | SO-03-S-0-4 | Soil | | 4/1/2014 11:10 | 4/2/2014 09:30 | ☐ |
| 1404130-06 | SO-03-D-12-16 | Soil | | 4/1/2014 11:45 | 4/2/2014 09:30 | ☐ |
| 1404130-07 | SO-04-S-0-4 | Soil | | 3/31/2014 11:10 | 4/2/2014 09:30 | ☐ |
| 1404130-08 | SO-04-D-16-20 | Soil | | 3/31/2014 12:00 | 4/2/2014 09:30 | ☐ |
| 1404130-09 | SO-05-S-0-4 | Soil | | 3/31/2014 15:05 | 4/2/2014 09:30 | ☐ |
| 1404130-10 | SO-05-D-16-20 | Soil | | 3/31/2014 15:45 | 4/2/2014 09:30 | ☐ |
| 1404130-11 | SO-06-S-0-4 | Soil | | 3/31/2014 16:00 | 4/2/2014 09:30 | ☐ |
| 1404130-12 | SO-06-D-16-20 | Soil | | 3/31/2014 16:30 | 4/2/2014 09:30 | ☐ |
| 1404130-13 | SED-01 | Sediment | | 3/31/2014 16:35 | 4/2/2014 09:30 | ☐ |
| 1404130-14 | SED-02 | Sediment | | 3/31/2014 16:00 | 4/2/2014 09:30 | ☐ |
| 1404130-15 | GW-04 | Water | | 3/31/2014 12:00 | 4/2/2014 09:30 | ☐ |
| 1404130-16 | Trip Blank | Soil | | 4/1/2014 | 4/2/2014 09:30 | ☐ |
| 1404130-17 | Trip Blank | Water | | 3/31/2014 | 4/2/2014 09:30 | ☐ |

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Work Order:** 1404130

# Case Narrative

Samples for the above noted Work Order were received on 04/02/2014. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:
Batch 57183 LCS recovery for Bromomethane was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for Bromomethane.

Batch R138301A LCS recovery for Bromomethane was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for Bromomethane. The
sample GW-04 MS/MSD recoveries for many Volatile compounds were below the control limits. The corresponding reporting limits in the parent sample may be biased low.

Batch R138353 LCS recovery for 4-Methyl-2-pentanone was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for 4-Methyl-2-pentanone.

Batch R138585 sample SO-03-D-12-16 MS/MSD recoveries for many Volatile compounds were below the control limits. The corresponding reporting limits in the parent sample may be biased low for these compounds.

All samples run from the TSP preserved low level Terra Core kits had a low recovery for the surrogate, Dibromofluoromethane, due to interference with the TSP preservative. No data requires qualification.

The soil Trip Blank had a reportable result for Acetone. This is a common laboratory solvent, and must be assumed this is caused by laboratory contamination.

Extractable Organics :
Batch 57176 sample GW-04 MS/MSD recoveries for 2,4-Dinitrophenol and 4,6-Dinitro-2-methyl phenol were below the control limits. The corresponding reporting limits in the parent sample may be biased low for 2,4-Dinitrophenol and 4,6-Dinitro-2-methyl phenol.

Batch 57224 LCS recovery for one Semi-Volatiles surrogate was above control limits and is considered a Sporadic Marginal Exceedence allowed by the SOP. No data requires qualification. Sample SO-02-S-0-4 MS recoveries for several PAH compounds were above control limits. The RPDs for Fluoranthene, Phenanthrene and Pyrene were also above control limits. The corresponding results for these three compounds may be biased high in the parent sample. No other compounds requires qualifications.

Batch 57224 sample 1404130-10 Semi-Volatiles surrogate recovery was below control limits due to matrix interference. All compounds were non-detect. The reporting limits may be biased low.

Batch 57371 MS/MSD data for Semi-Volatiles is not related to this project's samples. No data requires qualification.

Batch 57179 sample GW-04 RPD between the MS/MSD recoveries for the Semi-Volatile surrogate was above control limits. The individual MS/MSD recoveries met quality control criteria. No data requires qualification.

Metals:
Batch 57215 samples 1404130-01 through 1404130-06 reporting limits were elevated due to dilution for high concentrations of non-target analytes.

Batch 57215 sample SO-03-S-0-4 MS/MSD recoveries for Barium were above control limits, however, the result in the parent sample was greater than 4x the spiked amount. No qualification is required for Barium. The MS/MSD recoveries for Chromium were above control limits. The corresponding result in the parent sample may be biased high for Chromium.

Batch 57252 samples 1404130-07 through 1404130-14 reporting limits were elevated due to dilution for high concentrations of non-target analytes.

Batch 57252 sample SO-05-D-16-20 MS/MSD recoveries for Chromium were above control limits. The corresponding result in the parent sample may be biased high for Chromium. The MS/MSD recoveries and RPD for Barium were outside control limits, however, the result in the parent sample was greater than 4x the spiked amount. No qualification is required for Barium. The MS recovery for Lead was below control limits. Both the MSD recovery and

RPD met quality control criteria. No data requires qualification for Lead.

Wet Chemistry:
No deviations or anomalies noted.

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte is present at an estimated concentration between the MDL and Report Limit |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL |

| Acronym | Description |
|---|---|
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| LOD | Limit of Detection (see MDL) |
| LOQ | Limit of Quantitation (see PQL) |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PQL | Practical Quantitation Limit |
| RPD | Relative Percent Difference |
| TDL | Target Detection Limit |
| TNTC | Too Numerous To Count |
| A | APHA Standard Methods |
| D | ASTM |
| E | EPA |
| SW | SW-846 Update III |

| Units Reported | Description |
|---|---|
| % of sample | Percent of Sample |
| µg/Kg | Micrograms per Kilogram |
| µg/Kg-dry | Micrograms per Kilogram Dry Weight |
| µg/L | Micrograms per Liter |
| mg/Kg-dry | Milligrams per Kilogram Dry Weight |
| mg/L | Milligrams per Liter |

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-01-S-0-4
**Collection Date:** 4/1/2014 03:30 PM

**Work Order:** 1404130
**Lab ID:** 1404130-01
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 56 | 98 | µg/Kg-dry | 1 | 4/8/2014 15:16 |
| Aroclor 1221 | U | | 56 | 98 | µg/Kg-dry | 1 | 4/8/2014 15:16 |
| Aroclor 1232 | U | | 56 | 98 | µg/Kg-dry | 1 | 4/8/2014 15:16 |
| Aroclor 1242 | U | | 56 | 98 | µg/Kg-dry | 1 | 4/8/2014 15:16 |
| **Aroclor 1248** | **180** | | **56** | **98** | **µg/Kg-dry** | 1 | 4/8/2014 15:16 |
| Aroclor 1254 | U | | 36 | 98 | µg/Kg-dry | 1 | 4/8/2014 15:16 |
| Aroclor 1260 | U | | 36 | 98 | µg/Kg-dry | 1 | 4/8/2014 15:16 |
| *Surr: Decachlorobiphenyl* | *100* | | | *40-140* | *%REC* | 1 | 4/8/2014 15:16 |
| *Surr: Tetrachloro-m-xylene* | *94.1* | | | *45-124* | *%REC* | 1 | 4/8/2014 15:16 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.012** | J | **0.0010** | **0.021** | **mg/Kg-dry** | 1 | 4/3/2014 12:00 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **5.4** | | **0.28** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:32 |
| **Barium** | **180** | | **0.058** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:32 |
| **Cadmium** | **0.67** | J | **0.0084** | **0.84** | **mg/Kg-dry** | 5 | 4/4/2014 18:32 |
| **Chromium** | **22** | | **0.34** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:32 |
| **Lead** | **79** | | **0.0084** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:32 |
| **Selenium** | **1.4** | J | **0.27** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:32 |
| **Silver** | **0.51** | J | **0.0084** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:32 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| DRO (C10-C21) | U | | 1.5 | 3.5 | mg/Kg-dry | 1 | 4/8/2014 06:47 |
| ORO (C21-C35) | U | | 1.7 | 3.5 | mg/Kg-dry | 1 | 4/8/2014 06:47 |
| *Surr: 4-Terphenyl-d14* | *109* | | | *25-137* | *%REC* | 1 | 4/8/2014 06:47 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.0 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2,4,5-Trichlorophenol | U | | 10 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2,4,6-Trichlorophenol | U | | 6.8 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2,4-Dichlorophenol | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2,4-Dimethylphenol | U | | 65 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2,4-Dinitrophenol | U | | 36 | 800 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2,4-Dinitrotoluene | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2,6-Dinitrotoluene | U | | 21 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2-Chloronaphthalene | U | | 1.9 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2-Chlorophenol | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2-Methylnaphthalene | U | | 3.3 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2-Methylphenol | U | | 16 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-01-S-0-4
**Collection Date:** 4/1/2014 03:30 PM

**Work Order:** 1404130
**Lab ID:** 1404130-01
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 16 | 800 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 2-Nitrophenol | U | | 14 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 3,3´-Dichlorobenzidine | U | | 500 | 800 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 3-Nitroaniline | U | | 14 | 800 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 4,6-Dinitro-2-methylphenol | U | | 33 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 4-Bromophenyl phenyl ether | U | | 11 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 4-Chloro-3-methylphenol | U | | 9.3 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 4-Chloroaniline | U | | 12 | 800 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 4-Methylphenol | U | | 19 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 4-Nitroaniline | U | | 11 | 800 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| 4-Nitrophenol | U | | 8.0 | 800 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Acenaphthene | U | | 1.2 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Acenaphthylene | U | | 1.5 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Acetophenone | U | | 6.0 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Anthracene | U | | 1.6 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Atrazine | U | | 12 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Benzaldehyde | U | | 15 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| **Benzo(a)anthracene** | **22** | | **1.6** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 18:55 |
| **Benzo(a)pyrene** | **32** | | **2.6** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 18:55 |
| **Benzo(b)fluoranthene** | **51** | | **2.4** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 18:55 |
| **Benzo(g,h,i)perylene** | **30** | | **3.2** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 18:55 |
| Benzo(k)fluoranthene | U | | 1.7 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Bis(2-chloroethoxy)methane | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Bis(2-chloroethyl)ether | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Bis(2-chloroisopropyl)ether | U | | 17 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Bis(2-ethylhexyl)phthalate | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Butyl benzyl phthalate | U | | 15 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Caprolactam | U | | 18 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Carbazole | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| **Chrysene** | **26** | | **1.9** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 18:55 |
| Dibenzo(a,h)anthracene | U | | 3.0 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Dibenzofuran | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Diethyl phthalate | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Dimethyl phthalate | U | | 14 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Di-n-butyl phthalate | U | | 5.8 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Di-n-octyl phthalate | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| **Fluoranthene** | **32** | | **2.8** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 18:55 |
| Fluorene | U | | 2.7 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Hexachlorobenzene | U | | 11 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-01-S-0-4
**Collection Date:** 4/1/2014 03:30 PM

**Work Order:** 1404130
**Lab ID:** 1404130-01
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Hexachlorocyclopentadiene | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Hexachloroethane | U | | 19 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| **Indeno(1,2,3-cd)pyrene** | **53** | | **2.7** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 18:55 |
| Isophorone | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Naphthalene | U | | 3.0 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Nitrobenzene | U | | 16 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| N-Nitrosodi-n-propylamine | U | | 15 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| N-Nitrosodiphenylamine | U | | 72 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| Pentachlorophenol | U | | 7.8 | 400 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| **Phenanthrene** | **26** | | **1.6** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 18:55 |
| Phenol | U | | 14 | 190 | µg/Kg-dry | 1 | 4/8/2014 18:55 |
| **Pyrene** | **40** | | **2.7** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 18:55 |
| *Surr: 2,4,6-Tribromophenol* | *68.4* | | | *34-140* | *%REC* | 1 | 4/8/2014 18:55 |
| *Surr: 2-Fluorobiphenyl* | *74.5* | | | *12-100* | *%REC* | 1 | 4/8/2014 18:55 |
| *Surr: 2-Fluorophenol* | *84.2* | | | *33-117* | *%REC* | 1 | 4/8/2014 18:55 |
| *Surr: 4-Terphenyl-d14* | *113* | | | *25-137* | *%REC* | 1 | 4/8/2014 18:55 |
| *Surr: Nitrobenzene-d5* | *94.5* | | | *37-107* | *%REC* | 1 | 4/8/2014 18:55 |
| *Surr: Phenol-d6* | *86.0* | | | *40-106* | *%REC* | 1 | 4/8/2014 18:55 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: | **SW8260GRO** | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,500 | 3,100 | µg/Kg-dry | 1 | 4/3/2014 15:48 |
| *Surr: Toluene-d8* | *90.3* | | | *70-130* | *%REC* | 1 | 4/3/2014 15:48 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: | **SW8260** | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.23 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,1,2,2-Tetrachloroethane | U | | 0.15 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,1,2-Trichloroethane | U | | 0.20 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.30 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,1-Dichloroethane | U | | 0.27 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,1-Dichloroethene | U | | 0.24 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,2,4-Trichlorobenzene | U | | 0.22 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,2-Dibromo-3-chloropropane | U | | 0.21 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,2-Dibromoethane | U | | 0.22 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,2-Dichlorobenzene | U | | 0.22 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,2-Dichloroethane | U | | 0.29 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,2-Dichloropropane | U | | 0.28 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,3-Dichlorobenzene | U | | 0.20 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| 1,4-Dichlorobenzene | U | | 0.22 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| **2-Butanone** | **6.9** | J | **0.82** | **11** | **µg/Kg-dry** | 0.865 | 4/9/2014 11:27 |
| 2-Hexanone | U | | 0.32 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-01-S-0-4
**Collection Date:** 4/1/2014 03:30 PM

**Work Order:** 1404130
**Lab ID:** 1404130-01
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.21 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| **Acetone** | **57** | | **1.0** | **11** | **µg/Kg-dry** | 0.865 | 4/9/2014 11:27 |
| Benzene | U | | 0.26 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Bromodichloromethane | U | | 0.22 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Bromoform | U | | 0.16 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Bromomethane | U | | 0.37 | 11 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Carbon disulfide | U | | 0.39 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Carbon tetrachloride | U | | 0.22 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Chlorobenzene | U | | 0.23 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Chloroethane | U | | 0.60 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Chloroform | U | | 0.28 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Chloromethane | U | | 0.33 | 11 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| cis-1,2-Dichloroethene | U | | 0.31 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| cis-1,3-Dichloropropene | U | | 0.19 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Cyclohexane | U | | 0.34 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Dibromochloromethane | U | | 0.18 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Dichlorodifluoromethane | U | | 0.35 | 11 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Ethylbenzene | U | | 0.21 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Isopropylbenzene | U | | 0.21 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| m,p-Xylene | U | | 0.40 | 2.7 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Methyl acetate | U | | 0.86 | 11 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Methyl tert-butyl ether | U | | 0.27 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Methylcyclohexane | U | | 0.30 | 11 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| **Methylene chloride** | **1.4** | J | **0.30** | **5.3** | **µg/Kg-dry** | 0.865 | 4/9/2014 11:27 |
| o-Xylene | U | | 0.21 | 2.7 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Styrene | U | | 0.19 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Tetrachloroethene | U | | 0.32 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| **Toluene** | **0.34** | J | **0.25** | **5.3** | **µg/Kg-dry** | 0.865 | 4/9/2014 11:27 |
| trans-1,2-Dichloroethene | U | | 0.31 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| trans-1,3-Dichloropropene | U | | 0.20 | 11 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Trichloroethene | U | | 0.25 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Trichlorofluoromethane | U | | 1.2 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Vinyl chloride | U | | 0.32 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| Xylenes, Total | U | | 0.61 | 5.3 | µg/Kg-dry | 0.865 | 4/9/2014 11:27 |
| *Surr: 1,2-Dichloroethane-d4* | *108* | | | *70-120* | *%REC* | 0.865 | 4/9/2014 11:27 |
| *Surr: 4-Bromofluorobenzene* | *94.9* | | | *75-120* | *%REC* | 0.865 | 4/9/2014 11:27 |
| *Surr: Dibromofluoromethane* | *40.2* | S | | *85-115* | *%REC* | 0.865 | 4/9/2014 11:27 |
| *Surr: Toluene-d8* | *97.2* | | | *85-120* | *%REC* | 0.865 | 4/9/2014 11:27 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-01-S-0-4
**Collection Date:** 4/1/2014 03:30 PM

**Work Order:** 1404130
**Lab ID:** 1404130-01
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **19** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 13:35 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-01-D-16-20
**Collection Date:** 4/1/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-02
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 15:32 |
| Aroclor 1221 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 15:32 |
| Aroclor 1232 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 15:32 |
| Aroclor 1242 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 15:32 |
| Aroclor 1248 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 15:32 |
| Aroclor 1254 | U | | 39 | 110 | µg/Kg-dry | 1 | 4/8/2014 15:32 |
| Aroclor 1260 | U | | 39 | 110 | µg/Kg-dry | 1 | 4/8/2014 15:32 |
| *Surr: Decachlorobiphenyl* | *99.1* | | | *40-140* | *%REC* | 1 | 4/8/2014 15:32 |
| *Surr: Tetrachloro-m-xylene* | *95.1* | | | *45-124* | *%REC* | 1 | 4/8/2014 15:32 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.018** | J | **0.00088** | **0.018** | **mg/Kg-dry** | 1 | 4/3/2014 12:02 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **6.5** | | **0.28** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:39 |
| **Barium** | **170** | | **0.059** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:39 |
| **Cadmium** | **0.37** | J | **0.0084** | **0.84** | **mg/Kg-dry** | 5 | 4/4/2014 18:39 |
| **Chromium** | **19** | | **0.34** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:39 |
| **Lead** | **20** | | **0.0084** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:39 |
| **Selenium** | **1.3** | J | **0.27** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:39 |
| **Silver** | **0.10** | J | **0.0084** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 18:39 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| DRO (C10-C21) | U | | 1.6 | 3.7 | mg/Kg-dry | 1 | 4/8/2014 07:13 |
| ORO (C21-C35) | U | | 1.8 | 3.7 | mg/Kg-dry | 1 | 4/8/2014 07:13 |
| *Surr: 4-Terphenyl-d14* | *25.4* | | | *25-137* | *%REC* | 1 | 4/8/2014 07:13 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/9/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.3 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2,4,5-Trichlorophenol | U | | 11 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2,4,6-Trichlorophenol | U | | 7.2 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2,4-Dichlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2,4-Dimethylphenol | U | | 68 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2,4-Dinitrophenol | U | | 38 | 840 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2,4-Dinitrotoluene | U | | 14 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2,6-Dinitrotoluene | U | | 22 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2-Chloronaphthalene | U | | 2.0 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2-Chlorophenol | U | | 13 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2-Methylnaphthalene | U | | 3.5 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2-Methylphenol | U | | 17 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-01-D-16-20
**Collection Date:** 4/1/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-02
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 17 | 840 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 2-Nitrophenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 3,3´-Dichlorobenzidine | U | | 530 | 840 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 3-Nitroaniline | U | | 14 | 840 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 4,6-Dinitro-2-methylphenol | U | | 35 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 4-Bromophenyl phenyl ether | U | | 12 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 4-Chloro-3-methylphenol | U | | 9.9 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 4-Chloroaniline | U | | 13 | 840 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 4-Methylphenol | U | | 20 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 4-Nitroaniline | U | | 12 | 840 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| 4-Nitrophenol | U | | 8.4 | 840 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Acenaphthene | U | | 1.3 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Acenaphthylene | U | | 1.5 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Acetophenone | U | | 6.4 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Anthracene | U | | 1.7 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Atrazine | U | | 13 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Benzaldehyde | U | | 16 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Benzo(a)anthracene | U | | 1.7 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Benzo(a)pyrene | U | | 2.8 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Benzo(b)fluoranthene | U | | 2.5 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Benzo(g,h,i)perylene | U | | 3.3 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Benzo(k)fluoranthene | U | | 1.8 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Bis(2-chloroethoxy)methane | U | | 13 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Bis(2-chloroethyl)ether | U | | 13 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Bis(2-chloroisopropyl)ether | U | | 18 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Bis(2-ethylhexyl)phthalate | U | | 14 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Butyl benzyl phthalate | U | | 16 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Caprolactam | U | | 19 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Carbazole | U | | 13 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Chrysene | U | | 2.0 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Dibenzo(a,h)anthracene | U | | 3.2 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Dibenzofuran | U | | 13 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Diethyl phthalate | U | | 14 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Dimethyl phthalate | U | | 14 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Di-n-butyl phthalate | U | | 6.2 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Di-n-octyl phthalate | U | | 14 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Fluoranthene | U | | 3.0 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Fluorene | U | | 2.9 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Hexachlorobenzene | U | | 12 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-01-D-16-20
**Collection Date:** 4/1/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-02
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Hexachlorocyclopentadiene | U | | 13 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Hexachloroethane | U | | 20 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Indeno(1,2,3-cd)pyrene | U | | 2.8 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Isophorone | U | | 14 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Naphthalene | U | | 3.1 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Nitrobenzene | U | | 17 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| N-Nitrosodi-n-propylamine | U | | 16 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| N-Nitrosodiphenylamine | U | | 76 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Pentachlorophenol | U | | 8.2 | 420 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Phenanthrene | U | | 1.7 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Phenol | U | | 15 | 200 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| Pyrene | U | | 2.9 | 8.5 | µg/Kg-dry | 1 | 4/10/2014 20:28 |
| *Surr: 2,4,6-Tribromophenol* | *72.9* | | | *34-140* | *%REC* | 1 | 4/10/2014 20:28 |
| *Surr: 2-Fluorobiphenyl* | *72.2* | | | *12-100* | *%REC* | 1 | 4/10/2014 20:28 |
| *Surr: 2-Fluorophenol* | *82.7* | | | *33-117* | *%REC* | 1 | 4/10/2014 20:28 |
| *Surr: 4-Terphenyl-d14* | *103* | | | *25-137* | *%REC* | 1 | 4/10/2014 20:28 |
| *Surr: Nitrobenzene-d5* | *75.7* | | | *37-107* | *%REC* | 1 | 4/10/2014 20:28 |
| *Surr: Phenol-d6* | *84.4* | | | *40-106* | *%REC* | 1 | 4/10/2014 20:28 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: **SW8260GRO** | | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,600 | 3,200 | µg/Kg-dry | 1 | 4/3/2014 16:14 |
| *Surr: Toluene-d8* | *91.2* | | | *70-130* | *%REC* | 1 | 4/3/2014 16:14 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8260** | | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.22 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,1,2,2-Tetrachloroethane | U | | 0.14 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,1,2-Trichloroethane | U | | 0.19 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.28 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,1-Dichloroethane | U | | 0.25 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,1-Dichloroethene | U | | 0.22 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,2,4-Trichlorobenzene | U | | 0.21 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,2-Dibromo-3-chloropropane | U | | 0.20 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,2-Dibromoethane | U | | 0.20 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,2-Dichlorobenzene | U | | 0.20 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,2-Dichloroethane | U | | 0.27 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,2-Dichloropropane | U | | 0.26 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,3-Dichlorobenzene | U | | 0.19 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| 1,4-Dichlorobenzene | U | | 0.21 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| **2-Butanone** | **2.2** | J | **0.76** | **9.9** | **µg/Kg-dry** | 0.764 | 4/9/2014 11:53 |
| 2-Hexanone | U | | 0.30 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-01-D-16-20
**Collection Date:** 4/1/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-02
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.20 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| **Acetone** | **21** | | **0.93** | **9.9** | **µg/Kg-dry** | 0.764 | 4/9/2014 11:53 |
| Benzene | U | | 0.25 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Bromodichloromethane | U | | 0.20 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Bromoform | U | | 0.15 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Bromomethane | U | | 0.35 | 9.9 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Carbon disulfide | U | | 0.37 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Carbon tetrachloride | U | | 0.20 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Chlorobenzene | U | | 0.22 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Chloroethane | U | | 0.56 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Chloroform | U | | 0.26 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Chloromethane | U | | 0.30 | 9.9 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| cis-1,2-Dichloroethene | U | | 0.29 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| cis-1,3-Dichloropropene | U | | 0.18 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Cyclohexane | U | | 0.32 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Dibromochloromethane | U | | 0.17 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Dichlorodifluoromethane | U | | 0.33 | 9.9 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Ethylbenzene | U | | 0.19 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Isopropylbenzene | U | | 0.19 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| m,p-Xylene | U | | 0.37 | 2.5 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Methyl acetate | U | | 0.80 | 9.9 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Methyl tert-butyl ether | U | | 0.25 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Methylcyclohexane | U | | 0.28 | 9.9 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| **Methylene chloride** | **1.1** | J | **0.28** | **5.0** | **µg/Kg-dry** | 0.764 | 4/9/2014 11:53 |
| o-Xylene | U | | 0.20 | 2.5 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Styrene | U | | 0.18 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Tetrachloroethene | U | | 0.30 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| **Toluene** | **0.36** | J | **0.23** | **5.0** | **µg/Kg-dry** | 0.764 | 4/9/2014 11:53 |
| trans-1,2-Dichloroethene | U | | 0.29 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| trans-1,3-Dichloropropene | U | | 0.18 | 9.9 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Trichloroethene | U | | 0.23 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Trichlorofluoromethane | U | | 1.2 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Vinyl chloride | U | | 0.30 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| Xylenes, Total | U | | 0.57 | 5.0 | µg/Kg-dry | 0.764 | 4/9/2014 11:53 |
| *Surr: 1,2-Dichloroethane-d4* | *108* | | | *70-120* | *%REC* | 0.764 | 4/9/2014 11:53 |
| *Surr: 4-Bromofluorobenzene* | *95.6* | | | *75-120* | *%REC* | 0.764 | 4/9/2014 11:53 |
| *Surr: Dibromofluoromethane* | *21.6* | S | | *85-115* | *%REC* | 0.764 | 4/9/2014 11:53 |
| *Surr: Toluene-d8* | *96.5* | | | *85-120* | *%REC* | 0.764 | 4/9/2014 11:53 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-01-D-16-20
**Collection Date:** 4/1/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-02
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **23** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 13:35 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-02-S-0-4
**Collection Date:** 4/1/2014 12:15 PM

**Work Order:** 1404130
**Lab ID:** 1404130-03
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | Prep: SW3541 / 4/7/14 | | | Analyst: **JD** |
| Aroclor 1016 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 15:48 |
| Aroclor 1221 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 15:48 |
| Aroclor 1232 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 15:48 |
| Aroclor 1242 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 15:48 |
| **Aroclor 1248** | **130** | | **58** | **100** | **µg/Kg-dry** | 1 | 4/8/2014 15:48 |
| **Aroclor 1254** | **91** | J | **37** | **100** | **µg/Kg-dry** | 1 | 4/8/2014 15:48 |
| Aroclor 1260 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 15:48 |
| *Surr: Decachlorobiphenyl* | *97.1* | | | *40-140* | *%REC* | 1 | 4/8/2014 15:48 |
| *Surr: Tetrachloro-m-xylene* | *92.1* | | | *45-124* | *%REC* | 1 | 4/8/2014 15:48 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | Prep: SW7471 / 4/3/14 | | | Analyst: **LR** |
| **Mercury** | **0.024** | | **0.00080** | **0.016** | **mg/Kg-dry** | 1 | 4/3/2014 12:05 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | Prep: SW3050B / 4/4/14 | | | Analyst: **ML** |
| **Arsenic** | **7.1** | | **0.29** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 19:04 |
| **Barium** | **170** | | **0.059** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 19:04 |
| **Cadmium** | **1.9** | | **0.0084** | **0.84** | **mg/Kg-dry** | 5 | 4/4/2014 19:04 |
| **Chromium** | **42** | | **0.34** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 19:04 |
| **Lead** | **77** | | **0.0084** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 19:04 |
| **Selenium** | **1.2** | J | **0.27** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 19:04 |
| **Silver** | **0.27** | J | **0.0084** | **2.1** | **mg/Kg-dry** | 5 | 4/4/2014 19:04 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | Prep: SW3541 / 4/4/14 | | | Analyst: **RM** |
| **DRO (C10-C21)** | **55** | | **1.5** | **3.6** | **mg/Kg-dry** | 1 | 4/8/2014 11:05 |
| **ORO (C21-C35)** | **110** | | **1.7** | **3.6** | **mg/Kg-dry** | 1 | 4/8/2014 11:05 |
| *Surr: 4-Terphenyl-d14* | *105* | | | *25-137* | *%REC* | 1 | 4/8/2014 11:05 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | Prep: SW3541 / 4/4/14 | | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.1 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 2,4,5-Trichlorophenol | U | | 10 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 2,4,6-Trichlorophenol | U | | 6.9 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 2,4-Dichlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 2,4-Dimethylphenol | U | | 66 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 2,4-Dinitrophenol | U | | 37 | 820 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 2,4-Dinitrotoluene | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **2,6-Dinitrotoluene** | **120** | J | **21** | **200** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| 2-Chloronaphthalene | U | | 1.9 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 2-Chlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **2-Methylnaphthalene** | **78** | | **3.4** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| 2-Methylphenol | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-02-S-0-4
**Collection Date:** 4/1/2014 12:15 PM

**Work Order:** 1404130
**Lab ID:** 1404130-03
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 16 | 820 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 2-Nitrophenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 3,3´-Dichlorobenzidine | U | | 510 | 820 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 3-Nitroaniline | U | | 14 | 820 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 4,6-Dinitro-2-methylphenol | U | | 34 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 4-Bromophenyl phenyl ether | U | | 11 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 4-Chloro-3-methylphenol | U | | 9.5 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **4-Chloroaniline** | **62** | J | **12** | **820** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 4-Methylphenol | U | | 20 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 4-Nitroaniline | U | | 11 | 820 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| 4-Nitrophenol | U | | 8.2 | 820 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Acenaphthene** | **60** | | **1.2** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Acenaphthylene** | **150** | | **1.5** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| Acetophenone | U | | 6.2 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Anthracene** | **250** | | **1.6** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| Atrazine | U | | 12 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| Benzaldehyde | U | | 16 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Benzo(a)anthracene** | **550** | | **1.6** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Benzo(a)pyrene** | **580** | | **2.7** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Benzo(b)fluoranthene** | **830** | | **2.4** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Benzo(g,h,i)perylene** | **590** | | **3.2** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Benzo(k)fluoranthene** | **780** | | **1.7** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| Bis(2-chloroethoxy)methane | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| Bis(2-chloroethyl)ether | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Bis(2-chloroisopropyl)ether** | **48** | J | **17** | **200** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Bis(2-ethylhexyl)phthalate** | **49** | J | **13** | **410** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Butyl benzyl phthalate** | **170** | J | **15** | **200** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| Caprolactam | U | | 18 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Carbazole** | **110** | J | **12** | **200** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Chrysene** | **610** | | **2.0** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Dibenzo(a,h)anthracene** | **120** | | **3.1** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Dibenzofuran** | **110** | J | **13** | **200** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| Diethyl phthalate | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| Dimethyl phthalate | U | | 14 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Di-n-butyl phthalate** | **34** | J | **6.0** | **410** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| Di-n-octyl phthalate | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Fluoranthene** | **1,200** | | **2.9** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| **Fluorene** | **87** | | **2.8** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| Hexachlorobenzene | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-02-S-0-4
**Collection Date:** 4/1/2014 12:15 PM

**Work Order:** 1404130
**Lab ID:** 1404130-03
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| Hexachlorocyclopentadiene | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| Hexachloroethane | U | | 19 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Indeno(1,2,3-cd)pyrene** | **520** | | **2.7** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| Isophorone | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Naphthalene** | **200** | | **3.0** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| Nitrobenzene | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| N-Nitrosodi-n-propylamine | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| N-Nitrosodiphenylamine | U | | 73 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| Pentachlorophenol | U | | 8.0 | 410 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Phenanthrene** | **950** | | **1.6** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| Phenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 22:21 |
| **Pyrene** | **1,100** | | **2.8** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 22:21 |
| *Surr: 2,4,6-Tribromophenol* | *82.5* | | | *34-140* | *%REC* | 1 | 4/8/2014 22:21 |
| *Surr: 2-Fluorobiphenyl* | *76.2* | | | *12-100* | *%REC* | 1 | 4/8/2014 22:21 |
| *Surr: 2-Fluorophenol* | *83.7* | | | *33-117* | *%REC* | 1 | 4/8/2014 22:21 |
| *Surr: 4-Terphenyl-d14* | *101* | | | *25-137* | *%REC* | 1 | 4/8/2014 22:21 |
| *Surr: Nitrobenzene-d5* | *90.3* | | | *37-107* | *%REC* | 1 | 4/8/2014 22:21 |
| *Surr: Phenol-d6* | *84.4* | | | *40-106* | *%REC* | 1 | 4/8/2014 22:21 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: | **SW8260GRO** | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,600 | 3,100 | µg/Kg-dry | 1 | 4/3/2014 16:40 |
| *Surr: Toluene-d8* | *91.8* | | | *70-130* | *%REC* | 1 | 4/3/2014 16:40 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: | **SW8260** | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.23 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,1,2,2-Tetrachloroethane | U | | 0.15 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,1,2-Trichloroethane | U | | 0.20 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.30 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,1-Dichloroethane | U | | 0.27 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,1-Dichloroethene | U | | 0.24 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,2,4-Trichlorobenzene | U | | 0.22 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,2-Dibromo-3-chloropropane | U | | 0.21 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,2-Dibromoethane | U | | 0.22 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,2-Dichlorobenzene | U | | 0.22 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,2-Dichloroethane | U | | 0.30 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,2-Dichloropropane | U | | 0.28 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,3-Dichlorobenzene | U | | 0.20 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| 1,4-Dichlorobenzene | U | | 0.22 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| **2-Butanone** | **27** | | **0.82** | **11** | **µg/Kg-dry** | 0.852 | 4/9/2014 12:19 |
| 2-Hexanone | U | | 0.32 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-02-S-0-4
**Collection Date:** 4/1/2014 12:15 PM

**Work Order:** 1404130
**Lab ID:** 1404130-03
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.21 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Acetone | U | | 1.2 | 13 | µg/Kg-dry | 1 | 4/3/2014 16:40 |
| Benzene | U | | 0.26 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Bromodichloromethane | U | | 0.22 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Bromoform | U | | 0.16 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Bromomethane | U | | 0.38 | 11 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Carbon disulfide | U | | 0.39 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Carbon tetrachloride | U | | 0.22 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Chlorobenzene | U | | 0.24 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Chloroethane | U | | 0.60 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Chloroform | U | | 0.28 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Chloromethane | U | | 0.33 | 11 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| cis-1,2-Dichloroethene | U | | 0.32 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| cis-1,3-Dichloropropene | U | | 0.19 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Cyclohexane | U | | 0.34 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Dibromochloromethane | U | | 0.18 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Dichlorodifluoromethane | U | | 0.35 | 11 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Ethylbenzene | U | | 0.21 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Isopropylbenzene | U | | 0.21 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| m,p-Xylene | U | | 0.40 | 2.7 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Methyl acetate | U | | 0.86 | 11 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Methyl tert-butyl ether | U | | 0.27 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Methylcyclohexane | U | | 0.30 | 11 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| **Methylene chloride** | **0.64** | J | **0.30** | **5.3** | **µg/Kg-dry** | 0.852 | 4/9/2014 12:19 |
| o-Xylene | U | | 0.21 | 2.7 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Styrene | U | | 0.19 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Tetrachloroethene | U | | 0.32 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Toluene | U | | 0.25 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| trans-1,2-Dichloroethene | U | | 0.31 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| trans-1,3-Dichloropropene | U | | 0.20 | 11 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Trichloroethene | U | | 0.25 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Trichlorofluoromethane | U | | 1.2 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Vinyl chloride | U | | 0.33 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| Xylenes, Total | U | | 0.61 | 5.3 | µg/Kg-dry | 0.852 | 4/9/2014 12:19 |
| *Surr: 1,2-Dichloroethane-d4* | *99.6* | | | *70-120* | *%REC* | 1 | 4/3/2014 16:40 |
| *Surr: 1,2-Dichloroethane-d4* | *109* | | | *70-120* | *%REC* | 0.852 | 4/9/2014 12:19 |
| *Surr: 4-Bromofluorobenzene* | *93.6* | | | *75-120* | *%REC* | 1 | 4/3/2014 16:40 |
| *Surr: 4-Bromofluorobenzene* | *99.6* | | | *75-120* | *%REC* | 0.852 | 4/9/2014 12:19 |
| *Surr: Dibromofluoromethane* | *96.6* | | | *85-115* | *%REC* | 1 | 4/3/2014 16:40 |
| *Surr: Dibromofluoromethane* | *27.0* | S | | *85-115* | *%REC* | 0.852 | 4/9/2014 12:19 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-02-S-0-4
**Collection Date:** 4/1/2014 12:15 PM

**Work Order:** 1404130
**Lab ID:** 1404130-03
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| *Surr: Toluene-d8* | *104* | | | *85-120* | *%REC* | 1 | 4/3/2014 16:40 |
| *Surr: Toluene-d8* | *99.4* | | | *85-120* | *%REC* | 0.852 | 4/9/2014 12:19 |
| **MOISTURE** | | Method: **A2540 G** | | | | | Analyst: **AT** |
| **Moisture** | **20** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 13:35 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-02-D-16-20
**Collection Date:** 4/1/2014 12:40 PM

**Work Order:** 1404130
**Lab ID:** 1404130-04
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 16:36 |
| Aroclor 1221 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 16:36 |
| Aroclor 1232 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 16:36 |
| Aroclor 1242 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 16:36 |
| Aroclor 1248 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 16:36 |
| Aroclor 1254 | U | | 39 | 110 | µg/Kg-dry | 1 | 4/8/2014 16:36 |
| Aroclor 1260 | U | | 39 | 110 | µg/Kg-dry | 1 | 4/8/2014 16:36 |
| *Surr: Decachlorobiphenyl* | *76.1* | | | *40-140* | *%REC* | 1 | 4/8/2014 16:36 |
| *Surr: Tetrachloro-m-xylene* | *85.1* | | | *45-124* | *%REC* | 1 | 4/8/2014 16:36 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.036** | | **0.00094** | **0.019** | **mg/Kg-dry** | 1 | 4/3/2014 12:07 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **3.9** | | **0.31** | **2.3** | **mg/Kg-dry** | 5 | 4/4/2014 19:10 |
| **Barium** | **140** | | **0.065** | **2.3** | **mg/Kg-dry** | 5 | 4/4/2014 19:10 |
| **Cadmium** | **0.15** | J | **0.0092** | **0.92** | **mg/Kg-dry** | 5 | 4/4/2014 19:10 |
| **Chromium** | **15** | | **0.38** | **2.3** | **mg/Kg-dry** | 5 | 4/4/2014 19:10 |
| **Lead** | **8.5** | | **0.0092** | **2.3** | **mg/Kg-dry** | 5 | 4/4/2014 19:10 |
| **Selenium** | **0.99** | J | **0.30** | **2.3** | **mg/Kg-dry** | 5 | 4/4/2014 19:10 |
| **Silver** | **0.072** | J | **0.0092** | **2.3** | **mg/Kg-dry** | 5 | 4/4/2014 19:10 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| DRO (C10-C21) | U | | 1.6 | 3.6 | mg/Kg-dry | 1 | 4/8/2014 07:40 |
| ORO (C21-C35) | U | | 1.7 | 3.6 | mg/Kg-dry | 1 | 4/8/2014 07:40 |
| *Surr: 4-Terphenyl-d14* | *104* | | | *25-137* | *%REC* | 1 | 4/8/2014 07:40 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.2 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2,4,5-Trichlorophenol | U | | 10 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2,4,6-Trichlorophenol | U | | 7.0 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2,4-Dichlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2,4-Dimethylphenol | U | | 67 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2,4-Dinitrophenol | U | | 37 | 820 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2,4-Dinitrotoluene | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2,6-Dinitrotoluene | U | | 21 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2-Chloronaphthalene | U | | 2.0 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2-Chlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2-Methylnaphthalene | U | | 3.4 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2-Methylphenol | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-02-D-16-20
**Collection Date:** 4/1/2014 12:40 PM

**Work Order:** 1404130
**Lab ID:** 1404130-04
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 16 | 820 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 2-Nitrophenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 3,3´-Dichlorobenzidine | U | | 510 | 820 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 3-Nitroaniline | U | | 14 | 820 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 4,6-Dinitro-2-methylphenol | U | | 34 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 4-Bromophenyl phenyl ether | U | | 11 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 4-Chloro-3-methylphenol | U | | 9.6 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 4-Chloroaniline | U | | 12 | 820 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 4-Methylphenol | U | | 20 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 4-Nitroaniline | U | | 11 | 820 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| 4-Nitrophenol | U | | 8.2 | 820 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Acenaphthene | U | | 1.2 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Acenaphthylene | U | | 1.5 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Acetophenone | U | | 6.2 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Anthracene | U | | 1.6 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Atrazine | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Benzaldehyde | U | | 16 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Benzo(a)anthracene | U | | 1.6 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Benzo(a)pyrene | U | | 2.7 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Benzo(b)fluoranthene | U | | 2.4 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Benzo(g,h,i)perylene | U | | 3.3 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Benzo(k)fluoranthene | U | | 1.8 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Bis(2-chloroethoxy)methane | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Bis(2-chloroethyl)ether | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Bis(2-chloroisopropyl)ether | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Bis(2-ethylhexyl)phthalate | U | | 14 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Butyl benzyl phthalate | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Caprolactam | U | | 18 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Carbazole | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Chrysene | U | | 2.0 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Dibenzo(a,h)anthracene | U | | 3.1 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Dibenzofuran | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Diethyl phthalate | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Dimethyl phthalate | U | | 14 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Di-n-butyl phthalate | U | | 6.0 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Di-n-octyl phthalate | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Fluoranthene | U | | 2.9 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Fluorene | U | | 2.8 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Hexachlorobenzene | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-02-D-16-20
**Collection Date:** 4/1/2014 12:40 PM

**Work Order:** 1404130
**Lab ID:** 1404130-04
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Hexachlorocyclopentadiene | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Hexachloroethane | U | | 19 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Indeno(1,2,3-cd)pyrene | U | | 2.8 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Isophorone | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Naphthalene | U | | 3.1 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Nitrobenzene | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| N-Nitrosodi-n-propylamine | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| N-Nitrosodiphenylamine | U | | 74 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Pentachlorophenol | U | | 8.0 | 410 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Phenanthrene | U | | 1.7 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Phenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| Pyrene | U | | 2.8 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 19:36 |
| *Surr: 2,4,6-Tribromophenol* | *58.7* | | | *34-140* | *%REC* | 1 | 4/8/2014 19:36 |
| *Surr: 2-Fluorobiphenyl* | *72.2* | | | *12-100* | *%REC* | 1 | 4/8/2014 19:36 |
| *Surr: 2-Fluorophenol* | *80.2* | | | *33-117* | *%REC* | 1 | 4/8/2014 19:36 |
| *Surr: 4-Terphenyl-d14* | *106* | | | *25-137* | *%REC* | 1 | 4/8/2014 19:36 |
| *Surr: Nitrobenzene-d5* | *90.0* | | | *37-107* | *%REC* | 1 | 4/8/2014 19:36 |
| *Surr: Phenol-d6* | *84.3* | | | *40-106* | *%REC* | 1 | 4/8/2014 19:36 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | | Method: **SW8260GRO** | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,600 | 3,200 | µg/Kg-dry | 1 | 4/3/2014 17:07 |
| *Surr: Toluene-d8* | *92.8* | | | *70-130* | *%REC* | 1 | 4/3/2014 17:07 |
| **VOLATILE ORGANIC COMPOUNDS** | | | Method: **SW8260** | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.24 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,1,2,2-Tetrachloroethane | U | | 0.15 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,1,2-Trichloroethane | U | | 0.21 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.30 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,1-Dichloroethane | U | | 0.27 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,1-Dichloroethene | U | | 0.24 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,2,4-Trichlorobenzene | U | | 0.22 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,2-Dibromo-3-chloropropane | U | | 0.21 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,2-Dibromoethane | U | | 0.22 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,2-Dichlorobenzene | U | | 0.22 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,2-Dichloroethane | U | | 0.30 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,2-Dichloropropane | U | | 0.28 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,3-Dichlorobenzene | U | | 0.20 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| 1,4-Dichlorobenzene | U | | 0.23 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| **2-Butanone** | **2.5** | J | **0.83** | **11** | **µg/Kg-dry** | 0.847 | 4/9/2014 12:46 |
| 2-Hexanone | U | | 0.32 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-02-D-16-20
**Collection Date:** 4/1/2014 12:40 PM

**Work Order:** 1404130
**Lab ID:** 1404130-04
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.21 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| **Acetone** | **26** | | **1.0** | **11** | **µg/Kg-dry** | 0.847 | 4/9/2014 12:46 |
| Benzene | U | | 0.27 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Bromodichloromethane | U | | 0.22 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Bromoform | U | | 0.17 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Bromomethane | U | | 0.38 | 11 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Carbon disulfide | U | | 0.40 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Carbon tetrachloride | U | | 0.22 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Chlorobenzene | U | | 0.24 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Chloroethane | U | | 0.61 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Chloroform | U | | 0.28 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Chloromethane | U | | 0.33 | 11 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| cis-1,2-Dichloroethene | U | | 0.32 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| cis-1,3-Dichloropropene | U | | 0.19 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Cyclohexane | U | | 0.34 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Dibromochloromethane | U | | 0.18 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Dichlorodifluoromethane | U | | 0.36 | 11 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Ethylbenzene | U | | 0.21 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Isopropylbenzene | U | | 0.21 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| m,p-Xylene | U | | 0.41 | 2.7 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Methyl acetate | U | | 0.87 | 11 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Methyl tert-butyl ether | U | | 0.27 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Methylcyclohexane | U | | 0.30 | 11 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| **Methylene chloride** | **0.96** | J | **0.31** | **5.4** | **µg/Kg-dry** | 0.847 | 4/9/2014 12:46 |
| o-Xylene | U | | 0.21 | 2.7 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Styrene | U | | 0.20 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Tetrachloroethene | U | | 0.32 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| **Toluene** | **0.40** | J | **0.25** | **5.4** | **µg/Kg-dry** | 0.847 | 4/9/2014 12:46 |
| trans-1,2-Dichloroethene | U | | 0.32 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| trans-1,3-Dichloropropene | U | | 0.20 | 11 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Trichloroethene | U | | 0.25 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Trichlorofluoromethane | U | | 1.3 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Vinyl chloride | U | | 0.33 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| Xylenes, Total | U | | 0.62 | 5.4 | µg/Kg-dry | 0.847 | 4/9/2014 12:46 |
| *Surr: 1,2-Dichloroethane-d4* | *108* | | | *70-120* | *%REC* | 0.847 | 4/9/2014 12:46 |
| *Surr: 4-Bromofluorobenzene* | *97.2* | | | *75-120* | *%REC* | 0.847 | 4/9/2014 12:46 |
| *Surr: Dibromofluoromethane* | *19.8* | S | | *85-115* | *%REC* | 0.847 | 4/9/2014 12:46 |
| *Surr: Toluene-d8* | *98.6* | | | *85-120* | *%REC* | 0.847 | 4/9/2014 12:46 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-02-D-16-20
**Collection Date:** 4/1/2014 12:40 PM

**Work Order:** 1404130
**Lab ID:** 1404130-04
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **21** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 17:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-03-S-0-4
**Collection Date:** 4/1/2014 11:10 AM

**Work Order:** 1404130
**Lab ID:** 1404130-05
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 16:52 |
| Aroclor 1221 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 16:52 |
| Aroclor 1232 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 16:52 |
| Aroclor 1242 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 16:52 |
| Aroclor 1248 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 16:52 |
| Aroclor 1254 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 16:52 |
| Aroclor 1260 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 16:52 |
| *Surr: Decachlorobiphenyl* | *84.1* | | | *40-140* | *%REC* | 1 | 4/8/2014 16:52 |
| *Surr: Tetrachloro-m-xylene* | *90.1* | | | *45-124* | *%REC* | 1 | 4/8/2014 16:52 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.015** | J | **0.00077** | **0.015** | **mg/Kg-dry** | 1 | 4/3/2014 12:09 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **4.2** | | **0.28** | **2.0** | **mg/Kg-dry** | 5 | 4/4/2014 17:18 |
| **Barium** | **150** | | **0.057** | **2.0** | **mg/Kg-dry** | 5 | 4/4/2014 17:18 |
| **Cadmium** | **0.12** | J | **0.0081** | **0.81** | **mg/Kg-dry** | 5 | 4/4/2014 17:18 |
| **Chromium** | **17** | | **0.33** | **2.0** | **mg/Kg-dry** | 5 | 4/4/2014 17:18 |
| **Lead** | **11** | | **0.0081** | **2.0** | **mg/Kg-dry** | 5 | 4/4/2014 17:18 |
| **Selenium** | **1.3** | J | **0.26** | **2.0** | **mg/Kg-dry** | 5 | 4/4/2014 17:18 |
| **Silver** | **0.12** | J | **0.0081** | **2.0** | **mg/Kg-dry** | 5 | 4/4/2014 17:18 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| DRO (C10-C21) | U | | 1.5 | 3.6 | mg/Kg-dry | 1 | 4/8/2014 08:07 |
| ORO (C21-C35) | U | | 1.7 | 3.6 | mg/Kg-dry | 1 | 4/8/2014 08:07 |
| *Surr: 4-Terphenyl-d14* | *94.6* | | | *25-137* | *%REC* | 1 | 4/8/2014 08:07 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.1 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2,4,5-Trichlorophenol | U | | 10 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2,4,6-Trichlorophenol | U | | 6.8 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2,4-Dichlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2,4-Dimethylphenol | U | | 65 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2,4-Dinitrophenol | U | | 37 | 810 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2,4-Dinitrotoluene | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2,6-Dinitrotoluene | U | | 21 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2-Chloronaphthalene | U | | 1.9 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2-Chlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2-Methylnaphthalene | U | | 3.4 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2-Methylphenol | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-03-S-0-4
**Collection Date:** 4/1/2014 11:10 AM

**Work Order:** 1404130
**Lab ID:** 1404130-05
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 16 | 810 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 2-Nitrophenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 3,3´-Dichlorobenzidine | U | | 500 | 810 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 3-Nitroaniline | U | | 14 | 810 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 4,6-Dinitro-2-methylphenol | U | | 34 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 4-Bromophenyl phenyl ether | U | | 11 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 4-Chloro-3-methylphenol | U | | 9.4 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 4-Chloroaniline | U | | 12 | 810 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 4-Methylphenol | U | | 19 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 4-Nitroaniline | U | | 11 | 810 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| 4-Nitrophenol | U | | 8.0 | 810 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Acenaphthene | U | | 1.2 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Acenaphthylene | U | | 1.5 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Acetophenone | U | | 6.1 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Anthracene | U | | 1.6 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Atrazine | U | | 12 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Benzaldehyde | U | | 15 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Benzo(a)anthracene | U | | 1.6 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Benzo(a)pyrene | U | | 2.6 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Benzo(b)fluoranthene | U | | 2.4 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Benzo(g,h,i)perylene | U | | 3.2 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Benzo(k)fluoranthene | U | | 1.7 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Bis(2-chloroethoxy)methane | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Bis(2-chloroethyl)ether | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Bis(2-chloroisopropyl)ether | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Bis(2-ethylhexyl)phthalate | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Butyl benzyl phthalate | U | | 15 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Caprolactam | U | | 18 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Carbazole | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Chrysene | U | | 1.9 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Dibenzo(a,h)anthracene | U | | 3.0 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Dibenzofuran | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Diethyl phthalate | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Dimethyl phthalate | U | | 14 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Di-n-butyl phthalate | U | | 5.9 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Di-n-octyl phthalate | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Fluoranthene | U | | 2.8 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Fluorene | U | | 2.7 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Hexachlorobenzene | U | | 11 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-03-S-0-4
**Collection Date:** 4/1/2014 11:10 AM

**Work Order:** 1404130
**Lab ID:** 1404130-05
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Hexachlorocyclopentadiene | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Hexachloroethane | U | | 19 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Indeno(1,2,3-cd)pyrene | U | | 2.7 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Isophorone | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Naphthalene | U | | 3.0 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Nitrobenzene | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| N-Nitrosodi-n-propylamine | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| N-Nitrosodiphenylamine | U | | 72 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Pentachlorophenol | U | | 7.8 | 400 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Phenanthrene | U | | 1.6 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Phenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| Pyrene | U | | 2.7 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 19:57 |
| *Surr: 2,4,6-Tribromophenol* | *40.8* | | | *34-140* | *%REC* | 1 | 4/8/2014 19:57 |
| *Surr: 2-Fluorobiphenyl* | *70.6* | | | *12-100* | *%REC* | 1 | 4/8/2014 19:57 |
| *Surr: 2-Fluorophenol* | *62.5* | | | *33-117* | *%REC* | 1 | 4/8/2014 19:57 |
| *Surr: 4-Terphenyl-d14* | *101* | | | *25-137* | *%REC* | 1 | 4/8/2014 19:57 |
| *Surr: Nitrobenzene-d5* | *88.2* | | | *37-107* | *%REC* | 1 | 4/8/2014 19:57 |
| *Surr: Phenol-d6* | *75.8* | | | *40-106* | *%REC* | 1 | 4/8/2014 19:57 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: | **SW8260GRO** | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,600 | 3,100 | µg/Kg-dry | 1 | 4/3/2014 17:33 |
| *Surr: Toluene-d8* | *93.6* | | | *70-130* | *%REC* | 1 | 4/3/2014 17:33 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: | **SW8260** | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.24 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,1,2,2-Tetrachloroethane | U | | 0.15 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,1,2-Trichloroethane | U | | 0.21 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.30 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,1-Dichloroethane | U | | 0.28 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,1-Dichloroethene | U | | 0.24 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,2,4-Trichlorobenzene | U | | 0.22 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,2-Dibromo-3-chloropropane | U | | 0.21 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,2-Dibromoethane | U | | 0.22 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,2-Dichlorobenzene | U | | 0.22 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,2-Dichloroethane | U | | 0.30 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,2-Dichloropropane | U | | 0.28 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,3-Dichlorobenzene | U | | 0.20 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| 1,4-Dichlorobenzene | U | | 0.23 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| **2-Butanone** | **3.3** | J | **0.83** | **11** | **µg/Kg-dry** | 0.862 | 4/9/2014 13:11 |
| 2-Hexanone | U | | 0.33 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-03-S-0-4
**Collection Date:** 4/1/2014 11:10 AM

**Work Order:** 1404130
**Lab ID:** 1404130-05
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.21 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| **Acetone** | **35** | | **1.0** | **11** | **µg/Kg-dry** | 0.862 | 4/9/2014 13:11 |
| Benzene | U | | 0.27 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Bromodichloromethane | U | | 0.22 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Bromoform | U | | 0.17 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Bromomethane | U | | 0.38 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Carbon disulfide | U | | 0.40 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Carbon tetrachloride | U | | 0.22 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Chlorobenzene | U | | 0.24 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Chloroethane | U | | 0.61 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Chloroform | U | | 0.28 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Chloromethane | U | | 0.33 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| cis-1,2-Dichloroethene | U | | 0.32 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| cis-1,3-Dichloropropene | U | | 0.19 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Cyclohexane | U | | 0.35 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Dibromochloromethane | U | | 0.18 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Dichlorodifluoromethane | U | | 0.36 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Ethylbenzene | U | | 0.21 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Isopropylbenzene | U | | 0.21 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| m,p-Xylene | U | | 0.41 | 2.7 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Methyl acetate | U | | 0.87 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Methyl tert-butyl ether | U | | 0.27 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Methylcyclohexane | U | | 0.30 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| **Methylene chloride** | **0.48** | J | **0.31** | **5.4** | **µg/Kg-dry** | 0.862 | 4/9/2014 13:11 |
| o-Xylene | U | | 0.22 | 2.7 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Styrene | U | | 0.20 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Tetrachloroethene | U | | 0.32 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Toluene | U | | 0.26 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| trans-1,2-Dichloroethene | U | | 0.32 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| trans-1,3-Dichloropropene | U | | 0.20 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Trichloroethene | U | | 0.25 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Trichlorofluoromethane | U | | 1.3 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Vinyl chloride | U | | 0.33 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| Xylenes, Total | U | | 0.62 | 5.4 | µg/Kg-dry | 0.862 | 4/9/2014 13:11 |
| *Surr: 1,2-Dichloroethane-d4* | *112* | | | *70-120* | *%REC* | 0.862 | 4/9/2014 13:11 |
| *Surr: 4-Bromofluorobenzene* | *98.8* | | | *75-120* | *%REC* | 0.862 | 4/9/2014 13:11 |
| *Surr: Dibromofluoromethane* | *27.2* | S | | *85-115* | *%REC* | 0.862 | 4/9/2014 13:11 |
| *Surr: Toluene-d8* | *99.6* | | | *85-120* | *%REC* | 0.862 | 4/9/2014 13:11 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-03-S-0-4
**Collection Date:** 4/1/2014 11:10 AM

**Work Order:** 1404130
**Lab ID:** 1404130-05
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **20** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 17:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-03-D-12-16
**Collection Date:** 4/1/2014 11:45 AM

**Work Order:** 1404130
**Lab ID:** 1404130-06
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:09 |
| Aroclor 1221 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:09 |
| Aroclor 1232 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:09 |
| Aroclor 1242 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:09 |
| Aroclor 1248 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:09 |
| Aroclor 1254 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:09 |
| Aroclor 1260 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:09 |
| *Surr: Decachlorobiphenyl* | *88.1* | | | *40-140* | *%REC* | 1 | 4/8/2014 17:09 |
| *Surr: Tetrachloro-m-xylene* | *92.1* | | | *45-124* | *%REC* | 1 | 4/8/2014 17:09 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.019** | | **0.00097** | **0.019** | **mg/Kg-dry** | 1 | 4/3/2014 12:19 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **6.7** | | **0.33** | **2.4** | **mg/Kg-dry** | 5 | 4/4/2014 19:16 |
| **Barium** | **160** | | **0.068** | **2.4** | **mg/Kg-dry** | 5 | 4/4/2014 19:16 |
| **Cadmium** | **0.25** | J | **0.0097** | **0.97** | **mg/Kg-dry** | 5 | 4/4/2014 19:16 |
| **Chromium** | **17** | | **0.40** | **2.4** | **mg/Kg-dry** | 5 | 4/4/2014 19:16 |
| **Lead** | **9.5** | | **0.0097** | **2.4** | **mg/Kg-dry** | 5 | 4/4/2014 19:16 |
| **Selenium** | **1.2** | J | **0.31** | **2.4** | **mg/Kg-dry** | 5 | 4/4/2014 19:16 |
| **Silver** | **0.059** | J | **0.0097** | **2.4** | **mg/Kg-dry** | 5 | 4/4/2014 19:16 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| DRO (C10-C21) | U | | 1.6 | 3.6 | mg/Kg-dry | 1 | 4/8/2014 08:33 |
| ORO (C21-C35) | U | | 1.7 | 3.6 | mg/Kg-dry | 1 | 4/8/2014 08:33 |
| *Surr: 4-Terphenyl-d14* | *100* | | | *25-137* | *%REC* | 1 | 4/8/2014 08:33 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.2 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2,4,5-Trichlorophenol | U | | 10 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2,4,6-Trichlorophenol | U | | 7.0 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2,4-Dichlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2,4-Dimethylphenol | U | | 66 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2,4-Dinitrophenol | U | | 37 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2,4-Dinitrotoluene | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2,6-Dinitrotoluene | U | | 21 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2-Chloronaphthalene | U | | 1.9 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2-Chlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2-Methylnaphthalene | U | | 3.4 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2-Methylphenol | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-03-D-12-16
**Collection Date:** 4/1/2014 11:45 AM

**Work Order:** 1404130
**Lab ID:** 1404130-06
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 16 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 2-Nitrophenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 3,3´-Dichlorobenzidine | U | | 510 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 3-Nitroaniline | U | | 14 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 4,6-Dinitro-2-methylphenol | U | | 34 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 4-Bromophenyl phenyl ether | U | | 11 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 4-Chloro-3-methylphenol | U | | 9.6 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 4-Chloroaniline | U | | 12 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 4-Methylphenol | U | | 20 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 4-Nitroaniline | U | | 11 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| 4-Nitrophenol | U | | 8.2 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Acenaphthene | U | | 1.2 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Acenaphthylene | U | | 1.5 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Acetophenone | U | | 6.2 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Anthracene | U | | 1.6 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Atrazine | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Benzaldehyde | U | | 16 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| **Benzo(a)anthracene** | **35** | | **1.6** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:18 |
| **Benzo(a)pyrene** | **43** | | **2.7** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:18 |
| **Benzo(b)fluoranthene** | **46** | | **2.4** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:18 |
| **Benzo(g,h,i)perylene** | **33** | | **3.2** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:18 |
| Benzo(k)fluoranthene | U | | 1.7 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Bis(2-chloroethoxy)methane | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Bis(2-chloroethyl)ether | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Bis(2-chloroisopropyl)ether | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Bis(2-ethylhexyl)phthalate | U | | 14 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Butyl benzyl phthalate | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Caprolactam | U | | 18 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Carbazole | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| **Chrysene** | **24** | | **2.0** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:18 |
| Dibenzo(a,h)anthracene | U | | 3.1 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Dibenzofuran | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Diethyl phthalate | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Dimethyl phthalate | U | | 14 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Di-n-butyl phthalate | U | | 6.0 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Di-n-octyl phthalate | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| **Fluoranthene** | **63** | | **2.9** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:18 |
| Fluorene | U | | 2.8 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Hexachlorobenzene | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-03-D-12-16
**Collection Date:** 4/1/2014 11:45 AM

**Work Order:** 1404130
**Lab ID:** 1404130-06
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Hexachlorocyclopentadiene | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Hexachloroethane | U | | 19 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| **Indeno(1,2,3-cd)pyrene** | **53** | | **2.8** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:18 |
| Isophorone | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| **Naphthalene** | **24** | | **3.0** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:18 |
| Nitrobenzene | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| N-Nitrosodi-n-propylamine | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| N-Nitrosodiphenylamine | U | | 74 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| Pentachlorophenol | U | | 8.0 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| **Phenanthrene** | **55** | | **1.7** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:18 |
| Phenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:18 |
| **Pyrene** | **58** | | **2.8** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:18 |
| *Surr: 2,4,6-Tribromophenol* | *57.9* | | | *34-140* | *%REC* | 1 | 4/8/2014 20:18 |
| *Surr: 2-Fluorobiphenyl* | *73.1* | | | *12-100* | *%REC* | 1 | 4/8/2014 20:18 |
| *Surr: 2-Fluorophenol* | *81.4* | | | *33-117* | *%REC* | 1 | 4/8/2014 20:18 |
| *Surr: 4-Terphenyl-d14* | *108* | | | *25-137* | *%REC* | 1 | 4/8/2014 20:18 |
| *Surr: Nitrobenzene-d5* | *92.5* | | | *37-107* | *%REC* | 1 | 4/8/2014 20:18 |
| *Surr: Phenol-d6* | *85.7* | | | *40-106* | *%REC* | 1 | 4/8/2014 20:18 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: | **SW8260GRO** | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,600 | 3,200 | µg/Kg-dry | 1 | 4/3/2014 17:59 |
| *Surr: Toluene-d8* | *93.5* | | | *70-130* | *%REC* | 1 | 4/3/2014 17:59 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: | **SW8260** | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.23 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,1,2,2-Tetrachloroethane | U | | 0.15 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,1,2-Trichloroethane | U | | 0.20 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.29 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,1-Dichloroethane | U | | 0.26 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,1-Dichloroethene | U | | 0.23 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,2,4-Trichlorobenzene | U | | 0.21 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,2-Dibromo-3-chloropropane | U | | 0.21 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,2-Dibromoethane | U | | 0.21 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,2-Dichlorobenzene | U | | 0.21 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,2-Dichloroethane | U | | 0.29 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,2-Dichloropropane | U | | 0.27 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,3-Dichlorobenzene | U | | 0.20 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| 1,4-Dichlorobenzene | U | | 0.22 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| **2-Butanone** | **2.7** | J | **0.80** | **10** | **µg/Kg-dry** | 0.81 | 4/9/2014 13:37 |
| 2-Hexanone | U | | 0.31 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-03-D-12-16
**Collection Date:** 4/1/2014 11:45 AM

**Work Order:** 1404130
**Lab ID:** 1404130-06
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.21 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| **Acetone** | **25** | | **0.97** | **10** | **µg/Kg-dry** | 0.81 | 4/9/2014 13:37 |
| Benzene | U | | 0.26 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Bromodichloromethane | U | | 0.21 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Bromoform | U | | 0.16 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Bromomethane | U | | 0.37 | 10 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Carbon disulfide | U | | 0.38 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Carbon tetrachloride | U | | 0.21 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Chlorobenzene | U | | 0.23 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Chloroethane | U | | 0.58 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Chloroform | U | | 0.27 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Chloromethane | U | | 0.32 | 10 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| cis-1,2-Dichloroethene | U | | 0.31 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| cis-1,3-Dichloropropene | U | | 0.19 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Cyclohexane | U | | 0.33 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Dibromochloromethane | U | | 0.18 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Dichlorodifluoromethane | U | | 0.34 | 10 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Ethylbenzene | U | | 0.20 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Isopropylbenzene | U | | 0.20 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| m,p-Xylene | U | | 0.39 | 2.6 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Methyl acetate | U | | 0.84 | 10 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Methyl tert-butyl ether | U | | 0.26 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Methylcyclohexane | U | | 0.29 | 10 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| **Methylene chloride** | **1.4** | J | **0.29** | **5.2** | **µg/Kg-dry** | 0.81 | 4/9/2014 13:37 |
| o-Xylene | U | | 0.21 | 2.6 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Styrene | U | | 0.19 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Tetrachloroethene | U | | 0.31 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| **Toluene** | **0.38** | J | **0.24** | **5.2** | **µg/Kg-dry** | 0.81 | 4/9/2014 13:37 |
| trans-1,2-Dichloroethene | U | | 0.30 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| trans-1,3-Dichloropropene | U | | 0.19 | 10 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Trichloroethene | U | | 0.24 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Trichlorofluoromethane | U | | 1.2 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Vinyl chloride | U | | 0.32 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| Xylenes, Total | U | | 0.60 | 5.2 | µg/Kg-dry | 0.81 | 4/9/2014 13:37 |
| *Surr: 1,2-Dichloroethane-d4* | *112* | | | *70-120* | *%REC* | 0.81 | 4/9/2014 13:37 |
| *Surr: 4-Bromofluorobenzene* | *98.4* | | | *75-120* | *%REC* | 0.81 | 4/9/2014 13:37 |
| *Surr: Dibromofluoromethane* | *23.5* | S | | *85-115* | *%REC* | 0.81 | 4/9/2014 13:37 |
| *Surr: Toluene-d8* | *98.6* | | | *85-120* | *%REC* | 0.81 | 4/9/2014 13:37 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-03-D-12-16
**Collection Date:** 4/1/2014 11:45 AM

**Work Order:** 1404130
**Lab ID:** 1404130-06
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **22** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 17:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-04-S-0-4
**Collection Date:** 3/31/2014 11:10 AM

**Work Order:** 1404130
**Lab ID:** 1404130-07
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:25 |
| Aroclor 1221 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:25 |
| Aroclor 1232 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:25 |
| Aroclor 1242 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:25 |
| **Aroclor 1248** | **170** | | **57** | **100** | **µg/Kg-dry** | 1 | 4/8/2014 17:25 |
| Aroclor 1254 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:25 |
| Aroclor 1260 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:25 |
| *Surr: Decachlorobiphenyl* | *95.1* | | | *40-140* | *%REC* | 1 | 4/8/2014 17:25 |
| *Surr: Tetrachloro-m-xylene* | *100* | | | *45-124* | *%REC* | 1 | 4/8/2014 17:25 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.11** | | **0.00076** | **0.015** | **mg/Kg-dry** | 1 | 4/3/2014 12:21 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **9.3** | | **0.32** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:13 |
| **Barium** | **260** | | **0.066** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:13 |
| **Cadmium** | **2.1** | | **0.0094** | **0.94** | **mg/Kg-dry** | 5 | 4/5/2014 11:13 |
| **Chromium** | **43** | | **0.38** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:13 |
| **Lead** | **130** | | **0.0094** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:13 |
| **Selenium** | **1.5** | J | **0.30** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:13 |
| **Silver** | **0.26** | J | **0.0094** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:13 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| **DRO (C10-C21)** | **48** | | **1.5** | **3.5** | **mg/Kg-dry** | 1 | 4/8/2014 11:30 |
| **ORO (C21-C35)** | **65** | | **1.7** | **3.5** | **mg/Kg-dry** | 1 | 4/8/2014 11:30 |
| *Surr: 4-Terphenyl-d14* | *99.2* | | | *25-137* | *%REC* | 1 | 4/8/2014 11:30 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.0 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 2,4,5-Trichlorophenol | U | | 10 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 2,4,6-Trichlorophenol | U | | 6.8 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 2,4-Dichlorophenol | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 2,4-Dimethylphenol | U | | 65 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 2,4-Dinitrophenol | U | | 36 | 800 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 2,4-Dinitrotoluene | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 2,6-Dinitrotoluene | U | | 21 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 2-Chloronaphthalene | U | | 1.9 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 2-Chlorophenol | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **2-Methylnaphthalene** | **60** | | **3.4** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| 2-Methylphenol | U | | 16 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-04-S-0-4
**Collection Date:** 3/31/2014 11:10 AM

**Work Order:** 1404130
**Lab ID:** 1404130-07
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 16 | 800 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 2-Nitrophenol | U | | 14 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 3,3´-Dichlorobenzidine | U | | 500 | 800 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 3-Nitroaniline | U | | 14 | 800 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 4,6-Dinitro-2-methylphenol | U | | 34 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 4-Bromophenyl phenyl ether | U | | 11 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 4-Chloro-3-methylphenol | U | | 9.4 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 4-Chloroaniline | U | | 12 | 800 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 4-Methylphenol | U | | 19 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 4-Nitroaniline | U | | 11 | 800 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| 4-Nitrophenol | U | | 8.0 | 800 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **Acenaphthene** | **26** | | **1.2** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| **Acenaphthylene** | **320** | | **1.5** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| Acetophenone | U | | 6.0 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **Anthracene** | **360** | | **1.6** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| Atrazine | U | | 12 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| Benzaldehyde | U | | 15 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **Benzo(a)anthracene** | **770** | | **1.6** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| **Benzo(a)pyrene** | **960** | | **2.6** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| **Benzo(b)fluoranthene** | **1,300** | | **2.4** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| **Benzo(g,h,i)perylene** | **880** | | **3.2** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| **Benzo(k)fluoranthene** | **470** | | **1.7** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| Bis(2-chloroethoxy)methane | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| Bis(2-chloroethyl)ether | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| Bis(2-chloroisopropyl)ether | U | | 17 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **Bis(2-ethylhexyl)phthalate** | **160** | J | **13** | **400** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| **Butyl benzyl phthalate** | **450** | | **15** | **190** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| Caprolactam | U | | 18 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **Carbazole** | **78** | J | **12** | **190** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| **Chrysene** | **850** | | **1.9** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| **Dibenzo(a,h)anthracene** | **210** | | **3.0** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| **Dibenzofuran** | **110** | J | **13** | **190** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| Diethyl phthalate | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| Dimethyl phthalate | U | | 14 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| Di-n-butyl phthalate | U | | 5.8 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| Di-n-octyl phthalate | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **Fluoranthene** | **1,700** | | **2.8** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| **Fluorene** | **140** | | **2.7** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| Hexachlorobenzene | U | | 11 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-04-S-0-4
**Collection Date:** 3/31/2014 11:10 AM

**Work Order:** 1404130
**Lab ID:** 1404130-07
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| Hexachlorocyclopentadiene | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| Hexachloroethane | U | | 19 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **Indeno(1,2,3-cd)pyrene** | **860** | | **2.7** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| Isophorone | U | | 14 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **Naphthalene** | **140** | | **3.0** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| Nitrobenzene | U | | 16 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| N-Nitrosodi-n-propylamine | U | | 15 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| N-Nitrosodiphenylamine | U | | 72 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| Pentachlorophenol | U | | 7.8 | 400 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **Phenanthrene** | **960** | | **1.6** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| Phenol | U | | 14 | 190 | µg/Kg-dry | 1 | 4/8/2014 22:42 |
| **Pyrene** | **1,700** | | **2.7** | **8.1** | **µg/Kg-dry** | 1 | 4/8/2014 22:42 |
| *Surr: 2,4,6-Tribromophenol* | *80.3* | | | *34-140* | *%REC* | 1 | 4/8/2014 22:42 |
| *Surr: 2-Fluorobiphenyl* | *71.9* | | | *12-100* | *%REC* | 1 | 4/8/2014 22:42 |
| *Surr: 2-Fluorophenol* | *79.6* | | | *33-117* | *%REC* | 1 | 4/8/2014 22:42 |
| *Surr: 4-Terphenyl-d14* | *101* | | | *25-137* | *%REC* | 1 | 4/8/2014 22:42 |
| *Surr: Nitrobenzene-d5* | *86.9* | | | *37-107* | *%REC* | 1 | 4/8/2014 22:42 |
| *Surr: Phenol-d6* | *83.9* | | | *40-106* | *%REC* | 1 | 4/8/2014 22:42 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: | **SW8260GRO** | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,500 | 3,100 | µg/Kg-dry | 1 | 4/3/2014 18:25 |
| *Surr: Toluene-d8* | *91.8* | | | *70-130* | *%REC* | 1 | 4/3/2014 18:25 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: | **SW8260** | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.23 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,1,2,2-Tetrachloroethane | U | | 0.15 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,1,2-Trichloroethane | U | | 0.20 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.30 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,1-Dichloroethane | U | | 0.27 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,1-Dichloroethene | U | | 0.24 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,2,4-Trichlorobenzene | U | | 0.22 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,2-Dibromo-3-chloropropane | U | | 0.21 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,2-Dibromoethane | U | | 0.22 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,2-Dichlorobenzene | U | | 0.22 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,2-Dichloroethane | U | | 0.29 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,2-Dichloropropane | U | | 0.28 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,3-Dichlorobenzene | U | | 0.20 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| 1,4-Dichlorobenzene | U | | 0.22 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| **2-Butanone** | **14** | | **0.82** | **11** | **µg/Kg-dry** | 0.862 | 4/9/2014 14:03 |
| 2-Hexanone | U | | 0.32 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-04-S-0-4
**Collection Date:** 3/31/2014 11:10 AM

**Work Order:** 1404130
**Lab ID:** 1404130-07
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.21 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| **Acetone** | **91** | | **1.0** | **11** | **µg/Kg-dry** | 0.862 | 4/9/2014 14:03 |
| Benzene | U | | 0.26 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Bromodichloromethane | U | | 0.22 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Bromoform | U | | 0.16 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Bromomethane | U | | 0.37 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Carbon disulfide | U | | 0.39 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Carbon tetrachloride | U | | 0.22 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Chlorobenzene | U | | 0.24 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Chloroethane | U | | 0.60 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Chloroform | U | | 0.28 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Chloromethane | U | | 0.33 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| cis-1,2-Dichloroethene | U | | 0.31 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| cis-1,3-Dichloropropene | U | | 0.19 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Cyclohexane | U | | 0.34 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Dibromochloromethane | U | | 0.18 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Dichlorodifluoromethane | U | | 0.35 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Ethylbenzene | U | | 0.21 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Isopropylbenzene | U | | 0.21 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| m,p-Xylene | U | | 0.40 | 2.7 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Methyl acetate | U | | 0.86 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Methyl tert-butyl ether | U | | 0.27 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Methylcyclohexane | U | | 0.30 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Methylene chloride | U | | 0.30 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| o-Xylene | U | | 0.21 | 2.7 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Styrene | U | | 0.19 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Tetrachloroethene | U | | 0.32 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Toluene | U | | 0.25 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| trans-1,2-Dichloroethene | U | | 0.31 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| trans-1,3-Dichloropropene | U | | 0.20 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Trichloroethene | U | | 0.25 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Trichlorofluoromethane | U | | 1.2 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Vinyl chloride | U | | 0.32 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| Xylenes, Total | U | | 0.61 | 5.3 | µg/Kg-dry | 0.862 | 4/9/2014 14:03 |
| *Surr: 1,2-Dichloroethane-d4* | *108* | | | *70-120* | *%REC* | 0.862 | 4/9/2014 14:03 |
| *Surr: 4-Bromofluorobenzene* | *96.0* | | | *75-120* | *%REC* | 0.862 | 4/9/2014 14:03 |
| *Surr: Dibromofluoromethane* | *26.3* | S | | *85-115* | *%REC* | 0.862 | 4/9/2014 14:03 |
| *Surr: Toluene-d8* | *97.4* | | | *85-120* | *%REC* | 0.862 | 4/9/2014 14:03 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-04-S-0-4
**Collection Date:** 3/31/2014 11:10 AM

**Work Order:** 1404130
**Lab ID:** 1404130-07
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **19** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 17:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-04-D-16-20
**Collection Date:** 3/31/2014 12:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-08
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:41 |
| Aroclor 1221 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:41 |
| Aroclor 1232 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:41 |
| Aroclor 1242 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:41 |
| Aroclor 1248 | U | | 58 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:41 |
| Aroclor 1254 | U | | 38 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:41 |
| Aroclor 1260 | U | | 38 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:41 |
| *Surr: Decachlorobiphenyl* | *97.1* | | | *40-140* | *%REC* | 1 | 4/8/2014 17:41 |
| *Surr: Tetrachloro-m-xylene* | *101* | | | *45-124* | *%REC* | 1 | 4/8/2014 17:41 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.020** | | **0.00087** | **0.017** | **mg/Kg-dry** | 1 | 4/3/2014 12:23 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **9.9** | | **0.31** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:19 |
| **Barium** | **530** | | **0.064** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:19 |
| **Cadmium** | **0.61** | J | **0.0091** | **0.91** | **mg/Kg-dry** | 5 | 4/5/2014 11:19 |
| **Chromium** | **23** | | **0.37** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:19 |
| **Lead** | **17** | | **0.0091** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:19 |
| **Selenium** | **1.9** | J | **0.29** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:19 |
| **Silver** | **0.087** | J | **0.0091** | **2.3** | **mg/Kg-dry** | 5 | 4/5/2014 11:19 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| **DRO (C10-C21)** | **25** | | **1.6** | **3.6** | **mg/Kg-dry** | 1 | 4/8/2014 08:59 |
| ORO (C21-C35) | U | | 1.7 | 3.6 | mg/Kg-dry | 1 | 4/8/2014 08:59 |
| *Surr: 4-Terphenyl-d14* | *101* | | | *25-137* | *%REC* | 1 | 4/8/2014 08:59 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.2 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2,4,5-Trichlorophenol | U | | 10 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2,4,6-Trichlorophenol | U | | 7.0 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2,4-Dichlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2,4-Dimethylphenol | U | | 67 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2,4-Dinitrophenol | U | | 38 | 830 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2,4-Dinitrotoluene | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2,6-Dinitrotoluene | U | | 22 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2-Chloronaphthalene | U | | 2.0 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2-Chlorophenol | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2-Methylnaphthalene | U | | 3.5 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2-Methylphenol | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-04-D-16-20
**Collection Date:** 3/31/2014 12:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-08
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 16 | 830 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 2-Nitrophenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 3,3´-Dichlorobenzidine | U | | 520 | 830 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 3-Nitroaniline | U | | 14 | 830 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 4,6-Dinitro-2-methylphenol | U | | 35 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 4-Bromophenyl phenyl ether | U | | 11 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 4-Chloro-3-methylphenol | U | | 9.6 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 4-Chloroaniline | U | | 12 | 830 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 4-Methylphenol | U | | 20 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 4-Nitroaniline | U | | 12 | 830 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| 4-Nitrophenol | U | | 8.2 | 830 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Acenaphthene | U | | 1.2 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Acenaphthylene | U | | 1.5 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Acetophenone | U | | 6.2 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Anthracene | U | | 1.6 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Atrazine | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Benzaldehyde | U | | 16 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| **Benzo(a)anthracene** | **30** | | **1.6** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:38 |
| **Benzo(a)pyrene** | **38** | | **2.7** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:38 |
| **Benzo(b)fluoranthene** | **43** | | **2.4** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:38 |
| **Benzo(g,h,i)perylene** | **22** | | **3.3** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:38 |
| Benzo(k)fluoranthene | U | | 1.8 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Bis(2-chloroethoxy)methane | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Bis(2-chloroethyl)ether | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Bis(2-chloroisopropyl)ether | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Bis(2-ethylhexyl)phthalate | U | | 14 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Butyl benzyl phthalate | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Caprolactam | U | | 18 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Carbazole | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| **Chrysene** | **23** | | **2.0** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:38 |
| Dibenzo(a,h)anthracene | U | | 3.1 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Dibenzofuran | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Diethyl phthalate | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Dimethyl phthalate | U | | 14 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Di-n-butyl phthalate | U | | 6.0 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Di-n-octyl phthalate | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| **Fluoranthene** | **72** | | **2.9** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:38 |
| Fluorene | U | | 2.8 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Hexachlorobenzene | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-04-D-16-20
**Collection Date:** 3/31/2014 12:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-08
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Hexachlorocyclopentadiene | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Hexachloroethane | U | | 19 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Indeno(1,2,3-cd)pyrene | U | | 2.8 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Isophorone | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Naphthalene | U | | 3.1 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Nitrobenzene | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| N-Nitrosodi-n-propylamine | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| N-Nitrosodiphenylamine | U | | 74 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| Pentachlorophenol | U | | 8.0 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| **Phenanthrene** | **50** | | **1.7** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:38 |
| Phenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:38 |
| **Pyrene** | **63** | | **2.8** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:38 |
| *Surr: 2,4,6-Tribromophenol* | *42.6* | | | *34-140* | *%REC* | 1 | 4/8/2014 20:38 |
| *Surr: 2-Fluorobiphenyl* | *77.4* | | | *12-100* | *%REC* | 1 | 4/8/2014 20:38 |
| *Surr: 2-Fluorophenol* | *62.8* | | | *33-117* | *%REC* | 1 | 4/8/2014 20:38 |
| *Surr: 4-Terphenyl-d14* | *107* | | | *25-137* | *%REC* | 1 | 4/8/2014 20:38 |
| *Surr: Nitrobenzene-d5* | *97.6* | | | *37-107* | *%REC* | 1 | 4/8/2014 20:38 |
| *Surr: Phenol-d6* | *81.4* | | | *40-106* | *%REC* | 1 | 4/8/2014 20:38 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: | **SW8260GRO** | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,600 | 3,200 | µg/Kg-dry | 1 | 4/3/2014 18:51 |
| *Surr: Toluene-d8* | *92.9* | | | *70-130* | *%REC* | 1 | 4/3/2014 18:51 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: | **SW8260** | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.24 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,1,2,2-Tetrachloroethane | U | | 0.16 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,1,2-Trichloroethane | U | | 0.21 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.31 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,1-Dichloroethane | U | | 0.28 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,1-Dichloroethene | U | | 0.25 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,2,4-Trichlorobenzene | U | | 0.23 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,2-Dibromo-3-chloropropane | U | | 0.22 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,2-Dibromoethane | U | | 0.22 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,2-Dichlorobenzene | U | | 0.22 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,2-Dichloroethane | U | | 0.31 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,2-Dichloropropane | U | | 0.29 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,3-Dichlorobenzene | U | | 0.21 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| 1,4-Dichlorobenzene | U | | 0.23 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| **2-Butanone** | **4.9** | J | **0.85** | **11** | **µg/Kg-dry** | 0.87 | 4/9/2014 14:28 |
| 2-Hexanone | U | | 0.33 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-04-D-16-20
**Collection Date:** 3/31/2014 12:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-08
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.22 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| **Acetone** | **47** | | **1.0** | **11** | **µg/Kg-dry** | 0.87 | 4/9/2014 14:28 |
| Benzene | U | | 0.27 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Bromodichloromethane | U | | 0.23 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Bromoform | U | | 0.17 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Bromomethane | U | | 0.39 | 11 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Carbon disulfide | U | | 0.41 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Carbon tetrachloride | U | | 0.22 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Chlorobenzene | U | | 0.24 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Chloroethane | U | | 0.62 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Chloroform | U | | 0.29 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Chloromethane | U | | 0.34 | 11 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| cis-1,2-Dichloroethene | U | | 0.33 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| cis-1,3-Dichloropropene | U | | 0.20 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Cyclohexane | U | | 0.35 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Dibromochloromethane | U | | 0.19 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Dichlorodifluoromethane | U | | 0.37 | 11 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Ethylbenzene | U | | 0.21 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Isopropylbenzene | U | | 0.21 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| m,p-Xylene | U | | 0.42 | 2.8 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Methyl acetate | U | | 0.89 | 11 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Methyl tert-butyl ether | U | | 0.28 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Methylcyclohexane | U | | 0.31 | 11 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Methylene chloride | U | | 0.31 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| o-Xylene | U | | 0.22 | 2.8 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Styrene | U | | 0.20 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Tetrachloroethene | U | | 0.33 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Toluene | U | | 0.26 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| trans-1,2-Dichloroethene | U | | 0.32 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| trans-1,3-Dichloropropene | U | | 0.21 | 11 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Trichloroethene | U | | 0.26 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Trichlorofluoromethane | U | | 1.3 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Vinyl chloride | U | | 0.34 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| Xylenes, Total | U | | 0.64 | 5.5 | µg/Kg-dry | 0.87 | 4/9/2014 14:28 |
| *Surr: 1,2-Dichloroethane-d4* | *108* | | | *70-120* | *%REC* | 0.87 | 4/9/2014 14:28 |
| *Surr: 4-Bromofluorobenzene* | *96.7* | | | *75-120* | *%REC* | 0.87 | 4/9/2014 14:28 |
| *Surr: Dibromofluoromethane* | *21.0* | S | | *85-115* | *%REC* | 0.87 | 4/9/2014 14:28 |
| *Surr: Toluene-d8* | *98.3* | | | *85-120* | *%REC* | 0.87 | 4/9/2014 14:28 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-04-D-16-20
**Collection Date:** 3/31/2014 12:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-08
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **21** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 17:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-05-S-0-4
**Collection Date:** 3/31/2014 03:05 PM

**Work Order:** 1404130
**Lab ID:** 1404130-09
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:57 |
| Aroclor 1221 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:57 |
| Aroclor 1232 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:57 |
| Aroclor 1242 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:57 |
| Aroclor 1248 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:57 |
| Aroclor 1254 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:57 |
| Aroclor 1260 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 17:57 |
| *Surr: Decachlorobiphenyl* | *100* | | | *40-140* | *%REC* | 1 | 4/8/2014 17:57 |
| *Surr: Tetrachloro-m-xylene* | *104* | | | *45-124* | *%REC* | 1 | 4/8/2014 17:57 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.012** | J | **0.00096** | **0.019** | **mg/Kg-dry** | 1 | 4/3/2014 12:26 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **5.3** | | **0.33** | **2.5** | **mg/Kg-dry** | 5 | 4/5/2014 11:25 |
| **Barium** | **210** | | **0.069** | **2.5** | **mg/Kg-dry** | 5 | 4/5/2014 11:25 |
| **Cadmium** | **0.10** | J | **0.0098** | **0.98** | **mg/Kg-dry** | 5 | 4/5/2014 11:25 |
| **Chromium** | **20** | | **0.40** | **2.5** | **mg/Kg-dry** | 5 | 4/5/2014 11:25 |
| **Lead** | **11** | | **0.0098** | **2.5** | **mg/Kg-dry** | 5 | 4/5/2014 11:25 |
| **Selenium** | **1.9** | J | **0.31** | **2.5** | **mg/Kg-dry** | 5 | 4/5/2014 11:25 |
| **Silver** | **0.058** | J | **0.0098** | **2.5** | **mg/Kg-dry** | 5 | 4/5/2014 11:25 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| DRO (C10-C21) | U | | 1.5 | 3.6 | mg/Kg-dry | 1 | 4/8/2014 09:26 |
| ORO (C21-C35) | U | | 1.7 | 3.6 | mg/Kg-dry | 1 | 4/8/2014 09:26 |
| *Surr: 4-Terphenyl-d14* | *103* | | | *25-137* | *%REC* | 1 | 4/8/2014 09:26 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.1 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2,4,5-Trichlorophenol | U | | 10 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2,4,6-Trichlorophenol | U | | 6.9 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2,4-Dichlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2,4-Dimethylphenol | U | | 66 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2,4-Dinitrophenol | U | | 37 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2,4-Dinitrotoluene | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2,6-Dinitrotoluene | U | | 21 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2-Chloronaphthalene | U | | 1.9 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2-Chlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2-Methylnaphthalene | U | | 3.4 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2-Methylphenol | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-05-S-0-4
**Collection Date:** 3/31/2014 03:05 PM

**Work Order:** 1404130
**Lab ID:** 1404130-09
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 16 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 2-Nitrophenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 3,3´-Dichlorobenzidine | U | | 510 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 3-Nitroaniline | U | | 14 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 4,6-Dinitro-2-methylphenol | U | | 34 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 4-Bromophenyl phenyl ether | U | | 11 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 4-Chloro-3-methylphenol | U | | 9.5 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 4-Chloroaniline | U | | 12 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 4-Methylphenol | U | | 20 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 4-Nitroaniline | U | | 11 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| 4-Nitrophenol | U | | 8.2 | 820 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Acenaphthene | U | | 1.2 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Acenaphthylene | U | | 1.5 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Acetophenone | U | | 6.2 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Anthracene | U | | 1.6 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Atrazine | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Benzaldehyde | U | | 16 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Benzo(a)anthracene | U | | 1.6 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Benzo(a)pyrene | U | | 2.7 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Benzo(b)fluoranthene | U | | 2.4 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Benzo(g,h,i)perylene | U | | 3.2 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Benzo(k)fluoranthene | U | | 1.7 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Bis(2-chloroethoxy)methane | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Bis(2-chloroethyl)ether | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Bis(2-chloroisopropyl)ether | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Bis(2-ethylhexyl)phthalate | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Butyl benzyl phthalate | U | | 15 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Caprolactam | U | | 18 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Carbazole | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| **Chrysene** | **21** | | **2.0** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:59 |
| Dibenzo(a,h)anthracene | U | | 3.1 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Dibenzofuran | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Diethyl phthalate | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Dimethyl phthalate | U | | 14 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Di-n-butyl phthalate | U | | 6.0 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Di-n-octyl phthalate | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| **Fluoranthene** | **37** | | **2.9** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:59 |
| Fluorene | U | | 2.8 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Hexachlorobenzene | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-05-S-0-4
**Collection Date:** 3/31/2014 03:05 PM

**Work Order:** 1404130
**Lab ID:** 1404130-09
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Hexachlorocyclopentadiene | U | | 13 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Hexachloroethane | U | | 19 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Indeno(1,2,3-cd)pyrene | U | | 2.7 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Isophorone | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Naphthalene | U | | 3.0 | 8.3 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Nitrobenzene | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| N-Nitrosodi-n-propylamine | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| N-Nitrosodiphenylamine | U | | 73 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| Pentachlorophenol | U | | 8.0 | 410 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| **Phenanthrene** | **27** | | **1.7** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:59 |
| Phenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 20:59 |
| **Pyrene** | **40** | | **2.8** | **8.3** | **µg/Kg-dry** | 1 | 4/8/2014 20:59 |
| *Surr: 2,4,6-Tribromophenol* | *49.0* | | | *34-140* | *%REC* | 1 | 4/8/2014 20:59 |
| *Surr: 2-Fluorobiphenyl* | *78.4* | | | *12-100* | *%REC* | 1 | 4/8/2014 20:59 |
| *Surr: 2-Fluorophenol* | *76.3* | | | *33-117* | *%REC* | 1 | 4/8/2014 20:59 |
| *Surr: 4-Terphenyl-d14* | *109* | | | *25-137* | *%REC* | 1 | 4/8/2014 20:59 |
| *Surr: Nitrobenzene-d5* | *97.9* | | | *37-107* | *%REC* | 1 | 4/8/2014 20:59 |
| *Surr: Phenol-d6* | *85.2* | | | *40-106* | *%REC* | 1 | 4/8/2014 20:59 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: | **SW8260GRO** | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,600 | 3,100 | µg/Kg-dry | 1 | 4/3/2014 19:18 |
| *Surr: Toluene-d8* | *93.2* | | | *70-130* | *%REC* | 1 | 4/3/2014 19:18 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: | **SW8260** | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.24 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,1,2,2-Tetrachloroethane | U | | 0.15 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,1,2-Trichloroethane | U | | 0.21 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.30 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,1-Dichloroethane | U | | 0.28 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,1-Dichloroethene | U | | 0.25 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,2,4-Trichlorobenzene | U | | 0.22 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,2-Dibromo-3-chloropropane | U | | 0.21 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,2-Dibromoethane | U | | 0.22 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,2-Dichlorobenzene | U | | 0.22 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,2-Dichloroethane | U | | 0.30 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,2-Dichloropropane | U | | 0.28 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,3-Dichlorobenzene | U | | 0.20 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| 1,4-Dichlorobenzene | U | | 0.23 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| **2-Butanone** | **10** | J | **0.84** | **11** | **µg/Kg-dry** | 0.864 | 4/9/2014 14:54 |
| 2-Hexanone | U | | 0.33 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-05-S-0-4
**Collection Date:** 3/31/2014 03:05 PM

**Work Order:** 1404130
**Lab ID:** 1404130-09
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.21 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| **Acetone** | **88** | | **1.0** | **11** | **µg/Kg-dry** | 0.864 | 4/9/2014 14:54 |
| Benzene | U | | 0.27 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Bromodichloromethane | U | | 0.22 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Bromoform | U | | 0.17 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Bromomethane | U | | 0.38 | 11 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Carbon disulfide | U | | 0.40 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Carbon tetrachloride | U | | 0.22 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Chlorobenzene | U | | 0.24 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Chloroethane | U | | 0.61 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Chloroform | U | | 0.28 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Chloromethane | U | | 0.33 | 11 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| cis-1,2-Dichloroethene | U | | 0.32 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| cis-1,3-Dichloropropene | U | | 0.20 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Cyclohexane | U | | 0.35 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Dibromochloromethane | U | | 0.18 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Dichlorodifluoromethane | U | | 0.36 | 11 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Ethylbenzene | U | | 0.21 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Isopropylbenzene | U | | 0.21 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| m,p-Xylene | U | | 0.41 | 2.7 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Methyl acetate | U | | 0.87 | 11 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Methyl tert-butyl ether | U | | 0.27 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Methylcyclohexane | U | | 0.30 | 11 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| **Methylene chloride** | **0.49** | J | **0.31** | **5.4** | **µg/Kg-dry** | 0.864 | 4/9/2014 14:54 |
| o-Xylene | U | | 0.22 | 2.7 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Styrene | U | | 0.20 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Tetrachloroethene | U | | 0.33 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Toluene | U | | 0.26 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| trans-1,2-Dichloroethene | U | | 0.32 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| trans-1,3-Dichloropropene | U | | 0.20 | 11 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Trichloroethene | U | | 0.25 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Trichlorofluoromethane | U | | 1.3 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Vinyl chloride | U | | 0.33 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| Xylenes, Total | U | | 0.63 | 5.4 | µg/Kg-dry | 0.864 | 4/9/2014 14:54 |
| *Surr: 1,2-Dichloroethane-d4* | *109* | | | *70-120* | *%REC* | 0.864 | 4/9/2014 14:54 |
| *Surr: 4-Bromofluorobenzene* | *92.1* | | | *75-120* | *%REC* | 0.864 | 4/9/2014 14:54 |
| *Surr: Dibromofluoromethane* | *24.2* | S | | *85-115* | *%REC* | 0.864 | 4/9/2014 14:54 |
| *Surr: Toluene-d8* | *98.4* | | | *85-120* | *%REC* | 0.864 | 4/9/2014 14:54 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-05-S-0-4
**Collection Date:** 3/31/2014 03:05 PM

**Work Order:** 1404130
**Lab ID:** 1404130-09
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **20** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 17:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-05-D-16-20
**Collection Date:** 3/31/2014 03:45 PM

**Work Order:** 1404130
**Lab ID:** 1404130-10
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 18:13 |
| Aroclor 1221 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 18:13 |
| Aroclor 1232 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 18:13 |
| Aroclor 1242 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 18:13 |
| Aroclor 1248 | U | | 57 | 100 | µg/Kg-dry | 1 | 4/8/2014 18:13 |
| Aroclor 1254 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 18:13 |
| Aroclor 1260 | U | | 37 | 100 | µg/Kg-dry | 1 | 4/8/2014 18:13 |
| *Surr: Decachlorobiphenyl* | *101* | | | *40-140* | *%REC* | 1 | 4/8/2014 18:13 |
| *Surr: Tetrachloro-m-xylene* | *101* | | | *45-124* | *%REC* | 1 | 4/8/2014 18:13 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.017** | | **0.00082** | **0.016** | **mg/Kg-dry** | 1 | 4/3/2014 12:28 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **4.9** | | **0.30** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 11:31 |
| **Barium** | **230** | | **0.062** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 11:31 |
| **Cadmium** | **0.37** | J | **0.0089** | **0.89** | **mg/Kg-dry** | 5 | 4/5/2014 11:31 |
| **Chromium** | **16** | | **0.36** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 11:31 |
| **Lead** | **13** | | **0.0089** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 11:31 |
| **Selenium** | **1.4** | J | **0.28** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 11:31 |
| **Silver** | **0.050** | J | **0.0089** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 11:31 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| DRO (C10-C21) | U | | 1.6 | 3.7 | mg/Kg-dry | 1 | 4/8/2014 09:51 |
| ORO (C21-C35) | U | | 1.8 | 3.7 | mg/Kg-dry | 1 | 4/8/2014 09:51 |
| *Surr: 4-Terphenyl-d14* | *98.0* | | | *25-137* | *%REC* | 1 | 4/8/2014 09:51 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.3 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2,4,5-Trichlorophenol | U | | 10 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2,4,6-Trichlorophenol | U | | 7.1 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2,4-Dichlorophenol | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2,4-Dimethylphenol | U | | 67 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2,4-Dinitrophenol | U | | 38 | 830 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2,4-Dinitrotoluene | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2,6-Dinitrotoluene | U | | 22 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2-Chloronaphthalene | U | | 2.0 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2-Chlorophenol | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2-Methylnaphthalene | U | | 3.5 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2-Methylphenol | U | | 17 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-05-D-16-20
**Collection Date:** 3/31/2014 03:45 PM

**Work Order:** 1404130
**Lab ID:** 1404130-10
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 16 | 830 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 2-Nitrophenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 3,3´-Dichlorobenzidine | U | | 520 | 830 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 3-Nitroaniline | U | | 14 | 830 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 4,6-Dinitro-2-methylphenol | U | | 35 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 4-Bromophenyl phenyl ether | U | | 11 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 4-Chloro-3-methylphenol | U | | 9.7 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 4-Chloroaniline | U | | 13 | 830 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 4-Methylphenol | U | | 20 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 4-Nitroaniline | U | | 12 | 830 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| 4-Nitrophenol | U | | 8.3 | 830 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Acenaphthene | U | | 1.3 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Acenaphthylene | U | | 1.5 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Acetophenone | U | | 6.3 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Anthracene | U | | 1.7 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Atrazine | U | | 13 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Benzaldehyde | U | | 16 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Benzo(a)anthracene | U | | 1.7 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Benzo(a)pyrene | U | | 2.7 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Benzo(b)fluoranthene | U | | 2.5 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Benzo(g,h,i)perylene | U | | 3.3 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Benzo(k)fluoranthene | U | | 1.8 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Bis(2-chloroethoxy)methane | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Bis(2-chloroethyl)ether | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Bis(2-chloroisopropyl)ether | U | | 18 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Bis(2-ethylhexyl)phthalate | U | | 14 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Butyl benzyl phthalate | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Caprolactam | U | | 18 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Carbazole | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Chrysene | U | | 2.0 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Dibenzo(a,h)anthracene | U | | 3.1 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Dibenzofuran | U | | 13 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Diethyl phthalate | U | | 13 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Dimethyl phthalate | U | | 14 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Di-n-butyl phthalate | U | | 6.1 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Di-n-octyl phthalate | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Fluoranthene | U | | 2.9 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Fluorene | U | | 2.8 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Hexachlorobenzene | U | | 12 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-05-D-16-20
**Collection Date:** 3/31/2014 03:45 PM

**Work Order:** 1404130
**Lab ID:** 1404130-10
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Hexachlorocyclopentadiene | U | | 13 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Hexachloroethane | U | | 20 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Indeno(1,2,3-cd)pyrene | U | | 2.8 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Isophorone | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Naphthalene | U | | 3.1 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Nitrobenzene | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| N-Nitrosodi-n-propylamine | U | | 16 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| N-Nitrosodiphenylamine | U | | 75 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Pentachlorophenol | U | | 8.1 | 420 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Phenanthrene | U | | 1.7 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Phenol | U | | 14 | 200 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| Pyrene | U | | 2.8 | 8.4 | µg/Kg-dry | 1 | 4/8/2014 21:20 |
| *Surr: 2,4,6-Tribromophenol* | *33.6* | S | | *34-140* | *%REC* | 1 | 4/8/2014 21:20 |
| *Surr: 2-Fluorobiphenyl* | *63.5* | | | *12-100* | *%REC* | 1 | 4/8/2014 21:20 |
| *Surr: 2-Fluorophenol* | *49.9* | | | *33-117* | *%REC* | 1 | 4/8/2014 21:20 |
| *Surr: 4-Terphenyl-d14* | *102* | | | *25-137* | *%REC* | 1 | 4/8/2014 21:20 |
| *Surr: Nitrobenzene-d5* | *82.2* | | | *37-107* | *%REC* | 1 | 4/8/2014 21:20 |
| *Surr: Phenol-d6* | *66.6* | | | *40-106* | *%REC* | 1 | 4/8/2014 21:20 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: **SW8260GRO** | | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,600 | 3,200 | µg/Kg-dry | 1 | 4/3/2014 19:44 |
| *Surr: Toluene-d8* | *90.7* | | | *70-130* | *%REC* | 1 | 4/3/2014 19:44 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8260** | | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.24 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,1,2,2-Tetrachloroethane | U | | 0.16 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,1,2-Trichloroethane | U | | 0.21 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.30 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,1-Dichloroethane | U | | 0.28 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,1-Dichloroethene | U | | 0.25 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,2,4-Trichlorobenzene | U | | 0.23 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,2-Dibromo-3-chloropropane | U | | 0.22 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,2-Dibromoethane | U | | 0.22 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,2-Dichlorobenzene | U | | 0.22 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,2-Dichloroethane | U | | 0.30 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,2-Dichloropropane | U | | 0.28 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,3-Dichlorobenzene | U | | 0.21 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| 1,4-Dichlorobenzene | U | | 0.23 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| **2-Butanone** | **2.7** | J | **0.84** | **11** | **µg/Kg-dry** | 0.862 | 4/9/2014 15:20 |
| 2-Hexanone | U | | 0.33 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-05-D-16-20
**Collection Date:** 3/31/2014 03:45 PM

**Work Order:** 1404130
**Lab ID:** 1404130-10
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.22 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| **Acetone** | **32** | | **1.0** | **11** | **µg/Kg-dry** | 0.862 | 4/9/2014 15:20 |
| Benzene | U | | 0.27 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Bromodichloromethane | U | | 0.23 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Bromoform | U | | 0.17 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Bromomethane | U | | 0.38 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Carbon disulfide | U | | 0.40 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Carbon tetrachloride | U | | 0.22 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Chlorobenzene | U | | 0.24 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Chloroethane | U | | 0.61 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Chloroform | U | | 0.29 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Chloromethane | U | | 0.34 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| cis-1,2-Dichloroethene | U | | 0.32 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| cis-1,3-Dichloropropene | U | | 0.20 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Cyclohexane | U | | 0.35 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Dibromochloromethane | U | | 0.18 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Dichlorodifluoromethane | U | | 0.36 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Ethylbenzene | U | | 0.21 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Isopropylbenzene | U | | 0.21 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| m,p-Xylene | U | | 0.41 | 2.7 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Methyl acetate | U | | 0.88 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Methyl tert-butyl ether | U | | 0.28 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Methylcyclohexane | U | | 0.30 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| **Methylene chloride** | **1.2** | J | **0.31** | **5.5** | **µg/Kg-dry** | 0.862 | 4/9/2014 15:20 |
| o-Xylene | U | | 0.22 | 2.7 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Styrene | U | | 0.20 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Tetrachloroethene | U | | 0.33 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Toluene | U | | 0.26 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| trans-1,2-Dichloroethene | U | | 0.32 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| trans-1,3-Dichloropropene | U | | 0.20 | 11 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Trichloroethene | U | | 0.25 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Trichlorofluoromethane | U | | 1.3 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Vinyl chloride | U | | 0.33 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| Xylenes, Total | U | | 0.63 | 5.5 | µg/Kg-dry | 0.862 | 4/9/2014 15:20 |
| *Surr: 1,2-Dichloroethane-d4* | *109* | | | *70-120* | *%REC* | 0.862 | 4/9/2014 15:20 |
| *Surr: 4-Bromofluorobenzene* | *97.5* | | | *75-120* | *%REC* | 0.862 | 4/9/2014 15:20 |
| *Surr: Dibromofluoromethane* | *22.8* | S | | *85-115* | *%REC* | 0.862 | 4/9/2014 15:20 |
| *Surr: Toluene-d8* | *100* | | | *85-120* | *%REC* | 0.862 | 4/9/2014 15:20 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-05-D-16-20
**Collection Date:** 3/31/2014 03:45 PM

**Work Order:** 1404130
**Lab ID:** 1404130-10
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **21** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 17:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-06-S-0-4
**Collection Date:** 3/31/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-11
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 56 | 98 | µg/Kg-dry | 1 | 4/8/2014 18:29 |
| Aroclor 1221 | U | | 56 | 98 | µg/Kg-dry | 1 | 4/8/2014 18:29 |
| Aroclor 1232 | U | | 56 | 98 | µg/Kg-dry | 1 | 4/8/2014 18:29 |
| Aroclor 1242 | U | | 56 | 98 | µg/Kg-dry | 1 | 4/8/2014 18:29 |
| Aroclor 1248 | U | | 56 | 98 | µg/Kg-dry | 1 | 4/8/2014 18:29 |
| Aroclor 1254 | U | | 36 | 98 | µg/Kg-dry | 1 | 4/8/2014 18:29 |
| Aroclor 1260 | U | | 36 | 98 | µg/Kg-dry | 1 | 4/8/2014 18:29 |
| *Surr: Decachlorobiphenyl* | *102* | | | *40-140* | *%REC* | 1 | 4/8/2014 18:29 |
| *Surr: Tetrachloro-m-xylene* | *98.1* | | | *45-124* | *%REC* | 1 | 4/8/2014 18:29 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.018** | | **0.00077** | **0.015** | **mg/Kg-dry** | 1 | 4/3/2014 12:30 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **5.7** | | **0.26** | **1.9** | **mg/Kg-dry** | 5 | 4/5/2014 12:13 |
| **Barium** | **150** | | **0.054** | **1.9** | **mg/Kg-dry** | 5 | 4/5/2014 12:13 |
| **Cadmium** | **0.13** | J | **0.0077** | **0.77** | **mg/Kg-dry** | 5 | 4/5/2014 12:13 |
| **Chromium** | **17** | | **0.32** | **1.9** | **mg/Kg-dry** | 5 | 4/5/2014 12:13 |
| **Lead** | **12** | | **0.0077** | **1.9** | **mg/Kg-dry** | 5 | 4/5/2014 12:13 |
| **Selenium** | **1.3** | J | **0.25** | **1.9** | **mg/Kg-dry** | 5 | 4/5/2014 12:13 |
| **Silver** | **0.11** | J | **0.0077** | **1.9** | **mg/Kg-dry** | 5 | 4/5/2014 12:13 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| DRO (C10-C21) | U | | 1.5 | 3.5 | mg/Kg-dry | 1 | 4/8/2014 10:16 |
| ORO (C21-C35) | U | | 1.7 | 3.5 | mg/Kg-dry | 1 | 4/8/2014 10:16 |
| *Surr: 4-Terphenyl-d14* | *98.2* | | | *25-137* | *%REC* | 1 | 4/8/2014 10:16 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.0 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2,4,5-Trichlorophenol | U | | 10 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2,4,6-Trichlorophenol | U | | 6.8 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2,4-Dichlorophenol | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2,4-Dimethylphenol | U | | 65 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2,4-Dinitrophenol | U | | 36 | 800 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2,4-Dinitrotoluene | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2,6-Dinitrotoluene | U | | 21 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2-Chloronaphthalene | U | | 1.9 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2-Chlorophenol | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2-Methylnaphthalene | U | | 3.3 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2-Methylphenol | U | | 16 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-06-S-0-4
**Collection Date:** 3/31/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-11
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 16 | 800 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 2-Nitrophenol | U | | 14 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 3,3´-Dichlorobenzidine | U | | 500 | 800 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 3-Nitroaniline | U | | 14 | 800 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 4,6-Dinitro-2-methylphenol | U | | 33 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 4-Bromophenyl phenyl ether | U | | 11 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 4-Chloro-3-methylphenol | U | | 9.3 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 4-Chloroaniline | U | | 12 | 800 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 4-Chlorophenyl phenyl ether | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 4-Methylphenol | U | | 19 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 4-Nitroaniline | U | | 11 | 800 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| 4-Nitrophenol | U | | 8.0 | 800 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Acenaphthene | U | | 1.2 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Acenaphthylene | U | | 1.5 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Acetophenone | U | | 6.0 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Anthracene | U | | 1.6 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Atrazine | U | | 12 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Benzaldehyde | U | | 15 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Benzo(a)anthracene | U | | 1.6 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Benzo(a)pyrene | U | | 2.6 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Benzo(b)fluoranthene | U | | 2.4 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Benzo(g,h,i)perylene | U | | 3.2 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Benzo(k)fluoranthene | U | | 1.7 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Bis(2-chloroethoxy)methane | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Bis(2-chloroethyl)ether | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Bis(2-chloroisopropyl)ether | U | | 17 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Bis(2-ethylhexyl)phthalate | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Butyl benzyl phthalate | U | | 15 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Caprolactam | U | | 18 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Carbazole | U | | 12 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Chrysene | U | | 1.9 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Dibenzo(a,h)anthracene | U | | 3.0 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Dibenzofuran | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Diethyl phthalate | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Dimethyl phthalate | U | | 14 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Di-n-butyl phthalate | U | | 5.8 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Di-n-octyl phthalate | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Fluoranthene | U | | 2.8 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Fluorene | U | | 2.7 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Hexachlorobenzene | U | | 11 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-06-S-0-4
**Collection Date:** 3/31/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-11
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Hexachlorocyclopentadiene | U | | 13 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Hexachloroethane | U | | 19 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Indeno(1,2,3-cd)pyrene | U | | 2.7 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Isophorone | U | | 13 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Naphthalene | U | | 3.0 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Nitrobenzene | U | | 16 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| N-Nitrosodi-n-propylamine | U | | 15 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| N-Nitrosodiphenylamine | U | | 72 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Pentachlorophenol | U | | 7.8 | 400 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Phenanthrene | U | | 1.6 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Phenol | U | | 14 | 190 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| Pyrene | U | | 2.7 | 8.1 | µg/Kg-dry | 1 | 4/8/2014 21:40 |
| *Surr: 2,4,6-Tribromophenol* | *55.2* | | | *34-140* | *%REC* | 1 | 4/8/2014 21:40 |
| *Surr: 2-Fluorobiphenyl* | *73.9* | | | *12-100* | *%REC* | 1 | 4/8/2014 21:40 |
| *Surr: 2-Fluorophenol* | *83.6* | | | *33-117* | *%REC* | 1 | 4/8/2014 21:40 |
| *Surr: 4-Terphenyl-d14* | *100* | | | *25-137* | *%REC* | 1 | 4/8/2014 21:40 |
| *Surr: Nitrobenzene-d5* | *95.0* | | | *37-107* | *%REC* | 1 | 4/8/2014 21:40 |
| *Surr: Phenol-d6* | *84.6* | | | *40-106* | *%REC* | 1 | 4/8/2014 21:40 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: | **SW8260GRO** | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,500 | 3,100 | µg/Kg-dry | 1 | 4/3/2014 20:10 |
| *Surr: Toluene-d8* | *92.0* | | | *70-130* | *%REC* | 1 | 4/3/2014 20:10 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: | **SW8260** | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.22 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,1,2,2-Tetrachloroethane | U | | 0.14 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,1,2-Trichloroethane | U | | 0.20 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.28 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,1-Dichloroethane | U | | 0.26 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,1-Dichloroethene | U | | 0.23 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,2,4-Trichlorobenzene | U | | 0.21 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,2-Dibromo-3-chloropropane | U | | 0.20 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,2-Dibromoethane | U | | 0.21 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,2-Dichlorobenzene | U | | 0.21 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,2-Dichloroethane | U | | 0.28 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,2-Dichloropropane | U | | 0.26 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,3-Dichlorobenzene | U | | 0.19 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| 1,4-Dichlorobenzene | U | | 0.21 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| **2-Butanone** | **5.3** | J | **0.78** | **10** | **µg/Kg-dry** | 0.832 | 4/9/2014 15:46 |
| 2-Hexanone | U | | 0.31 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-06-S-0-4
**Collection Date:** 3/31/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-11
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.20 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| **Acetone** | **57** | | **0.95** | **10** | **µg/Kg-dry** | 0.832 | 4/9/2014 15:46 |
| Benzene | U | | 0.25 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Bromodichloromethane | U | | 0.21 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Bromoform | U | | 0.16 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Bromomethane | U | | 0.36 | 10 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Carbon disulfide | U | | 0.37 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Carbon tetrachloride | U | | 0.21 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Chlorobenzene | U | | 0.22 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Chloroethane | U | | 0.57 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Chloroform | U | | 0.27 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Chloromethane | U | | 0.31 | 10 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| cis-1,2-Dichloroethene | U | | 0.30 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| cis-1,3-Dichloropropene | U | | 0.18 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Cyclohexane | U | | 0.32 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Dibromochloromethane | U | | 0.17 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Dichlorodifluoromethane | U | | 0.34 | 10 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Ethylbenzene | U | | 0.20 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Isopropylbenzene | U | | 0.20 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| m,p-Xylene | U | | 0.38 | 2.5 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Methyl acetate | U | | 0.82 | 10 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Methyl tert-butyl ether | U | | 0.26 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Methylcyclohexane | U | | 0.28 | 10 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| **Methylene chloride** | **0.83** | J | **0.29** | **5.1** | **µg/Kg-dry** | 0.832 | 4/9/2014 15:46 |
| o-Xylene | U | | 0.20 | 2.5 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Styrene | U | | 0.19 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Tetrachloroethene | U | | 0.31 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| **Toluene** | **0.38** | J | **0.24** | **5.1** | **µg/Kg-dry** | 0.832 | 4/9/2014 15:46 |
| trans-1,2-Dichloroethene | U | | 0.30 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| trans-1,3-Dichloropropene | U | | 0.19 | 10 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Trichloroethene | U | | 0.24 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Trichlorofluoromethane | U | | 1.2 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Vinyl chloride | U | | 0.31 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| Xylenes, Total | U | | 0.59 | 5.1 | µg/Kg-dry | 0.832 | 4/9/2014 15:46 |
| *Surr: 1,2-Dichloroethane-d4* | *112* | | | *70-120* | *%REC* | 0.832 | 4/9/2014 15:46 |
| *Surr: 4-Bromofluorobenzene* | *96.3* | | | *75-120* | *%REC* | 0.832 | 4/9/2014 15:46 |
| *Surr: Dibromofluoromethane* | *27.8* | S | | *85-115* | *%REC* | 0.832 | 4/9/2014 15:46 |
| *Surr: Toluene-d8* | *99.2* | | | *85-120* | *%REC* | 0.832 | 4/9/2014 15:46 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-06-S-0-4
**Collection Date:** 3/31/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-11
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **18** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 17:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-06-D-16-20
**Collection Date:** 3/31/2014 04:30 PM

**Work Order:** 1404130
**Lab ID:** 1404130-12
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 62 | 110 | µg/Kg-dry | 1 | 4/8/2014 18:46 |
| Aroclor 1221 | U | | 62 | 110 | µg/Kg-dry | 1 | 4/8/2014 18:46 |
| Aroclor 1232 | U | | 62 | 110 | µg/Kg-dry | 1 | 4/8/2014 18:46 |
| Aroclor 1242 | U | | 62 | 110 | µg/Kg-dry | 1 | 4/8/2014 18:46 |
| Aroclor 1248 | U | | 62 | 110 | µg/Kg-dry | 1 | 4/8/2014 18:46 |
| Aroclor 1254 | U | | 40 | 110 | µg/Kg-dry | 1 | 4/8/2014 18:46 |
| Aroclor 1260 | U | | 40 | 110 | µg/Kg-dry | 1 | 4/8/2014 18:46 |
| *Surr: Decachlorobiphenyl* | *105* | | | *40-140* | *%REC* | 1 | 4/8/2014 18:46 |
| *Surr: Tetrachloro-m-xylene* | *101* | | | *45-124* | *%REC* | 1 | 4/8/2014 18:46 |
| **MERCURY BY CVAA** | | Method: **SW7471** | | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.024** | | **0.00094** | **0.019** | **mg/Kg-dry** | 1 | 4/3/2014 12:32 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **11** | | **0.30** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 12:20 |
| **Barium** | **430** | | **0.062** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 12:20 |
| **Cadmium** | **0.74** | J | **0.0089** | **0.89** | **mg/Kg-dry** | 5 | 4/5/2014 12:20 |
| **Chromium** | **21** | | **0.37** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 12:20 |
| **Lead** | **16** | | **0.0089** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 12:20 |
| **Selenium** | **1.9** | J | **0.29** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 12:20 |
| **Silver** | **0.095** | J | **0.0089** | **2.2** | **mg/Kg-dry** | 5 | 4/5/2014 12:20 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| DRO (C10-C21) | U | | 1.6 | 3.7 | mg/Kg-dry | 1 | 4/8/2014 10:41 |
| ORO (C21-C35) | U | | 1.8 | 3.7 | mg/Kg-dry | 1 | 4/8/2014 10:41 |
| *Surr: 4-Terphenyl-d14* | *99.4* | | | *25-137* | *%REC* | 1 | 4/8/2014 10:41 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3541 / 4/4/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 6.4 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2,4,5-Trichlorophenol | U | | 11 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2,4,6-Trichlorophenol | U | | 7.2 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2,4-Dichlorophenol | U | | 12 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2,4-Dimethylphenol | U | | 69 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2,4-Dinitrophenol | U | | 39 | 850 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2,4-Dinitrotoluene | U | | 14 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2,6-Dinitrotoluene | U | | 22 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2-Chloronaphthalene | U | | 2.0 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2-Chlorophenol | U | | 13 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2-Methylnaphthalene | U | | 3.5 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2-Methylphenol | U | | 17 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-06-D-16-20
**Collection Date:** 3/31/2014 04:30 PM

**Work Order:** 1404130
**Lab ID:** 1404130-12
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | U | | 17 | 850 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 2-Nitrophenol | U | | 14 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 3,3´-Dichlorobenzidine | U | | 530 | 850 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 3-Nitroaniline | U | | 14 | 850 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 4,6-Dinitro-2-methylphenol | U | | 35 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 4-Bromophenyl phenyl ether | U | | 12 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 4-Chloro-3-methylphenol | U | | 9.9 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 4-Chloroaniline | U | | 13 | 850 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 4-Chlorophenyl phenyl ether | U | | 13 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 4-Methylphenol | U | | 20 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 4-Nitroaniline | U | | 12 | 850 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| 4-Nitrophenol | U | | 8.5 | 850 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Acenaphthene | U | | 1.3 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Acenaphthylene | U | | 1.6 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Acetophenone | U | | 6.4 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Anthracene | U | | 1.7 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Atrazine | U | | 13 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Benzaldehyde | U | | 16 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Benzo(a)anthracene | U | | 1.7 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Benzo(a)pyrene | U | | 2.8 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Benzo(b)fluoranthene | U | | 2.5 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Benzo(g,h,i)perylene | U | | 3.4 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Benzo(k)fluoranthene | U | | 1.8 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Bis(2-chloroethoxy)methane | U | | 13 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Bis(2-chloroethyl)ether | U | | 13 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Bis(2-chloroisopropyl)ether | U | | 18 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Bis(2-ethylhexyl)phthalate | U | | 14 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Butyl benzyl phthalate | U | | 16 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Caprolactam | U | | 19 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Carbazole | U | | 13 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Chrysene | U | | 2.0 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Dibenzo(a,h)anthracene | U | | 3.2 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Dibenzofuran | U | | 13 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Diethyl phthalate | U | | 14 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Dimethyl phthalate | U | | 14 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Di-n-butyl phthalate | U | | 6.2 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Di-n-octyl phthalate | U | | 14 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Fluoranthene | U | | 3.0 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Fluorene | U | | 2.9 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Hexachlorobenzene | U | | 12 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-06-D-16-20
**Collection Date:** 3/31/2014 04:30 PM

**Work Order:** 1404130
**Lab ID:** 1404130-12
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | U | | 14 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Hexachlorocyclopentadiene | U | | 13 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Hexachloroethane | U | | 20 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Indeno(1,2,3-cd)pyrene | U | | 2.8 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Isophorone | U | | 14 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Naphthalene | U | | 3.1 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Nitrobenzene | U | | 17 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| N-Nitrosodi-n-propylamine | U | | 16 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| N-Nitrosodiphenylamine | U | | 76 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Pentachlorophenol | U | | 8.2 | 420 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Phenanthrene | U | | 1.7 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Phenol | U | | 15 | 210 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| Pyrene | U | | 2.9 | 8.6 | µg/Kg-dry | 1 | 4/8/2014 22:01 |
| *Surr: 2,4,6-Tribromophenol* | *65.0* | | | *34-140* | *%REC* | 1 | 4/8/2014 22:01 |
| *Surr: 2-Fluorobiphenyl* | *78.9* | | | *12-100* | *%REC* | 1 | 4/8/2014 22:01 |
| *Surr: 2-Fluorophenol* | *92.3* | | | *33-117* | *%REC* | 1 | 4/8/2014 22:01 |
| *Surr: 4-Terphenyl-d14* | *105* | | | *25-137* | *%REC* | 1 | 4/8/2014 22:01 |
| *Surr: Nitrobenzene-d5* | *101* | | | *37-107* | *%REC* | 1 | 4/8/2014 22:01 |
| *Surr: Phenol-d6* | *89.9* | | | *40-106* | *%REC* | 1 | 4/8/2014 22:01 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: | **SW8260GRO** | | Prep: SW5035 / 4/3/14 | | Analyst: **BG** |
| GRO (C6-C10) | U | | 1,700 | 3,300 | µg/Kg-dry | 1 | 4/3/2014 20:35 |
| *Surr: Toluene-d8* | *91.8* | | | *70-130* | *%REC* | 1 | 4/3/2014 20:35 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: | **SW8260** | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.44 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,1,2,2-Tetrachloroethane | U | | 0.28 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,1,2-Trichloroethane | U | | 0.38 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.55 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,1-Dichloroethane | U | | 0.51 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,1-Dichloroethene | U | | 0.45 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,2,4-Trichlorobenzene | U | | 0.41 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,2-Dibromo-3-chloropropane | U | | 0.39 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,2-Dibromoethane | U | | 0.40 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,2-Dichlorobenzene | U | | 0.40 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,2-Dichloroethane | U | | 0.55 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,2-Dichloropropane | U | | 0.52 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,3-Dichlorobenzene | U | | 0.37 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| 1,4-Dichlorobenzene | U | | 0.42 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| **2-Butanone** | **7.7** | J | **1.5** | **20** | **µg/Kg-dry** | 1.51 | 4/9/2014 16:11 |
| 2-Hexanone | U | | 0.60 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-06-D-16-20
**Collection Date:** 3/31/2014 04:30 PM

**Work Order:** 1404130
**Lab ID:** 1404130-12
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | U | | 0.39 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| **Acetone** | **88** | | **1.9** | **20** | **µg/Kg-dry** | 1.51 | 4/9/2014 16:11 |
| Benzene | U | | 0.49 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Bromodichloromethane | U | | 0.41 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Bromoform | U | | 0.31 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Bromomethane | U | | 0.70 | 20 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Carbon disulfide | U | | 0.73 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Carbon tetrachloride | U | | 0.40 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Chlorobenzene | U | | 0.44 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Chloroethane | U | | 1.1 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Chloroform | U | | 0.52 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Chloromethane | U | | 0.61 | 20 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| cis-1,2-Dichloroethene | U | | 0.59 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| cis-1,3-Dichloropropene | U | | 0.36 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Cyclohexane | U | | 0.64 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Dibromochloromethane | U | | 0.34 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Dichlorodifluoromethane | U | | 0.66 | 20 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Ethylbenzene | U | | 0.38 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Isopropylbenzene | U | | 0.38 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| m,p-Xylene | U | | 0.75 | 5.0 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Methyl acetate | U | | 1.6 | 20 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Methyl tert-butyl ether | U | | 0.50 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Methylcyclohexane | U | | 0.55 | 20 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| **Methylene chloride** | **0.70** | J | **0.57** | **10** | **µg/Kg-dry** | 1.51 | 4/9/2014 16:11 |
| o-Xylene | U | | 0.40 | 5.0 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Styrene | U | | 0.36 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Tetrachloroethene | U | | 0.60 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Toluene | U | | 0.47 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| trans-1,2-Dichloroethene | U | | 0.58 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| trans-1,3-Dichloropropene | U | | 0.37 | 20 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Trichloroethene | U | | 0.46 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Trichlorofluoromethane | U | | 2.3 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Vinyl chloride | U | | 0.61 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| Xylenes, Total | U | | 1.1 | 10 | µg/Kg-dry | 1.51 | 4/9/2014 16:11 |
| *Surr: 1,2-Dichloroethane-d4* | *112* | | | *70-120* | *%REC* | 1.51 | 4/9/2014 16:11 |
| *Surr: 4-Bromofluorobenzene* | *96.6* | | | *75-120* | *%REC* | 1.51 | 4/9/2014 16:11 |
| *Surr: Dibromofluoromethane* | *16.4* | S | | *85-115* | *%REC* | 1.51 | 4/9/2014 16:11 |
| *Surr: Toluene-d8* | *98.7* | | | *85-120* | *%REC* | 1.51 | 4/9/2014 16:11 |

**MOISTURE** Method: **A2540 G** Analyst: **AT**

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SO-06-D-16-20
**Collection Date:** 3/31/2014 04:30 PM

**Work Order:** 1404130
**Lab ID:** 1404130-12
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **Moisture** | **24** | | **0.025** | **0.050** | **% of sample** | 1 | 4/2/2014 17:01 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SED-01
**Collection Date:** 3/31/2014 04:35 PM

**Work Order:** 1404130
**Lab ID:** 1404130-13
**Matrix:** SEDIMENT

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HERBICIDES** | | Method: **SW8151** | | | Prep: SW8151M / 4/1/14 | | Analyst: **JD** |
| 2,4,5-T | U | | 6.3 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:26 |
| 2,4,5-TP (Silvex) | U | | 4.3 | 640 | µg/Kg-dry | 5 | 4/10/2014 17:26 |
| 2,4-D | U | | 4.6 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:26 |
| 2,4-DB | U | | 21 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:26 |
| Dalapon | U | | 21 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:26 |
| Dicamba | U | | 21 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:26 |
| Dichlorprop | U | | 21 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:26 |
| Dinoseb | U | | 21 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:26 |
| MCPA | U | | 2,100 | 11,000 | µg/Kg-dry | 5 | 4/10/2014 17:26 |
| MCPP | U | | 2,100 | 11,000 | µg/Kg-dry | 5 | 4/10/2014 17:26 |
| *Surr: DCAA* | *42.0* | | | *30-150* | *%REC* | 5 | 4/10/2014 17:26 |
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 59 | 100 | µg/Kg-dry | 1 | 4/8/2014 19:18 |
| Aroclor 1221 | U | | 59 | 100 | µg/Kg-dry | 1 | 4/8/2014 19:18 |
| Aroclor 1232 | U | | 59 | 100 | µg/Kg-dry | 1 | 4/8/2014 19:18 |
| Aroclor 1242 | U | | 59 | 100 | µg/Kg-dry | 1 | 4/8/2014 19:18 |
| Aroclor 1248 | U | | 59 | 100 | µg/Kg-dry | 1 | 4/8/2014 19:18 |
| Aroclor 1254 | U | | 38 | 100 | µg/Kg-dry | 1 | 4/8/2014 19:18 |
| Aroclor 1260 | U | | 38 | 100 | µg/Kg-dry | 1 | 4/8/2014 19:18 |
| *Surr: Decachlorobiphenyl* | *93.1* | | | *40-140* | *%REC* | 1 | 4/8/2014 19:18 |
| *Surr: Tetrachloro-m-xylene* | *87.1* | | | *45-124* | *%REC* | 1 | 4/8/2014 19:18 |
| **PESTICIDES** | | Method: **SW8081** | | | Prep: SW3541 / 4/9/14 | | Analyst: **JD** |
| 4,4´-DDD | U | | 16 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| 4,4´-DDE | U | | 10 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| 4,4´-DDT | U | | 12 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Aldrin | U | | 4.6 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| alpha-BHC | U | | 17 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| alpha-Chlordane | U | | 14 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| beta-BHC | U | | 19 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Chlordane, Technical | U | | 51 | 130 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| delta-BHC | U | | 19 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Dieldrin | U | | 4.4 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Endosulfan I | U | | 6.7 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Endosulfan II | U | | 5.7 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Endosulfan sulfate | U | | 6.3 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Endrin | U | | 15 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Endrin aldehyde | U | | 13 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SED-01
**Collection Date:** 3/31/2014 04:35 PM

**Work Order:** 1404130
**Lab ID:** 1404130-13
**Matrix:** SEDIMENT

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Endrin ketone | U | | 20 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| gamma-BHC (Lindane) | U | | 24 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| gamma-Chlordane | U | | 8.6 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Heptachlor | U | | 26 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Heptachlor epoxide | U | | 8.1 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Methoxychlor | U | | 13 | 51 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| Toxaphene | U | | 60 | 310 | µg/Kg-dry | 4 | 4/10/2014 11:59 |
| *Surr: Decachlorobiphenyl* | *76.1* | | | *45-135* | *%REC* | 4 | 4/10/2014 11:59 |
| *Surr: Tetrachloro-m-xylene* | *80.1* | | | *45-124* | *%REC* | 4 | 4/10/2014 11:59 |
| **MERCURY BY CVAA** | | Method: | **SW7471** | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.069** | | **0.00092** | **0.018** | **mg/Kg-dry** | 1 | 4/3/2014 12:35 |
| **METALS BY ICP-MS** | | Method: | **SW6020A** | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **6.2** | | **0.28** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:26 |
| **Barium** | **150** | | **0.058** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:26 |
| **Cadmium** | **1.4** | | **0.0083** | **0.83** | **mg/Kg-dry** | 5 | 4/5/2014 12:26 |
| **Chromium** | **31** | | **0.34** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:26 |
| **Lead** | **59** | | **0.0083** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:26 |
| **Selenium** | **1.4** | J | **0.27** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:26 |
| **Silver** | **0.19** | J | **0.0083** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:26 |
| **MOISTURE** | | Method: | **A2540 G** | | | | Analyst: **AT** |
| **Moisture** | **24** | | **0.025** | **0.050** | **% of sample** | 1 | 4/3/2014 14:05 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SED-02
**Collection Date:** 3/31/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-14
**Matrix:** SEDIMENT

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HERBICIDES** | | Method: **SW8151** | | | Prep: SW8151M / 4/1/14 | | Analyst: **JD** |
| 2,4,5-T | U | | 6.2 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:43 |
| 2,4,5-TP (Silvex) | U | | 4.2 | 640 | µg/Kg-dry | 5 | 4/10/2014 17:43 |
| 2,4-D | U | | 4.6 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:43 |
| 2,4-DB | U | | 21 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:43 |
| Dalapon | U | | 21 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:43 |
| Dicamba | U | | 21 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:43 |
| Dichlorprop | U | | 21 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:43 |
| Dinoseb | U | | 21 | 320 | µg/Kg-dry | 5 | 4/10/2014 17:43 |
| MCPA | U | | 2,100 | 11,000 | µg/Kg-dry | 5 | 4/10/2014 17:43 |
| MCPP | U | | 2,100 | 11,000 | µg/Kg-dry | 5 | 4/10/2014 17:43 |
| *Surr: DCAA* | *36.0* | | | *30-150* | *%REC* | 5 | 4/10/2014 17:43 |
| **PCBS** | | Method: **SW8082** | | | Prep: SW3541 / 4/7/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 20:06 |
| Aroclor 1221 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 20:06 |
| Aroclor 1232 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 20:06 |
| Aroclor 1242 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 20:06 |
| Aroclor 1248 | U | | 60 | 110 | µg/Kg-dry | 1 | 4/8/2014 20:06 |
| Aroclor 1254 | U | | 39 | 110 | µg/Kg-dry | 1 | 4/8/2014 20:06 |
| Aroclor 1260 | U | | 39 | 110 | µg/Kg-dry | 1 | 4/8/2014 20:06 |
| *Surr: Decachlorobiphenyl* | *100* | | | *40-140* | *%REC* | 1 | 4/8/2014 20:06 |
| *Surr: Tetrachloro-m-xylene* | *93.1* | | | *45-124* | *%REC* | 1 | 4/8/2014 20:06 |
| **PESTICIDES** | | Method: **SW8081** | | | Prep: SW3541 / 4/9/14 | | Analyst: **JD** |
| 4,4´-DDD | U | | 8.0 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| 4,4´-DDE | U | | 4.9 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| 4,4´-DDT | U | | 5.8 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Aldrin | U | | 2.3 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| alpha-BHC | U | | 8.1 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| alpha-Chlordane | U | | 6.9 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| beta-BHC | U | | 9.5 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Chlordane, Technical | U | | 25 | 63 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| delta-BHC | U | | 9.3 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Dieldrin | U | | 2.1 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Endosulfan I | U | | 3.3 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Endosulfan II | U | | 2.8 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Endosulfan sulfate | U | | 3.1 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Endrin | U | | 7.3 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Endrin aldehyde | U | | 6.1 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** SED-02
**Collection Date:** 3/31/2014 04:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-14
**Matrix:** SEDIMENT

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Endrin ketone | U | | 9.7 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| gamma-BHC (Lindane) | U | | 12 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| gamma-Chlordane | U | | 4.2 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Heptachlor | U | | 13 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Heptachlor epoxide | U | | 4.0 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Methoxychlor | U | | 6.2 | 25 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| Toxaphene | U | | 30 | 150 | µg/Kg-dry | 2 | 4/10/2014 12:15 |
| *Surr: Decachlorobiphenyl* | *80.1* | | | *45-135* | *%REC* | 2 | 4/10/2014 12:15 |
| *Surr: Tetrachloro-m-xylene* | *88.1* | | | *45-124* | *%REC* | 2 | 4/10/2014 12:15 |
| **MERCURY BY CVAA** | | Method: | **SW7471** | | Prep: SW7471 / 4/3/14 | | Analyst: **LR** |
| **Mercury** | **0.075** | | **0.00087** | **0.017** | **mg/Kg-dry** | 1 | 4/3/2014 12:37 |
| **METALS BY ICP-MS** | | Method: | **SW6020A** | | Prep: SW3050B / 4/4/14 | | Analyst: **ML** |
| **Arsenic** | **6.0** | | **0.28** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:32 |
| **Barium** | **190** | | **0.057** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:32 |
| **Cadmium** | **1.8** | | **0.0082** | **0.82** | **mg/Kg-dry** | 5 | 4/5/2014 12:32 |
| **Chromium** | **27** | | **0.34** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:32 |
| **Lead** | **73** | | **0.0082** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:32 |
| **Selenium** | **1.5** | J | **0.26** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:32 |
| **Silver** | **0.19** | J | **0.0082** | **2.1** | **mg/Kg-dry** | 5 | 4/5/2014 12:32 |
| **MOISTURE** | | Method: | **A2540 G** | | | | Analyst: **AT** |
| **Moisture** | **22** | | **0.025** | **0.050** | **% of sample** | 1 | 4/3/2014 14:05 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** GW-04
**Collection Date:** 3/31/2014 12:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-15
**Matrix:** WATER

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PCBS** | | Method: **SW8082** | | | Prep: SW3510 / 4/4/14 | | Analyst: **JD** |
| Aroclor 1016 | U | | 0.067 | 0.20 | µg/L | 1 | 4/7/2014 14:11 |
| Aroclor 1221 | U | | 0.067 | 0.20 | µg/L | 1 | 4/7/2014 14:11 |
| Aroclor 1232 | U | | 0.067 | 0.20 | µg/L | 1 | 4/7/2014 14:11 |
| Aroclor 1242 | U | | 0.067 | 0.20 | µg/L | 1 | 4/7/2014 14:11 |
| Aroclor 1248 | U | | 0.067 | 0.20 | µg/L | 1 | 4/7/2014 14:11 |
| Aroclor 1254 | U | | 0.058 | 0.20 | µg/L | 1 | 4/7/2014 14:11 |
| Aroclor 1260 | U | | 0.058 | 0.20 | µg/L | 1 | 4/7/2014 14:11 |
| *Surr: Decachlorobiphenyl* | *58.0* | | | *40-110* | *%REC* | 1 | 4/7/2014 14:11 |
| *Surr: Tetrachloro-m-xylene* | *57.0* | | | *40-110* | *%REC* | 1 | 4/7/2014 14:11 |
| **MERCURY BY CVAA** | | Method: **SW7470** | | | Prep: SW7470 / 4/4/14 | | Analyst: **LR** |
| **Mercury** | **0.00015** | J | **0.00010** | **0.00020** | **mg/L** | 1 | 4/7/2014 15:03 |
| **MERCURY BY CVAA (DISSOLVED)** | | Method: **SW7470** | | | Prep: SW7470 / 4/4/14 | | Analyst: **LR** |
| Mercury | U | | 0.00010 | 0.00020 | mg/L | 1 | 4/7/2014 15:05 |
| **METALS BY ICP-MS** | | Method: **SW6020A** | | | Prep: SW3005A / 4/7/14 | | Analyst: **ML** |
| **Arsenic** | **0.045** | | **0.00058** | **0.0050** | **mg/L** | 1 | 4/9/2014 01:56 |
| **Barium** | **0.65** | | **0.000063** | **0.0050** | **mg/L** | 1 | 4/9/2014 01:56 |
| **Cadmium** | **0.0064** | | **0.000045** | **0.0020** | **mg/L** | 1 | 4/9/2014 01:56 |
| **Chromium** | **0.10** | | **0.00027** | **0.0050** | **mg/L** | 1 | 4/9/2014 01:56 |
| **Lead** | **0.11** | | **0.000051** | **0.0050** | **mg/L** | 1 | 4/9/2014 01:56 |
| **Selenium** | **0.0061** | | **0.00064** | **0.0050** | **mg/L** | 1 | 4/9/2014 01:56 |
| **Silver** | **0.00057** | J | **0.000042** | **0.0050** | **mg/L** | 1 | 4/9/2014 01:56 |
| **METALS BY ICP-MS (DISSOLVED)** | | Method: **SW6020A** | | | | | Analyst: **ML** |
| **Arsenic** | **0.026** | | **0.00058** | **0.0050** | **mg/L** | 1 | 4/10/2014 15:22 |
| **Barium** | **0.29** | | **0.000063** | **0.0050** | **mg/L** | 1 | 4/10/2014 15:22 |
| **Cadmium** | **0.000087** | J | **0.000045** | **0.0020** | **mg/L** | 1 | 4/10/2014 15:22 |
| Chromium | U | | 0.00027 | 0.0050 | mg/L | 1 | 4/10/2014 15:22 |
| Lead | U | | 0.000051 | 0.0030 | mg/L | 1 | 4/10/2014 15:22 |
| **Selenium** | **0.00066** | J | **0.00064** | **0.0050** | **mg/L** | 1 | 4/10/2014 15:22 |
| **Silver** | **0.000075** | J | **0.000042** | **0.00020** | **mg/L** | 1 | 4/10/2014 15:22 |
| **DIESEL RANGE ORGANICS BY GC-MS** | | Method: **SW8270** | | | Prep: SW3510 / 4/3/14 | | Analyst: **RM** |
| DRO (C10-C21) | U | | 0.013 | 0.10 | mg/L | 1 | 4/8/2014 05:02 |
| ORO (C21-C35) | U | | 0.027 | 0.10 | mg/L | 1 | 4/8/2014 05:02 |
| *Surr: 4-Terphenyl-d14* | *88.2* | | | *23-112* | *%REC* | 1 | 4/8/2014 05:02 |
| **SEMI-VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8270** | | | Prep: SW3510 / 4/3/14 | | Analyst: **RM** |
| 1,1`-Biphenyl | U | | 0.095 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** GW-04
**Collection Date:** 3/31/2014 12:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-15
**Matrix:** WATER

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | U | | 0.25 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 2,4,6-Trichlorophenol | U | | 0.27 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 2,4-Dichlorophenol | U | | 0.22 | 10 | µg/L | 1 | 4/4/2014 14:29 |
| 2,4-Dimethylphenol | U | | 1.8 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 2,4-Dinitrophenol | U | | 0.67 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 2,4-Dinitrotoluene | U | | 0.27 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 2,6-Dinitrotoluene | U | | 0.23 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 2-Chloronaphthalene | U | | 0.13 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 2-Chlorophenol | U | | 0.32 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 2-Methylnaphthalene | U | | 0.13 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 2-Methylphenol | U | | 0.20 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 2-Nitroaniline | U | | 0.34 | 20 | µg/L | 1 | 4/4/2014 14:29 |
| 2-Nitrophenol | U | | 0.28 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 3,3´-Dichlorobenzidine | U | | 3.9 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 3-Nitroaniline | U | | 0.34 | 20 | µg/L | 1 | 4/4/2014 14:29 |
| 4,6-Dinitro-2-methylphenol | U | | 1.2 | 20 | µg/L | 1 | 4/4/2014 14:29 |
| 4-Bromophenyl phenyl ether | U | | 0.23 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 4-Chloro-3-methylphenol | U | | 0.31 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 4-Chloroaniline | U | | 0.32 | 20 | µg/L | 1 | 4/4/2014 14:29 |
| 4-Chlorophenyl phenyl ether | U | | 0.23 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 4-Methylphenol | U | | 0.20 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| 4-Nitroaniline | U | | 0.30 | 20 | µg/L | 1 | 4/4/2014 14:29 |
| 4-Nitrophenol | U | | 0.51 | 20 | µg/L | 1 | 4/4/2014 14:29 |
| Acenaphthene | U | | 0.11 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Acenaphthylene | U | | 0.12 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Acetophenone | U | | 0.090 | 1.0 | µg/L | 1 | 4/4/2014 14:29 |
| Anthracene | U | | 0.72 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Atrazine | U | | 0.13 | 1.0 | µg/L | 1 | 4/4/2014 14:29 |
| Benzaldehyde | U | | 0.46 | 1.0 | µg/L | 1 | 4/4/2014 14:29 |
| Benzo(a)anthracene | U | | 0.57 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Benzo(a)pyrene | U | | 0.10 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Benzo(b)fluoranthene | U | | 0.74 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Benzo(g,h,i)perylene | U | | 0.70 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Benzo(k)fluoranthene | U | | 0.17 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Bis(2-chloroethoxy)methane | U | | 0.33 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Bis(2-chloroethyl)ether | U | | 0.34 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Bis(2-chloroisopropyl)ether | U | | 0.32 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Bis(2-ethylhexyl)phthalate | U | | 0.15 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Butyl benzyl phthalate | U | | 0.10 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Caprolactam | U | | 4.7 | 10 | µg/L | 1 | 4/4/2014 14:29 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** GW-04
**Collection Date:** 3/31/2014 12:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-15
**Matrix:** WATER

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbazole | U | | 0.16 | 10 | µg/L | 1 | 4/4/2014 14:29 |
| Chrysene | U | | 0.71 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Dibenzo(a,h)anthracene | U | | 0.67 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Dibenzofuran | U | | 0.28 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Diethyl phthalate | U | | 0.24 | 20 | µg/L | 1 | 4/4/2014 14:29 |
| Dimethyl phthalate | U | | 0.27 | 20 | µg/L | 1 | 4/4/2014 14:29 |
| Di-n-butyl phthalate | U | | 0.14 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Di-n-octyl phthalate | U | | 0.12 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Fluoranthene | U | | 0.77 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Fluorene | U | | 0.10 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Hexachlorobenzene | U | | 0.22 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Hexachlorobutadiene | U | | 0.24 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Hexachlorocyclopentadiene | U | | 0.18 | 20 | µg/L | 1 | 4/4/2014 14:29 |
| Hexachloroethane | U | | 0.47 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Indeno(1,2,3-cd)pyrene | U | | 0.69 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Isophorone | U | | 0.30 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Naphthalene | U | | 0.12 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Nitrobenzene | U | | 0.33 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| N-Nitrosodi-n-propylamine | U | | 0.32 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| N-Nitrosodiphenylamine | U | | 0.81 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Pentachlorophenol | U | | 0.22 | 20 | µg/L | 1 | 4/4/2014 14:29 |
| Phenanthrene | U | | 0.86 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Phenol | U | | 0.32 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| Pyrene | U | | 0.65 | 5.0 | µg/L | 1 | 4/4/2014 14:29 |
| *Surr: 2,4,6-Tribromophenol* | *71.9* | | | *32-115* | *%REC* | 1 | 4/4/2014 14:29 |
| *Surr: 2-Fluorobiphenyl* | *70.0* | | | *32-100* | *%REC* | 1 | 4/4/2014 14:29 |
| *Surr: 2-Fluorophenol* | *50.4* | | | *22-59* | *%REC* | 1 | 4/4/2014 14:29 |
| *Surr: 4-Terphenyl-d14* | *97.8* | | | *23-112* | *%REC* | 1 | 4/4/2014 14:29 |
| *Surr: Nitrobenzene-d5* | *79.2* | | | *31-93* | *%REC* | 1 | 4/4/2014 14:29 |
| *Surr: Phenol-d6* | *34.0* | | | *13-36* | *%REC* | 1 | 4/4/2014 14:29 |
| **GASOLINE RANGE ORGANICS BY GC-MS** | | Method: **SW8260GRO** | | | | | Analyst: **BG** |
| GRO (C6-C10) | U | | 25 | 50 | µg/L | 1 | 4/3/2014 21:02 |
| *Surr: Toluene-d8* | *91.7* | | | *70-130* | *%REC* | 1 | 4/3/2014 21:02 |
| **VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8260** | | | | | Analyst: **BG** |
| 1,1,1-Trichloroethane | U | | 0.11 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,1,2,2-Tetrachloroethane | U | | 0.21 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,1,2-Trichloroethane | U | | 0.11 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.40 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,1-Dichloroethane | U | | 0.14 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** GW-04
**Collection Date:** 3/31/2014 12:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-15
**Matrix:** WATER

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,2,4-Trichlorobenzene | U | | 0.096 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,2-Dibromo-3-chloropropane | U | | 0.35 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,2-Dibromoethane | U | | 0.14 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,2-Dichlorobenzene | U | | 0.17 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,2-Dichloroethane | U | | 0.11 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,2-Dichloropropane | U | | 0.12 | 2.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,3-Dichlorobenzene | U | | 0.15 | 2.0 | µg/L | 1 | 4/3/2014 21:02 |
| 1,4-Dichlorobenzene | U | | 0.15 | 2.0 | µg/L | 1 | 4/3/2014 21:02 |
| 2-Butanone | U | | 0.64 | 5.0 | µg/L | 1 | 4/3/2014 21:02 |
| 2-Hexanone | U | | 0.19 | 5.0 | µg/L | 1 | 4/3/2014 21:02 |
| 4-Methyl-2-pentanone | U | | 0.20 | 5.0 | µg/L | 1 | 4/3/2014 21:02 |
| Acetone | U | | 3.0 | 20 | µg/L | 1 | 4/3/2014 21:02 |
| Benzene | U | | 0.14 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Bromodichloromethane | U | | 0.22 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Bromoform | U | | 0.18 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Bromomethane | U | | 0.38 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Carbon disulfide | U | | 0.26 | 2.5 | µg/L | 1 | 4/3/2014 21:02 |
| Carbon tetrachloride | U | | 0.16 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Chlorobenzene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Chloroethane | U | | 0.25 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Chloroform | U | | 0.15 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Chloromethane | U | | 0.29 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| cis-1,2-Dichloroethene | U | | 0.10 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| cis-1,3-Dichloropropene | U | | 0.097 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Cyclohexane | U | | 0.20 | 5.0 | µg/L | 1 | 4/3/2014 21:02 |
| Dibromochloromethane | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Dichlorodifluoromethane | U | | 0.18 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Ethylbenzene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Isopropylbenzene | U | | 0.11 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| m,p-Xylene | U | | 0.19 | 2.0 | µg/L | 1 | 4/3/2014 21:02 |
| Methyl acetate | U | | 0.76 | 2.0 | µg/L | 1 | 4/3/2014 21:02 |
| Methyl tert-butyl ether | U | | 0.28 | 5.0 | µg/L | 1 | 4/3/2014 21:02 |
| Methylcyclohexane | U | | 0.19 | 5.0 | µg/L | 1 | 4/3/2014 21:02 |
| Methylene chloride | U | | 0.75 | 5.0 | µg/L | 1 | 4/3/2014 21:02 |
| o-Xylene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Styrene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Tetrachloroethene | U | | 0.098 | 2.0 | µg/L | 1 | 4/3/2014 21:02 |
| **Toluene** | **0.30** | J | **0.13** | **1.0** | **µg/L** | 1 | 4/3/2014 21:02 |
| trans-1,2-Dichloroethene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** GW-04
**Collection Date:** 3/31/2014 12:00 PM

**Work Order:** 1404130
**Lab ID:** 1404130-15
**Matrix:** WATER

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | U | | 0.093 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Trichloroethene | U | | 0.16 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Trichlorofluoromethane | U | | 0.22 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Vinyl chloride | U | | 0.15 | 1.0 | µg/L | 1 | 4/3/2014 21:02 |
| Xylenes, Total | U | | 0.30 | 3.0 | µg/L | 1 | 4/3/2014 21:02 |
| *Surr: 1,2-Dichloroethane-d4* | *98.5* | | | *70-120* | *%REC* | 1 | 4/3/2014 21:02 |
| *Surr: 4-Bromofluorobenzene* | *95.9* | | | *75-120* | *%REC* | 1 | 4/3/2014 21:02 |
| *Surr: Dibromofluoromethane* | *94.0* | | | *85-115* | *%REC* | 1 | 4/3/2014 21:02 |
| *Surr: Toluene-d8* | *105* | | | *85-120* | *%REC* | 1 | 4/3/2014 21:02 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** Trip Blank
**Collection Date:** 4/1/2014

**Work Order:** 1404130
**Lab ID:** 1404130-16
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8260** | | | | | Analyst: **AK** |
| 1,1,1-Trichloroethane | U | | 0.22 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,1,2,2-Tetrachloroethane | U | | 0.14 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,1,2-Trichloroethane | U | | 0.19 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.28 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,1-Dichloroethane | U | | 0.26 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,1-Dichloroethene | U | | 0.23 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,2,4-Trichlorobenzene | U | | 0.21 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,2-Dibromo-3-chloropropane | U | | 0.20 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,2-Dibromoethane | U | | 0.20 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,2-Dichlorobenzene | U | | 0.20 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,2-Dichloroethane | U | | 0.28 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,2-Dichloropropane | U | | 0.26 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,3-Dichlorobenzene | U | | 0.19 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 1,4-Dichlorobenzene | U | | 0.21 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 2-Butanone | U | | 0.77 | 10 | µg/Kg | 1 | 4/3/2014 20:37 |
| 2-Hexanone | U | | 0.30 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| 4-Methyl-2-pentanone | U | | 0.20 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| **Acetone** | **10** | | **0.94** | **10** | **µg/Kg** | 1 | 4/3/2014 20:37 |
| Benzene | U | | 0.25 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Bromodichloromethane | U | | 0.21 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Bromoform | U | | 0.15 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Bromomethane | U | | 0.35 | 10 | µg/Kg | 1 | 4/3/2014 20:37 |
| Carbon disulfide | U | | 0.37 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Carbon tetrachloride | U | | 0.20 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Chlorobenzene | U | | 0.22 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Chloroethane | U | | 0.56 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Chloroform | U | | 0.26 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Chloromethane | U | | 0.31 | 10 | µg/Kg | 1 | 4/3/2014 20:37 |
| cis-1,2-Dichloroethene | U | | 0.30 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| cis-1,3-Dichloropropene | U | | 0.18 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Cyclohexane | U | | 0.32 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Dibromochloromethane | U | | 0.17 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Dichlorodifluoromethane | U | | 0.33 | 10 | µg/Kg | 1 | 4/3/2014 20:37 |
| Ethylbenzene | U | | 0.19 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Isopropylbenzene | U | | 0.19 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| m,p-Xylene | U | | 0.38 | 2.5 | µg/Kg | 1 | 4/3/2014 20:37 |
| Methyl acetate | U | | 0.80 | 10 | µg/Kg | 1 | 4/3/2014 20:37 |
| Methyl tert-butyl ether | U | | 0.25 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** Trip Blank
**Collection Date:** 4/1/2014

**Work Order:** 1404130
**Lab ID:** 1404130-16
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Methylcyclohexane | U | | 0.28 | 10 | µg/Kg | 1 | 4/3/2014 20:37 |
| **Methylene chloride** | **2.0** | J | **0.28** | **5.0** | **µg/Kg** | 1 | 4/3/2014 20:37 |
| o-Xylene | U | | 0.20 | 2.5 | µg/Kg | 1 | 4/3/2014 20:37 |
| Styrene | U | | 0.18 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Tetrachloroethene | U | | 0.30 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| **Toluene** | **0.70** | J | **0.24** | **5.0** | **µg/Kg** | 1 | 4/3/2014 20:37 |
| trans-1,2-Dichloroethene | U | | 0.29 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| trans-1,3-Dichloropropene | U | | 0.19 | 10 | µg/Kg | 1 | 4/3/2014 20:37 |
| Trichloroethene | U | | 0.23 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Trichlorofluoromethane | U | | 1.2 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Vinyl chloride | U | | 0.30 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| Xylenes, Total | U | | 0.58 | 5.0 | µg/Kg | 1 | 4/3/2014 20:37 |
| *Surr: 1,2-Dichloroethane-d4* | *109* | | | *70-120* | *%REC* | 1 | 4/3/2014 20:37 |
| *Surr: 4-Bromofluorobenzene* | *96.0* | | | *75-120* | *%REC* | 1 | 4/3/2014 20:37 |
| *Surr: Dibromofluoromethane* | *12.6* | S | | *85-115* | *%REC* | 1 | 4/3/2014 20:37 |
| *Surr: Toluene-d8* | *99.4* | | | *85-120* | *%REC* | 1 | 4/3/2014 20:37 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** Trip Blank
**Collection Date:** 3/31/2014

**Work Order:** 1404130
**Lab ID:** 1404130-17
**Matrix:** WATER

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS** | | Method: **SW8260** | | | | | Analyst: **BG** |
| 1,1,1-Trichloroethane | U | | 0.11 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,1,2,2-Tetrachloroethane | U | | 0.21 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,1,2-Trichloroethane | U | | 0.11 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.40 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,1-Dichloroethane | U | | 0.14 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,1-Dichloroethene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,2,4-Trichlorobenzene | U | | 0.096 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,2-Dibromo-3-chloropropane | U | | 0.35 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,2-Dibromoethane | U | | 0.14 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,2-Dichlorobenzene | U | | 0.17 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,2-Dichloroethane | U | | 0.11 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,2-Dichloropropane | U | | 0.12 | 2.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,3-Dichlorobenzene | U | | 0.15 | 2.0 | µg/L | 1 | 4/3/2014 15:22 |
| 1,4-Dichlorobenzene | U | | 0.15 | 2.0 | µg/L | 1 | 4/3/2014 15:22 |
| 2-Butanone | U | | 0.64 | 5.0 | µg/L | 1 | 4/3/2014 15:22 |
| 2-Hexanone | U | | 0.19 | 5.0 | µg/L | 1 | 4/3/2014 15:22 |
| 4-Methyl-2-pentanone | U | | 0.20 | 5.0 | µg/L | 1 | 4/3/2014 15:22 |
| Acetone | U | | 3.0 | 20 | µg/L | 1 | 4/3/2014 15:22 |
| Benzene | U | | 0.14 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Bromodichloromethane | U | | 0.22 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Bromoform | U | | 0.18 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Bromomethane | U | | 0.38 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Carbon disulfide | U | | 0.26 | 2.5 | µg/L | 1 | 4/3/2014 15:22 |
| Carbon tetrachloride | U | | 0.16 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Chlorobenzene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Chloroethane | U | | 0.25 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Chloroform | U | | 0.15 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Chloromethane | U | | 0.29 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| cis-1,2-Dichloroethene | U | | 0.10 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| cis-1,3-Dichloropropene | U | | 0.097 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Cyclohexane | U | | 0.20 | 5.0 | µg/L | 1 | 4/3/2014 15:22 |
| Dibromochloromethane | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Dichlorodifluoromethane | U | | 0.18 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Ethylbenzene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Isopropylbenzene | U | | 0.11 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| m,p-Xylene | U | | 0.19 | 2.0 | µg/L | 1 | 4/3/2014 15:22 |
| Methyl acetate | U | | 0.76 | 2.0 | µg/L | 1 | 4/3/2014 15:22 |
| Methyl tert-butyl ether | U | | 0.28 | 5.0 | µg/L | 1 | 4/3/2014 15:22 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group USA, Corp

**Date:** *14-Apr-14*

**Client:** Tetra Tech
**Project:** KCMO Public Works East Garage 3.31-4.1.14
**Sample ID:** Trip Blank
**Collection Date:** 3/31/2014

**Work Order:** 1404130
**Lab ID:** 1404130-17
**Matrix:** WATER

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Methylcyclohexane | U | | 0.19 | 5.0 | µg/L | 1 | 4/3/2014 15:22 |
| Methylene chloride | U | | 0.75 | 5.0 | µg/L | 1 | 4/3/2014 15:22 |
| o-Xylene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Styrene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Tetrachloroethene | U | | 0.098 | 2.0 | µg/L | 1 | 4/3/2014 15:22 |
| Toluene | U | | 0.13 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| trans-1,2-Dichloroethene | U | | 0.12 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| trans-1,3-Dichloropropene | U | | 0.093 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Trichloroethene | U | | 0.16 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Trichlorofluoromethane | U | | 0.22 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Vinyl chloride | U | | 0.15 | 1.0 | µg/L | 1 | 4/3/2014 15:22 |
| Xylenes, Total | U | | 0.30 | 3.0 | µg/L | 1 | 4/3/2014 15:22 |
| *Surr: 1,2-Dichloroethane-d4* | *100* | | | *70-120* | *%REC* | 1 | 4/3/2014 15:22 |
| *Surr: 4-Bromofluorobenzene* | *94.2* | | | *75-120* | *%REC* | 1 | 4/3/2014 15:22 |
| *Surr: Dibromofluoromethane* | *86.8* | | | *85-115* | *%REC* | 1 | 4/3/2014 15:22 |
| *Surr: Toluene-d8* | *104* | | | *85-120* | *%REC* | 1 | 4/3/2014 15:22 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 14-Apr-14

**Client:** Tetra Tech

# QC BATCH REPORT

**Work Order:** 1404130

**Project:** KCMO Public Works East Garage 3.31-4.1.14

Batch ID: **57117** Instrument ID **GC7** Method: **SW8151**

**MBLK** Sample ID: **HBLKS1-57117-57117** Units: **µg/Kg** Analysis Date: **4/10/2014 04:53 PM**

Client ID: Run ID: **GC7_140410A** SeqNo: **2708497** Prep Date: **4/1/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | U | 50 | 0 | 0 | 0 | 0-0 | 0 | | | |
| 2,4,5-TP (Silvex) | U | 100 | 0 | 0 | 0 | 0-0 | 0 | | | |
| 2,4-D | U | 50 | 0 | 0 | 0 | 0-0 | 0 | | | |
| 2,4-DB | U | 50 | 0 | 0 | 0 | 0-0 | 0 | | | |
| Dalapon | U | 50 | 0 | 0 | 0 | 0-0 | 0 | | | |
| Dicamba | U | 50 | 0 | 0 | 0 | 0-0 | 0 | | | |
| Dichlorprop | U | 50 | 0 | 0 | 0 | 0-0 | 0 | | | |
| Dinoseb | U | 50 | 0 | 0 | 0 | 0-0 | 0 | | | |
| MCPA | U | 1,700 | 0 | 0 | 0 | 0-0 | 0 | | | |
| MCPP | U | 1,700 | 0 | 0 | 0 | 0-0 | 0 | | | |
| *Surr: DCAA* | *101.7* | 0 | *166.7* | 0 | *61* | *30-150* | 0 | | | |

**LCS** Sample ID: **HLCSS1-57117-57117** Units: **µg/Kg** Analysis Date: **4/10/2014 05:09 PM**

Client ID: Run ID: **GC7_140410A** SeqNo: **2708498** Prep Date: **4/1/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | 120 | 50 | 166.7 | 0 | 72 | 30-150 | 0 | | | |
| 2,4,5-TP (Silvex) | 119.3 | 100 | 166.7 | 0 | 71.6 | 30-150 | 0 | | | |
| 2,4-D | 127.7 | 50 | 166.7 | 0 | 76.6 | 20-130 | 0 | | | |
| 2,4-DB | 117 | 50 | 166.7 | 0 | 70.2 | 30-150 | 0 | | | |
| Dalapon | 106.7 | 50 | 166.7 | 0 | 64 | 30-150 | 0 | | | |
| Dicamba | 121 | 50 | 166.7 | 0 | 72.6 | 30-150 | 0 | | | |
| Dichlorprop | 109.7 | 50 | 166.7 | 0 | 65.8 | 30-150 | 0 | | | |
| Dinoseb | 149.7 | 50 | 166.7 | 0 | 89.8 | 10-110 | 0 | | | |
| MCPA | 13220 | 1,700 | 16670 | 0 | 79.3 | 20-130 | 0 | | | |
| MCPP | 11500 | 1,700 | 16670 | 0 | 69 | 20-130 | 0 | | | |
| *Surr: DCAA* | *124* | 0 | *166.7* | 0 | *74.4* | *30-150* | 0 | | | |

**The following samples were analyzed in this batch:** 1404130-13A 1404130-14A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57218** Instrument ID **GC14** Method: **SW8082**

**MBLK** Sample ID: **PBLKW1-57218-57218** Units: **µg/L** Analysis Date: **4/7/2014 12:34 PM**
Client ID: Run ID: **GC14_140407A** SeqNo: **2703135** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | U | 0.20 | | | | | | | | |
| Aroclor 1221 | U | 0.20 | | | | | | | | |
| Aroclor 1232 | U | 0.20 | | | | | | | | |
| Aroclor 1242 | U | 0.20 | | | | | | | | |
| Aroclor 1248 | U | 0.20 | | | | | | | | |
| Aroclor 1254 | U | 0.20 | | | | | | | | |
| Aroclor 1260 | U | 0.20 | | | | | | | | |
| *Surr: Decachlorobiphenyl* | *0.059* | 0 | *0.1* | 0 | *59* | *40-110* | 0 | | | |
| *Surr: Tetrachloro-m-xylene* | *0.056* | 0 | *0.1* | 0 | *56* | *40-110* | 0 | | | |

**LCS** Sample ID: **PLCSW1-57218-57218** Units: **µg/L** Analysis Date: **4/7/2014 12:50 PM**
Client ID: Run ID: **GC14_140407A** SeqNo: **2703136** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | 1.653 | 0.20 | 2.5 | 0 | 66.1 | 50-130 | 0 | | | |
| Aroclor 1260 | 1.792 | 0.20 | 2.5 | 0 | 71.7 | 50-130 | 0 | | | |
| *Surr: Decachlorobiphenyl* | *0.062* | 0 | *0.1* | 0 | *62* | *40-110* | 0 | | | |
| *Surr: Tetrachloro-m-xylene* | *0.055* | 0 | *0.1* | 0 | *55* | *40-110* | 0 | | | |

**MS** Sample ID: **1404109-01D MS** Units: **µg/L** Analysis Date: **4/7/2014 01:23 PM**
Client ID: Run ID: **GC14_140407A** SeqNo: **2703138** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | 14.86 | 2.0 | 25 | 0 | 59.4 | 40-140 | 0 | | | |
| Aroclor 1260 | 16.32 | 2.0 | 25 | 0 | 65.3 | 40-140 | 0 | | | |
| *Surr: Decachlorobiphenyl* | *0.49* | 0 | *1* | 0 | *49* | *40-110* | 0 | | | |
| *Surr: Tetrachloro-m-xylene* | *0.5* | 0 | *1* | 0 | *50* | *40-110* | 0 | | | |

**MSD** Sample ID: **1404109-01D MSD** Units: **µg/L** Analysis Date: **4/7/2014 01:39 PM**
Client ID: Run ID: **GC14_140407A** SeqNo: **2703139** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | 14.4 | 2.0 | 25 | 0 | 57.6 | 40-140 | 14.86 | 3.14 | 50 | |
| Aroclor 1260 | 15.32 | 2.0 | 25 | 0 | 61.3 | 40-140 | 16.32 | 6.32 | 50 | |
| *Surr: Decachlorobiphenyl* | *0.53* | 0 | *1* | 0 | *53* | *40-110* | 0.49 | *7.84* | *50* | |
| *Surr: Tetrachloro-m-xylene* | *0.5* | 0 | *1* | 0 | *50* | *40-110* | 0.5 | *0* | *50* | |

**The following samples were analyzed in this batch:** 1404130-15B

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57299** Instrument ID **GC14** Method: **SW8082**

**MBLK** Sample ID: **PBLKS1-57299-57299** Units: **µg/Kg** Analysis Date: **4/8/2014 02:43 PM**
Client ID: Run ID: **GC14_140408B** SeqNo: **2704909** Prep Date: **4/7/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | U | 83 | | | | | | | | |
| Aroclor 1221 | U | 83 | | | | | | | | |
| Aroclor 1232 | U | 83 | | | | | | | | |
| Aroclor 1242 | U | 83 | | | | | | | | |
| Aroclor 1248 | U | 83 | | | | | | | | |
| Aroclor 1254 | U | 83 | | | | | | | | |
| Aroclor 1260 | U | 83 | | | | | | | | |
| *Surr: Decachlorobiphenyl* | *32.67* | 0 | *33.3* | 0 | *98.1* | *40-140* | 0 | | | |
| *Surr: Tetrachloro-m-xylene* | *32.33* | 0 | *33.3* | 0 | *97.1* | *45-124* | 0 | | | |

**LCS** Sample ID: **PLCSS1-57299-57299** Units: **µg/Kg** Analysis Date: **4/8/2014 02:59 PM**
Client ID: Run ID: **GC14_140408B** SeqNo: **2704910** Prep Date: **4/7/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | 964.7 | 83 | 833 | 0 | 116 | 50-130 | 0 | | | |
| Aroclor 1260 | 1008 | 83 | 833 | 0 | 121 | 50-130 | 0 | | | |
| *Surr: Decachlorobiphenyl* | *34.33* | 0 | *33.3* | 0 | *103* | *40-140* | 0 | | | |
| *Surr: Tetrachloro-m-xylene* | *32.33* | 0 | *33.3* | 0 | *97.1* | *45-124* | 0 | | | |

**MS** Sample ID: **1404130-13A MS** Units: **µg/Kg** Analysis Date: **4/8/2014 07:34 PM**
Client ID: **SED-01** Run ID: **GC14_140408B** SeqNo: **2704925** Prep Date: **4/7/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | 934.1 | 81 | 809.4 | 0 | 115 | 40-140 | 0 | | | |
| Aroclor 1260 | 952.8 | 81 | 809.4 | 0 | 118 | 40-140 | 0 | | | |
| *Surr: Decachlorobiphenyl* | *30.12* | 0 | *32.36* | 0 | *93.1* | *40-140* | 0 | | | |
| *Surr: Tetrachloro-m-xylene* | *29.15* | 0 | *32.36* | 0 | *90.1* | *45-124* | 0 | | | |

**MSD** Sample ID: **1404130-13A MSD** Units: **µg/Kg** Analysis Date: **4/8/2014 07:50 PM**
Client ID: **SED-01** Run ID: **GC14_140408B** SeqNo: **2704926** Prep Date: **4/7/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | 919.8 | 80 | 799.5 | 0 | 115 | 40-140 | 934.1 | 1.54 | 50 | |
| Aroclor 1260 | 939.9 | 80 | 799.5 | 0 | 118 | 40-140 | 952.8 | 1.37 | 50 | |
| *Surr: Decachlorobiphenyl* | *30.71* | 0 | *31.96* | 0 | *96.1* | *40-140* | 30.12 | *1.95* | *50* | |
| *Surr: Tetrachloro-m-xylene* | *29.43* | 0 | *31.96* | 0 | *92.1* | *45-124* | 29.15 | *0.968* | *50* | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57299** Instrument ID **GC14** Method: **SW8082**

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 1404130-01C | 1404130-02C | 1404130-03C |
| 1404130-04C | 1404130-05C | 1404130-06C |
| 1404130-07C | 1404130-08C | 1404130-09C |
| 1404130-10C | 1404130-11C | 1404130-12C |
| 1404130-13A | 1404130-14A | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57368** Instrument ID **GC12** Method: **SW8081**

**MBLK** Sample ID: **PBLKS1-57368-57368** Units: **µg/Kg** Analysis Date: **4/10/2014 11:28 AM**
Client ID: Run ID: **GC12_140410A** SeqNo: **2706720** Prep Date: **4/9/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | U | 10 | | | | | | | | |
| 4,4´-DDE | U | 10 | | | | | | | | |
| 4,4´-DDT | U | 10 | | | | | | | | |
| Aldrin | U | 10 | | | | | | | | |
| alpha-BHC | U | 10 | | | | | | | | |
| alpha-Chlordane | U | 10 | | | | | | | | |
| beta-BHC | U | 10 | | | | | | | | |
| Chlordane, Technical | U | 25 | | | | | | | | |
| delta-BHC | U | 10 | | | | | | | | |
| Dieldrin | U | 10 | | | | | | | | |
| Endosulfan I | U | 10 | | | | | | | | |
| Endosulfan II | U | 10 | | | | | | | | |
| Endosulfan sulfate | U | 10 | | | | | | | | |
| Endrin | U | 10 | | | | | | | | |
| Endrin aldehyde | U | 10 | | | | | | | | |
| Endrin ketone | U | 10 | | | | | | | | |
| gamma-BHC (Lindane) | U | 10 | | | | | | | | |
| gamma-Chlordane | U | 10 | | | | | | | | |
| Heptachlor | U | 10 | | | | | | | | |
| Heptachlor epoxide | U | 10 | | | | | | | | |
| Methoxychlor | U | 10 | | | | | | | | |
| Toxaphene | U | 60 | | | | | | | | |
| *Surr: Decachlorobiphenyl* | *26.67* | 0 | *33.3* | 0 | *80.1* | *45-135* | 0 | | | |
| *Surr: Tetrachloro-m-xylene* | *29* | 0 | *33.3* | 0 | *87.1* | *45-124* | 0 | | | |

**LCS** Sample ID: **PLCSS1-57368-57368** Units: **µg/Kg** Analysis Date: **4/10/2014 11:43 AM**
Client ID: Run ID: **GC12_140410A** SeqNo: **2706721** Prep Date: **4/9/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Dieldrin | 31.33 | 10 | 33.33 | 0 | 94 | 65-125 | 0 | | | |
| Endosulfan I | 31.33 | 10 | 33.33 | 0 | 94 | 15-135 | 0 | | | |
| Endosulfan II | 31 | 10 | 33.33 | 0 | 93 | 35-140 | 0 | | | |
| Endosulfan sulfate | 31.67 | 10 | 33.33 | 0 | 95 | 60-135 | 0 | | | |
| Endrin | 29 | 10 | 33.33 | 0 | 87 | 60-135 | 0 | | | |
| Endrin aldehyde | 29.67 | 10 | 33.33 | 0 | 89 | 35-145 | 0 | | | |
| Endrin ketone | 32 | 10 | 33.33 | 0 | 96 | 50-150 | 0 | | | |
| Methoxychlor | 32.67 | 10 | 33.33 | 0 | 98 | 55-145 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57368** Instrument ID **GC12** Method: **SW8081**

**LCS** Sample ID: **PLCSS1-57368-57368** Units: **µg/Kg** Analysis Date: **4/10/2014 06:32 PM**
Client ID: Run ID: **GC12_140410A** SeqNo: **2708595** Prep Date: **4/9/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | 33.67 | 10 | 33.33 | 0 | 101 | 30-135 | 0 | | | |
| 4,4´-DDE | 30.33 | 10 | 33.33 | 0 | 91 | 70-125 | 0 | | | |
| 4,4´-DDT | 26.33 | 10 | 33.33 | 0 | 79 | 45-140 | 0 | | | |
| Aldrin | 29.67 | 10 | 33.33 | 0 | 89 | 45-140 | 0 | | | |
| alpha-BHC | 30 | 10 | 33.33 | 0 | 90 | 60-125 | 0 | | | |
| alpha-Chlordane | 30.67 | 10 | 33.33 | 0 | 92 | 50-150 | 0 | | | |
| gamma-BHC (Lindane) | 31 | 10 | 33.33 | 0 | 93 | 60-125 | 0 | | | |
| Heptachlor | 28.33 | 10 | 33.33 | 0 | 85 | 50-140 | 0 | | | |
| Heptachlor epoxide | 27 | 10 | 33.33 | 0 | 81 | 65-130 | 0 | | | |
| *Surr: Decachlorobiphenyl* | *24.33* | 0 | *33.3* | 0 | *73.1* | *45-135* | 0 | | | |
| *Surr: Tetrachloro-m-xylene* | *29.67* | 0 | *33.3* | 0 | *89.1* | *45-124* | 0 | | | |

**MS** Sample ID: **1404329-07C MS** Units: **µg/Kg** Analysis Date: **4/10/2014 04:11 PM**
Client ID: Run ID: **GC12_140410A** SeqNo: **2708679** Prep Date: **4/9/2014** DF: **4**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | 29.82 | 39 | 32.41 | 0 | 92 | 30-135 | 0 | | | J |
| 4,4´-DDE | 28.53 | 39 | 32.41 | 0 | 88 | 70-125 | 0 | | | J |
| 4,4´-DDT | 35.01 | 39 | 32.41 | 0 | 108 | 45-140 | 0 | | | J |
| Aldrin | 27.23 | 39 | 32.41 | 0 | 84 | 45-140 | 0 | | | J |
| alpha-BHC | 28.53 | 39 | 32.41 | 0 | 88 | 60-125 | 0 | | | J |
| alpha-Chlordane | 27.23 | 39 | 32.41 | 0 | 84 | 50-150 | 0 | | | J |
| beta-BHC | 23.34 | 39 | 32.41 | 0 | 72 | 60-125 | 0 | | | J |
| delta-BHC | 32.42 | 39 | 32.41 | 0 | 100 | 55-130 | 0 | | | J |
| Dieldrin | 28.53 | 39 | 32.41 | 0 | 88 | 65-125 | 0 | | | J |
| Endosulfan I | 28.53 | 39 | 32.41 | 0 | 88 | 15-135 | 0 | | | J |
| Endosulfan II | 29.82 | 39 | 32.41 | 0 | 92 | 35-140 | 0 | | | J |
| Endosulfan sulfate | 32.42 | 39 | 32.41 | 0 | 100 | 60-135 | 0 | | | J |
| Endrin | 28.53 | 39 | 32.41 | 0 | 88 | 60-135 | 0 | | | J |
| Endrin aldehyde | 27.23 | 39 | 32.41 | 0 | 84 | 35-145 | 0 | | | J |
| Endrin ketone | 31.12 | 39 | 32.41 | 0 | 96 | 50-150 | 0 | | | J |
| gamma-BHC (Lindane) | 28.53 | 39 | 32.41 | 0 | 88 | 60-125 | 0 | | | J |
| gamma-Chlordane | 27.23 | 39 | 32.41 | 0 | 84 | 50-150 | 0 | | | J |
| Heptachlor | 28.53 | 39 | 32.41 | 0 | 88 | 50-140 | 0 | | | J |
| Heptachlor epoxide | 28.53 | 39 | 32.41 | 0 | 88 | 65-130 | 0 | | | J |
| Methoxychlor | 33.71 | 39 | 32.41 | 0 | 104 | 55-145 | 0 | | | J |
| *Surr: Decachlorobiphenyl* | *25.93* | 0 | *32.38* | 0 | *80.1* | *45-135* | 0 | | | |
| *Surr: Tetrachloro-m-xylene* | *27.23* | 0 | *32.38* | 0 | *84.1* | *45-124* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57368** Instrument ID **GC12** Method: **SW8081**

**MSD** Sample ID: **1404329-07C MSD** Units: **µg/Kg** Analysis Date: **4/10/2014 04:26 PM**

Client ID: Run ID: **GC12_140410A** SeqNo: **2708681** Prep Date: **4/9/2014** DF: **4**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | 29.72 | 39 | 32.3 | 0 | 92 | 30-135 | 29.82 | 0 | 35 | J |
| 4,4´-DDE | 27.14 | 39 | 32.3 | 0 | 84 | 70-125 | 28.53 | 0 | 35 | J |
| 4,4´-DDT | 36.18 | 39 | 32.3 | 0 | 112 | 45-140 | 35.01 | 0 | 35 | J |
| Aldrin | 27.14 | 39 | 32.3 | 0 | 84 | 45-140 | 27.23 | 0 | 35 | J |
| alpha-BHC | 28.43 | 39 | 32.3 | 0 | 88 | 60-125 | 28.53 | 0 | 35 | J |
| alpha-Chlordane | 28.43 | 39 | 32.3 | 0 | 88 | 50-150 | 27.23 | 0 | 35 | J |
| beta-BHC | 24.55 | 39 | 32.3 | 0 | 76 | 60-125 | 23.34 | 0 | 35 | J |
| delta-BHC | 32.31 | 39 | 32.3 | 0 | 100 | 55-130 | 32.42 | 0 | 35 | J |
| Dieldrin | 29.72 | 39 | 32.3 | 0 | 92 | 65-125 | 28.53 | 0 | 35 | J |
| Endosulfan I | 27.14 | 39 | 32.3 | 0 | 84 | 15-135 | 28.53 | 0 | 35 | J |
| Endosulfan II | 29.72 | 39 | 32.3 | 0 | 92 | 35-140 | 29.82 | 0 | 35 | J |
| Endosulfan sulfate | 31.01 | 39 | 32.3 | 0 | 96 | 60-135 | 32.42 | 0 | 35 | J |
| Endrin | 29.72 | 39 | 32.3 | 0 | 92 | 60-135 | 28.53 | 0 | 35 | J |
| Endrin aldehyde | 27.14 | 39 | 32.3 | 0 | 84 | 35-145 | 27.23 | 0 | 35 | J |
| Endrin ketone | 31.01 | 39 | 32.3 | 0 | 96 | 50-150 | 31.12 | 0 | 35 | J |
| gamma-BHC (Lindane) | 29.72 | 39 | 32.3 | 0 | 92 | 60-125 | 28.53 | 0 | 35 | J |
| gamma-Chlordane | 28.43 | 39 | 32.3 | 0 | 88 | 50-150 | 27.23 | 0 | 35 | J |
| Heptachlor | 29.72 | 39 | 32.3 | 0 | 92 | 50-140 | 28.53 | 0 | 35 | J |
| Heptachlor epoxide | 28.43 | 39 | 32.3 | 0 | 88 | 65-130 | 28.53 | 0 | 35 | J |
| Methoxychlor | 33.6 | 39 | 32.3 | 0 | 104 | 55-145 | 33.71 | 0 | 35 | J |
| *Surr: Decachlorobiphenyl* | *25.84* | 0 | *32.27* | 0 | *80.1* | *45-135* | 25.93 | *0.343* | *35* | |
| *Surr: Tetrachloro-m-xylene* | *28.43* | 0 | *32.27* | 0 | *88.1* | *45-124* | 27.23 | *4.31* | *35* | |

**The following samples were analyzed in this batch:** 1404130-13A 1404130-14A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57171** Instrument ID **HG1** Method: **SW7471**

**MBLK** Sample ID: **MBLK-57171-57171** Units: **mg/Kg** Analysis Date: **4/3/2014 11:35 AM**
Client ID: Run ID: **HG1_140403A** SeqNo: **2697909** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | U | 0.020 | | | | | | | | |

**LCS** Sample ID: **LCS-57171-57171** Units: **mg/Kg** Analysis Date: **4/3/2014 11:37 AM**
Client ID: Run ID: **HG1_140403A** SeqNo: **2697910** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.1697 | 0.020 | 0.1665 | 0 | 102 | 80-120 | 0 | | | |

**MS** Sample ID: **1404093-01AMS** Units: **mg/Kg** Analysis Date: **4/3/2014 11:56 AM**
Client ID: Run ID: **HG1_140403A** SeqNo: **2697930** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.1404 | 0.014 | 0.1144 | 0.02161 | 104 | 75-125 | 0 | | | |

**MSD** Sample ID: **1404093-01AMSD** Units: **mg/Kg** Analysis Date: **4/3/2014 11:58 AM**
Client ID: Run ID: **HG1_140403A** SeqNo: **2697931** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.1347 | 0.013 | 0.1098 | 0.02161 | 103 | 75-125 | 0.1404 | 4.15 | 35 | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 1404130-01C | 1404130-02C | 1404130-03C |
| 1404130-04C | 1404130-05C | 1404130-06C |
| 1404130-07C | 1404130-08C | 1404130-09C |
| 1404130-10C | 1404130-11C | 1404130-12C |
| 1404130-13A | 1404130-14A | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57254** Instrument ID **HG1** Method: **SW7470**

**MBLK** Sample ID: **MBLK-57254-57254** Units: **mg/L** Analysis Date: **4/7/2014 02:33 PM**
Client ID: Run ID: **HG1_140407A** SeqNo: **2701501** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | U | 0.00020 | | | | | | | | |

**LCS** Sample ID: **LCS-57254-57254** Units: **mg/L** Analysis Date: **4/7/2014 02:35 PM**
Client ID: Run ID: **HG1_140407A** SeqNo: **2701502** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.00193 | 0.00020 | 0.002 | 0 | 96.5 | 80-120 | 0 | | | |

**MS** Sample ID: **1404057-01CMS** Units: **mg/L** Analysis Date: **4/7/2014 02:47 PM**
Client ID: Run ID: **HG1_140407A** SeqNo: **2701509** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.002061 | 0.00020 | 0.002 | -0.000023 | 104 | 75-125 | 0 | | | |

**MSD** Sample ID: **1404057-01CMSD** Units: **mg/L** Analysis Date: **4/7/2014 02:56 PM**
Client ID: Run ID: **HG1_140407A** SeqNo: **2701518** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.002032 | 0.00020 | 0.002 | -0.000023 | 103 | 75-125 | 0.002061 | 1.42 | 20 | |

**The following samples were analyzed in this batch:** 1404130-15C 1404130-15D

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57215** Instrument ID **ICPMS1** Method: **SW6020A**

**MBLK** Sample ID: **MBLK-57215-57215** Units: **mg/Kg** Analysis Date: **4/4/2014 04:40 PM**
Client ID: Run ID: **ICPMS1_140404A** SeqNo: **2700801** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | U | 0.25 | | | | | | | | |
| Barium | 0.008145 | 0.25 | | | | | | | | J |
| Cadmium | U | 0.10 | | | | | | | | |
| Chromium | U | 0.25 | | | | | | | | |
| Lead | 0.0179 | 0.25 | | | | | | | | J |
| Selenium | U | 0.25 | | | | | | | | |
| Silver | U | 0.25 | | | | | | | | |

**LCS** Sample ID: **LCS-57215-57215** Units: **mg/Kg** Analysis Date: **4/4/2014 04:46 PM**
Client ID: Run ID: **ICPMS1_140404A** SeqNo: **2700802** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 4.504 | 0.25 | 5 | 0 | 90.1 | 80-120 | 0 | | | |
| Barium | 4.582 | 0.25 | 5 | 0 | 91.6 | 80-120 | 0 | | | |
| Cadmium | 4.588 | 0.10 | 5 | 0 | 91.8 | 80-120 | 0 | | | |
| Chromium | 4.66 | 0.25 | 5 | 0 | 93.2 | 80-120 | 0 | | | |
| Lead | 4.64 | 0.25 | 5 | 0 | 92.8 | 80-120 | 0 | | | |
| Selenium | 4.266 | 0.25 | 5 | 0 | 85.3 | 80-120 | 0 | | | |

**LCS** Sample ID: **LCS-57215-57215** Units: **mg/Kg** Analysis Date: **4/7/2014 03:27 PM**
Client ID: Run ID: **ICPMS1_140407A** SeqNo: **2701676** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Silver | 4.432 | 0.25 | 5 | 0 | 88.6 | 80-120 | 0 | | | |

**MS** Sample ID: **1404130-05CMS** Units: **mg/Kg** Analysis Date: **4/4/2014 05:43 PM**
Client ID: **SO-03-S-0-4** Run ID: **ICPMS1_140404A** SeqNo: **2700811** Prep Date: **4/4/2014** DF: **5**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 9.743 | 1.6 | 6.596 | 3.319 | 97.4 | 75-125 | 0 | | | |
| Barium | 144.6 | 1.6 | 6.596 | 119.2 | 385 | 75-125 | 0 | | | SO |
| Cadmium | 6.534 | 0.66 | 6.596 | 0.095 | 97.6 | 75-125 | 0 | | | |
| Chromium | 23.51 | 1.6 | 6.596 | 13.72 | 148 | 75-125 | 0 | | | S |
| Lead | 14.08 | 1.6 | 6.596 | 8.445 | 85.4 | 75-125 | 0 | | | |
| Selenium | 6.88 | 1.6 | 6.596 | 1.061 | 88.2 | 75-125 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57215** Instrument ID **ICPMS1** Method: **SW6020A**

**MS** Sample ID: **1404130-05CMS** Units: **mg/Kg** Analysis Date: **4/7/2014 03:46 PM**
Client ID: **SO-03-S-0-4** Run ID: **ICPMS1_140407A** SeqNo: **2701679** Prep Date: **4/4/2014** DF: **50**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Silver | 5.419 | 16 | 6.596 | -0.1085 | 83.8 | 75-125 | 0 | | | J |

**MSD** Sample ID: **1404130-05CMSD** Units: **mg/Kg** Analysis Date: **4/4/2014 05:50 PM**
Client ID: **SO-03-S-0-4** Run ID: **ICPMS1_140404A** SeqNo: **2700812** Prep Date: **4/4/2014** DF: **5**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 9.297 | 1.6 | 6.274 | 3.319 | 95.3 | 75-125 | 9.743 | 4.68 | 25 | |
| Barium | 173.9 | 1.6 | 6.274 | 119.2 | 872 | 75-125 | 144.6 | 18.4 | 25 | SO |
| Cadmium | 5.932 | 0.63 | 6.274 | 0.095 | 93 | 75-125 | 6.534 | 9.66 | 25 | |
| Chromium | 21.83 | 1.6 | 6.274 | 13.72 | 129 | 75-125 | 23.51 | 7.4 | 25 | S |
| Lead | 13.25 | 1.6 | 6.274 | 8.445 | 76.5 | 75-125 | 14.08 | 6.1 | 25 | |
| Selenium | 5.8 | 1.6 | 6.274 | 1.061 | 75.5 | 75-125 | 6.88 | 17 | 25 | |

**MSD** Sample ID: **1404130-05CMSD** Units: **mg/Kg** Analysis Date: **4/7/2014 03:52 PM**
Client ID: **SO-03-S-0-4** Run ID: **ICPMS1_140407A** SeqNo: **2701680** Prep Date: **4/4/2014** DF: **50**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Silver | 4.868 | 16 | 6.274 | -0.1085 | 79.3 | 75-125 | 5.419 | 0 | 25 | J |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 1404130-01C | 1404130-02C | 1404130-03C |
| 1404130-04C | 1404130-05C | 1404130-06C |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57252** Instrument ID **ICPMS1** Method: **SW6020A**

**MBLK** Sample ID: **MBLK-57252-57252** Units: **mg/Kg** Analysis Date: **4/5/2014 10:55 AM**
Client ID: Run ID: **ICPMS1_140404A** SeqNo: **2701054** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | U | 0.25 | | | | | | | | |
| Barium | U | 0.25 | | | | | | | | |
| Cadmium | U | 0.10 | | | | | | | | |
| Chromium | U | 0.25 | | | | | | | | |
| Lead | U | 0.25 | | | | | | | | |
| Selenium | U | 0.25 | | | | | | | | |
| Silver | U | 0.25 | | | | | | | | |

**LCS** Sample ID: **LCS-57252-57252** Units: **mg/Kg** Analysis Date: **4/5/2014 11:01 AM**
Client ID: Run ID: **ICPMS1_140404A** SeqNo: **2701056** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 6.185 | 0.34 | 6.868 | 0 | 90 | 80-120 | 0 | | | |
| Barium | 6.312 | 0.34 | 6.868 | 0 | 91.9 | 80-120 | 0 | | | |
| Cadmium | 6.245 | 0.14 | 6.868 | 0 | 90.9 | 80-120 | 0 | | | |
| Chromium | 6.345 | 0.34 | 6.868 | 0 | 92.4 | 80-120 | 0 | | | |
| Lead | 6.338 | 0.34 | 6.868 | 0 | 92.3 | 80-120 | 0 | | | |
| Selenium | 5.8 | 0.34 | 6.868 | 0 | 84.4 | 80-120 | 0 | | | |
| Silver | 6.081 | 0.34 | 6.868 | 0 | 88.5 | 80-120 | 0 | | | |

**MS** Sample ID: **1404130-10CMS** Units: **mg/Kg** Analysis Date: **4/5/2014 11:55 AM**
Client ID: **SO-05-D-16-20** Run ID: **ICPMS1_140404A** SeqNo: **2701065** Prep Date: **4/4/2014** DF: **5**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 9.296 | 1.7 | 6.868 | 3.86 | 79.1 | 75-125 | 0 | | | |
| Barium | 108.9 | 1.7 | 6.868 | 179.3 | -1020 | 75-125 | 0 | | | SO |
| Cadmium | 6.528 | 0.69 | 6.868 | 0.2909 | 90.8 | 75-125 | 0 | | | |
| Chromium | 22.08 | 1.7 | 6.868 | 12.58 | 138 | 75-125 | 0 | | | S |
| Lead | 13.91 | 1.7 | 6.868 | 10.06 | 56 | 75-125 | 0 | | | S |
| Selenium | 7.136 | 1.7 | 6.868 | 1.136 | 87.4 | 75-125 | 0 | | | |
| Silver | 6.016 | 1.7 | 6.868 | 0.03976 | 87 | 75-125 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57252** Instrument ID **ICPMS1** Method: **SW6020A**

**MSD** Sample ID: **1404130-10CMSD** Units: **mg/Kg** Analysis Date: **4/5/2014 12:01 PM**
Client ID: **SO-05-D-16-20** Run ID: **ICPMS1_140404A** SeqNo: **2701066** Prep Date: **4/4/2014** DF: **5**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.56 | 1.8 | 7.072 | 3.86 | 109 | 75-125 | 9.296 | 21.7 | 25 | |
| Barium | 223.8 | 1.8 | 7.072 | 179.3 | 630 | 75-125 | 108.9 | 69.1 | 25 | SRO |
| Cadmium | 7.73 | 0.71 | 7.072 | 0.2909 | 105 | 75-125 | 6.528 | 16.9 | 25 | |
| Chromium | 25.55 | 1.8 | 7.072 | 12.58 | 183 | 75-125 | 22.08 | 14.6 | 25 | S |
| Lead | 17.71 | 1.8 | 7.072 | 10.06 | 108 | 75-125 | 13.91 | 24 | 25 | |
| Selenium | 7.705 | 1.8 | 7.072 | 1.136 | 92.9 | 75-125 | 7.136 | 7.67 | 25 | |
| Silver | 6.952 | 1.8 | 7.072 | 0.03976 | 97.7 | 75-125 | 6.016 | 14.4 | 25 | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 1404130-07C | 1404130-08C | 1404130-09C |
| 1404130-10C | 1404130-11C | 1404130-12C |
| 1404130-13A | 1404130-14A | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57297** Instrument ID **ICPMS1** Method: **SW6020A**

**MBLK** Sample ID: **MBLK-57297-57297** Units: **mg/L** Analysis Date: **4/8/2014 09:50 AM**
Client ID: Run ID: **ICPMS1_140407A** SeqNo: **2702370** Prep Date: **4/7/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | U | 0.0050 | | | | | | | | |
| Barium | 0.0002534 | 0.0050 | | | | | | | | J |
| Cadmium | U | 0.0020 | | | | | | | | |
| Chromium | 0.0008322 | 0.0050 | | | | | | | | J |
| Lead | 0.000101 | 0.0050 | | | | | | | | J |
| Selenium | U | 0.0050 | | | | | | | | |
| Silver | U | 0.0050 | | | | | | | | |

**LCS** Sample ID: **LCS-57297-57297** Units: **mg/L** Analysis Date: **4/8/2014 09:58 AM**
Client ID: Run ID: **ICPMS1_140407A** SeqNo: **2702371** Prep Date: **4/7/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.09578 | 0.0050 | 0.1 | 0 | 95.8 | 80-120 | 0 | | | |
| Barium | 0.09271 | 0.0050 | 0.1 | 0 | 92.7 | 80-120 | 0 | | | |
| Cadmium | 0.09439 | 0.0020 | 0.1 | 0 | 94.4 | 80-120 | 0 | | | |
| Chromium | 0.09374 | 0.0050 | 0.1 | 0 | 93.7 | 80-120 | 0 | | | |
| Lead | 0.09257 | 0.0050 | 0.1 | 0 | 92.6 | 80-120 | 0 | | | |
| Selenium | 0.09228 | 0.0050 | 0.1 | 0 | 92.3 | 80-120 | 0 | | | |
| Silver | 0.09358 | 0.0050 | 0.1 | 0 | 93.6 | 80-120 | 0 | | | |

**MS** Sample ID: **1404326-01CMS** Units: **mg/L** Analysis Date: **4/8/2014 10:42 AM**
Client ID: Run ID: **ICPMS1_140407A** SeqNo: **2702534** Prep Date: **4/7/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0947 | 0.0050 | 0.1 | 0.0006322 | 94.1 | 75-125 | 0 | | | |
| Barium | 0.1106 | 0.0050 | 0.1 | 0.02147 | 89.1 | 75-125 | 0 | | | |
| Cadmium | 0.09042 | 0.0020 | 0.1 | 0.00007987 | 90.3 | 75-125 | 0 | | | |
| Chromium | 0.09224 | 0.0050 | 0.1 | 0.002304 | 89.9 | 75-125 | 0 | | | |
| Lead | 0.09006 | 0.0050 | 0.1 | 0.0004396 | 89.6 | 75-125 | 0 | | | |
| Selenium | 0.08904 | 0.0050 | 0.1 | 0.0002382 | 88.8 | 75-125 | 0 | | | |
| Silver | 0.08843 | 0.0050 | 0.1 | 0.00001462 | 88.4 | 75-125 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57297** Instrument ID **ICPMS1** Method: **SW6020A**

**MSD** Sample ID: **1404326-01CMSD** Units: **mg/L** Analysis Date: **4/8/2014 10:48 AM**

Client ID: Run ID: **ICPMS1_140407A** SeqNo: **2702535** Prep Date: **4/7/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0956 | 0.0050 | 0.1 | 0.0006322 | 95 | 75-125 | 0.0947 | 0.946 | 20 | |
| Barium | 0.1107 | 0.0050 | 0.1 | 0.02147 | 89.2 | 75-125 | 0.1106 | 0.0904 | 20 | |
| Cadmium | 0.09067 | 0.0020 | 0.1 | 0.00007987 | 90.6 | 75-125 | 0.09042 | 0.276 | 20 | |
| Chromium | 0.09312 | 0.0050 | 0.1 | 0.002304 | 90.8 | 75-125 | 0.09224 | 0.95 | 20 | |
| Lead | 0.09001 | 0.0050 | 0.1 | 0.0004396 | 89.6 | 75-125 | 0.09006 | 0.0555 | 20 | |
| Selenium | 0.08876 | 0.0050 | 0.1 | 0.0002382 | 88.5 | 75-125 | 0.08904 | 0.315 | 20 | |
| Silver | 0.08998 | 0.0050 | 0.1 | 0.00001462 | 90 | 75-125 | 0.08843 | 1.74 | 20 | |

**The following samples were analyzed in this batch:** 1404130-15C

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138699A** Instrument ID **ICPMS1** Method: **SW6020A** **(Dissolve)**

**MBLK** Sample ID: **MBLK-R138699A-R138699A** Units: **mg/L** Analysis Date: **4/10/2014 03:46 PM**
Client ID: Run ID: **ICPMS1_140410A** SeqNo: **2706958** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | U | 0.0050 | | | | | | | | |
| Barium | 0.0001685 | 0.0050 | | | | | | | | J |
| Cadmium | 0.0001249 | 0.0020 | | | | | | | | J |
| Chromium | U | 0.0050 | | | | | | | | |
| Lead | U | 0.0050 | | | | | | | | |
| Selenium | U | 0.0050 | | | | | | | | |
| Silver | 0.0002782 | 0.0050 | | | | | | | | J |

**LCS** Sample ID: **LCS-R138699A-R138699A** Units: **mg/L** Analysis Date: **4/10/2014 03:40 PM**
Client ID: Run ID: **ICPMS1_140410A** SeqNo: **2706957** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.09447 | 0.0050 | 0.1 | 0 | 94.5 | 80-120 | 0 | | | |
| Barium | 0.09604 | 0.0050 | 0.1 | 0 | 96 | 80-120 | 0 | | | |
| Cadmium | 0.09617 | 0.0020 | 0.1 | 0 | 96.2 | 80-120 | 0 | | | |
| Chromium | 0.09403 | 0.0050 | 0.1 | 0 | 94 | 80-120 | 0 | | | |
| Lead | 0.09378 | 0.0050 | 0.1 | 0 | 93.8 | 80-120 | 0 | | | |
| Selenium | 0.09498 | 0.0050 | 0.1 | 0 | 95 | 80-120 | 0 | | | |
| Silver | 0.09643 | 0.0050 | 0.1 | 0 | 96.4 | 80-120 | 0 | | | |

**MS** Sample ID: **1404130-15DMS** Units: **mg/L** Analysis Date: **4/10/2014 03:28 PM**
Client ID: **GW-04** Run ID: **ICPMS1_140410A** SeqNo: **2706914** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1237 | 0.0050 | 0.1 | 0.02635 | 97.4 | 75-125 | 0 | | | |
| Barium | 0.382 | 0.0050 | 0.1 | 0.2941 | 87.9 | 75-125 | 0 | | | |
| Cadmium | 0.09376 | 0.0020 | 0.1 | 0.0000867 | 93.7 | 75-125 | 0 | | | |
| Chromium | 0.09033 | 0.0050 | 0.1 | -9.275E-05 | 90.4 | 75-125 | 0 | | | |
| Lead | 0.09159 | 0.0050 | 0.1 | 0.00003449 | 91.6 | 75-125 | 0 | | | |
| Selenium | 0.09921 | 0.0050 | 0.1 | 0.000658 | 98.6 | 75-125 | 0 | | | |
| Silver | 0.0773 | 0.0050 | 0.1 | 0.00007477 | 77.2 | 75-125 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138699A** Instrument ID **ICPMS1** Method: **SW6020A** **(Dissolve)**

**MSD** Sample ID: **1404130-15DMSD** Units: **mg/L** Analysis Date: **4/10/2014 03:34 PM**

Client ID: **GW-04** Run ID: **ICPMS1_140410A** SeqNo: **2706915** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1272 | 0.0050 | 0.1 | 0.02635 | 101 | 75-125 | 0.1237 | 2.79 | 20 | |
| Barium | 0.3898 | 0.0050 | 0.1 | 0.2941 | 95.7 | 75-125 | 0.382 | 2.02 | 20 | |
| Cadmium | 0.09694 | 0.0020 | 0.1 | 0.0000867 | 96.9 | 75-125 | 0.09376 | 3.34 | 20 | |
| Chromium | 0.09263 | 0.0050 | 0.1 | -9.275E-05 | 92.7 | 75-125 | 0.09033 | 2.51 | 20 | |
| Lead | 0.09475 | 0.0050 | 0.1 | 0.00003449 | 94.7 | 75-125 | 0.09159 | 3.39 | 20 | |
| Selenium | 0.1037 | 0.0050 | 0.1 | 0.000658 | 103 | 75-125 | 0.09921 | 4.43 | 20 | |
| Silver | 0.08143 | 0.0050 | 0.1 | 0.00007477 | 81.4 | 75-125 | 0.0773 | 5.2 | 20 | |

**The following samples were analyzed in this batch:** 1404130-15D

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57176** Instrument ID **SVMS8** Method: **SW8270**

**MBLK** Sample ID: **SBLKW1-57176-57176** Units: **µg/L** Analysis Date: **4/4/2014 11:02 AM**

Client ID: Run ID: **SVMS8_140404A** SeqNo: **2700280** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1`-Biphenyl | U | 5.0 | | | | | | | | |
| 2,4,5-Trichlorophenol | U | 5.0 | | | | | | | | |
| 2,4,6-Trichlorophenol | U | 5.0 | | | | | | | | |
| 2,4-Dichlorophenol | U | 10 | | | | | | | | |
| 2,4-Dimethylphenol | U | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | U | 5.0 | | | | | | | | |
| 2,4-Dinitrotoluene | U | 5.0 | | | | | | | | |
| 2,6-Dinitrotoluene | U | 5.0 | | | | | | | | |
| 2-Chloronaphthalene | U | 5.0 | | | | | | | | |
| 2-Chlorophenol | U | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | U | 5.0 | | | | | | | | |
| 2-Methylphenol | U | 5.0 | | | | | | | | |
| 2-Nitroaniline | U | 20 | | | | | | | | |
| 2-Nitrophenol | U | 5.0 | | | | | | | | |
| 3,3´-Dichlorobenzidine | U | 5.0 | | | | | | | | |
| 3-Nitroaniline | U | 20 | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | U | 20 | | | | | | | | |
| 4-Bromophenyl phenyl ether | U | 5.0 | | | | | | | | |
| 4-Chloro-3-methylphenol | U | 5.0 | | | | | | | | |
| 4-Chloroaniline | U | 20 | | | | | | | | |
| 4-Chlorophenyl phenyl ether | U | 5.0 | | | | | | | | |
| 4-Methylphenol | U | 5.0 | | | | | | | | |
| 4-Nitroaniline | U | 20 | | | | | | | | |
| 4-Nitrophenol | U | 20 | | | | | | | | |
| Acenaphthene | U | 5.0 | | | | | | | | |
| Acenaphthylene | U | 5.0 | | | | | | | | |
| Acetophenone | U | 1.0 | | | | | | | | |
| Anthracene | U | 5.0 | | | | | | | | |
| Atrazine | U | 1.0 | | | | | | | | |
| Benzaldehyde | U | 1.0 | | | | | | | | |
| Benzo(a)anthracene | U | 5.0 | | | | | | | | |
| Benzo(a)pyrene | U | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | U | 5.0 | | | | | | | | |
| Benzo(g,h,i)perylene | U | 5.0 | | | | | | | | |
| Benzo(k)fluoranthene | U | 5.0 | | | | | | | | |
| Bis(2-chloroethoxy)methane | U | 5.0 | | | | | | | | |
| Bis(2-chloroethyl)ether | U | 5.0 | | | | | | | | |
| Bis(2-chloroisopropyl)ether | U | 5.0 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | U | 5.0 | | | | | | | | |
| Butyl benzyl phthalate | U | 5.0 | | | | | | | | |
| Caprolactam | U | 10 | | | | | | | | |
| Carbazole | U | 10 | | | | | | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **57176** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chrysene | U | 5.0 | | | | | |
| Dibenzo(a,h)anthracene | U | 5.0 | | | | | |
| Dibenzofuran | U | 5.0 | | | | | |
| Diethyl phthalate | U | 20 | | | | | |
| Dimethyl phthalate | U | 20 | | | | | |
| Di-n-butyl phthalate | U | 5.0 | | | | | |
| Di-n-octyl phthalate | U | 5.0 | | | | | |
| Fluoranthene | U | 5.0 | | | | | |
| Fluorene | U | 5.0 | | | | | |
| Hexachlorobenzene | U | 5.0 | | | | | |
| Hexachlorobutadiene | U | 5.0 | | | | | |
| Hexachlorocyclopentadiene | U | 20 | | | | | |
| Hexachloroethane | U | 5.0 | | | | | |
| Indeno(1,2,3-cd)pyrene | U | 5.0 | | | | | |
| Isophorone | U | 5.0 | | | | | |
| Naphthalene | U | 5.0 | | | | | |
| Nitrobenzene | U | 5.0 | | | | | |
| N-Nitrosodi-n-propylamine | U | 5.0 | | | | | |
| N-Nitrosodiphenylamine | U | 5.0 | | | | | |
| Pentachlorophenol | U | 20 | | | | | |
| Phenanthrene | U | 5.0 | | | | | |
| Phenol | U | 5.0 | | | | | |
| Pyrene | U | 5.0 | | | | | |
| *Surr: 2,4,6-Tribromophenol* | *30.23* | 0 | *50* | 0 | *60.5* | *38-115* | 0 |
| *Surr: 2-Fluorobiphenyl* | *31.72* | 0 | *50* | 0 | *63.4* | *32-100* | 0 |
| *Surr: 2-Fluorophenol* | *19.15* | 0 | *50* | 0 | *38.3* | *22-59* | 0 |
| *Surr: 4-Terphenyl-d14* | *45.82* | 0 | *50* | 0 | *91.6* | *23-112* | 0 |
| *Surr: Nitrobenzene-d5* | *35.48* | 0 | *50* | 0 | *71* | *31-93* | 0 |
| *Surr: Phenol-d6* | *11.82* | 0 | *50* | 0 | *23.6* | *13-36* | 0 |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57176** Instrument ID **SVMS8** Method: **SW8270**

**LCS** Sample ID: **SLCSW1-57176-57176** Units: **µg/L** Analysis Date: **4/4/2014 11:23 AM**

Client ID: Run ID: **SVMS8_140404A** SeqNo: **2700281** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 14.37 | 5.0 | 20 | 0 | 71.8 | 50-110 | 0 | | | |
| 2,4,6-Trichlorophenol | 13.79 | 5.0 | 20 | 0 | 69 | 50-115 | 0 | | | |
| 2,4-Dichlorophenol | 13.07 | 10 | 20 | 0 | 65.4 | 50-105 | 0 | | | |
| 2,4-Dimethylphenol | 12.01 | 5.0 | 20 | 0 | 60 | 30-110 | 0 | | | |
| 2,4-Dinitrophenol | 12.48 | 5.0 | 20 | 0 | 62.4 | 15-140 | 0 | | | |
| 2,4-Dinitrotoluene | 15.08 | 5.0 | 20 | 0 | 75.4 | 50-120 | 0 | | | |
| 2,6-Dinitrotoluene | 14.77 | 5.0 | 20 | 0 | 73.8 | 50-115 | 0 | | | |
| 2-Chloronaphthalene | 14.49 | 5.0 | 20 | 0 | 72.4 | 50-105 | 0 | | | |
| 2-Chlorophenol | 12.81 | 5.0 | 20 | 0 | 64 | 35-105 | 0 | | | |
| 2-Methylnaphthalene | 13.81 | 5.0 | 20 | 0 | 69 | 45-105 | 0 | | | |
| 2-Methylphenol | 11.55 | 5.0 | 20 | 0 | 57.8 | 40-110 | 0 | | | |
| 2-Nitroaniline | 15.92 | 20 | 20 | 0 | 79.6 | 50-115 | 0 | | | J |
| 2-Nitrophenol | 13.9 | 5.0 | 20 | 0 | 69.5 | 40-115 | 0 | | | |
| 3-Nitroaniline | 14.59 | 20 | 20 | 0 | 73 | 20-125 | 0 | | | J |
| 4,6-Dinitro-2-methylphenol | 14.74 | 20 | 20 | 0 | 73.7 | 40-130 | 0 | | | J |
| 4-Bromophenyl phenyl ether | 15.89 | 5.0 | 20 | 0 | 79.4 | 50-115 | 0 | | | |
| 4-Chloro-3-methylphenol | 13.72 | 5.0 | 20 | 0 | 68.6 | 45-110 | 0 | | | |
| 4-Chloroaniline | 15.23 | 20 | 20 | 0 | 76.2 | 15-110 | 0 | | | J |
| 4-Chlorophenyl phenyl ether | 14.5 | 5.0 | 20 | 0 | 72.5 | 50-110 | 0 | | | |
| 4-Methylphenol | 9.9 | 5.0 | 20 | 0 | 49.5 | 30-110 | 0 | | | |
| 4-Nitroaniline | 14.13 | 20 | 20 | 0 | 70.6 | 35-150 | 0 | | | J |
| 4-Nitrophenol | 5.09 | 20 | 20 | 0 | 25.4 | 1-58 | 0 | | | J |
| Acenaphthene | 14.04 | 5.0 | 20 | 0 | 70.2 | 45-110 | 0 | | | |
| Acenaphthylene | 15.42 | 5.0 | 20 | 0 | 77.1 | 50-105 | 0 | | | |
| Anthracene | 16.78 | 5.0 | 20 | 0 | 83.9 | 55-110 | 0 | | | |
| Benzo(a)anthracene | 15.81 | 5.0 | 20 | 0 | 79 | 55-110 | 0 | | | |
| Benzo(a)pyrene | 16.25 | 5.0 | 20 | 0 | 81.2 | 55-110 | 0 | | | |
| Benzo(b)fluoranthene | 16.8 | 5.0 | 20 | 0 | 84 | 45-120 | 0 | | | |
| Benzo(g,h,i)perylene | 16.33 | 5.0 | 20 | 0 | 81.6 | 40-125 | 0 | | | |
| Benzo(k)fluoranthene | 16.98 | 5.0 | 20 | 0 | 84.9 | 45-125 | 0 | | | |
| Bis(2-chloroethoxy)methane | 14.59 | 5.0 | 20 | 0 | 73 | 45-105 | 0 | | | |
| Bis(2-chloroethyl)ether | 15.9 | 5.0 | 20 | 0 | 79.5 | 35-110 | 0 | | | |
| Bis(2-chloroisopropyl)ether | 16.54 | 5.0 | 20 | 0 | 82.7 | 25-130 | 0 | | | |
| Bis(2-ethylhexyl)phthalate | 15.67 | 5.0 | 20 | 0 | 78.4 | 40-125 | 0 | | | |
| Butyl benzyl phthalate | 15.7 | 5.0 | 20 | 0 | 78.5 | 45-115 | 0 | | | |
| Carbazole | 16.76 | 10 | 20 | 0 | 83.8 | 50-150 | 0 | | | |
| Chrysene | 16.62 | 5.0 | 20 | 0 | 83.1 | 55-110 | 0 | | | |
| Dibenzo(a,h)anthracene | 15.19 | 5.0 | 20 | 0 | 76 | 40-125 | 0 | | | |
| Dibenzofuran | 14.33 | 5.0 | 20 | 0 | 71.6 | 55-105 | 0 | | | |
| Diethyl phthalate | 16.12 | 20 | 20 | 0 | 80.6 | 40-120 | 0 | | | J |
| Dimethyl phthalate | 15.49 | 20 | 20 | 0 | 77.4 | 25-125 | 0 | | | J |
| Di-n-butyl phthalate | 16.73 | 5.0 | 20 | 0 | 83.6 | 55-115 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **57176** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Di-n-octyl phthalate | 15.68 | 5.0 | 20 | 0 | 78.4 | 35-135 | 0 | |
| Fluoranthene | 16.77 | 5.0 | 20 | 0 | 83.8 | 55-115 | 0 | |
| Fluorene | 14.9 | 5.0 | 20 | 0 | 74.5 | 50-110 | 0 | |
| Hexachlorobenzene | 15.32 | 5.0 | 20 | 0 | 76.6 | 50-110 | 0 | |
| Hexachlorobutadiene | 12.26 | 5.0 | 20 | 0 | 61.3 | 25-105 | 0 | |
| Hexachlorocyclopentadiene | 10.97 | 20 | 20 | 0 | 54.8 | 25-105 | 0 | J |
| Hexachloroethane | 12.73 | 5.0 | 20 | 0 | 63.6 | 30-95 | 0 | |
| Indeno(1,2,3-cd)pyrene | 18.13 | 5.0 | 20 | 0 | 90.6 | 45-125 | 0 | |
| Isophorone | 15.65 | 5.0 | 20 | 0 | 78.2 | 50-110 | 0 | |
| Naphthalene | 13.15 | 5.0 | 20 | 0 | 65.8 | 40-100 | 0 | |
| Nitrobenzene | 14.96 | 5.0 | 20 | 0 | 74.8 | 45-110 | 0 | |
| N-Nitrosodi-n-propylamine | 15.72 | 5.0 | 20 | 0 | 78.6 | 35-130 | 0 | |
| N-Nitrosodiphenylamine | 16.13 | 5.0 | 20 | 0 | 80.6 | 50-110 | 0 | |
| Pentachlorophenol | 13.13 | 20 | 20 | 0 | 65.6 | 40-115 | 0 | J |
| Phenanthrene | 15.83 | 5.0 | 20 | 0 | 79.2 | 50-115 | 0 | |
| Phenol | 5.19 | 5.0 | 20 | 0 | 26 | 12-43 | 0 | |
| Pyrene | 17.65 | 5.0 | 20 | 0 | 88.2 | 50-130 | 0 | |
| *Surr: 2,4,6-Tribromophenol* | *37.35* | 0 | *50* | 0 | *74.7* | *38-115* | 0 | |
| *Surr: 2-Fluorobiphenyl* | *34.28* | 0 | *50* | 0 | *68.6* | *32-100* | 0 | |
| *Surr: 2-Fluorophenol* | *19.09* | 0 | *50* | 0 | *38.2* | *22-59* | 0 | |
| *Surr: 4-Terphenyl-d14* | *46.26* | 0 | *50* | 0 | *92.5* | *23-112* | 0 | |
| *Surr: Nitrobenzene-d5* | *41.24* | 0 | *50* | 0 | *82.5* | *31-93* | 0 | |
| *Surr: Phenol-d6* | *12.93* | 0 | *50* | 0 | *25.9* | *13-36* | 0 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57176** Instrument ID **SVMS8** Method: **SW8270**

**MS** Sample ID: **1404130-15B MS** Units: **µg/L** Analysis Date: **4/4/2014 01:49 PM**
Client ID: **GW-04** Run ID: **SVMS8_140404A** SeqNo: **2700286** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 159 | 50 | 200 | 0 | 79.5 | 50-110 | 0 | | | |
| 2,4,6-Trichlorophenol | 157.7 | 50 | 200 | 0 | 78.8 | 50-115 | 0 | | | |
| 2,4-Dichlorophenol | 144.9 | 100 | 200 | 0 | 72.4 | 50-105 | 0 | | | |
| 2,4-Dimethylphenol | 155.7 | 50 | 200 | 0 | 77.8 | 30-110 | 0 | | | |
| 2,4-Dinitrophenol | 16.1 | 50 | 200 | 0 | 8.05 | 15-140 | 0 | | | JS |
| 2,4-Dinitrotoluene | 157.9 | 50 | 200 | 0 | 79 | 50-120 | 0 | | | |
| 2,6-Dinitrotoluene | 151.9 | 50 | 200 | 0 | 76 | 50-115 | 0 | | | |
| 2-Chloronaphthalene | 148.4 | 50 | 200 | 0 | 74.2 | 50-105 | 0 | | | |
| 2-Chlorophenol | 146.9 | 50 | 200 | 0 | 73.4 | 35-105 | 0 | | | |
| 2-Methylnaphthalene | 140.6 | 50 | 200 | 0 | 70.3 | 45-105 | 0 | | | |
| 2-Methylphenol | 131.2 | 50 | 200 | 0 | 65.6 | 40-110 | 0 | | | |
| 2-Nitroaniline | 171.6 | 200 | 200 | 0 | 85.8 | 50-115 | 0 | | | J |
| 2-Nitrophenol | 140.1 | 50 | 200 | 0 | 70 | 40-115 | 0 | | | |
| 3-Nitroaniline | 150.2 | 200 | 200 | 0 | 75.1 | 20-125 | 0 | | | J |
| 4,6-Dinitro-2-methylphenol | 45.8 | 200 | 200 | 0 | 22.9 | 40-130 | 0 | | | JS |
| 4-Bromophenyl phenyl ether | 162.6 | 50 | 200 | 0 | 81.3 | 50-115 | 0 | | | |
| 4-Chloro-3-methylphenol | 157.2 | 50 | 200 | 0 | 78.6 | 45-110 | 0 | | | |
| 4-Chloroaniline | 121.6 | 200 | 200 | 0 | 60.8 | 15-110 | 0 | | | J |
| 4-Chlorophenyl phenyl ether | 150.4 | 50 | 200 | 0 | 75.2 | 50-110 | 0 | | | |
| 4-Methylphenol | 116 | 50 | 200 | 0 | 58 | 30-110 | 0 | | | |
| 4-Nitroaniline | 144.2 | 200 | 200 | 0 | 72.1 | 35-150 | 0 | | | J |
| 4-Nitrophenol | 38.7 | 200 | 200 | 0 | 19.4 | 1-58 | 0 | | | J |
| Acenaphthene | 130.2 | 50 | 200 | 0 | 65.1 | 45-110 | 0 | | | |
| Acenaphthylene | 156.9 | 50 | 200 | 0 | 78.4 | 50-105 | 0 | | | |
| Anthracene | 171.4 | 50 | 200 | 0 | 85.7 | 55-110 | 0 | | | |
| Benzo(a)anthracene | 169.6 | 50 | 200 | 0 | 84.8 | 55-110 | 0 | | | |
| Benzo(a)pyrene | 179.6 | 50 | 200 | 0 | 89.8 | 55-110 | 0 | | | |
| Benzo(b)fluoranthene | 191.3 | 50 | 200 | 0 | 95.6 | 45-120 | 0 | | | |
| Benzo(g,h,i)perylene | 157.5 | 50 | 200 | 0 | 78.8 | 40-125 | 0 | | | |
| Benzo(k)fluoranthene | 189.2 | 50 | 200 | 0 | 94.6 | 45-125 | 0 | | | |
| Bis(2-chloroethoxy)methane | 147.6 | 50 | 200 | 0 | 73.8 | 45-105 | 0 | | | |
| Bis(2-chloroethyl)ether | 151.5 | 50 | 200 | 0 | 75.8 | 35-110 | 0 | | | |
| Bis(2-chloroisopropyl)ether | 154.4 | 50 | 200 | 0 | 77.2 | 25-130 | 0 | | | |
| Bis(2-ethylhexyl)phthalate | 195.7 | 50 | 200 | 0 | 97.8 | 40-125 | 0 | | | |
| Butyl benzyl phthalate | 197.1 | 50 | 200 | 0 | 98.6 | 45-115 | 0 | | | |
| Carbazole | 171.8 | 100 | 200 | 0 | 85.9 | 50-150 | 0 | | | |
| Chrysene | 163.2 | 50 | 200 | 0 | 81.6 | 55-110 | 0 | | | |
| Dibenzo(a,h)anthracene | 153.8 | 50 | 200 | 0 | 76.9 | 40-125 | 0 | | | |
| Dibenzofuran | 147.6 | 50 | 200 | 0 | 73.8 | 55-105 | 0 | | | |
| Diethyl phthalate | 164.6 | 200 | 200 | 0 | 82.3 | 40-120 | 0 | | | J |
| Dimethyl phthalate | 160.7 | 200 | 200 | 0 | 80.4 | 25-125 | 0 | | | J |
| Di-n-butyl phthalate | 179.7 | 50 | 200 | 0 | 89.8 | 55-115 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **57176** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Di-n-octyl phthalate | 258.7 | 50 | 200 | 0 | 129 | 35-135 | 0 | |
| Fluoranthene | 173.7 | 50 | 200 | 0 | 86.8 | 55-115 | 0 | |
| Fluorene | 152.1 | 50 | 200 | 0 | 76 | 50-110 | 0 | |
| Hexachlorobenzene | 152.5 | 50 | 200 | 0 | 76.2 | 50-110 | 0 | |
| Hexachlorobutadiene | 128 | 50 | 200 | 0 | 64 | 25-105 | 0 | |
| Hexachlorocyclopentadiene | 67.1 | 200 | 200 | 0 | 33.6 | 25-105 | 0 | J |
| Hexachloroethane | 131.3 | 50 | 200 | 0 | 65.6 | 30-95 | 0 | |
| Indeno(1,2,3-cd)pyrene | 195.2 | 50 | 200 | 0 | 97.6 | 45-125 | 0 | |
| Isophorone | 159.6 | 50 | 200 | 0 | 79.8 | 50-110 | 0 | |
| Naphthalene | 134.5 | 50 | 200 | 0 | 67.2 | 40-100 | 0 | |
| Nitrobenzene | 153 | 50 | 200 | 0 | 76.5 | 45-110 | 0 | |
| N-Nitrosodi-n-propylamine | 162 | 50 | 200 | 0 | 81 | 35-130 | 0 | |
| N-Nitrosodiphenylamine | 162.5 | 50 | 200 | 0 | 81.2 | 50-110 | 0 | |
| Pentachlorophenol | 113.5 | 200 | 200 | 0 | 56.8 | 40-115 | 0 | J |
| Phenanthrene | 155.9 | 50 | 200 | 0 | 78 | 50-115 | 0 | |
| Phenol | 53.1 | 50 | 200 | 0 | 26.6 | 12-43 | 0 | |
| Pyrene | 211 | 50 | 200 | 0 | 106 | 50-130 | 0 | |
| *Surr: 2,4,6-Tribromophenol* | *394.5* | 0 | *500* | 0 | *78.9* | *38-115* | 0 | |
| *Surr: 2-Fluorobiphenyl* | *347.5* | 0 | *500* | 0 | *69.5* | *32-100* | 0 | |
| *Surr: 2-Fluorophenol* | *210.2* | 0 | *500* | 0 | *42* | *22-59* | 0 | |
| *Surr: 4-Terphenyl-d14* | *555* | 0 | *500* | 0 | *111* | *23-112* | 0 | |
| *Surr: Nitrobenzene-d5* | *413.4* | 0 | *500* | 0 | *82.7* | *31-93* | 0 | |
| *Surr: Phenol-d6* | *135.5* | 0 | *500* | 0 | *27.1* | *13-36* | 0 | |

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57176** Instrument ID **SVMS8** Method: **SW8270**

**MSD** Sample ID: **1404130-15B MSD** Units: **µg/L** Analysis Date: **4/4/2014 02:09 PM**

Client ID: **GW-04** Run ID: **SVMS8_140404A** SeqNo: **2700287** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 163.6 | 50 | 200 | 0 | 81.8 | 50-110 | 159 | 2.85 | 30 | |
| 2,4,6-Trichlorophenol | 166 | 50 | 200 | 0 | 83 | 50-115 | 157.7 | 5.13 | 30 | |
| 2,4-Dichlorophenol | 150.5 | 100 | 200 | 0 | 75.2 | 50-105 | 144.9 | 3.79 | 30 | |
| 2,4-Dimethylphenol | 137.9 | 50 | 200 | 0 | 69 | 30-110 | 155.7 | 12.1 | 30 | |
| 2,4-Dinitrophenol | 28.2 | 50 | 200 | 0 | 14.1 | 15-140 | 16.1 | 0 | 30 | JS |
| 2,4-Dinitrotoluene | 160.6 | 50 | 200 | 0 | 80.3 | 50-120 | 157.9 | 1.7 | 30 | |
| 2,6-Dinitrotoluene | 159.3 | 50 | 200 | 0 | 79.6 | 50-115 | 151.9 | 4.76 | 30 | |
| 2-Chloronaphthalene | 152.6 | 50 | 200 | 0 | 76.3 | 50-105 | 148.4 | 2.79 | 30 | |
| 2-Chlorophenol | 148.8 | 50 | 200 | 0 | 74.4 | 35-105 | 146.9 | 1.29 | 30 | |
| 2-Methylnaphthalene | 145.5 | 50 | 200 | 0 | 72.8 | 45-105 | 140.6 | 3.43 | 30 | |
| 2-Methylphenol | 135.5 | 50 | 200 | 0 | 67.8 | 40-110 | 131.2 | 3.22 | 30 | |
| 2-Nitroaniline | 174.4 | 200 | 200 | 0 | 87.2 | 50-115 | 171.6 | 0 | 30 | J |
| 2-Nitrophenol | 149.1 | 50 | 200 | 0 | 74.6 | 40-115 | 140.1 | 6.22 | 30 | |
| 3-Nitroaniline | 166 | 200 | 200 | 0 | 83 | 20-125 | 150.2 | 0 | 30 | J |
| 4,6-Dinitro-2-methylphenol | 60.7 | 200 | 200 | 0 | 30.4 | 40-130 | 45.8 | 0 | 30 | JS |
| 4-Bromophenyl phenyl ether | 160.1 | 50 | 200 | 0 | 80 | 50-115 | 162.6 | 1.55 | 30 | |
| 4-Chloro-3-methylphenol | 170.5 | 50 | 200 | 0 | 85.2 | 45-110 | 157.2 | 8.12 | 30 | |
| 4-Chloroaniline | 154.7 | 200 | 200 | 0 | 77.4 | 15-110 | 121.6 | 0 | 30 | J |
| 4-Chlorophenyl phenyl ether | 151.7 | 50 | 200 | 0 | 75.8 | 50-110 | 150.4 | 0.861 | 30 | |
| 4-Methylphenol | 126.6 | 50 | 200 | 0 | 63.3 | 30-110 | 116 | 8.74 | 30 | |
| 4-Nitroaniline | 157.8 | 200 | 200 | 0 | 78.9 | 35-150 | 144.2 | 0 | 30 | J |
| 4-Nitrophenol | 50.4 | 200 | 200 | 0 | 25.2 | 1-58 | 38.7 | 0 | 0 | J |
| Acenaphthene | 133.9 | 50 | 200 | 0 | 67 | 45-110 | 130.2 | 2.8 | 30 | |
| Acenaphthylene | 158.5 | 50 | 200 | 0 | 79.2 | 50-105 | 156.9 | 1.01 | 30 | |
| Anthracene | 168.8 | 50 | 200 | 0 | 84.4 | 55-110 | 171.4 | 1.53 | 30 | |
| Benzo(a)anthracene | 170.7 | 50 | 200 | 0 | 85.4 | 55-110 | 169.6 | 0.646 | 30 | |
| Benzo(a)pyrene | 179.4 | 50 | 200 | 0 | 89.7 | 55-110 | 179.6 | 0.111 | 30 | |
| Benzo(b)fluoranthene | 192.7 | 50 | 200 | 0 | 96.4 | 45-120 | 191.3 | 0.729 | 30 | |
| Benzo(g,h,i)perylene | 152 | 50 | 200 | 0 | 76 | 40-125 | 157.5 | 3.55 | 30 | |
| Benzo(k)fluoranthene | 190.5 | 50 | 200 | 0 | 95.2 | 45-125 | 189.2 | 0.685 | 30 | |
| Bis(2-chloroethoxy)methane | 150.7 | 50 | 200 | 0 | 75.4 | 45-105 | 147.6 | 2.08 | 30 | |
| Bis(2-chloroethyl)ether | 157.6 | 50 | 200 | 0 | 78.8 | 35-110 | 151.5 | 3.95 | 30 | |
| Bis(2-chloroisopropyl)ether | 157.9 | 50 | 200 | 0 | 79 | 25-130 | 154.4 | 2.24 | 30 | |
| Bis(2-ethylhexyl)phthalate | 191.8 | 50 | 200 | 0 | 95.9 | 40-125 | 195.7 | 2.01 | 30 | |
| Butyl benzyl phthalate | 189.3 | 50 | 200 | 0 | 94.6 | 45-115 | 197.1 | 4.04 | 30 | |
| Carbazole | 175.1 | 100 | 200 | 0 | 87.6 | 50-150 | 171.8 | 1.9 | 30 | |
| Chrysene | 166.8 | 50 | 200 | 0 | 83.4 | 55-110 | 163.2 | 2.18 | 30 | |
| Dibenzo(a,h)anthracene | 149.1 | 50 | 200 | 0 | 74.6 | 40-125 | 153.8 | 3.1 | 30 | |
| Dibenzofuran | 149.8 | 50 | 200 | 0 | 74.9 | 55-105 | 147.6 | 1.48 | 30 | |
| Diethyl phthalate | 173 | 200 | 200 | 0 | 86.5 | 40-120 | 164.6 | 0 | 30 | J |
| Dimethyl phthalate | 165.4 | 200 | 200 | 0 | 82.7 | 25-125 | 160.7 | 0 | 30 | J |
| Di-n-butyl phthalate | 180 | 50 | 200 | 0 | 90 | 55-115 | 179.7 | 0.167 | 30 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **57176** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Di-n-octyl phthalate | 251.8 | 50 | 200 | 0 | 126 | 35-135 | 258.7 | 2.7 | 30 | |
| Fluoranthene | 174.7 | 50 | 200 | 0 | 87.4 | 55-115 | 173.7 | 0.574 | 30 | |
| Fluorene | 154.8 | 50 | 200 | 0 | 77.4 | 50-110 | 152.1 | 1.76 | 30 | |
| Hexachlorobenzene | 154.6 | 50 | 200 | 0 | 77.3 | 50-110 | 152.5 | 1.37 | 30 | |
| Hexachlorobutadiene | 132.1 | 50 | 200 | 0 | 66 | 25-105 | 128 | 3.15 | 30 | |
| Hexachlorocyclopentadiene | 63.3 | 200 | 200 | 0 | 31.6 | 25-105 | 67.1 | 0 | 30 | J |
| Hexachloroethane | 129.1 | 50 | 200 | 0 | 64.6 | 30-95 | 131.3 | 1.69 | 30 | |
| Indeno(1,2,3-cd)pyrene | 189.1 | 50 | 200 | 0 | 94.6 | 45-125 | 195.2 | 3.17 | 30 | |
| Isophorone | 165.1 | 50 | 200 | 0 | 82.6 | 50-110 | 159.6 | 3.39 | 30 | |
| Naphthalene | 138.2 | 50 | 200 | 0 | 69.1 | 40-100 | 134.5 | 2.71 | 30 | |
| Nitrobenzene | 160.2 | 50 | 200 | 0 | 80.1 | 45-110 | 153 | 4.6 | 30 | |
| N-Nitrosodi-n-propylamine | 168.4 | 50 | 200 | 0 | 84.2 | 35-130 | 162 | 3.87 | 30 | |
| N-Nitrosodiphenylamine | 164.2 | 50 | 200 | 0 | 82.1 | 50-110 | 162.5 | 1.04 | 30 | |
| Pentachlorophenol | 117.4 | 200 | 200 | 0 | 58.7 | 40-115 | 113.5 | 0 | 30 | J |
| Phenanthrene | 161.2 | 50 | 200 | 0 | 80.6 | 50-115 | 155.9 | 3.34 | 30 | |
| Phenol | 62.7 | 50 | 200 | 0 | 31.4 | 12-43 | 53.1 | 16.6 | 30 | |
| Pyrene | 199.9 | 50 | 200 | 0 | 100 | 50-130 | 211 | 5.4 | 30 | |
| *Surr: 2,4,6-Tribromophenol* | *397.5* | 0 | *500* | 0 | *79.5* | *38-115* | 394.5 | *0.758* | *40* | |
| *Surr: 2-Fluorobiphenyl* | *349.2* | 0 | *500* | 0 | *69.8* | *32-100* | 347.5 | *0.488* | *40* | |
| *Surr: 2-Fluorophenol* | *235.1* | 0 | *500* | 0 | *47* | *22-59* | 210.2 | *11.2* | *40* | |
| *Surr: 4-Terphenyl-d14* | *528.4* | 0 | *500* | 0 | *106* | *23-112* | 555 | *4.91* | *40* | |
| *Surr: Nitrobenzene-d5* | *420.8* | 0 | *500* | 0 | *84.2* | *31-93* | 413.4 | *1.77* | *40* | |
| *Surr: Phenol-d6* | *159.6* | 0 | *500* | 0 | *31.9* | *13-36* | 135.5 | *16.3* | *40* | |

**The following samples were analyzed in this batch:** 1404130-15B

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57179** Instrument ID **SVMS8** Method: **SW8270**

**MBLK** Sample ID: **DBLKW1-57179-57179** Units: **mg/L** Analysis Date: **4/8/2014 02:52 AM**
Client ID: Run ID: **SVMS8_140407B** SeqNo: **2705962** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| DRO (C10-C21) | U | 0.10 | | | | | | | | |
| ORO (C21-C35) | U | 0.10 | | | | | | | | |
| *Surr: 4-Terphenyl-d14* | *0.04784* | 0 | *0.05* | 0 | *95.7* | *23-112* | 0 | | | |

**LCS** Sample ID: **DLCSW1-57179-57179** Units: **mg/L** Analysis Date: **4/8/2014 03:44 AM**
Client ID: Run ID: **SVMS8_140407B** SeqNo: **2705963** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| DRO (C10-C21) | 3.545 | 0.10 | 5 | 0 | 70.9 | 44-116 | 0 | | | |
| ORO (C21-C35) | 3.786 | 0.10 | 5 | 0 | 75.7 | 44-116 | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *0.04071* | 0 | *0.05* | 0 | *81.4* | *23-112* | 0 | | | |

**MS** Sample ID: **1404130-15B MS** Units: **mg/L** Analysis Date: **4/8/2014 04:10 AM**
Client ID: **GW-04** Run ID: **SVMS8_140407B** SeqNo: **2705960** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| DRO (C10-C21) | 32.16 | 1.0 | 50 | 0 | 64.3 | 44-116 | 0 | | | |
| ORO (C21-C35) | 35.54 | 1.0 | 50 | 0 | 71.1 | 44-116 | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *0.2738* | 0 | *0.5* | 0 | *54.8* | *23-112* | 0 | | | |

**MSD** Sample ID: **1404130-15B MSD** Units: **mg/L** Analysis Date: **4/8/2014 04:36 AM**
Client ID: **GW-04** Run ID: **SVMS8_140407B** SeqNo: **2705961** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| DRO (C10-C21) | 34.07 | 1.0 | 50 | 0 | 68.1 | 44-116 | 32.16 | 5.74 | 30 | |
| ORO (C21-C35) | 36.97 | 1.0 | 50 | 0 | 73.9 | 44-116 | 35.54 | 3.96 | 30 | |
| *Surr: 4-Terphenyl-d14* | *0.3744* | 0 | *0.5* | 0 | *74.9* | *23-112* | 0.2738 | *31* | *30* | *R* |

**The following samples were analyzed in this batch:** 1404130-15B

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57224** Instrument ID **SVMS8** Method: **SW8270**

**MBLK** Sample ID: **SBLKS1-57224-57224** Units: **µg/Kg** Analysis Date: **4/8/2014 02:08 PM**

Client ID: Run ID: **SVMS8_140408A** SeqNo: **2703868** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1`-Biphenyl | U | 330 | | | | | | | | |
| 2,4,5-Trichlorophenol | U | 160 | | | | | | | | |
| 2,4,6-Trichlorophenol | U | 160 | | | | | | | | |
| 2,4-Dichlorophenol | U | 160 | | | | | | | | |
| 2,4-Dimethylphenol | U | 330 | | | | | | | | |
| 2,4-Dinitrophenol | U | 660 | | | | | | | | |
| 2,4-Dinitrotoluene | U | 160 | | | | | | | | |
| 2,6-Dinitrotoluene | U | 160 | | | | | | | | |
| 2-Chloronaphthalene | U | 6.7 | | | | | | | | |
| 2-Chlorophenol | U | 160 | | | | | | | | |
| 2-Methylnaphthalene | U | 6.7 | | | | | | | | |
| 2-Methylphenol | U | 160 | | | | | | | | |
| 2-Nitroaniline | U | 660 | | | | | | | | |
| 2-Nitrophenol | U | 160 | | | | | | | | |
| 3,3´-Dichlorobenzidine | U | 660 | | | | | | | | |
| 3-Nitroaniline | U | 660 | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | U | 330 | | | | | | | | |
| 4-Bromophenyl phenyl ether | U | 160 | | | | | | | | |
| 4-Chloro-3-methylphenol | U | 160 | | | | | | | | |
| 4-Chloroaniline | U | 660 | | | | | | | | |
| 4-Chlorophenyl phenyl ether | U | 160 | | | | | | | | |
| 4-Methylphenol | U | 160 | | | | | | | | |
| 4-Nitroaniline | U | 660 | | | | | | | | |
| 4-Nitrophenol | U | 660 | | | | | | | | |
| Acenaphthene | U | 6.7 | | | | | | | | |
| Acenaphthylene | U | 6.7 | | | | | | | | |
| Acetophenone | U | 330 | | | | | | | | |
| Anthracene | U | 6.7 | | | | | | | | |
| Atrazine | U | 330 | | | | | | | | |
| Benzaldehyde | U | 330 | | | | | | | | |
| Benzo(a)anthracene | U | 6.7 | | | | | | | | |
| Benzo(a)pyrene | U | 6.7 | | | | | | | | |
| Benzo(b)fluoranthene | U | 6.7 | | | | | | | | |
| Benzo(g,h,i)perylene | U | 6.7 | | | | | | | | |
| Benzo(k)fluoranthene | U | 6.7 | | | | | | | | |
| Bis(2-chloroethoxy)methane | U | 160 | | | | | | | | |
| Bis(2-chloroethyl)ether | U | 160 | | | | | | | | |
| Bis(2-chloroisopropyl)ether | U | 160 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | U | 330 | | | | | | | | |
| Butyl benzyl phthalate | U | 160 | | | | | | | | |
| Caprolactam | U | 330 | | | | | | | | |
| Carbazole | U | 160 | | | | | | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **57224** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chrysene | U | 6.7 | | | | | |
| Dibenzo(a,h)anthracene | U | 6.7 | | | | | |
| Dibenzofuran | U | 160 | | | | | |
| Diethyl phthalate | U | 330 | | | | | |
| Dimethyl phthalate | U | 330 | | | | | |
| Di-n-butyl phthalate | U | 330 | | | | | |
| Di-n-octyl phthalate | U | 160 | | | | | |
| Fluoranthene | U | 6.7 | | | | | |
| Fluorene | U | 6.7 | | | | | |
| Hexachlorobenzene | U | 160 | | | | | |
| Hexachlorobutadiene | U | 160 | | | | | |
| Hexachlorocyclopentadiene | U | 330 | | | | | |
| Hexachloroethane | U | 160 | | | | | |
| Indeno(1,2,3-cd)pyrene | U | 6.7 | | | | | |
| Isophorone | U | 160 | | | | | |
| Naphthalene | U | 6.7 | | | | | |
| Nitrobenzene | U | 160 | | | | | |
| N-Nitrosodi-n-propylamine | U | 160 | | | | | |
| N-Nitrosodiphenylamine | U | 160 | | | | | |
| Pentachlorophenol | U | 330 | | | | | |
| Phenanthrene | U | 6.7 | | | | | |
| Phenol | U | 160 | | | | | |
| Pyrene | U | 6.7 | | | | | |
| *Surr: 2,4,6-Tribromophenol* | *1183* | 0 | *1667* | 0 | *71* | *34-140* | 0 |
| *Surr: 2-Fluorobiphenyl* | *1396* | 0 | *1667* | 0 | *83.8* | *12-100* | 0 |
| *Surr: 2-Fluorophenol* | *1657* | 0 | *1667* | 0 | *99.4* | *33-117* | 0 |
| *Surr: 4-Terphenyl-d14* | *1869* | 0 | *1667* | 0 | *112* | *25-137* | 0 |
| *Surr: Nitrobenzene-d5* | *1732* | 0 | *1667* | 0 | *104* | *37-107* | 0 |
| *Surr: Phenol-d6* | *1622* | 0 | *1667* | 0 | *97.3* | *40-106* | 0 |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57224** Instrument ID **SVMS8** Method: **SW8270**

**LCS** Sample ID: **SLCSS1-57224-57224** Units: **µg/Kg** Analysis Date: **4/8/2014 02:29 PM**

Client ID: Run ID: **SVMS8_140408A** SeqNo: **2703869** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 559.7 | 160 | 666.7 | 0 | 83.9 | 50-110 | 0 | | | |
| 2,4,6-Trichlorophenol | 553 | 160 | 666.7 | 0 | 82.9 | 45-110 | 0 | | | |
| 2,4-Dichlorophenol | 526.3 | 160 | 666.7 | 0 | 78.9 | 45-110 | 0 | | | |
| 2,4-Dimethylphenol | 436 | 330 | 666.7 | 0 | 65.4 | 30-105 | 0 | | | |
| 2,4-Dinitrophenol | 407 | 660 | 666.7 | 0 | 61 | 15-130 | 0 | | | J |
| 2,4-Dinitrotoluene | 507 | 160 | 666.7 | 0 | 76 | 50-115 | 0 | | | |
| 2,6-Dinitrotoluene | 536 | 160 | 666.7 | 0 | 80.4 | 50-110 | 0 | | | |
| 2-Chloronaphthalene | 609.7 | 6.7 | 666.7 | 0 | 91.4 | 45-105 | 0 | | | |
| 2-Chlorophenol | 588 | 160 | 666.7 | 0 | 88.2 | 45-105 | 0 | | | |
| 2-Methylnaphthalene | 546.7 | 6.7 | 666.7 | 0 | 82 | 45-105 | 0 | | | |
| 2-Methylphenol | 564 | 160 | 666.7 | 0 | 84.6 | 40-105 | 0 | | | |
| 2-Nitroaniline | 665.7 | 660 | 666.7 | 0 | 99.8 | 45-120 | 0 | | | |
| 2-Nitrophenol | 550.7 | 160 | 666.7 | 0 | 82.6 | 40-110 | 0 | | | |
| 3-Nitroaniline | 404 | 660 | 666.7 | 0 | 60.6 | 25-150 | 0 | | | J |
| 4-Bromophenyl phenyl ether | 607 | 160 | 666.7 | 0 | 91 | 45-115 | 0 | | | |
| 4-Chloro-3-methylphenol | 581.3 | 160 | 666.7 | 0 | 87.2 | 45-115 | 0 | | | |
| 4-Chloroaniline | 233.3 | 660 | 666.7 | 0 | 35 | 15-110 | 0 | | | J |
| 4-Chlorophenyl phenyl ether | 529.3 | 160 | 666.7 | 0 | 79.4 | 45-110 | 0 | | | |
| 4-Methylphenol | 567.7 | 160 | 666.7 | 0 | 85.1 | 40-105 | 0 | | | |
| 4-Nitroaniline | 412.7 | 660 | 666.7 | 0 | 61.9 | 35-150 | 0 | | | J |
| 4-Nitrophenol | 742 | 660 | 666.7 | 0 | 111 | 15-140 | 0 | | | |
| Acenaphthene | 546 | 6.7 | 666.7 | 0 | 81.9 | 45-110 | 0 | | | |
| Acenaphthylene | 584.3 | 6.7 | 666.7 | 0 | 87.6 | 45-105 | 0 | | | |
| Anthracene | 647.7 | 6.7 | 666.7 | 0 | 97.1 | 55-105 | 0 | | | |
| Benzo(a)anthracene | 620.3 | 6.7 | 666.7 | 0 | 93 | 50-110 | 0 | | | |
| Benzo(a)pyrene | 638 | 6.7 | 666.7 | 0 | 95.7 | 50-110 | 0 | | | |
| Benzo(b)fluoranthene | 657.3 | 6.7 | 666.7 | 0 | 98.6 | 45-115 | 0 | | | |
| Benzo(g,h,i)perylene | 645.3 | 6.7 | 666.7 | 0 | 96.8 | 40-125 | 0 | | | |
| Benzo(k)fluoranthene | 656.7 | 6.7 | 666.7 | 0 | 98.5 | 45-115 | 0 | | | |
| Bis(2-chloroethoxy)methane | 615.3 | 160 | 666.7 | 0 | 92.3 | 45-110 | 0 | | | |
| Bis(2-chloroethyl)ether | 624 | 160 | 666.7 | 0 | 93.6 | 40-105 | 0 | | | |
| Bis(2-chloroisopropyl)ether | 687.7 | 160 | 666.7 | 0 | 103 | 20-115 | 0 | | | |
| Bis(2-ethylhexyl)phthalate | 731 | 330 | 666.7 | 0 | 110 | 45-125 | 0 | | | |
| Butyl benzyl phthalate | 707.7 | 160 | 666.7 | 0 | 106 | 50-125 | 0 | | | |
| Carbazole | 626.3 | 160 | 666.7 | 0 | 93.9 | 50-150 | 0 | | | |
| Chrysene | 638.7 | 6.7 | 666.7 | 0 | 95.8 | 55-110 | 0 | | | |
| Dibenzo(a,h)anthracene | 648 | 6.7 | 666.7 | 0 | 97.2 | 40-125 | 0 | | | |
| Dibenzofuran | 551.3 | 160 | 666.7 | 0 | 82.7 | 50-105 | 0 | | | |
| Diethyl phthalate | 577 | 330 | 666.7 | 0 | 86.5 | 50-115 | 0 | | | |
| Dimethyl phthalate | 555 | 330 | 666.7 | 0 | 83.2 | 50-110 | 0 | | | |
| Di-n-butyl phthalate | 654.7 | 330 | 666.7 | 0 | 98.2 | 55-110 | 0 | | | |
| Di-n-octyl phthalate | 795.7 | 160 | 666.7 | 0 | 119 | 40-130 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **57224** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 606.3 | 6.7 | 666.7 | 0 | 90.9 | 55-115 | 0 | |
| Fluorene | 553.3 | 6.7 | 666.7 | 0 | 83 | 50-110 | 0 | |
| Hexachlorobenzene | 576 | 160 | 666.7 | 0 | 86.4 | 45-120 | 0 | |
| Hexachlorobutadiene | 525.7 | 160 | 666.7 | 0 | 78.8 | 40-115 | 0 | |
| Hexachlorocyclopentadiene | 450 | 330 | 666.7 | 0 | 67.5 | 40-115 | 0 | |
| Hexachloroethane | 592.3 | 160 | 666.7 | 0 | 88.8 | 35-110 | 0 | |
| Indeno(1,2,3-cd)pyrene | 577.3 | 6.7 | 666.7 | 0 | 86.6 | 40-120 | 0 | |
| Isophorone | 640.7 | 160 | 666.7 | 0 | 96.1 | 45-110 | 0 | |
| Naphthalene | 553.3 | 6.7 | 666.7 | 0 | 83 | 40-105 | 0 | |
| Nitrobenzene | 610.7 | 160 | 666.7 | 0 | 91.6 | 40-115 | 0 | |
| N-Nitrosodi-n-propylamine | 622.3 | 160 | 666.7 | 0 | 93.3 | 40-115 | 0 | |
| N-Nitrosodiphenylamine | 657 | 160 | 666.7 | 0 | 98.5 | 50-115 | 0 | |
| Pentachlorophenol | 483 | 330 | 666.7 | 0 | 72.4 | 25-120 | 0 | |
| Phenanthrene | 610.3 | 6.7 | 666.7 | 0 | 91.5 | 50-110 | 0 | |
| Phenol | 654 | 160 | 666.7 | 0 | 98.1 | 40-100 | 0 | |
| Pyrene | 795.3 | 6.7 | 666.7 | 0 | 119 | 45-125 | 0 | |
| *Surr: 2,4,6-Tribromophenol* | *1420* | 0 | *1667* | 0 | *85.2* | *34-140* | 0 | |
| *Surr: 2-Fluorobiphenyl* | *1405* | 0 | *1667* | 0 | *84.3* | *12-100* | 0 | |
| *Surr: 2-Fluorophenol* | *1653* | 0 | *1667* | 0 | *99.2* | *33-117* | 0 | |
| *Surr: 4-Terphenyl-d14* | *1943* | 0 | *1667* | 0 | *117* | *25-137* | 0 | |
| *Surr: Nitrobenzene-d5* | *1879* | 0 | *1667* | 0 | *113* | *37-107* | 0 | *S* |
| *Surr: Phenol-d6* | *1597* | 0 | *1667* | 0 | *95.8* | *40-106* | 0 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57224** Instrument ID **SVMS8** Method: **SW8270**

**MS** Sample ID: **1404130-03C MS** Units: **µg/Kg** Analysis Date: **4/8/2014 02:49 PM**

Client ID: **SO-02-S-0-4** Run ID: **SVMS8_140408A** SeqNo: **2703870** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 1196 | 320 | 1329 | 0 | 90 | 50-110 | 0 | | | |
| 2,4,6-Trichlorophenol | 1213 | 320 | 1329 | 0 | 91.2 | 45-110 | 0 | | | |
| 2,4-Dichlorophenol | 1060 | 320 | 1329 | 0 | 79.7 | 45-110 | 0 | | | |
| 2,4-Dimethylphenol | 808.1 | 660 | 1329 | 0 | 60.8 | 30-105 | 0 | | | |
| 2,4-Dinitrophenol | 703.1 | 1,300 | 1329 | 0 | 52.9 | 15-130 | 0 | | | J |
| 2,4-Dinitrotoluene | 1068 | 320 | 1329 | 0 | 80.3 | 50-115 | 0 | | | |
| 2,6-Dinitrotoluene | 1092 | 320 | 1329 | 98.95 | 74.7 | 50-110 | 0 | | | |
| 2-Chloronaphthalene | 1156 | 13 | 1329 | 0 | 86.9 | 45-105 | 0 | | | |
| 2-Chlorophenol | 1032 | 320 | 1329 | 0 | 77.6 | 45-105 | 0 | | | |
| 2-Methylnaphthalene | 1032 | 13 | 1329 | 62.01 | 73 | 45-105 | 0 | | | |
| 2-Methylphenol | 1038 | 320 | 1329 | 0 | 78.1 | 40-105 | 0 | | | |
| 2-Nitroaniline | 1451 | 1,300 | 1329 | 0 | 109 | 45-120 | 0 | | | |
| 2-Nitrophenol | 988.8 | 320 | 1329 | 0 | 74.4 | 40-110 | 0 | | | |
| 3-Nitroaniline | 817.4 | 1,300 | 1329 | 0 | 61.5 | 25-110 | 0 | | | J |
| 4-Bromophenyl phenyl ether | 1289 | 320 | 1329 | 0 | 97 | 45-115 | 0 | | | |
| 4-Chloro-3-methylphenol | 1226 | 320 | 1329 | 0 | 92.2 | 45-115 | 0 | | | |
| 4-Chloroaniline | 366.2 | 1,300 | 1329 | 49.8 | 23.8 | 15-110 | 0 | | | J |
| 4-Chlorophenyl phenyl ether | 1106 | 320 | 1329 | 0 | 83.2 | 45-110 | 0 | | | |
| 4-Methylphenol | 1046 | 320 | 1329 | 0 | 78.7 | 40-105 | 0 | | | |
| 4-Nitroaniline | 926.4 | 1,300 | 1329 | 0 | 69.7 | 35-150 | 0 | | | J |
| 4-Nitrophenol | 1554 | 1,300 | 1329 | 0 | 117 | 15-140 | 0 | | | |
| Acenaphthene | 1158 | 13 | 1329 | 47.82 | 83.5 | 45-110 | 0 | | | |
| Acenaphthylene | 1301 | 13 | 1329 | 119.7 | 88.8 | 45-105 | 0 | | | |
| Anthracene | 1626 | 13 | 1329 | 201.9 | 107 | 55-105 | 0 | | | S |
| Benzo(a)anthracene | 2083 | 13 | 1329 | 440 | 124 | 50-110 | 0 | | | S |
| Benzo(a)pyrene | 1983 | 13 | 1329 | 460.1 | 115 | 50-110 | 0 | | | S |
| Benzo(b)fluoranthene | 2343 | 13 | 1329 | 660.6 | 127 | 45-115 | 0 | | | S |
| Benzo(g,h,i)perylene | 2172 | 13 | 1329 | 472.6 | 128 | 40-125 | 0 | | | S |
| Benzo(k)fluoranthene | 1633 | 13 | 1329 | 625 | 75.9 | 45-115 | 0 | | | |
| Bis(2-chloroethoxy)methane | 1077 | 320 | 1329 | 0 | 81 | 45-110 | 0 | | | |
| Bis(2-chloroethyl)ether | 1201 | 320 | 1329 | 0 | 90.4 | 40-105 | 0 | | | |
| Bis(2-chloroisopropyl)ether | 1294 | 320 | 1329 | 38.26 | 94.5 | 20-115 | 0 | | | |
| Bis(2-ethylhexyl)phthalate | 1432 | 660 | 1329 | 39.25 | 105 | 45-125 | 0 | | | |
| Butyl benzyl phthalate | 1481 | 320 | 1329 | 137.2 | 101 | 50-125 | 0 | | | |
| Carbazole | 1356 | 320 | 1329 | 84.11 | 95.7 | 50-150 | 0 | | | |
| Chrysene | 2052 | 13 | 1329 | 485.5 | 118 | 55-110 | 0 | | | S |
| Dibenzo(a,h)anthracene | 1591 | 13 | 1329 | 94.99 | 113 | 40-125 | 0 | | | |
| Dibenzofuran | 1216 | 320 | 1329 | 91.69 | 84.6 | 50-105 | 0 | | | |
| Diethyl phthalate | 1195 | 660 | 1329 | 0 | 89.9 | 50-115 | 0 | | | |
| Dimethyl phthalate | 1160 | 660 | 1329 | 0 | 87.2 | 50-110 | 0 | | | |
| Di-n-butyl phthalate | 1317 | 660 | 1329 | 27.05 | 97.1 | 55-110 | 0 | | | |
| Di-n-octyl phthalate | 1538 | 320 | 1329 | 0 | 116 | 40-130 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **57224** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 3419 | 13 | 1329 | 949.9 | 186 | 55-115 | 0 | S |
| Fluorene | 1270 | 13 | 1329 | 69.92 | 90.3 | 50-110 | 0 | |
| Hexachlorobenzene | 1214 | 320 | 1329 | 0 | 91.3 | 45-120 | 0 | |
| Hexachlorobutadiene | 923 | 320 | 1329 | 0 | 69.4 | 40-115 | 0 | |
| Hexachlorocyclopentadiene | 786.8 | 660 | 1329 | 0 | 59.2 | 40-115 | 0 | |
| Hexachloroethane | 1082 | 320 | 1329 | 0 | 81.4 | 35-110 | 0 | |
| Indeno(1,2,3-cd)pyrene | 1918 | 13 | 1329 | 419.2 | 113 | 40-120 | 0 | |
| Isophorone | 1156 | 320 | 1329 | 0 | 87 | 45-110 | 0 | |
| Naphthalene | 1031 | 13 | 1329 | 163.3 | 65.3 | 40-105 | 0 | |
| Nitrobenzene | 1074 | 320 | 1329 | 0 | 80.8 | 40-115 | 0 | |
| N-Nitrosodi-n-propylamine | 1148 | 320 | 1329 | 0 | 86.4 | 40-115 | 0 | |
| N-Nitrosodiphenylamine | 1302 | 320 | 1329 | 0 | 97.9 | 50-115 | 0 | |
| Pentachlorophenol | 1023 | 660 | 1329 | 0 | 76.9 | 25-120 | 0 | |
| Phenanthrene | 2892 | 13 | 1329 | 761.9 | 160 | 50-110 | 0 | S |
| Phenol | 1108 | 320 | 1329 | 0 | 83.3 | 40-100 | 0 | |
| Pyrene | 3385 | 13 | 1329 | 902.4 | 187 | 45-125 | 0 | S |
| *Surr: 2,4,6-Tribromophenol* | *2930* | 0 | *3323* | 0 | *88.2* | *34-140* | 0 | |
| *Surr: 2-Fluorobiphenyl* | *2662* | 0 | *3323* | 0 | *80.1* | *12-100* | 0 | |
| *Surr: 2-Fluorophenol* | *2818* | 0 | *3323* | 0 | *84.8* | *33-117* | 0 | |
| *Surr: 4-Terphenyl-d14* | *3600* | 0 | *3323* | 0 | *108* | *25-137* | 0 | |
| *Surr: Nitrobenzene-d5* | *3338* | 0 | *3323* | 0 | *100* | *37-107* | 0 | |
| *Surr: Phenol-d6* | *2875* | 0 | *3323* | 0 | *86.5* | *40-106* | 0 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57224** Instrument ID **SVMS8** Method: **SW8270**

**MSD** Sample ID: **1404130-03C MSD** Units: **µg/Kg** Analysis Date: **4/8/2014 03:09 PM**

Client ID: **SO-02-S-0-4** Run ID: **SVMS8_140408A** SeqNo: **2703871** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 1116 | 310 | 1312 | 0 | 85.1 | 50-110 | 1196 | 6.92 | 30 | |
| 2,4,6-Trichlorophenol | 1157 | 310 | 1312 | 0 | 88.2 | 45-110 | 1213 | 4.72 | 30 | |
| 2,4-Dichlorophenol | 994.9 | 310 | 1312 | 0 | 75.8 | 45-110 | 1060 | 6.33 | 30 | |
| 2,4-Dimethylphenol | 829.6 | 650 | 1312 | 0 | 63.2 | 30-105 | 808.1 | 2.63 | 30 | |
| 2,4-Dinitrophenol | 328.6 | 1,300 | 1312 | 0 | 25 | 15-130 | 703.1 | 0 | 30 | J |
| 2,4-Dinitrotoluene | 1001 | 310 | 1312 | 0 | 76.3 | 50-115 | 1068 | 6.49 | 30 | |
| 2,6-Dinitrotoluene | 1001 | 310 | 1312 | 98.95 | 68.8 | 50-110 | 1092 | 8.64 | 30 | |
| 2-Chloronaphthalene | 1098 | 13 | 1312 | 0 | 83.7 | 45-105 | 1156 | 5.13 | 30 | |
| 2-Chlorophenol | 1017 | 310 | 1312 | 0 | 77.5 | 45-105 | 1032 | 1.51 | 30 | |
| 2-Methylnaphthalene | 1018 | 13 | 1312 | 62.01 | 72.9 | 45-105 | 1032 | 1.32 | 30 | |
| 2-Methylphenol | 1041 | 310 | 1312 | 0 | 79.4 | 40-105 | 1038 | 0.331 | 30 | |
| 2-Nitroaniline | 1317 | 1,300 | 1312 | 0 | 100 | 45-120 | 1451 | 9.71 | 30 | |
| 2-Nitrophenol | 923.4 | 310 | 1312 | 0 | 70.4 | 40-110 | 988.8 | 6.84 | 30 | |
| 3-Nitroaniline | 842.7 | 1,300 | 1312 | 0 | 64.2 | 25-110 | 817.4 | 0 | 30 | J |
| 4-Bromophenyl phenyl ether | 1241 | 310 | 1312 | 0 | 94.6 | 45-115 | 1289 | 3.77 | 30 | |
| 4-Chloro-3-methylphenol | 1134 | 310 | 1312 | 0 | 86.4 | 45-115 | 1226 | 7.81 | 30 | |
| 4-Chloroaniline | 525.3 | 1,300 | 1312 | 49.8 | 36.3 | 15-110 | 366.2 | 0 | 30 | J |
| 4-Chlorophenyl phenyl ether | 1018 | 310 | 1312 | 0 | 77.6 | 45-110 | 1106 | 8.28 | 30 | |
| 4-Methylphenol | 1017 | 310 | 1312 | 0 | 77.5 | 40-105 | 1046 | 2.86 | 30 | |
| 4-Nitroaniline | 933.2 | 1,300 | 1312 | 0 | 71.1 | 35-150 | 926.4 | 0 | 30 | J |
| 4-Nitrophenol | 1383 | 1,300 | 1312 | 0 | 105 | 15-140 | 1554 | 11.7 | 30 | |
| Acenaphthene | 1009 | 13 | 1312 | 47.82 | 73.3 | 45-110 | 1158 | 13.8 | 30 | |
| Acenaphthylene | 1247 | 13 | 1312 | 119.7 | 85.9 | 45-105 | 1301 | 4.22 | 30 | |
| Anthracene | 1346 | 13 | 1312 | 201.9 | 87.3 | 55-105 | 1626 | 18.8 | 30 | |
| Benzo(a)anthracene | 1624 | 13 | 1312 | 440 | 90.3 | 50-110 | 2083 | 24.8 | 30 | |
| Benzo(a)pyrene | 1622 | 13 | 1312 | 460.1 | 88.6 | 50-110 | 1983 | 20 | 30 | |
| Benzo(b)fluoranthene | 1818 | 13 | 1312 | 660.6 | 88.2 | 45-115 | 2343 | 25.2 | 30 | |
| Benzo(g,h,i)perylene | 1798 | 13 | 1312 | 472.6 | 101 | 40-125 | 2172 | 18.8 | 30 | |
| Benzo(k)fluoranthene | 1428 | 13 | 1312 | 625 | 61.2 | 45-115 | 1633 | 13.4 | 30 | |
| Bis(2-chloroethoxy)methane | 1032 | 310 | 1312 | 0 | 78.6 | 45-110 | 1077 | 4.33 | 30 | |
| Bis(2-chloroethyl)ether | 1169 | 310 | 1312 | 0 | 89.1 | 40-105 | 1201 | 2.71 | 30 | |
| Bis(2-chloroisopropyl)ether | 1207 | 310 | 1312 | 38.26 | 89.1 | 20-115 | 1294 | 6.97 | 30 | |
| Bis(2-ethylhexyl)phthalate | 1346 | 650 | 1312 | 39.25 | 99.7 | 45-125 | 1432 | 6.17 | 30 | |
| Butyl benzyl phthalate | 1418 | 310 | 1312 | 137.2 | 97.6 | 50-125 | 1481 | 4.33 | 30 | |
| Carbazole | 1181 | 310 | 1312 | 84.11 | 83.6 | 50-150 | 1356 | 13.8 | 30 | |
| Chrysene | 1589 | 13 | 1312 | 485.5 | 84.1 | 55-110 | 2052 | 25.4 | 30 | |
| Dibenzo(a,h)anthracene | 1390 | 13 | 1312 | 94.99 | 98.8 | 40-125 | 1591 | 13.5 | 30 | |
| Dibenzofuran | 1108 | 310 | 1312 | 91.69 | 77.5 | 50-105 | 1216 | 9.27 | 30 | |
| Diethyl phthalate | 1098 | 650 | 1312 | 0 | 83.7 | 50-115 | 1195 | 8.46 | 30 | |
| Dimethyl phthalate | 1054 | 650 | 1312 | 0 | 80.3 | 50-110 | 1160 | 9.55 | 30 | |
| Di-n-butyl phthalate | 1201 | 650 | 1312 | 27.05 | 89.5 | 55-110 | 1317 | 9.24 | 30 | |
| Di-n-octyl phthalate | 1431 | 310 | 1312 | 0 | 109 | 40-130 | 1538 | 7.23 | 30 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **57224** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 2200 | 13 | 1312 | 949.9 | 95.3 | 55-115 | 3419 | 43.4 | 30 | R |
| Fluorene | 1092 | 13 | 1312 | 69.92 | 77.9 | 50-110 | 1270 | 15.1 | 30 | |
| Hexachlorobenzene | 1100 | 310 | 1312 | 0 | 83.8 | 45-120 | 1214 | 9.88 | 30 | |
| Hexachlorobutadiene | 931.3 | 310 | 1312 | 0 | 71 | 40-115 | 923 | 0.887 | 30 | |
| Hexachlorocyclopentadiene | 573.8 | 650 | 1312 | 0 | 43.7 | 40-115 | 786.8 | 0 | 30 | J |
| Hexachloroethane | 1028 | 310 | 1312 | 0 | 78.4 | 35-110 | 1082 | 5.07 | 30 | |
| Indeno(1,2,3-cd)pyrene | 1624 | 13 | 1312 | 419.2 | 91.8 | 40-120 | 1918 | 16.6 | 30 | |
| Isophorone | 1111 | 310 | 1312 | 0 | 84.7 | 45-110 | 1156 | 4 | 30 | |
| Naphthalene | 1007 | 13 | 1312 | 163.3 | 64.3 | 40-105 | 1031 | 2.36 | 30 | |
| Nitrobenzene | 1041 | 310 | 1312 | 0 | 79.3 | 40-115 | 1074 | 3.13 | 30 | |
| N-Nitrosodi-n-propylamine | 1080 | 310 | 1312 | 0 | 82.3 | 40-115 | 1148 | 6.12 | 30 | |
| N-Nitrosodiphenylamine | 1237 | 310 | 1312 | 0 | 94.3 | 50-115 | 1302 | 5.12 | 30 | |
| Pentachlorophenol | 971.3 | 650 | 1312 | 0 | 74 | 25-120 | 1023 | 5.16 | 30 | |
| Phenanthrene | 1771 | 13 | 1312 | 761.9 | 77 | 50-110 | 2892 | 48.1 | 30 | R |
| Phenol | 1180 | 310 | 1312 | 0 | 89.9 | 40-100 | 1108 | 6.3 | 30 | |
| Pyrene | 2350 | 13 | 1312 | 902.4 | 110 | 45-125 | 3385 | 36.1 | 30 | R |
| *Surr: 2,4,6-Tribromophenol* | *2686* | 0 | *3279* | 0 | *81.9* | *34-140* | 2930 | *8.7* | *40* | |
| *Surr: 2-Fluorobiphenyl* | *2621* | 0 | *3279* | 0 | *79.9* | *12-100* | 2662 | *1.57* | *40* | |
| *Surr: 2-Fluorophenol* | *2774* | 0 | *3279* | 0 | *84.6* | *33-117* | 2818 | *1.58* | *40* | |
| *Surr: 4-Terphenyl-d14* | *3303* | 0 | *3279* | 0 | *101* | *25-137* | 3600 | *8.61* | *40* | |
| *Surr: Nitrobenzene-d5* | *3162* | 0 | *3279* | 0 | *96.4* | *37-107* | 3338 | *5.42* | *40* | |
| *Surr: Phenol-d6* | *2847* | 0 | *3279* | 0 | *86.8* | *40-106* | 2875 | *0.974* | *40* | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 1404130-01C | 1404130-03C | 1404130-04C |
| 1404130-05C | 1404130-06C | 1404130-07C |
| 1404130-08C | 1404130-09C | 1404130-10C |
| 1404130-11C | 1404130-12C | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57225** Instrument ID **SVMS8** Method: **SW8270**

**MBLK** Sample ID: **DBLKS1-57225-57225** Units: **mg/Kg** Analysis Date: **4/8/2014 03:18 AM**
Client ID: Run ID: **SVMS8_140407B** SeqNo: **2705979** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| DRO (C10-C21) | U | 4.2 | | | | | | | | |
| ORO (C21-C35) | U | 4.2 | | | | | | | | |
| *Surr: 4-Terphenyl-d14* | *1.752* | 0 | *1.667* | 0 | *105* | *25-137* | 0 | | | |

**LCS** Sample ID: **DLCSS1-57225-57225** Units: **mg/Kg** Analysis Date: **4/8/2014 05:28 AM**
Client ID: Run ID: **SVMS8_140407B** SeqNo: **2705980** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| DRO (C10-C21) | 128.3 | 4.2 | 166.7 | 0 | 77 | 31-135 | 0 | | | |
| ORO (C21-C35) | 125.4 | 4.2 | 166.7 | 0 | 75.2 | 31-135 | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *1.806* | 0 | *1.667* | 0 | *108* | *25-137* | 0 | | | |

**MS** Sample ID: **1404130-02C MS** Units: **mg/Kg** Analysis Date: **4/8/2014 05:53 AM**
Client ID: **SO-01-D-16-20** Run ID: **SVMS8_140407B** SeqNo: **2705967** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| DRO (C10-C21) | 230.7 | 7.9 | 316.1 | 0 | 73 | 31-135 | 0 | | | |
| ORO (C21-C35) | 238.4 | 7.9 | 316.1 | 0 | 75.4 | 31-135 | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *3.359* | 0 | *3.161* | 0 | *106* | *25-137* | 0 | | | |

**MSD** Sample ID: **1404130-02C MSD** Units: **mg/Kg** Analysis Date: **4/8/2014 06:20 AM**
Client ID: **SO-01-D-16-20** Run ID: **SVMS8_140407B** SeqNo: **2705968** Prep Date: **4/4/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| DRO (C10-C21) | 228.1 | 8.2 | 326.5 | 0 | 69.9 | 31-135 | 230.7 | 1.14 | 30 | |
| ORO (C21-C35) | 224.8 | 8.2 | 326.5 | 0 | 68.8 | 31-135 | 238.4 | 5.91 | 30 | |
| *Surr: 4-Terphenyl-d14* | *3.272* | 0 | *3.265* | 0 | *100* | *25-137* | 3.359 | *2.6* | *30* | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 1404130-01C | 1404130-02C | 1404130-03C |
| 1404130-04C | 1404130-05C | 1404130-06C |
| 1404130-07C | 1404130-08C | 1404130-09C |
| 1404130-10C | 1404130-11C | 1404130-12C |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57371** Instrument ID **SVMS8** Method: **SW8270**

**MBLK** Sample ID: **SBLKS1-57371-57371** Units: **µg/Kg** Analysis Date: **4/10/2014 05:42 PM**

Client ID: Run ID: **SVMS8_140410A** SeqNo: **2708575** Prep Date: **4/9/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1`-Biphenyl | U | 330 | | | | | | | | |
| 2,4,5-Trichlorophenol | U | 160 | | | | | | | | |
| 2,4,6-Trichlorophenol | U | 160 | | | | | | | | |
| 2,4-Dichlorophenol | U | 160 | | | | | | | | |
| 2,4-Dimethylphenol | U | 330 | | | | | | | | |
| 2,4-Dinitrophenol | U | 660 | | | | | | | | |
| 2,4-Dinitrotoluene | U | 160 | | | | | | | | |
| 2,6-Dinitrotoluene | U | 160 | | | | | | | | |
| 2-Chloronaphthalene | U | 6.7 | | | | | | | | |
| 2-Chlorophenol | U | 160 | | | | | | | | |
| 2-Methylnaphthalene | U | 6.7 | | | | | | | | |
| 2-Methylphenol | U | 160 | | | | | | | | |
| 2-Nitroaniline | U | 660 | | | | | | | | |
| 2-Nitrophenol | U | 160 | | | | | | | | |
| 3,3´-Dichlorobenzidine | U | 660 | | | | | | | | |
| 3-Nitroaniline | U | 660 | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | U | 330 | | | | | | | | |
| 4-Bromophenyl phenyl ether | U | 160 | | | | | | | | |
| 4-Chloro-3-methylphenol | U | 160 | | | | | | | | |
| 4-Chloroaniline | U | 660 | | | | | | | | |
| 4-Chlorophenyl phenyl ether | U | 160 | | | | | | | | |
| 4-Methylphenol | U | 160 | | | | | | | | |
| 4-Nitroaniline | U | 660 | | | | | | | | |
| 4-Nitrophenol | U | 660 | | | | | | | | |
| Acenaphthene | U | 6.7 | | | | | | | | |
| Acenaphthylene | U | 6.7 | | | | | | | | |
| Acetophenone | U | 330 | | | | | | | | |
| Anthracene | U | 6.7 | | | | | | | | |
| Atrazine | U | 330 | | | | | | | | |
| Benzaldehyde | U | 330 | | | | | | | | |
| Benzo(a)anthracene | U | 6.7 | | | | | | | | |
| Benzo(a)pyrene | U | 6.7 | | | | | | | | |
| Benzo(b)fluoranthene | U | 6.7 | | | | | | | | |
| Benzo(g,h,i)perylene | U | 6.7 | | | | | | | | |
| Benzo(k)fluoranthene | U | 6.7 | | | | | | | | |
| Bis(2-chloroethoxy)methane | U | 160 | | | | | | | | |
| Bis(2-chloroethyl)ether | U | 160 | | | | | | | | |
| Bis(2-chloroisopropyl)ether | U | 160 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | U | 330 | | | | | | | | |
| Butyl benzyl phthalate | U | 160 | | | | | | | | |
| Caprolactam | U | 330 | | | | | | | | |
| Carbazole | U | 160 | | | | | | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **57371** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chrysene | U | 6.7 | | | | | |
| Dibenzo(a,h)anthracene | U | 6.7 | | | | | |
| Dibenzofuran | U | 160 | | | | | |
| Diethyl phthalate | U | 330 | | | | | |
| Dimethyl phthalate | U | 330 | | | | | |
| Di-n-butyl phthalate | U | 330 | | | | | |
| Di-n-octyl phthalate | U | 160 | | | | | |
| Fluoranthene | U | 6.7 | | | | | |
| Fluorene | U | 6.7 | | | | | |
| Hexachlorobenzene | U | 160 | | | | | |
| Hexachlorobutadiene | U | 160 | | | | | |
| Hexachlorocyclopentadiene | U | 330 | | | | | |
| Hexachloroethane | U | 160 | | | | | |
| Indeno(1,2,3-cd)pyrene | U | 6.7 | | | | | |
| Isophorone | U | 160 | | | | | |
| Naphthalene | U | 6.7 | | | | | |
| Nitrobenzene | U | 160 | | | | | |
| N-Nitrosodi-n-propylamine | U | 160 | | | | | |
| N-Nitrosodiphenylamine | U | 160 | | | | | |
| Pentachlorophenol | U | 330 | | | | | |
| Phenanthrene | U | 6.7 | | | | | |
| Phenol | U | 160 | | | | | |
| Pyrene | U | 6.7 | | | | | |
| *Surr: 2,4,6-Tribromophenol* | *1237* | 0 | *1667* | 0 | *74.2* | *34-140* | 0 |
| *Surr: 2-Fluorobiphenyl* | *1401* | 0 | *1667* | 0 | *84* | *12-100* | 0 |
| *Surr: 2-Fluorophenol* | *1603* | 0 | *1667* | 0 | *96.2* | *33-117* | 0 |
| *Surr: 4-Terphenyl-d14* | *1954* | 0 | *1667* | 0 | *117* | *25-137* | 0 |
| *Surr: Nitrobenzene-d5* | *1416* | 0 | *1667* | 0 | *84.9* | *37-107* | 0 |
| *Surr: Phenol-d6* | *1651* | 0 | *1667* | 0 | *99.1* | *40-106* | 0 |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57371** Instrument ID **SVMS8** Method: **SW8270**

**LCS** Sample ID: **SLCSS1-57371-57371** Units: **µg/Kg** Analysis Date: **4/10/2014 06:03 PM**
Client ID: Run ID: **SVMS8_140410A** SeqNo: **2708576** Prep Date: **4/9/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 574.7 | 160 | 666.7 | 0 | 86.2 | 50-110 | 0 | | | |
| 2,4,6-Trichlorophenol | 554.3 | 160 | 666.7 | 0 | 83.1 | 45-110 | 0 | | | |
| 2,4-Dichlorophenol | 540 | 160 | 666.7 | 0 | 81 | 45-110 | 0 | | | |
| 2,4-Dimethylphenol | 344.7 | 330 | 666.7 | 0 | 51.7 | 30-105 | 0 | | | |
| 2,4-Dinitrophenol | 454 | 660 | 666.7 | 0 | 68.1 | 15-130 | 0 | | | J |
| 2,4-Dinitrotoluene | 602.3 | 160 | 666.7 | 0 | 90.3 | 50-115 | 0 | | | |
| 2,6-Dinitrotoluene | 604 | 160 | 666.7 | 0 | 90.6 | 50-110 | 0 | | | |
| 2-Chloronaphthalene | 627 | 6.7 | 666.7 | 0 | 94 | 45-105 | 0 | | | |
| 2-Chlorophenol | 612 | 160 | 666.7 | 0 | 91.8 | 45-105 | 0 | | | |
| 2-Methylnaphthalene | 579 | 6.7 | 666.7 | 0 | 86.8 | 45-105 | 0 | | | |
| 2-Methylphenol | 591 | 160 | 666.7 | 0 | 88.6 | 40-105 | 0 | | | |
| 2-Nitroaniline | 601.3 | 660 | 666.7 | 0 | 90.2 | 45-120 | 0 | | | J |
| 2-Nitrophenol | 559 | 160 | 666.7 | 0 | 83.8 | 40-110 | 0 | | | |
| 3-Nitroaniline | 380 | 660 | 666.7 | 0 | 57 | 25-150 | 0 | | | J |
| 4-Bromophenyl phenyl ether | 646.3 | 160 | 666.7 | 0 | 96.9 | 45-115 | 0 | | | |
| 4-Chloro-3-methylphenol | 576.3 | 160 | 666.7 | 0 | 86.4 | 45-115 | 0 | | | |
| 4-Chloroaniline | 359.7 | 660 | 666.7 | 0 | 53.9 | 15-110 | 0 | | | J |
| 4-Chlorophenyl phenyl ether | 598 | 160 | 666.7 | 0 | 89.7 | 45-110 | 0 | | | |
| 4-Methylphenol | 597.7 | 160 | 666.7 | 0 | 89.6 | 40-105 | 0 | | | |
| 4-Nitroaniline | 285 | 660 | 666.7 | 0 | 42.7 | 35-150 | 0 | | | J |
| 4-Nitrophenol | 573.7 | 660 | 666.7 | 0 | 86 | 15-140 | 0 | | | J |
| Acenaphthene | 574.3 | 6.7 | 666.7 | 0 | 86.1 | 45-110 | 0 | | | |
| Acenaphthylene | 622.3 | 6.7 | 666.7 | 0 | 93.3 | 45-105 | 0 | | | |
| Anthracene | 665.7 | 6.7 | 666.7 | 0 | 99.8 | 55-105 | 0 | | | |
| Benzo(a)anthracene | 634.3 | 6.7 | 666.7 | 0 | 95.1 | 50-110 | 0 | | | |
| Benzo(a)pyrene | 672.3 | 6.7 | 666.7 | 0 | 101 | 50-110 | 0 | | | |
| Benzo(b)fluoranthene | 690.3 | 6.7 | 666.7 | 0 | 104 | 45-115 | 0 | | | |
| Benzo(g,h,i)perylene | 633.7 | 6.7 | 666.7 | 0 | 95 | 40-125 | 0 | | | |
| Benzo(k)fluoranthene | 684.3 | 6.7 | 666.7 | 0 | 103 | 45-115 | 0 | | | |
| Bis(2-chloroethoxy)methane | 587.7 | 160 | 666.7 | 0 | 88.1 | 45-110 | 0 | | | |
| Bis(2-chloroethyl)ether | 614.7 | 160 | 666.7 | 0 | 92.2 | 40-105 | 0 | | | |
| Bis(2-chloroisopropyl)ether | 597 | 160 | 666.7 | 0 | 89.5 | 20-115 | 0 | | | |
| Bis(2-ethylhexyl)phthalate | 824.3 | 330 | 666.7 | 0 | 124 | 45-125 | 0 | | | |
| Butyl benzyl phthalate | 674.7 | 160 | 666.7 | 0 | 101 | 50-125 | 0 | | | |
| Carbazole | 662.3 | 160 | 666.7 | 0 | 99.3 | 50-150 | 0 | | | |
| Chrysene | 652 | 6.7 | 666.7 | 0 | 97.8 | 55-110 | 0 | | | |
| Dibenzo(a,h)anthracene | 631 | 6.7 | 666.7 | 0 | 94.6 | 40-125 | 0 | | | |
| Dibenzofuran | 601 | 160 | 666.7 | 0 | 90.1 | 50-105 | 0 | | | |
| Diethyl phthalate | 617.3 | 330 | 666.7 | 0 | 92.6 | 50-115 | 0 | | | |
| Dimethyl phthalate | 620.3 | 330 | 666.7 | 0 | 93 | 50-110 | 0 | | | |
| Di-n-butyl phthalate | 663.3 | 330 | 666.7 | 0 | 99.5 | 55-110 | 0 | | | |
| Di-n-octyl phthalate | 738 | 160 | 666.7 | 0 | 111 | 40-130 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **57371** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Fluoranthene | 695 | 6.7 | 666.7 | 0 | 104 | 55-115 | 0 |
| Fluorene | 595.7 | 6.7 | 666.7 | 0 | 89.3 | 50-110 | 0 |
| Hexachlorobenzene | 605 | 160 | 666.7 | 0 | 90.7 | 45-120 | 0 |
| Hexachlorobutadiene | 540.3 | 160 | 666.7 | 0 | 81 | 40-115 | 0 |
| Hexachlorocyclopentadiene | 568.7 | 330 | 666.7 | 0 | 85.3 | 40-115 | 0 |
| Hexachloroethane | 555.7 | 160 | 666.7 | 0 | 83.3 | 35-110 | 0 |
| Indeno(1,2,3-cd)pyrene | 657.7 | 6.7 | 666.7 | 0 | 98.6 | 40-120 | 0 |
| Isophorone | 569 | 160 | 666.7 | 0 | 85.3 | 45-110 | 0 |
| Naphthalene | 566.7 | 6.7 | 666.7 | 0 | 85 | 40-105 | 0 |
| Nitrobenzene | 553 | 160 | 666.7 | 0 | 82.9 | 40-115 | 0 |
| N-Nitrosodi-n-propylamine | 635 | 160 | 666.7 | 0 | 95.2 | 40-115 | 0 |
| N-Nitrosodiphenylamine | 662.7 | 160 | 666.7 | 0 | 99.4 | 50-115 | 0 |
| Pentachlorophenol | 522 | 330 | 666.7 | 0 | 78.3 | 25-120 | 0 |
| Phenanthrene | 624.7 | 6.7 | 666.7 | 0 | 93.7 | 50-110 | 0 |
| Phenol | 605.3 | 160 | 666.7 | 0 | 90.8 | 40-100 | 0 |
| Pyrene | 760 | 6.7 | 666.7 | 0 | 114 | 45-125 | 0 |
| *Surr: 2,4,6-Tribromophenol* | *1503* | 0 | *1667* | 0 | *90.2* | *34-140* | 0 |
| *Surr: 2-Fluorobiphenyl* | *1408* | 0 | *1667* | 0 | *84.5* | *12-100* | 0 |
| *Surr: 2-Fluorophenol* | *1564* | 0 | *1667* | 0 | *93.8* | *33-117* | 0 |
| *Surr: 4-Terphenyl-d14* | *2018* | 0 | *1667* | 0 | *121* | *25-137* | 0 |
| *Surr: Nitrobenzene-d5* | *1499* | 0 | *1667* | 0 | *89.9* | *37-107* | 0 |
| *Surr: Phenol-d6* | *1572* | 0 | *1667* | 0 | *94.3* | *40-106* | 0 |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57371** Instrument ID **SVMS8** Method: **SW8270**

**MS** Sample ID: **1404377-14B MS** Units: **µg/Kg** Analysis Date: **4/10/2014 07:26 PM**

Client ID: Run ID: **SVMS8_140410A** SeqNo: **2708580** Prep Date: **4/9/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 1655 | 450 | 1860 | 0 | 88.9 | 50-110 | 0 | | | |
| 2,4,6-Trichlorophenol | 1650 | 450 | 1860 | 0 | 88.7 | 45-110 | 0 | | | |
| 2,4-Dichlorophenol | 1481 | 450 | 1860 | 0 | 79.6 | 45-110 | 0 | | | |
| 2,4-Dimethylphenol | 1482 | 920 | 1860 | 0 | 79.6 | 30-105 | 0 | | | |
| 2,4-Dinitrophenol | 1259 | 1,800 | 1860 | 0 | 67.7 | 15-130 | 0 | | | J |
| 2,4-Dinitrotoluene | 1542 | 450 | 1860 | 0 | 82.9 | 50-115 | 0 | | | |
| 2,6-Dinitrotoluene | 1549 | 450 | 1860 | 412.8 | 61.1 | 50-110 | 0 | | | |
| 2-Chloronaphthalene | 1637 | 19 | 1860 | 0 | 88 | 45-105 | 0 | | | |
| 2-Chlorophenol | 1461 | 450 | 1860 | 0 | 78.5 | 45-105 | 0 | | | |
| 2-Methylnaphthalene | 1449 | 19 | 1860 | 0 | 77.9 | 45-105 | 0 | | | |
| 2-Methylphenol | 1535 | 450 | 1860 | 0 | 82.5 | 40-105 | 0 | | | |
| 2-Nitroaniline | 1713 | 1,800 | 1860 | 0 | 92.1 | 45-120 | 0 | | | J |
| 2-Nitrophenol | 1351 | 450 | 1860 | 0 | 72.6 | 40-110 | 0 | | | |
| 3-Nitroaniline | 1201 | 1,800 | 1860 | 0 | 64.5 | 25-110 | 0 | | | J |
| 4-Bromophenyl phenyl ether | 1772 | 450 | 1860 | 0 | 95.2 | 45-115 | 0 | | | |
| 4-Chloro-3-methylphenol | 1631 | 450 | 1860 | 0 | 87.6 | 45-115 | 0 | | | |
| 4-Chloroaniline | 559 | 1,800 | 1860 | 0 | 30 | 15-110 | 0 | | | J |
| 4-Chlorophenyl phenyl ether | 1568 | 450 | 1860 | 0 | 84.3 | 45-110 | 0 | | | |
| 4-Methylphenol | 1593 | 450 | 1860 | 0 | 85.6 | 40-105 | 0 | | | |
| 4-Nitroaniline | 1251 | 1,800 | 1860 | 0 | 67.2 | 35-150 | 0 | | | J |
| 4-Nitrophenol | 1611 | 1,800 | 1860 | 0 | 86.6 | 15-140 | 0 | | | J |
| Acenaphthene | 1565 | 19 | 1860 | 0 | 84.1 | 45-110 | 0 | | | |
| Acenaphthylene | 1665 | 19 | 1860 | 0 | 89.5 | 45-105 | 0 | | | |
| Anthracene | 1761 | 19 | 1860 | 0 | 94.6 | 55-105 | 0 | | | |
| Benzo(a)anthracene | 1696 | 19 | 1860 | 0 | 91.1 | 50-110 | 0 | | | |
| Benzo(a)pyrene | 1803 | 19 | 1860 | 0 | 96.9 | 50-110 | 0 | | | |
| Benzo(b)fluoranthene | 1688 | 19 | 1860 | 0 | 90.7 | 45-115 | 0 | | | |
| Benzo(g,h,i)perylene | 1806 | 19 | 1860 | 0 | 97.1 | 40-125 | 0 | | | |
| Benzo(k)fluoranthene | 1662 | 19 | 1860 | 0 | 89.3 | 45-115 | 0 | | | |
| Bis(2-chloroethoxy)methane | 1445 | 450 | 1860 | 0 | 77.6 | 45-110 | 0 | | | |
| Bis(2-chloroethyl)ether | 1543 | 450 | 1860 | 0 | 82.9 | 40-105 | 0 | | | |
| Bis(2-chloroisopropyl)ether | 1398 | 450 | 1860 | 58.04 | 72 | 20-115 | 0 | | | |
| Bis(2-ethylhexyl)phthalate | 1934 | 920 | 1860 | 0 | 104 | 45-125 | 0 | | | |
| Butyl benzyl phthalate | 1927 | 450 | 1860 | 0 | 104 | 50-125 | 0 | | | |
| Carbazole | 1695 | 450 | 1860 | 0 | 91.1 | 50-150 | 0 | | | |
| Chrysene | 1665 | 19 | 1860 | 0 | 89.5 | 55-110 | 0 | | | |
| Dibenzo(a,h)anthracene | 1924 | 19 | 1860 | 0 | 103 | 40-125 | 0 | | | |
| Dibenzofuran | 1605 | 450 | 1860 | 0 | 86.3 | 50-105 | 0 | | | |
| Diethyl phthalate | 1664 | 920 | 1860 | 0 | 89.4 | 50-115 | 0 | | | |
| Dimethyl phthalate | 1611 | 920 | 1860 | 0 | 86.6 | 50-110 | 0 | | | |
| Di-n-butyl phthalate | 1810 | 920 | 1860 | 0 | 97.3 | 55-110 | 0 | | | |
| Di-n-octyl phthalate | 2189 | 450 | 1860 | 0 | 118 | 40-130 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **57371** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 1840 | 19 | 1860 | 0 | 98.9 | 55-115 | 0 | |
| Fluorene | 1606 | 19 | 1860 | 0 | 86.3 | 50-110 | 0 | |
| Hexachlorobenzene | 1662 | 450 | 1860 | 0 | 89.3 | 45-120 | 0 | |
| Hexachlorobutadiene | 1277 | 450 | 1860 | 0 | 68.6 | 40-115 | 0 | |
| Hexachlorocyclopentadiene | 440.9 | 920 | 1860 | 0 | 23.7 | 40-115 | 0 | JS |
| Hexachloroethane | 1281 | 450 | 1860 | 0 | 68.8 | 35-110 | 0 | |
| Indeno(1,2,3-cd)pyrene | 1959 | 19 | 1860 | 0 | 105 | 40-120 | 0 | |
| Isophorone | 1407 | 450 | 1860 | 0 | 75.6 | 45-110 | 0 | |
| Naphthalene | 1336 | 19 | 1860 | 0 | 71.8 | 40-105 | 0 | |
| Nitrobenzene | 1301 | 450 | 1860 | 0 | 69.9 | 40-115 | 0 | |
| N-Nitrosodi-n-propylamine | 1541 | 450 | 1860 | 0 | 82.8 | 40-115 | 0 | |
| N-Nitrosodiphenylamine | 1870 | 450 | 1860 | 0 | 100 | 50-115 | 0 | |
| Pentachlorophenol | 1738 | 920 | 1860 | 0 | 93.4 | 25-120 | 0 | |
| Phenanthrene | 1671 | 19 | 1860 | 0 | 89.8 | 50-110 | 0 | |
| Phenol | 1492 | 450 | 1860 | 0 | 80.2 | 40-100 | 0 | |
| Pyrene | 1849 | 19 | 1860 | 0 | 99.4 | 45-125 | 0 | |
| *Surr: 2,4,6-Tribromophenol* | *4127* | 0 | *4651* | 0 | *88.7* | *34-140* | 0 | |
| *Surr: 2-Fluorobiphenyl* | *3601* | 0 | *4651* | 0 | *77.4* | *12-100* | 0 | |
| *Surr: 2-Fluorophenol* | *3737* | 0 | *4651* | 0 | *80.4* | *33-117* | 0 | |
| *Surr: 4-Terphenyl-d14* | *4805* | 0 | *4651* | 0 | *103* | *25-137* | 0 | |
| *Surr: Nitrobenzene-d5* | *3409* | 0 | *4651* | 0 | *73.3* | *37-107* | 0 | |
| *Surr: Phenol-d6* | *3908* | 0 | *4651* | 0 | *84* | *40-106* | 0 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57371** Instrument ID **SVMS8** Method: **SW8270**

**MSD** Sample ID: **1404377-14B MSD** Units: **µg/Kg** Analysis Date: **4/10/2014 07:47 PM**

Client ID: Run ID: **SVMS8_140410A** SeqNo: **2708581** Prep Date: **4/9/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 1669 | 450 | 1892 | 0 | 88.2 | 50-110 | 1655 | 0.842 | 30 | |
| 2,4,6-Trichlorophenol | 1701 | 450 | 1892 | 0 | 89.9 | 45-110 | 1650 | 3.03 | 30 | |
| 2,4-Dichlorophenol | 1589 | 450 | 1892 | 0 | 84 | 45-110 | 1481 | 7.07 | 30 | |
| 2,4-Dimethylphenol | 1576 | 940 | 1892 | 0 | 83.3 | 30-105 | 1482 | 6.17 | 30 | |
| 2,4-Dinitrophenol | 1173 | 1,900 | 1892 | 0 | 62 | 15-130 | 1259 | 0 | 30 | J |
| 2,4-Dinitrotoluene | 1643 | 450 | 1892 | 0 | 86.8 | 50-115 | 1542 | 6.34 | 30 | |
| 2,6-Dinitrotoluene | 1597 | 450 | 1892 | 412.8 | 62.6 | 50-110 | 1549 | 3.06 | 30 | |
| 2-Chloronaphthalene | 1637 | 19 | 1892 | 0 | 86.5 | 45-105 | 1637 | 0.0308 | 30 | |
| 2-Chlorophenol | 1532 | 450 | 1892 | 0 | 80.9 | 45-105 | 1461 | 4.7 | 30 | |
| 2-Methylnaphthalene | 1514 | 19 | 1892 | 0 | 80 | 45-105 | 1449 | 4.35 | 30 | |
| 2-Methylphenol | 1636 | 450 | 1892 | 0 | 86.4 | 40-105 | 1535 | 6.36 | 30 | |
| 2-Nitroaniline | 1788 | 1,900 | 1892 | 0 | 94.5 | 45-120 | 1713 | 0 | 30 | J |
| 2-Nitrophenol | 1447 | 450 | 1892 | 0 | 76.5 | 40-110 | 1351 | 6.92 | 30 | |
| 3-Nitroaniline | 1346 | 1,900 | 1892 | 0 | 71.1 | 25-110 | 1201 | 0 | 30 | J |
| 4-Bromophenyl phenyl ether | 1789 | 450 | 1892 | 0 | 94.5 | 45-115 | 1772 | 0.951 | 30 | |
| 4-Chloro-3-methylphenol | 1669 | 450 | 1892 | 0 | 88.2 | 45-115 | 1631 | 2.31 | 30 | |
| 4-Chloroaniline | 621.5 | 1,900 | 1892 | 0 | 32.8 | 15-110 | 559 | 0 | 30 | J |
| 4-Chlorophenyl phenyl ether | 1637 | 450 | 1892 | 0 | 86.5 | 45-110 | 1568 | 4.32 | 30 | |
| 4-Methylphenol | 1660 | 450 | 1892 | 0 | 87.7 | 40-105 | 1593 | 4.11 | 30 | |
| 4-Nitroaniline | 1340 | 1,900 | 1892 | 0 | 70.8 | 35-150 | 1251 | 0 | 30 | J |
| 4-Nitrophenol | 1714 | 1,900 | 1892 | 0 | 90.6 | 15-140 | 1611 | 0 | 30 | J |
| Acenaphthene | 1564 | 19 | 1892 | 0 | 82.6 | 45-110 | 1565 | 0.11 | 30 | |
| Acenaphthylene | 1653 | 19 | 1892 | 0 | 87.3 | 45-105 | 1665 | 0.743 | 30 | |
| Anthracene | 1766 | 19 | 1892 | 0 | 93.3 | 55-105 | 1761 | 0.305 | 30 | |
| Benzo(a)anthracene | 1736 | 19 | 1892 | 0 | 91.7 | 50-110 | 1696 | 2.34 | 30 | |
| Benzo(a)pyrene | 1845 | 19 | 1892 | 0 | 97.5 | 50-110 | 1803 | 2.31 | 30 | |
| Benzo(b)fluoranthene | 1785 | 19 | 1892 | 0 | 94.3 | 45-115 | 1688 | 5.58 | 30 | |
| Benzo(g,h,i)perylene | 1822 | 19 | 1892 | 0 | 96.3 | 40-125 | 1806 | 0.861 | 30 | |
| Benzo(k)fluoranthene | 1701 | 19 | 1892 | 0 | 89.9 | 45-115 | 1662 | 2.3 | 30 | |
| Bis(2-chloroethoxy)methane | 1485 | 450 | 1892 | 0 | 78.5 | 45-110 | 1445 | 2.78 | 30 | |
| Bis(2-chloroethyl)ether | 1540 | 450 | 1892 | 0 | 81.4 | 40-105 | 1543 | 0.198 | 30 | |
| Bis(2-chloroisopropyl)ether | 1410 | 450 | 1892 | 58.04 | 71.4 | 20-115 | 1398 | 0.82 | 30 | |
| Bis(2-ethylhexyl)phthalate | 2020 | 940 | 1892 | 0 | 107 | 45-125 | 1934 | 4.35 | 30 | |
| Butyl benzyl phthalate | 1951 | 450 | 1892 | 0 | 103 | 50-125 | 1927 | 1.2 | 30 | |
| Carbazole | 1706 | 450 | 1892 | 0 | 90.1 | 50-150 | 1695 | 0.64 | 30 | |
| Chrysene | 1701 | 19 | 1892 | 0 | 89.9 | 55-110 | 1665 | 2.13 | 30 | |
| Dibenzo(a,h)anthracene | 1961 | 19 | 1892 | 0 | 104 | 40-125 | 1924 | 1.88 | 30 | |
| Dibenzofuran | 1596 | 450 | 1892 | 0 | 84.3 | 50-105 | 1605 | 0.597 | 30 | |
| Diethyl phthalate | 1681 | 940 | 1892 | 0 | 88.8 | 50-115 | 1664 | 1.02 | 30 | |
| Dimethyl phthalate | 1664 | 940 | 1892 | 0 | 87.9 | 50-110 | 1611 | 3.24 | 30 | |
| Di-n-butyl phthalate | 1836 | 940 | 1892 | 0 | 97 | 55-110 | 1810 | 1.43 | 30 | |
| Di-n-octyl phthalate | 2325 | 450 | 1892 | 0 | 123 | 40-130 | 2189 | 6.05 | 30 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **57371** Instrument ID **SVMS8** Method: **SW8270**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 1845 | 19 | 1892 | 0 | 97.5 | 55-115 | 1840 | 0.263 | 30 | |
| Fluorene | 1616 | 19 | 1892 | 0 | 85.4 | 50-110 | 1606 | 0.582 | 30 | |
| Hexachlorobenzene | 1620 | 450 | 1892 | 0 | 85.6 | 45-120 | 1662 | 2.6 | 30 | |
| Hexachlorobutadiene | 1331 | 450 | 1892 | 0 | 70.3 | 40-115 | 1277 | 4.13 | 30 | |
| Hexachlorocyclopentadiene | 424.7 | 940 | 1892 | 0 | 22.4 | 40-115 | 440.9 | 0 | 30 | JS |
| Hexachloroethane | 1259 | 450 | 1892 | 0 | 66.5 | 35-110 | 1281 | 1.71 | 30 | |
| Indeno(1,2,3-cd)pyrene | 2039 | 19 | 1892 | 0 | 108 | 40-120 | 1959 | 3.99 | 30 | |
| Isophorone | 1454 | 450 | 1892 | 0 | 76.8 | 45-110 | 1407 | 3.26 | 30 | |
| Naphthalene | 1346 | 19 | 1892 | 0 | 71.1 | 40-105 | 1336 | 0.779 | 30 | |
| Nitrobenzene | 1385 | 450 | 1892 | 0 | 73.2 | 40-115 | 1301 | 6.23 | 30 | |
| N-Nitrosodi-n-propylamine | 1603 | 450 | 1892 | 0 | 84.7 | 40-115 | 1541 | 3.96 | 30 | |
| N-Nitrosodiphenylamine | 1900 | 450 | 1892 | 0 | 100 | 50-115 | 1870 | 1.59 | 30 | |
| Pentachlorophenol | 1898 | 940 | 1892 | 0 | 100 | 25-120 | 1738 | 8.76 | 30 | |
| Phenanthrene | 1682 | 19 | 1892 | 0 | 88.9 | 50-110 | 1671 | 0.625 | 30 | |
| Phenol | 1550 | 450 | 1892 | 0 | 81.9 | 40-100 | 1492 | 3.85 | 30 | |
| Pyrene | 1813 | 19 | 1892 | 0 | 95.8 | 45-125 | 1849 | 1.95 | 30 | |
| *Surr: 2,4,6-Tribromophenol* | *4478* | 0 | *4730* | 0 | *94.7* | *34-140* | 4127 | *8.16* | *40* | |
| *Surr: 2-Fluorobiphenyl* | *3639* | 0 | *4730* | 0 | *76.9* | *12-100* | 3601 | *1.07* | *40* | |
| *Surr: 2-Fluorophenol* | *3771* | 0 | *4730* | 0 | *79.7* | *33-117* | 3737 | *0.889* | *40* | |
| *Surr: 4-Terphenyl-d14* | *4672* | 0 | *4730* | 0 | *98.8* | *25-137* | 4805 | *2.8* | *40* | |
| *Surr: Nitrobenzene-d5* | *3491* | 0 | *4730* | 0 | *73.8* | *37-107* | 3409 | *2.37* | *40* | |
| *Surr: Phenol-d6* | *4010* | 0 | *4730* | 0 | *84.8* | *40-106* | 3908 | *2.56* | *40* | |

**The following samples were analyzed in this batch:** 1404130-02C

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57183** Instrument ID **VMS5** Method: **SW8260B**

**MBLK** Sample ID: **MBLK-57183-57183** Units: **µg/Kg** Analysis Date: **4/3/2014 02:56 PM**

Client ID: Run ID: **VMS5_140403A** SeqNo: **2699035** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | U | 30 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | U | 30 | | | | | | | | |
| 1,1,2-Trichloroethane | U | 30 | | | | | | | | |
| 1,1,2-Trichlorotrifluoroethane | U | 30 | | | | | | | | |
| 1,1-Dichloroethane | U | 30 | | | | | | | | |
| 1,1-Dichloroethene | U | 30 | | | | | | | | |
| 1,2,4-Trichlorobenzene | U | 30 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | U | 30 | | | | | | | | |
| 1,2-Dibromoethane | U | 30 | | | | | | | | |
| 1,2-Dichlorobenzene | U | 30 | | | | | | | | |
| 1,2-Dichloroethane | U | 30 | | | | | | | | |
| 1,2-Dichloropropane | U | 30 | | | | | | | | |
| 1,3-Dichlorobenzene | U | 30 | | | | | | | | |
| 1,4-Dichlorobenzene | U | 30 | | | | | | | | |
| 2-Butanone | U | 200 | | | | | | | | |
| 2-Hexanone | U | 30 | | | | | | | | |
| 4-Methyl-2-pentanone | U | 30 | | | | | | | | |
| Acetone | 90 | 100 | | | | | | | | J |
| Benzene | U | 30 | | | | | | | | |
| Bromodichloromethane | U | 30 | | | | | | | | |
| Bromoform | U | 30 | | | | | | | | |
| Bromomethane | U | 75 | | | | | | | | |
| Carbon disulfide | U | 30 | | | | | | | | |
| Carbon tetrachloride | U | 30 | | | | | | | | |
| Chlorobenzene | U | 30 | | | | | | | | |
| Chloroethane | U | 100 | | | | | | | | |
| Chloroform | U | 30 | | | | | | | | |
| Chloromethane | U | 100 | | | | | | | | |
| cis-1,2-Dichloroethene | U | 30 | | | | | | | | |
| cis-1,3-Dichloropropene | U | 30 | | | | | | | | |
| Cyclohexane | U | 30 | | | | | | | | |
| Dibromochloromethane | U | 30 | | | | | | | | |
| Dichlorodifluoromethane | U | 30 | | | | | | | | |
| Ethylbenzene | U | 30 | | | | | | | | |
| GRO (C6-C10) | U | 2,500 | | | | | | | | |
| Isopropylbenzene | U | 30 | | | | | | | | |
| m,p-Xylene | U | 60 | | | | | | | | |
| Methyl acetate | 1220 | 200 | | | | | | | | |
| Methyl tert-butyl ether | U | 30 | | | | | | | | |
| Methylcyclohexane | U | 30 | | | | | | | | |
| Methylene chloride | U | 30 | | | | | | | | |
| o-Xylene | U | 30 | | | | | | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **57183** Instrument ID **VMS5** Method: **SW8260B**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Styrene | U | 30 | | | | | | | | |
| Tetrachloroethene | U | 30 | | | | | | | | |
| Toluene | U | 30 | | | | | | | | |
| trans-1,2-Dichloroethene | U | 30 | | | | | | | | |
| trans-1,3-Dichloropropene | U | 30 | | | | | | | | |
| Trichloroethene | U | 30 | | | | | | | | |
| Trichlorofluoromethane | U | 30 | | | | | | | | |
| Vinyl chloride | U | 30 | | | | | | | | |
| Xylenes, Total | U | 90 | | | | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *1008* | 0 | *1000* | | 0 | *101* | *70-130* | | 0 | |
| *Surr: 4-Bromofluorobenzene* | *947.5* | 0 | *1000* | | 0 | *94.8* | *70-130* | | 0 | |
| *Surr: Dibromofluoromethane* | *978.5* | 0 | *1000* | | 0 | *97.8* | *70-130* | | 0 | |
| *Surr: Toluene-d8* | *1034* | 0 | *1000* | | 0 | *103* | *70-130* | | 0 | |

**MBLK** Sample ID: **MBLK-57183-57183** Units: **µg/Kg** Analysis Date: **4/3/2014 02:56 PM**

Client ID: Run ID: **VMS5_140403A** SeqNo: **2699234** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| GRO (C6-C10) | U | 5,000 | | | | | | | | |
| *Surr: Toluene-d8* | *931* | 0 | *1000* | 0 | *93.1* | *70-130* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57183** Instrument ID **VMS5** Method: **SW8260B**

**LCS** Sample ID: **LCS-57183-57183** Units: **µg/Kg** Analysis Date: **4/3/2014 12:45 PM**
Client ID: Run ID: **VMS5_140403A** SeqNo: **2699033** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 950 | 30 | 1000 | 0 | 95 | 70-135 | 0 | | | |
| 1,1,2,2-Tetrachloroethane | 982 | 30 | 1000 | 0 | 98.2 | 55-130 | 0 | | | |
| 1,1,2-Trichloroethane | 949 | 30 | 1000 | 0 | 94.9 | 60-125 | 0 | | | |
| 1,1-Dichloroethane | 977.5 | 30 | 1000 | 0 | 97.8 | 75-125 | 0 | | | |
| 1,1-Dichloroethene | 1054 | 30 | 1000 | 0 | 105 | 65-135 | 0 | | | |
| 1,2,4-Trichlorobenzene | 921 | 30 | 1000 | 0 | 92.1 | 65-130 | 0 | | | |
| 1,2-Dibromo-3-chloropropane | 792.5 | 30 | 1000 | 0 | 79.2 | 40-135 | 0 | | | |
| 1,2-Dibromoethane | 1058 | 30 | 1000 | 0 | 106 | 75-125 | 0 | | | |
| 1,2-Dichlorobenzene | 932 | 30 | 1000 | 0 | 93.2 | 75-120 | 0 | | | |
| 1,2-Dichloroethane | 911.5 | 30 | 1000 | 0 | 91.2 | 70-135 | 0 | | | |
| 1,2-Dichloropropane | 925.5 | 30 | 1000 | 0 | 92.6 | 70-120 | 0 | | | |
| 1,3-Dichlorobenzene | 963.5 | 30 | 1000 | 0 | 96.4 | 70-125 | 0 | | | |
| 1,4-Dichlorobenzene | 938.5 | 30 | 1000 | 0 | 93.8 | 70-125 | 0 | | | |
| 2-Butanone | 1074 | 200 | 1000 | 0 | 107 | 30-160 | 0 | | | |
| 2-Hexanone | 1038 | 30 | 1000 | 0 | 104 | 45-145 | 0 | | | |
| 4-Methyl-2-pentanone | 1358 | 30 | 1000 | 0 | 136 | 96-168 | 0 | | | |
| Acetone | 1159 | 100 | 1000 | 0 | 116 | 20-160 | 0 | | | |
| Benzene | 970 | 30 | 1000 | 0 | 97 | 75-125 | 0 | | | |
| Bromodichloromethane | 923.5 | 30 | 1000 | 0 | 92.4 | 70-130 | 0 | | | |
| Bromoform | 739.5 | 30 | 1000 | 0 | 74 | 55-135 | 0 | | | |
| Bromomethane | 1624 | 75 | 1000 | 0 | 162 | 30-160 | 0 | | | S |
| Carbon disulfide | 1084 | 30 | 1000 | 0 | 108 | 45-160 | 0 | | | |
| Carbon tetrachloride | 929 | 30 | 1000 | 0 | 92.9 | 65-135 | 0 | | | |
| Chlorobenzene | 944 | 30 | 1000 | 0 | 94.4 | 75-125 | 0 | | | |
| Chloroethane | 1168 | 100 | 1000 | 0 | 117 | 40-155 | 0 | | | |
| Chloroform | 932 | 30 | 1000 | 0 | 93.2 | 70-125 | 0 | | | |
| Chloromethane | 1055 | 100 | 1000 | 0 | 106 | 50-130 | 0 | | | |
| cis-1,2-Dichloroethene | 960 | 30 | 1000 | 0 | 96 | 65-125 | 0 | | | |
| cis-1,3-Dichloropropene | 966.5 | 30 | 1000 | 0 | 96.6 | 70-125 | 0 | | | |
| Dibromochloromethane | 740.5 | 30 | 1000 | 0 | 74 | 65-135 | 0 | | | |
| Dichlorodifluoromethane | 847.5 | 30 | 1000 | 0 | 84.8 | 35-135 | 0 | | | |
| Ethylbenzene | 995 | 30 | 1000 | 0 | 99.5 | 75-125 | 0 | | | |
| Isopropylbenzene | 985 | 30 | 1000 | 0 | 98.5 | 75-130 | 0 | | | |
| m,p-Xylene | 1968 | 60 | 2000 | 0 | 98.4 | 80-125 | 0 | | | |
| Methyl tert-butyl ether | 969 | 30 | 1000 | 0 | 96.9 | 75-125 | 0 | | | |
| Methylene chloride | 1064 | 30 | 1000 | 0 | 106 | 55-145 | 0 | | | |
| o-Xylene | 977.5 | 30 | 1000 | 0 | 97.8 | 75-125 | 0 | | | |
| Styrene | 1005 | 30 | 1000 | 0 | 100 | 75-125 | 0 | | | |
| Tetrachloroethene | 968.5 | 30 | 1000 | 0 | 96.8 | 64-140 | 0 | | | |
| Toluene | 964.5 | 30 | 1000 | 0 | 96.4 | 70-125 | 0 | | | |
| trans-1,2-Dichloroethene | 1038 | 30 | 1000 | 0 | 104 | 65-135 | 0 | | | |
| trans-1,3-Dichloropropene | 969.5 | 30 | 1000 | 0 | 97 | 65-125 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **57183** Instrument ID **VMS5** Method: **SW8260B**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trichloroethene | 943 | 30 | 1000 | 0 | 94.3 | 75-125 | 0 |
| Trichlorofluoromethane | 1060 | 30 | 1000 | 0 | 106 | 25-185 | 0 |
| Vinyl chloride | 1103 | 30 | 1000 | 0 | 110 | 60-125 | 0 |
| Xylenes, Total | 2945 | 90 | 3000 | 0 | 98.2 | 75-125 | 0 |
| *Surr: 1,2-Dichloroethane-d4* | *990.5* | 0 | *1000* | 0 | *99* | *70-130* | 0 |
| *Surr: 4-Bromofluorobenzene* | *954* | 0 | *1000* | 0 | *95.4* | *70-130* | 0 |
| *Surr: Dibromofluoromethane* | *1005* | 0 | *1000* | 0 | *100* | *70-130* | 0 |
| *Surr: Toluene-d8* | *1028* | 0 | *1000* | 0 | *103* | *70-130* | 0 |

**LCS** Sample ID: **LCS-57183-57183** Units: **µg/Kg** Analysis Date: **4/3/2014 01:37 PM**

Client ID: Run ID: **VMS5_140403A** SeqNo: **2699232** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| GRO (C6-C10) | 21770 | 5,000 | 25000 | 0 | 87.1 | 70-130 | 0 | | | |
| *Surr: Toluene-d8* | *946* | 0 | *1000* | 0 | *94.6* | *70-130* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57183** Instrument ID **VMS5** Method: **SW8260B**

**MS** Sample ID: **14031223-02A MS** Units: **µg/Kg** Analysis Date: **4/4/2014 09:40 PM**

Client ID: Run ID: **VMS8_140404A** SeqNo: **2700547** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 979.5 | 30 | 1000 | 0 | 98 | 70-135 | 0 | | | |
| 1,1,2,2-Tetrachloroethane | 953 | 30 | 1000 | 0 | 95.3 | 55-130 | 0 | | | |
| 1,1,2-Trichloroethane | 943.5 | 30 | 1000 | 0 | 94.4 | 60-125 | 0 | | | |
| 1,1-Dichloroethane | 1037 | 30 | 1000 | 0 | 104 | 75-125 | 0 | | | |
| 1,1-Dichloroethene | 1143 | 30 | 1000 | 0 | 114 | 65-135 | 0 | | | |
| 1,2,4-Trichlorobenzene | 786.5 | 30 | 1000 | 0 | 78.6 | 65-130 | 0 | | | |
| 1,2-Dibromo-3-chloropropane | 917.5 | 30 | 1000 | 0 | 91.8 | 40-135 | 0 | | | |
| 1,2-Dibromoethane | 1232 | 30 | 1000 | 0 | 123 | 75-125 | 0 | | | |
| 1,2-Dichlorobenzene | 881.5 | 30 | 1000 | 0 | 88.2 | 75-120 | 0 | | | |
| 1,2-Dichloroethane | 986.5 | 30 | 1000 | 0 | 98.6 | 70-135 | 0 | | | |
| 1,2-Dichloropropane | 1002 | 30 | 1000 | 0 | 100 | 70-120 | 0 | | | |
| 1,3-Dichlorobenzene | 877.5 | 30 | 1000 | 0 | 87.8 | 70-125 | 0 | | | |
| 1,4-Dichlorobenzene | 863 | 30 | 1000 | 0 | 86.3 | 70-125 | 0 | | | |
| 2-Butanone | 1208 | 200 | 1000 | 0 | 121 | 30-160 | 0 | | | |
| 2-Hexanone | 1038 | 30 | 1000 | 0 | 104 | 45-145 | 0 | | | |
| 4-Methyl-2-pentanone | 1380 | 30 | 1000 | 0 | 138 | 89-161 | 0 | | | |
| Acetone | 1182 | 100 | 1000 | 0 | 118 | 20-160 | 0 | | | |
| Benzene | 1070 | 30 | 1000 | 0 | 107 | 75-125 | 0 | | | |
| Bromodichloromethane | 862 | 30 | 1000 | 0 | 86.2 | 70-130 | 0 | | | |
| Bromoform | 800 | 30 | 1000 | 0 | 80 | 55-135 | 0 | | | |
| Bromomethane | 952 | 75 | 1000 | 0 | 95.2 | 30-160 | 0 | | | |
| Carbon disulfide | 1274 | 30 | 1000 | 0 | 127 | 45-160 | 0 | | | |
| Carbon tetrachloride | 997.5 | 30 | 1000 | 0 | 99.8 | 65-135 | 0 | | | |
| Chlorobenzene | 941.5 | 30 | 1000 | 0 | 94.2 | 75-125 | 0 | | | |
| Chloroethane | 551 | 100 | 1000 | 0 | 55.1 | 40-155 | 0 | | | |
| Chloroform | 967.5 | 30 | 1000 | 0 | 96.8 | 70-125 | 0 | | | |
| Chloromethane | 915.5 | 100 | 1000 | 0 | 91.6 | 50-130 | 0 | | | |
| cis-1,2-Dichloroethene | 973 | 30 | 1000 | 0 | 97.3 | 65-125 | 0 | | | |
| cis-1,3-Dichloropropene | 864 | 30 | 1000 | 0 | 86.4 | 70-125 | 0 | | | |
| Dibromochloromethane | 785 | 30 | 1000 | 0 | 78.5 | 65-135 | 0 | | | |
| Dichlorodifluoromethane | 767 | 30 | 1000 | 0 | 76.7 | 35-135 | 0 | | | |
| Ethylbenzene | 943 | 30 | 1000 | 0 | 94.3 | 75-125 | 0 | | | |
| Isopropylbenzene | 946.5 | 30 | 1000 | 0 | 94.6 | 75-130 | 0 | | | |
| m,p-Xylene | 1869 | 60 | 2000 | 0 | 93.4 | 80-125 | 0 | | | |
| Methyl tert-butyl ether | 1100 | 30 | 1000 | 0 | 110 | 75-125 | 0 | | | |
| Methylene chloride | 1078 | 30 | 1000 | 0 | 108 | 55-145 | 0 | | | |
| o-Xylene | 938.5 | 30 | 1000 | 0 | 93.8 | 75-125 | 0 | | | |
| Styrene | 979 | 30 | 1000 | 0 | 97.9 | 75-125 | 0 | | | |
| Tetrachloroethene | 979.5 | 30 | 1000 | 0 | 98 | 64-140 | 0 | | | |
| Toluene | 943.5 | 30 | 1000 | 0 | 94.4 | 70-125 | 0 | | | |
| trans-1,2-Dichloroethene | 1088 | 30 | 1000 | 0 | 109 | 65-135 | 0 | | | |
| trans-1,3-Dichloropropene | 860.5 | 30 | 1000 | 0 | 86 | 65-125 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **57183** Instrument ID **VMS5** Method: **SW8260B**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trichloroethene | 973.5 | 30 | 1000 | 0 | 97.4 | 75-125 | 0 |
| Trichlorofluoromethane | 981 | 30 | 1000 | 0 | 98.1 | 25-185 | 0 |
| Vinyl chloride | 1018 | 30 | 1000 | 0 | 102 | 60-125 | 0 |
| Xylenes, Total | 2808 | 90 | 3000 | 0 | 93.6 | 75-125 | 0 |
| *Surr: 1,2-Dichloroethane-d4* | *962.5* | 0 | *1000* | 0 | *96.2* | *70-130* | 0 |
| *Surr: 4-Bromofluorobenzene* | *1006* | 0 | *1000* | 0 | *101* | *70-130* | 0 |
| *Surr: Dibromofluoromethane* | *1001* | 0 | *1000* | 0 | *100* | *70-130* | 0 |
| *Surr: Toluene-d8* | *986.5* | 0 | *1000* | 0 | *98.6* | *70-130* | 0 |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **57183** Instrument ID **VMS5** Method: **SW8260B**

**MSD** Sample ID: **14031223-02A MSD** Units: **µg/Kg** Analysis Date: **4/4/2014 10:05 PM**

Client ID: Run ID: **VMS8_140404A** SeqNo: **2700548** Prep Date: **4/3/2014** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 892.5 | 30 | 1000 | 0 | 89.2 | 70-135 | 979.5 | 9.29 | 30 | |
| 1,1,2,2-Tetrachloroethane | 913 | 30 | 1000 | 0 | 91.3 | 55-130 | 953 | 4.29 | 30 | |
| 1,1,2-Trichloroethane | 887.5 | 30 | 1000 | 0 | 88.8 | 60-125 | 943.5 | 6.12 | 30 | |
| 1,1-Dichloroethane | 992 | 30 | 1000 | 0 | 99.2 | 75-125 | 1037 | 4.44 | 30 | |
| 1,1-Dichloroethene | 1088 | 30 | 1000 | 0 | 109 | 65-135 | 1143 | 4.93 | 30 | |
| 1,2,4-Trichlorobenzene | 825 | 30 | 1000 | 0 | 82.5 | 65-130 | 786.5 | 4.78 | 30 | |
| 1,2-Dibromo-3-chloropropane | 838 | 30 | 1000 | 0 | 83.8 | 40-135 | 917.5 | 9.06 | 30 | |
| 1,2-Dibromoethane | 1158 | 30 | 1000 | 0 | 116 | 75-125 | 1232 | 6.11 | 30 | |
| 1,2-Dichlorobenzene | 852 | 30 | 1000 | 0 | 85.2 | 75-120 | 881.5 | 3.4 | 30 | |
| 1,2-Dichloroethane | 876 | 30 | 1000 | 0 | 87.6 | 70-135 | 986.5 | 11.9 | 30 | |
| 1,2-Dichloropropane | 950.5 | 30 | 1000 | 0 | 95 | 70-120 | 1002 | 5.28 | 30 | |
| 1,3-Dichlorobenzene | 862 | 30 | 1000 | 0 | 86.2 | 70-125 | 877.5 | 1.78 | 30 | |
| 1,4-Dichlorobenzene | 842.5 | 30 | 1000 | 0 | 84.2 | 70-125 | 863 | 2.4 | 30 | |
| 2-Butanone | 1174 | 200 | 1000 | 0 | 117 | 30-160 | 1208 | 2.77 | 30 | |
| 2-Hexanone | 982 | 30 | 1000 | 0 | 98.2 | 45-145 | 1038 | 5.5 | 30 | |
| 4-Methyl-2-pentanone | 1348 | 30 | 1000 | 0 | 135 | 89-161 | 1380 | 2.35 | 30 | |
| Acetone | 1193 | 100 | 1000 | 0 | 119 | 20-160 | 1182 | 0.884 | 30 | |
| Benzene | 974 | 30 | 1000 | 0 | 97.4 | 75-125 | 1070 | 9.44 | 30 | |
| Bromodichloromethane | 809 | 30 | 1000 | 0 | 80.9 | 70-130 | 862 | 6.34 | 30 | |
| Bromoform | 762 | 30 | 1000 | 0 | 76.2 | 55-135 | 800 | 4.87 | 30 | |
| Bromomethane | 864.5 | 75 | 1000 | 0 | 86.4 | 30-160 | 952 | 9.63 | 30 | |
| Carbon disulfide | 1144 | 30 | 1000 | 0 | 114 | 45-160 | 1274 | 10.7 | 30 | |
| Carbon tetrachloride | 906.5 | 30 | 1000 | 0 | 90.6 | 65-135 | 997.5 | 9.56 | 30 | |
| Chlorobenzene | 909.5 | 30 | 1000 | 0 | 91 | 75-125 | 941.5 | 3.46 | 30 | |
| Chloroethane | 461.5 | 100 | 1000 | 0 | 46.2 | 40-155 | 551 | 17.7 | 30 | |
| Chloroform | 926 | 30 | 1000 | 0 | 92.6 | 70-125 | 967.5 | 4.38 | 30 | |
| Chloromethane | 848 | 100 | 1000 | 0 | 84.8 | 50-130 | 915.5 | 7.66 | 30 | |
| cis-1,2-Dichloroethene | 940 | 30 | 1000 | 0 | 94 | 65-125 | 973 | 3.45 | 30 | |
| cis-1,3-Dichloropropene | 832.5 | 30 | 1000 | 0 | 83.2 | 70-125 | 864 | 3.71 | 30 | |
| Dibromochloromethane | 750 | 30 | 1000 | 0 | 75 | 65-135 | 785 | 4.56 | 30 | |
| Dichlorodifluoromethane | 736.5 | 30 | 1000 | 0 | 73.6 | 35-135 | 767 | 4.06 | 30 | |
| Ethylbenzene | 915 | 30 | 1000 | 0 | 91.5 | 75-125 | 943 | 3.01 | 30 | |
| Isopropylbenzene | 898.5 | 30 | 1000 | 0 | 89.8 | 75-130 | 946.5 | 5.2 | 30 | |
| m,p-Xylene | 1801 | 60 | 2000 | 0 | 90 | 80-125 | 1869 | 3.71 | 30 | |
| Methyl tert-butyl ether | 1047 | 30 | 1000 | 0 | 105 | 75-125 | 1100 | 4.94 | 30 | |
| Methylene chloride | 1093 | 30 | 1000 | 0 | 109 | 55-145 | 1078 | 1.43 | 30 | |
| o-Xylene | 902.5 | 30 | 1000 | 0 | 90.2 | 75-125 | 938.5 | 3.91 | 30 | |
| Styrene | 953 | 30 | 1000 | 0 | 95.3 | 75-125 | 979 | 2.69 | 30 | |
| Tetrachloroethene | 911 | 30 | 1000 | 0 | 91.1 | 64-140 | 979.5 | 7.25 | 30 | |
| Toluene | 906 | 30 | 1000 | 0 | 90.6 | 70-125 | 943.5 | 4.06 | 30 | |
| trans-1,2-Dichloroethene | 1058 | 30 | 1000 | 0 | 106 | 65-135 | 1088 | 2.75 | 30 | |
| trans-1,3-Dichloropropene | 842 | 30 | 1000 | 0 | 84.2 | 65-125 | 860.5 | 2.17 | 30 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **57183** Instrument ID **VMS5** Method: **SW8260B**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene | 946 | 30 | 1000 | 0 | 94.6 | 75-125 | 973.5 | 2.87 | 30 |
| Trichlorofluoromethane | 911.5 | 30 | 1000 | 0 | 91.2 | 25-185 | 981 | 7.34 | 30 |
| Vinyl chloride | 894.5 | 30 | 1000 | 0 | 89.4 | 60-125 | 1018 | 12.9 | 30 |
| Xylenes, Total | 2704 | 90 | 3000 | 0 | 90.1 | 75-125 | 2808 | 3.77 | 30 |
| *Surr: 1,2-Dichloroethane-d4* | *915* | 0 | *1000* | 0 | *91.5* | *70-130* | 962.5 | *5.06* | *30* |
| *Surr: 4-Bromofluorobenzene* | *1002* | 0 | *1000* | 0 | *100* | *70-130* | 1006 | *0.448* | *30* |
| *Surr: Dibromofluoromethane* | *965* | 0 | *1000* | 0 | *96.5* | *70-130* | 1001 | *3.66* | *30* |
| *Surr: Toluene-d8* | *986* | 0 | *1000* | 0 | *98.6* | *70-130* | 986.5 | *0.0507* | *30* |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 1404130-01A | 1404130-02A | 1404130-03A |
| 1404130-04A | 1404130-05A | 1404130-06A |
| 1404130-07A | 1404130-08A | 1404130-09A |
| 1404130-10A | 1404130-11A | 1404130-12A |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138301** Instrument ID **VMS5** Method: **SW8260GRO**

| **MBLK** | Sample ID: **VBLKW1-14043-R138301** | | | | Units: **µg/L** | | | Analysis Date: **4/3/2014 02:30 PM** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | | Run ID: **VMS5_140403A** | | | SeqNo: **2699206** | | Prep Date: | | DF: **1** | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| GRO (C6-C10) | U | 100 | | | | | | | | |
| *Surr: Toluene-d8* | *18.67* | 0 | *20* | 0 | *93.4* | *70-120* | 0 | | | |

| **LCS** | Sample ID: **VLCSW2-140403-R138301** | | | | Units: **µg/L** | | | Analysis Date: **4/3/2014 01:11 PM** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | | Run ID: **VMS5_140403A** | | | SeqNo: **2699205** | | Prep Date: | | DF: **1** | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| GRO (C6-C10) | 428.1 | 100 | 500 | 0 | 85.6 | 70-130 | 0 | | | |
| *Surr: Toluene-d8* | *19.26* | 0 | *20* | 0 | *96.3* | *70-130* | 0 | | | |

**The following samples were analyzed in this batch:** 1404130-15A 1404130-17A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138301A** Instrument ID **VMS5** Method: **SW8260**

| **MBLK** | Sample ID: **VBLKW1-14043-R138301A** | | | | Units: **µg/L** | | Analysis Date: **4/3/2014 02:30 PM** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | | Run ID: **VMS5_140403A** | | | SeqNo: **2699017** | | Prep Date: | | DF: **1** | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | U | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | U | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | U | 1.0 | | | | | | | | |
| 1,1,2-Trichlorotrifluoroethane | U | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | U | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | U | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | U | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | U | 1.0 | | | | | | | | |
| 1,2-Dibromoethane | U | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | U | 1.0 | | | | | | | | |
| 1,2-Dichloroethane | U | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | U | 2.0 | | | | | | | | |
| 1,3-Dichlorobenzene | U | 2.0 | | | | | | | | |
| 1,4-Dichlorobenzene | U | 2.0 | | | | | | | | |
| 2-Butanone | U | 5.0 | | | | | | | | |
| 2-Hexanone | U | 5.0 | | | | | | | | |
| 4-Methyl-2-pentanone | U | 5.0 | | | | | | | | |
| Acetone | U | 20 | | | | | | | | |
| Benzene | U | 1.0 | | | | | | | | |
| Bromodichloromethane | U | 1.0 | | | | | | | | |
| Bromoform | U | 1.0 | | | | | | | | |
| Bromomethane | U | 1.0 | | | | | | | | |
| Carbon disulfide | U | 2.5 | | | | | | | | |
| Carbon tetrachloride | U | 1.0 | | | | | | | | |
| Chlorobenzene | U | 1.0 | | | | | | | | |
| Chloroethane | U | 1.0 | | | | | | | | |
| Chloroform | U | 1.0 | | | | | | | | |
| Chloromethane | U | 1.0 | | | | | | | | |
| cis-1,2-Dichloroethene | U | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | U | 1.0 | | | | | | | | |
| Cyclohexane | U | 5.0 | | | | | | | | |
| Dibromochloromethane | U | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | U | 1.0 | | | | | | | | |
| Ethylbenzene | U | 1.0 | | | | | | | | |
| Isopropylbenzene | U | 1.0 | | | | | | | | |
| m,p-Xylene | U | 2.0 | | | | | | | | |
| Methyl acetate | U | 2.0 | | | | | | | | |
| Methyl tert-butyl ether | U | 5.0 | | | | | | | | |
| Methylcyclohexane | U | 5.0 | | | | | | | | |
| Methylene chloride | U | 5.0 | | | | | | | | |
| o-Xylene | U | 1.0 | | | | | | | | |
| Styrene | U | 1.0 | | | | | | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **R138301A** Instrument ID **VMS5** Method: **SW8260**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | U | 2.0 | | | | | |
| Toluene | U | 1.0 | | | | | |
| trans-1,2-Dichloroethene | U | 1.0 | | | | | |
| trans-1,3-Dichloropropene | U | 1.0 | | | | | |
| Trichloroethene | U | 1.0 | | | | | |
| Trichlorofluoromethane | U | 1.0 | | | | | |
| Vinyl chloride | U | 1.0 | | | | | |
| Xylenes, Total | U | 3.0 | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *20.19* | 0 | *20* | 0 | *101* | *70-120* | 0 |
| *Surr: 4-Bromofluorobenzene* | *18.78* | 0 | *20* | 0 | *93.9* | *75-120* | 0 |
| *Surr: Dibromofluoromethane* | *20.01* | 0 | *20* | 0 | *100* | *85-115* | 0 |
| *Surr: Toluene-d8* | *20.43* | 0 | *20* | 0 | *102* | *85-120* | 0 |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138301A** Instrument ID **VMS5** Method: **SW8260**

| **LCS** | Sample ID: **VLCSW1-140403-R138301A** | | | | Units: **µg/L** | | | Analysis Date: **4/3/2014 12:19 PM** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | | Run ID: **VMS5_140403A** | | | SeqNo: **2699015** | | Prep Date: | | DF: **1** | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | 19.76 | 1.0 | 20 | 0 | 98.8 | 65-130 | 0 | | | |
| 1,1,2,2-Tetrachloroethane | 20.04 | 1.0 | 20 | 0 | 100 | 65-130 | 0 | | | |
| 1,1,2-Trichloroethane | 19.41 | 1.0 | 20 | 0 | 97 | 75-125 | 0 | | | |
| 1,1-Dichloroethane | 20.65 | 1.0 | 20 | 0 | 103 | 70-135 | 0 | | | |
| 1,1-Dichloroethene | 22.6 | 1.0 | 20 | 0 | 113 | 70-130 | 0 | | | |
| 1,2,4-Trichlorobenzene | 19.24 | 1.0 | 20 | 0 | 96.2 | 65-135 | 0 | | | |
| 1,2-Dibromo-3-chloropropane | 16.04 | 1.0 | 20 | 0 | 80.2 | 50-130 | 0 | | | |
| 1,2-Dibromoethane | 21.35 | 1.0 | 20 | 0 | 107 | 87-179 | 0 | | | |
| 1,2-Dichlorobenzene | 19.3 | 1.0 | 20 | 0 | 96.5 | 70-120 | 0 | | | |
| 1,2-Dichloroethane | 18.44 | 1.0 | 20 | 0 | 92.2 | 87-179 | 0 | | | |
| 1,2-Dichloropropane | 18.64 | 2.0 | 20 | 0 | 93.2 | 75-125 | 0 | | | |
| 1,3-Dichlorobenzene | 19.75 | 2.0 | 20 | 0 | 98.8 | 75-125 | 0 | | | |
| 1,4-Dichlorobenzene | 18.78 | 2.0 | 20 | 0 | 93.9 | 75-125 | 0 | | | |
| 2-Butanone | 21.6 | 5.0 | 20 | 0 | 108 | 30-150 | 0 | | | |
| 2-Hexanone | 21.2 | 5.0 | 20 | 0 | 106 | 55-130 | 0 | | | |
| 4-Methyl-2-pentanone | 27.62 | 5.0 | 20 | 0 | 138 | 77-178 | 0 | | | |
| Acetone | 22.96 | 20 | 20 | 0 | 115 | 40-140 | 0 | | | |
| Benzene | 19.92 | 1.0 | 20 | 0 | 99.6 | 80-120 | 0 | | | |
| Bromodichloromethane | 19.04 | 1.0 | 20 | 0 | 95.2 | 75-120 | 0 | | | |
| Bromoform | 15.18 | 1.0 | 20 | 0 | 75.9 | 70-130 | 0 | | | |
| Bromomethane | 36.01 | 1.0 | 20 | 0 | 180 | 30-145 | 0 | | | S |
| Carbon disulfide | 23.3 | 2.5 | 20 | 0 | 116 | 35-165 | 0 | | | |
| Carbon tetrachloride | 19.94 | 1.0 | 20 | 0 | 99.7 | 65-140 | 0 | | | |
| Chlorobenzene | 19.51 | 1.0 | 20 | 0 | 97.6 | 80-120 | 0 | | | |
| Chloroethane | 24.93 | 1.0 | 20 | 0 | 125 | 60-135 | 0 | | | |
| Chloroform | 19.43 | 1.0 | 20 | 0 | 97.2 | 65-135 | 0 | | | |
| Chloromethane | 22.45 | 1.0 | 20 | 0 | 112 | 70-125 | 0 | | | |
| cis-1,2-Dichloroethene | 20.29 | 1.0 | 20 | 0 | 101 | 70-125 | 0 | | | |
| cis-1,3-Dichloropropene | 19.77 | 1.0 | 20 | 0 | 98.8 | 70-130 | 0 | | | |
| Dibromochloromethane | 15.55 | 1.0 | 20 | 0 | 77.8 | 60-135 | 0 | | | |
| Dichlorodifluoromethane | 18.31 | 1.0 | 20 | 0 | 91.6 | 30-155 | 0 | | | |
| Ethylbenzene | 20.88 | 1.0 | 20 | 0 | 104 | 75-125 | 0 | | | |
| Isopropylbenzene | 20.94 | 1.0 | 20 | 0 | 105 | 75-125 | 0 | | | |
| m,p-Xylene | 41.09 | 2.0 | 40 | 0 | 103 | 75-130 | 0 | | | |
| Methyl tert-butyl ether | 20.19 | 5.0 | 20 | 0 | 101 | 65-125 | 0 | | | |
| Methylene chloride | 22.09 | 5.0 | 20 | 0 | 110 | 55-140 | 0 | | | |
| o-Xylene | 20.37 | 1.0 | 20 | 0 | 102 | 80-120 | 0 | | | |
| Styrene | 21.18 | 1.0 | 20 | 0 | 106 | 65-135 | 0 | | | |
| Tetrachloroethene | 19.69 | 2.0 | 20 | 0 | 98.4 | 45-150 | 0 | | | |
| Toluene | 20.25 | 1.0 | 20 | 0 | 101 | 75-120 | 0 | | | |
| trans-1,2-Dichloroethene | 22.07 | 1.0 | 20 | 0 | 110 | 60-140 | 0 | | | |
| trans-1,3-Dichloropropene | 20.06 | 1.0 | 20 | 0 | 100 | 55-140 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **R138301A** Instrument ID **VMS5** Method: **SW8260**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trichloroethene | 19.67 | 1.0 | 20 | 0 | 98.4 | 70-125 | 0 |
| Trichlorofluoromethane | 22.77 | 1.0 | 20 | 0 | 114 | 60-145 | 0 |
| Vinyl chloride | 23.26 | 1.0 | 20 | 0 | 116 | 50-145 | 0 |
| Xylenes, Total | 61.46 | 3.0 | 60 | 0 | 102 | 75-130 | 0 |
| *Surr: 1,2-Dichloroethane-d4* | *19.65* | 0 | *20* | 0 | *98.2* | *70-120* | 0 |
| *Surr: 4-Bromofluorobenzene* | *19.42* | 0 | *20* | 0 | *97.1* | *75-120* | 0 |
| *Surr: Dibromofluoromethane* | *19.85* | 0 | *20* | 0 | *99.2* | *85-115* | 0 |
| *Surr: Toluene-d8* | *20.54* | 0 | *20* | 0 | *103* | *85-120* | 0 |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138301A** Instrument ID **VMS5** Method: **SW8260**

**MS** Sample ID: **1404130-15A MS** Units: **µg/L** Analysis Date: **4/3/2014 09:27 PM**

Client ID: **GW-04** Run ID: **VMS5_140403A** SeqNo: **2699024** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 12.59 | 1.0 | 20 | 0 | 63 | 65-130 | 0 | | | S |
| 1,1,2,2-Tetrachloroethane | 2.67 | 1.0 | 20 | 0 | 13.4 | 65-130 | 0 | | | S |
| 1,1,2-Trichloroethane | 11.57 | 1.0 | 20 | 0 | 57.8 | 75-125 | 0 | | | S |
| 1,1-Dichloroethane | 12.79 | 1.0 | 20 | 0 | 64 | 70-135 | 0 | | | S |
| 1,1-Dichloroethene | 14.72 | 1.0 | 20 | 0 | 73.6 | 70-130 | 0 | | | |
| 1,2,4-Trichlorobenzene | 11.54 | 1.0 | 20 | 0 | 57.7 | 65-135 | 0 | | | S |
| 1,2-Dibromo-3-chloropropane | 7.02 | 1.0 | 20 | 0 | 35.1 | 50-130 | 0 | | | S |
| 1,2-Dibromoethane | 12.38 | 1.0 | 20 | 0 | 61.9 | 81-158 | 0 | | | S |
| 1,2-Dichlorobenzene | 11.55 | 1.0 | 20 | 0 | 57.8 | 70-120 | 0 | | | S |
| 1,2-Dichloroethane | 11.21 | 1.0 | 20 | 0 | 56 | 70-130 | 0 | | | S |
| 1,2-Dichloropropane | 11.5 | 2.0 | 20 | 0 | 57.5 | 75-125 | 0 | | | S |
| 1,3-Dichlorobenzene | 11.95 | 2.0 | 20 | 0 | 59.8 | 75-125 | 0 | | | S |
| 1,4-Dichlorobenzene | 11.62 | 2.0 | 20 | 0 | 58.1 | 75-125 | 0 | | | S |
| 2-Butanone | 20.38 | 5.0 | 20 | 0 | 102 | 30-150 | 0 | | | |
| 2-Hexanone | 16.58 | 5.0 | 20 | 0 | 82.9 | 55-130 | 0 | | | |
| 4-Methyl-2-pentanone | 12.85 | 5.0 | 20 | 0 | 64.2 | 73-162 | 0 | | | S |
| Acetone | 33.09 | 20 | 20 | 0 | 165 | 40-140 | 0 | | | S |
| Benzene | 12.71 | 1.0 | 20 | 0 | 63.6 | 80-120 | 0 | | | S |
| Bromodichloromethane | 9.95 | 1.0 | 20 | 0 | 49.8 | 75-120 | 0 | | | S |
| Bromoform | 6.78 | 1.0 | 20 | 0 | 33.9 | 70-130 | 0 | | | S |
| Bromomethane | 22.69 | 1.0 | 20 | 0 | 113 | 30-145 | 0 | | | |
| Carbon disulfide | 13.61 | 2.5 | 20 | 0 | 68 | 35-165 | 0 | | | |
| Carbon tetrachloride | 11.04 | 1.0 | 20 | 0 | 55.2 | 65-140 | 0 | | | S |
| Chlorobenzene | 12.07 | 1.0 | 20 | 0 | 60.4 | 80-120 | 0 | | | S |
| Chloroethane | 15.58 | 1.0 | 20 | 0 | 77.9 | 60-135 | 0 | | | |
| Chloroform | 11.96 | 1.0 | 20 | 0 | 59.8 | 65-135 | 0 | | | S |
| Chloromethane | 13.92 | 1.0 | 20 | 0 | 69.6 | 70-125 | 0 | | | S |
| cis-1,2-Dichloroethene | 12.17 | 1.0 | 20 | 0 | 60.8 | 70-125 | 0 | | | S |
| cis-1,3-Dichloropropene | 10.91 | 1.0 | 20 | 0 | 54.6 | 70-130 | 0 | | | S |
| Dibromochloromethane | 7.48 | 1.0 | 20 | 0 | 37.4 | 60-135 | 0 | | | S |
| Dichlorodifluoromethane | 11.95 | 1.0 | 20 | 0 | 59.8 | 30-155 | 0 | | | |
| Ethylbenzene | 13.31 | 1.0 | 20 | 0 | 66.6 | 75-125 | 0 | | | S |
| Isopropylbenzene | 13.08 | 1.0 | 20 | 0 | 65.4 | 75-125 | 0 | | | S |
| m,p-Xylene | 25.56 | 2.0 | 40 | 0 | 63.9 | 75-130 | 0 | | | S |
| Methyl tert-butyl ether | 11.9 | 5.0 | 20 | 0 | 59.5 | 65-125 | 0 | | | S |
| Methylene chloride | 13.17 | 5.0 | 20 | 0 | 65.8 | 55-140 | 0 | | | |
| o-Xylene | 12.58 | 1.0 | 20 | 0 | 62.9 | 80-120 | 0 | | | S |
| Styrene | 12.44 | 1.0 | 20 | 0 | 62.2 | 65-135 | 0 | | | S |
| Tetrachloroethene | 24.17 | 2.0 | 20 | 0 | 121 | 45-150 | 0 | | | |
| Toluene | 13.04 | 1.0 | 20 | 0.3 | 63.7 | 75-120 | 0 | | | S |
| trans-1,2-Dichloroethene | 13.62 | 1.0 | 20 | 0 | 68.1 | 60-140 | 0 | | | |
| trans-1,3-Dichloropropene | 10.96 | 1.0 | 20 | 0 | 54.8 | 55-140 | 0 | | | S |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **R138301A** Instrument ID **VMS5** Method: **SW8260**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Trichloroethene | 20.01 | 1.0 | 20 | 0 | 100 | 70-125 | 0 | |
| Trichlorofluoromethane | 15.16 | 1.0 | 20 | 0 | 75.8 | 60-145 | 0 | |
| Vinyl chloride | 15.33 | 1.0 | 20 | 0 | 76.6 | 50-145 | 0 | |
| Xylenes, Total | 38.14 | 3.0 | 60 | 0 | 63.6 | 75-130 | 0 | S |
| *Surr: 1,2-Dichloroethane-d4* | *19.69* | 0 | *20* | 0 | *98.4* | *70-120* | 0 | |
| *Surr: 4-Bromofluorobenzene* | *19.44* | 0 | *20* | 0 | *97.2* | *75-120* | 0 | |
| *Surr: Dibromofluoromethane* | *19.03* | 0 | *20* | 0 | *95.2* | *85-115* | 0 | |
| *Surr: Toluene-d8* | *20.7* | 0 | *20* | 0 | *104* | *85-120* | 0 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138301A** Instrument ID **VMS5** Method: **SW8260**

**MSD** Sample ID: **1404130-15A MSD** Units: **µg/L** Analysis Date: **4/3/2014 09:53 PM**

Client ID: **GW-04** Run ID: **VMS5_140403A** SeqNo: **2699026** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 12.14 | 1.0 | 20 | 0 | 60.7 | 65-130 | 12.59 | 3.64 | 30 | S |
| 1,1,2,2-Tetrachloroethane | 2.48 | 1.0 | 20 | 0 | 12.4 | 65-130 | 2.67 | 7.38 | 30 | S |
| 1,1,2-Trichloroethane | 10.98 | 1.0 | 20 | 0 | 54.9 | 75-125 | 11.57 | 5.23 | 30 | S |
| 1,1-Dichloroethane | 12.47 | 1.0 | 20 | 0 | 62.4 | 70-135 | 12.79 | 2.53 | 30 | S |
| 1,1-Dichloroethene | 14.12 | 1.0 | 20 | 0 | 70.6 | 70-130 | 14.72 | 4.16 | 30 | |
| 1,2,4-Trichlorobenzene | 11.87 | 1.0 | 20 | 0 | 59.4 | 65-135 | 11.54 | 2.82 | 30 | S |
| 1,2-Dibromo-3-chloropropane | 7.25 | 1.0 | 20 | 0 | 36.2 | 50-130 | 7.02 | 3.22 | 30 | S |
| 1,2-Dibromoethane | 12.15 | 1.0 | 20 | 0 | 60.8 | 81-158 | 12.38 | 1.88 | 30 | S |
| 1,2-Dichlorobenzene | 12.17 | 1.0 | 20 | 0 | 60.8 | 70-120 | 11.55 | 5.23 | 30 | S |
| 1,2-Dichloroethane | 11.23 | 1.0 | 20 | 0 | 56.2 | 70-130 | 11.21 | 0.178 | 30 | S |
| 1,2-Dichloropropane | 11.3 | 2.0 | 20 | 0 | 56.5 | 75-125 | 11.5 | 1.75 | 30 | S |
| 1,3-Dichlorobenzene | 12.34 | 2.0 | 20 | 0 | 61.7 | 75-125 | 11.95 | 3.21 | 30 | S |
| 1,4-Dichlorobenzene | 11.87 | 2.0 | 20 | 0 | 59.4 | 75-125 | 11.62 | 2.13 | 30 | S |
| 2-Butanone | 18.88 | 5.0 | 20 | 0 | 94.4 | 30-150 | 20.38 | 7.64 | 30 | |
| 2-Hexanone | 15.73 | 5.0 | 20 | 0 | 78.6 | 55-130 | 16.58 | 5.26 | 30 | |
| 4-Methyl-2-pentanone | 12.29 | 5.0 | 20 | 0 | 61.4 | 73-162 | 12.85 | 4.46 | 30 | S |
| Acetone | 29.85 | 20 | 20 | 0 | 149 | 40-140 | 33.09 | 10.3 | 30 | S |
| Benzene | 12.42 | 1.0 | 20 | 0 | 62.1 | 80-120 | 12.71 | 2.31 | 30 | S |
| Bromodichloromethane | 10.2 | 1.0 | 20 | 0 | 51 | 75-120 | 9.95 | 2.48 | 30 | S |
| Bromoform | 6.82 | 1.0 | 20 | 0 | 34.1 | 70-130 | 6.78 | 0.588 | 30 | S |
| Bromomethane | 21.67 | 1.0 | 20 | 0 | 108 | 30-145 | 22.69 | 4.6 | 30 | |
| Carbon disulfide | 13 | 2.5 | 20 | 0 | 65 | 35-165 | 13.61 | 4.58 | 30 | |
| Carbon tetrachloride | 11.12 | 1.0 | 20 | 0 | 55.6 | 65-140 | 11.04 | 0.722 | 30 | S |
| Chlorobenzene | 11.61 | 1.0 | 20 | 0 | 58 | 80-120 | 12.07 | 3.89 | 30 | S |
| Chloroethane | 15.17 | 1.0 | 20 | 0 | 75.8 | 60-135 | 15.58 | 2.67 | 30 | |
| Chloroform | 11.84 | 1.0 | 20 | 0 | 59.2 | 65-135 | 11.96 | 1.01 | 30 | S |
| Chloromethane | 13.24 | 1.0 | 20 | 0 | 66.2 | 70-125 | 13.92 | 5.01 | 30 | S |
| cis-1,2-Dichloroethene | 11.76 | 1.0 | 20 | 0 | 58.8 | 70-125 | 12.17 | 3.43 | 30 | S |
| cis-1,3-Dichloropropene | 11.04 | 1.0 | 20 | 0 | 55.2 | 70-130 | 10.91 | 1.18 | 30 | S |
| Dibromochloromethane | 7.37 | 1.0 | 20 | 0 | 36.8 | 60-135 | 7.48 | 1.48 | 30 | S |
| Dichlorodifluoromethane | 11.02 | 1.0 | 20 | 0 | 55.1 | 30-155 | 11.95 | 8.1 | 30 | |
| Ethylbenzene | 12.55 | 1.0 | 20 | 0 | 62.8 | 75-125 | 13.31 | 5.88 | 30 | S |
| Isopropylbenzene | 13.16 | 1.0 | 20 | 0 | 65.8 | 75-125 | 13.08 | 0.61 | 30 | S |
| m,p-Xylene | 25.12 | 2.0 | 40 | 0 | 62.8 | 75-130 | 25.56 | 1.74 | 30 | S |
| Methyl tert-butyl ether | 11.69 | 5.0 | 20 | 0 | 58.4 | 65-125 | 11.9 | 1.78 | 30 | S |
| Methylene chloride | 13.16 | 5.0 | 20 | 0 | 65.8 | 55-140 | 13.17 | 0.076 | 30 | |
| o-Xylene | 12.29 | 1.0 | 20 | 0 | 61.4 | 80-120 | 12.58 | 2.33 | 30 | S |
| Styrene | 12.27 | 1.0 | 20 | 0 | 61.4 | 65-135 | 12.44 | 1.38 | 30 | S |
| Tetrachloroethene | 23.12 | 2.0 | 20 | 0 | 116 | 45-150 | 24.17 | 4.44 | 30 | |
| Toluene | 12.27 | 1.0 | 20 | 0.3 | 59.8 | 75-120 | 13.04 | 6.08 | 30 | S |
| trans-1,2-Dichloroethene | 13.13 | 1.0 | 20 | 0 | 65.6 | 60-140 | 13.62 | 3.66 | 30 | |
| trans-1,3-Dichloropropene | 10.54 | 1.0 | 20 | 0 | 52.7 | 55-140 | 10.96 | 3.91 | 30 | S |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **R138301A** Instrument ID **VMS5** Method: **SW8260**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene | 19.44 | 1.0 | 20 | 0 | 97.2 | 70-125 | 20.01 | 2.89 | 30 | |
| Trichlorofluoromethane | 14.62 | 1.0 | 20 | 0 | 73.1 | 60-145 | 15.16 | 3.63 | 30 | |
| Vinyl chloride | 14.38 | 1.0 | 20 | 0 | 71.9 | 50-145 | 15.33 | 6.4 | 30 | |
| Xylenes, Total | 37.41 | 3.0 | 60 | 0 | 62.4 | 75-130 | 38.14 | 1.93 | 30 | S |
| *Surr: 1,2-Dichloroethane-d4* | *19.96* | 0 | *20* | 0 | *99.8* | *70-120* | 19.69 | *1.36* | *30* | |
| *Surr: 4-Bromofluorobenzene* | *19.21* | 0 | *20* | 0 | *96* | *75-120* | 19.44 | *1.19* | *30* | |
| *Surr: Dibromofluoromethane* | *19.51* | 0 | *20* | 0 | *97.6* | *85-115* | 19.03 | *2.49* | *30* | |
| *Surr: Toluene-d8* | *20.59* | 0 | *20* | 0 | *103* | *85-120* | 20.7 | *0.533* | *30* | |

**The following samples were analyzed in this batch:** 1404130-15A 1404130-17A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138353** Instrument ID **VMS7** Method: **SW8260**

**MBLK** Sample ID: **VBLKS2-140403-R138353** Units: **µg/Kg** Analysis Date: **4/3/2014 04:21 PM**

Client ID: Run ID: **VMS7_140403A** SeqNo: **2699397** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | U | 5.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | U | 5.0 | | | | | | | | |
| 1,1,2-Trichloroethane | U | 5.0 | | | | | | | | |
| 1,1,2-Trichlorotrifluoroethane | U | 5.0 | | | | | | | | |
| 1,1-Dichloroethane | U | 5.0 | | | | | | | | |
| 1,1-Dichloroethene | U | 5.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | U | 5.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | U | 5.0 | | | | | | | | |
| 1,2-Dibromoethane | U | 5.0 | | | | | | | | |
| 1,2-Dichlorobenzene | U | 5.0 | | | | | | | | |
| 1,2-Dichloroethane | U | 5.0 | | | | | | | | |
| 1,2-Dichloropropane | U | 5.0 | | | | | | | | |
| 1,3-Dichlorobenzene | U | 5.0 | | | | | | | | |
| 1,4-Dichlorobenzene | U | 5.0 | | | | | | | | |
| 2-Butanone | U | 10 | | | | | | | | |
| 2-Hexanone | U | 5.0 | | | | | | | | |
| 4-Methyl-2-pentanone | U | 5.0 | | | | | | | | |
| Acetone | U | 10 | | | | | | | | |
| Benzene | U | 5.0 | | | | | | | | |
| Bromodichloromethane | U | 5.0 | | | | | | | | |
| Bromoform | U | 5.0 | | | | | | | | |
| Bromomethane | U | 10 | | | | | | | | |
| Carbon disulfide | U | 5.0 | | | | | | | | |
| Carbon tetrachloride | U | 5.0 | | | | | | | | |
| Chlorobenzene | U | 5.0 | | | | | | | | |
| Chloroethane | U | 5.0 | | | | | | | | |
| Chloroform | U | 5.0 | | | | | | | | |
| Chloromethane | U | 10 | | | | | | | | |
| cis-1,2-Dichloroethene | U | 5.0 | | | | | | | | |
| cis-1,3-Dichloropropene | U | 5.0 | | | | | | | | |
| Cyclohexane | U | 5.0 | | | | | | | | |
| Dibromochloromethane | U | 5.0 | | | | | | | | |
| Dichlorodifluoromethane | U | 10 | | | | | | | | |
| Ethylbenzene | U | 5.0 | | | | | | | | |
| Isopropylbenzene | U | 5.0 | | | | | | | | |
| m,p-Xylene | U | 2.5 | | | | | | | | |
| Methyl acetate | U | 10 | | | | | | | | |
| Methyl tert-butyl ether | U | 5.0 | | | | | | | | |
| Methylcyclohexane | U | 10 | | | | | | | | |
| Methylene chloride | U | 5.0 | | | | | | | | |
| o-Xylene | U | 2.5 | | | | | | | | |
| Styrene | U | 5.0 | | | | | | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **R138353** Instrument ID **VMS7** Method: **SW8260**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | U | 5.0 | | | | | |
| Toluene | U | 5.0 | | | | | |
| trans-1,2-Dichloroethene | U | 5.0 | | | | | |
| trans-1,3-Dichloropropene | U | 10 | | | | | |
| Trichloroethene | U | 5.0 | | | | | |
| Trichlorofluoromethane | U | 5.0 | | | | | |
| Vinyl chloride | U | 5.0 | | | | | |
| Xylenes, Total | U | 5.0 | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *20.2* | 0 | *20* | 0 | *101* | *70-120* | 0 |
| *Surr: 4-Bromofluorobenzene* | *19.37* | 0 | *20* | 0 | *96.8* | *75-120* | 0 |
| *Surr: Dibromofluoromethane* | *19.54* | 0 | *20* | 0 | *97.7* | *85-115* | 0 |
| *Surr: Toluene-d8* | *20.29* | 0 | *20* | 0 | *101* | *85-120* | 0 |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138353** Instrument ID **VMS7** Method: **SW8260**

| **LCS** | Sample ID: **VLCSS1-140403-R138353** | | | | Units: **µg/Kg** | | | Analysis Date: **4/3/2014 03:20 PM** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | | Run ID: **VMS7_140403A** | | | SeqNo: **2699261** | | Prep Date: | | DF: **1** | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | 19.42 | 5.0 | 20 | 0 | 97.1 | 70-135 | 0 | | | |
| 1,1,2,2-Tetrachloroethane | 21.73 | 5.0 | 20 | 0 | 109 | 55-130 | 0 | | | |
| 1,1,2-Trichloroethane | 21.12 | 5.0 | 20 | 0 | 106 | 60-125 | 0 | | | |
| 1,1-Dichloroethane | 20.83 | 5.0 | 20 | 0 | 104 | 75-125 | 0 | | | |
| 1,1-Dichloroethene | 21.65 | 5.0 | 20 | 0 | 108 | 65-135 | 0 | | | |
| 1,2,4-Trichlorobenzene | 20.69 | 5.0 | 20 | 0 | 103 | 65-130 | 0 | | | |
| 1,2-Dibromo-3-chloropropane | 23 | 5.0 | 20 | 0 | 115 | 40-135 | 0 | | | |
| 1,2-Dibromoethane | 21.18 | 5.0 | 20 | 0 | 106 | 70-125 | 0 | | | |
| 1,2-Dichlorobenzene | 20.23 | 5.0 | 20 | 0 | 101 | 75-120 | 0 | | | |
| 1,2-Dichloroethane | 20.65 | 5.0 | 20 | 0 | 103 | 70-135 | 0 | | | |
| 1,2-Dichloropropane | 19.71 | 5.0 | 20 | 0 | 98.6 | 70-120 | 0 | | | |
| 1,3-Dichlorobenzene | 20.37 | 5.0 | 20 | 0 | 102 | 70-125 | 0 | | | |
| 1,4-Dichlorobenzene | 20.59 | 5.0 | 20 | 0 | 103 | 70-125 | 0 | | | |
| 2-Butanone | 28.2 | 10 | 20 | 0 | 141 | 30-160 | 0 | | | |
| 2-Hexanone | 24.61 | 5.0 | 20 | 0 | 123 | 45-145 | 0 | | | |
| 4-Methyl-2-pentanone | 35.05 | 5.0 | 20 | 0 | 175 | 114-173 | 0 | | | S |
| Acetone | 28.55 | 10 | 20 | 0 | 143 | 20-160 | 0 | | | |
| Benzene | 20.04 | 5.0 | 20 | 0 | 100 | 75-125 | 0 | | | |
| Bromodichloromethane | 19.34 | 5.0 | 20 | 0 | 96.7 | 70-130 | 0 | | | |
| Bromoform | 20.62 | 5.0 | 20 | 0 | 103 | 55-135 | 0 | | | |
| Bromomethane | 27.83 | 10 | 20 | 0 | 139 | 30-160 | 0 | | | |
| Carbon disulfide | 23.52 | 5.0 | 20 | 0 | 118 | 45-160 | 0 | | | |
| Carbon tetrachloride | 19.87 | 5.0 | 20 | 0 | 99.4 | 65-135 | 0 | | | |
| Chlorobenzene | 19.51 | 5.0 | 20 | 0 | 97.6 | 75-125 | 0 | | | |
| Chloroethane | 19.12 | 5.0 | 20 | 0 | 95.6 | 40-155 | 0 | | | |
| Chloroform | 20.02 | 5.0 | 20 | 0 | 100 | 70-125 | 0 | | | |
| Chloromethane | 18.52 | 10 | 20 | 0 | 92.6 | 50-130 | 0 | | | |
| cis-1,2-Dichloroethene | 20.99 | 5.0 | 20 | 0 | 105 | 65-125 | 0 | | | |
| cis-1,3-Dichloropropene | 20.69 | 5.0 | 20 | 0 | 103 | 70-125 | 0 | | | |
| Dibromochloromethane | 19.39 | 5.0 | 20 | 0 | 97 | 65-135 | 0 | | | |
| Dichlorodifluoromethane | 15.46 | 10 | 20 | 0 | 77.3 | 35-135 | 0 | | | |
| Ethylbenzene | 19.65 | 5.0 | 20 | 0 | 98.2 | 75-125 | 0 | | | |
| Isopropylbenzene | 20.24 | 5.0 | 20 | 0 | 101 | 75-130 | 0 | | | |
| m,p-Xylene | 39.76 | 2.5 | 40 | 0 | 99.4 | 80-125 | 0 | | | |
| Methyl tert-butyl ether | 23.98 | 5.0 | 20 | 0 | 120 | 75-125 | 0 | | | |
| Methylene chloride | 20.98 | 5.0 | 20 | 0 | 105 | 55-140 | 0 | | | |
| o-Xylene | 19.88 | 2.5 | 20 | 0 | 99.4 | 75-125 | 0 | | | |
| Styrene | 20.93 | 5.0 | 20 | 0 | 105 | 75-125 | 0 | | | |
| Tetrachloroethene | 18.56 | 5.0 | 20 | 0 | 92.8 | 65-140 | 0 | | | |
| Toluene | 19.76 | 5.0 | 20 | 0 | 98.8 | 70-125 | 0 | | | |
| trans-1,2-Dichloroethene | 21.56 | 5.0 | 20 | 0 | 108 | 65-135 | 0 | | | |
| trans-1,3-Dichloropropene | 21.58 | 10 | 20 | 0 | 108 | 65-125 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **R138353** Instrument ID **VMS7** Method: **SW8260**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trichloroethene | 20 | 5.0 | 20 | 0 | 100 | 75-125 | 0 |
| Trichlorofluoromethane | 19.05 | 5.0 | 20 | 0 | 95.2 | 25-185 | 0 |
| Vinyl chloride | 19.16 | 5.0 | 20 | 0 | 95.8 | 60-125 | 0 |
| Xylenes, Total | 59.64 | 5.0 | 60 | 0 | 99.4 | 75-125 | 0 |
| *Surr: 1,2-Dichloroethane-d4* | *19.97* | 0 | *20* | 0 | *99.8* | *70-120* | 0 |
| *Surr: 4-Bromofluorobenzene* | *19.03* | 0 | *20* | 0 | *95.2* | *75-120* | 0 |
| *Surr: Dibromofluoromethane* | *19.33* | 0 | *20* | 0 | *96.6* | *85-115* | 0 |
| *Surr: Toluene-d8* | *19.32* | 0 | *20* | 0 | *96.6* | *85-120* | 0 |

**The following samples were analyzed in this batch:** 1404130-16A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138585** Instrument ID **VMS7** Method: **SW8260**

**MBLK** Sample ID: **VBLKS1-140409-R138585** Units: **µg/Kg** Analysis Date: **4/9/2014 10:11 AM**

Client ID: Run ID: **VMS7_140409A** SeqNo: **2705763** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | U | 5.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | U | 5.0 | | | | | | | | |
| 1,1,2-Trichloroethane | U | 5.0 | | | | | | | | |
| 1,1,2-Trichlorotrifluoroethane | U | 5.0 | | | | | | | | |
| 1,1-Dichloroethane | U | 5.0 | | | | | | | | |
| 1,1-Dichloroethene | U | 5.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | U | 5.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | U | 5.0 | | | | | | | | |
| 1,2-Dibromoethane | U | 5.0 | | | | | | | | |
| 1,2-Dichlorobenzene | U | 5.0 | | | | | | | | |
| 1,2-Dichloroethane | U | 5.0 | | | | | | | | |
| 1,2-Dichloropropane | U | 5.0 | | | | | | | | |
| 1,3-Dichlorobenzene | U | 5.0 | | | | | | | | |
| 1,4-Dichlorobenzene | U | 5.0 | | | | | | | | |
| 2-Butanone | U | 10 | | | | | | | | |
| 2-Hexanone | U | 5.0 | | | | | | | | |
| 4-Methyl-2-pentanone | U | 5.0 | | | | | | | | |
| Acetone | U | 10 | | | | | | | | |
| Benzene | U | 5.0 | | | | | | | | |
| Bromodichloromethane | U | 5.0 | | | | | | | | |
| Bromoform | U | 5.0 | | | | | | | | |
| Bromomethane | U | 10 | | | | | | | | |
| Carbon disulfide | U | 5.0 | | | | | | | | |
| Carbon tetrachloride | U | 5.0 | | | | | | | | |
| Chlorobenzene | U | 5.0 | | | | | | | | |
| Chloroethane | U | 5.0 | | | | | | | | |
| Chloroform | U | 5.0 | | | | | | | | |
| Chloromethane | U | 10 | | | | | | | | |
| cis-1,2-Dichloroethene | U | 5.0 | | | | | | | | |
| cis-1,3-Dichloropropene | U | 5.0 | | | | | | | | |
| Cyclohexane | U | 5.0 | | | | | | | | |
| Dibromochloromethane | U | 5.0 | | | | | | | | |
| Dichlorodifluoromethane | U | 10 | | | | | | | | |
| Ethylbenzene | U | 5.0 | | | | | | | | |
| Isopropylbenzene | U | 5.0 | | | | | | | | |
| m,p-Xylene | U | 2.5 | | | | | | | | |
| Methyl acetate | U | 10 | | | | | | | | |
| Methyl tert-butyl ether | U | 5.0 | | | | | | | | |
| Methylcyclohexane | U | 10 | | | | | | | | |
| Methylene chloride | U | 5.0 | | | | | | | | |
| o-Xylene | U | 2.5 | | | | | | | | |
| Styrene | U | 5.0 | | | | | | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **R138585** Instrument ID **VMS7** Method: **SW8260**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | U | 5.0 | | | | | |
| Toluene | U | 5.0 | | | | | |
| trans-1,2-Dichloroethene | U | 5.0 | | | | | |
| trans-1,3-Dichloropropene | U | 10 | | | | | |
| Trichloroethene | U | 5.0 | | | | | |
| Trichlorofluoromethane | U | 5.0 | | | | | |
| Vinyl chloride | U | 5.0 | | | | | |
| Xylenes, Total | U | 5.0 | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *19.79* | 0 | *20* | 0 | *99* | *70-120* | 0 |
| *Surr: 4-Bromofluorobenzene* | *18.94* | 0 | *20* | 0 | *94.7* | *75-120* | 0 |
| *Surr: Dibromofluoromethane* | *19.56* | 0 | *20* | 0 | *97.8* | *85-115* | 0 |
| *Surr: Toluene-d8* | *19.9* | 0 | *20* | 0 | *99.5* | *85-120* | 0 |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138585** Instrument ID **VMS7** Method: **SW8260**

| **LCS** | Sample ID: **VLCSS1-140409-R138585** | | | | Units: **µg/Kg** | | | Analysis Date: **4/9/2014 09:08 AM** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | | Run ID: **VMS7_140409A** | | | SeqNo: **2705759** | | Prep Date: | | DF: **1** | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | 17.85 | 5.0 | 20 | 0 | 89.2 | 70-135 | 0 | | | |
| 1,1,2,2-Tetrachloroethane | 19.62 | 5.0 | 20 | 0 | 98.1 | 55-130 | 0 | | | |
| 1,1,2-Trichloroethane | 19.06 | 5.0 | 20 | 0 | 95.3 | 60-125 | 0 | | | |
| 1,1-Dichloroethane | 18.33 | 5.0 | 20 | 0 | 91.6 | 75-125 | 0 | | | |
| 1,1-Dichloroethene | 19.24 | 5.0 | 20 | 0 | 96.2 | 65-135 | 0 | | | |
| 1,2,4-Trichlorobenzene | 18.49 | 5.0 | 20 | 0 | 92.4 | 65-130 | 0 | | | |
| 1,2-Dibromo-3-chloropropane | 20.97 | 5.0 | 20 | 0 | 105 | 40-135 | 0 | | | |
| 1,2-Dibromoethane | 18.92 | 5.0 | 20 | 0 | 94.6 | 70-125 | 0 | | | |
| 1,2-Dichlorobenzene | 17.61 | 5.0 | 20 | 0 | 88 | 75-120 | 0 | | | |
| 1,2-Dichloroethane | 18.22 | 5.0 | 20 | 0 | 91.1 | 70-135 | 0 | | | |
| 1,2-Dichloropropane | 17.78 | 5.0 | 20 | 0 | 88.9 | 70-120 | 0 | | | |
| 1,3-Dichlorobenzene | 17.82 | 5.0 | 20 | 0 | 89.1 | 70-125 | 0 | | | |
| 1,4-Dichlorobenzene | 17.75 | 5.0 | 20 | 0 | 88.8 | 70-125 | 0 | | | |
| 2-Butanone | 23.91 | 10 | 20 | 0 | 120 | 30-160 | 0 | | | |
| 2-Hexanone | 21.99 | 5.0 | 20 | 0 | 110 | 45-145 | 0 | | | |
| 4-Methyl-2-pentanone | 30.9 | 5.0 | 20 | 0 | 154 | 114-173 | 0 | | | |
| Acetone | 23.94 | 10 | 20 | 0 | 120 | 20-160 | 0 | | | |
| Benzene | 18 | 5.0 | 20 | 0 | 90 | 75-125 | 0 | | | |
| Bromodichloromethane | 17.66 | 5.0 | 20 | 0 | 88.3 | 70-130 | 0 | | | |
| Bromoform | 19.15 | 5.0 | 20 | 0 | 95.8 | 55-135 | 0 | | | |
| Bromomethane | 22.39 | 10 | 20 | 0 | 112 | 30-160 | 0 | | | |
| Carbon disulfide | 20.14 | 5.0 | 20 | 0 | 101 | 45-160 | 0 | | | |
| Carbon tetrachloride | 18.47 | 5.0 | 20 | 0 | 92.4 | 65-135 | 0 | | | |
| Chlorobenzene | 17.44 | 5.0 | 20 | 0 | 87.2 | 75-125 | 0 | | | |
| Chloroethane | 17.6 | 5.0 | 20 | 0 | 88 | 40-155 | 0 | | | |
| Chloroform | 17.3 | 5.0 | 20 | 0 | 86.5 | 70-125 | 0 | | | |
| Chloromethane | 16.66 | 10 | 20 | 0 | 83.3 | 50-130 | 0 | | | |
| cis-1,2-Dichloroethene | 18.38 | 5.0 | 20 | 0 | 91.9 | 65-125 | 0 | | | |
| cis-1,3-Dichloropropene | 18.97 | 5.0 | 20 | 0 | 94.8 | 70-125 | 0 | | | |
| Dibromochloromethane | 18 | 5.0 | 20 | 0 | 90 | 65-135 | 0 | | | |
| Dichlorodifluoromethane | 14.58 | 10 | 20 | 0 | 72.9 | 35-135 | 0 | | | |
| Ethylbenzene | 17.39 | 5.0 | 20 | 0 | 87 | 75-125 | 0 | | | |
| Isopropylbenzene | 17.6 | 5.0 | 20 | 0 | 88 | 75-130 | 0 | | | |
| m,p-Xylene | 34.72 | 2.5 | 40 | 0 | 86.8 | 80-125 | 0 | | | |
| Methyl tert-butyl ether | 20.56 | 5.0 | 20 | 0 | 103 | 75-125 | 0 | | | |
| Methylene chloride | 19.44 | 5.0 | 20 | 0 | 97.2 | 55-140 | 0 | | | |
| o-Xylene | 17.63 | 2.5 | 20 | 0 | 88.2 | 75-125 | 0 | | | |
| Styrene | 18.26 | 5.0 | 20 | 0 | 91.3 | 75-125 | 0 | | | |
| Tetrachloroethene | 16.24 | 5.0 | 20 | 0 | 81.2 | 65-140 | 0 | | | |
| Toluene | 17.54 | 5.0 | 20 | 0 | 87.7 | 70-125 | 0 | | | |
| trans-1,2-Dichloroethene | 19.03 | 5.0 | 20 | 0 | 95.2 | 65-135 | 0 | | | |
| trans-1,3-Dichloropropene | 19.34 | 10 | 20 | 0 | 96.7 | 65-125 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **R138585** Instrument ID **VMS7** Method: **SW8260**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trichloroethene | 17.61 | 5.0 | 20 | 0 | 88 | 75-125 | 0 |
| Trichlorofluoromethane | 17.1 | 5.0 | 20 | 0 | 85.5 | 25-185 | 0 |
| Vinyl chloride | 16.91 | 5.0 | 20 | 0 | 84.6 | 60-125 | 0 |
| Xylenes, Total | 52.35 | 5.0 | 60 | 0 | 87.2 | 75-125 | 0 |
| *Surr: 1,2-Dichloroethane-d4* | *21.09* | 0 | *20* | 0 | *105* | *70-120* | 0 |
| *Surr: 4-Bromofluorobenzene* | *20.14* | 0 | *20* | 0 | *101* | *75-120* | 0 |
| *Surr: Dibromofluoromethane* | *20.08* | 0 | *20* | 0 | *100* | *85-115* | 0 |
| *Surr: Toluene-d8* | *19.74* | 0 | *20* | 0 | *98.7* | *85-120* | 0 |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138585** Instrument ID **VMS7** Method: **SW8260**

**MS** Sample ID: **1404130-06A MS** Units: **µg/Kg** Analysis Date: **4/9/2014 07:13 PM**

Client ID: **SO-03-D-12-16** Run ID: **VMS7_140409A** SeqNo: **2705786** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 13.3 | 5.0 | 20 | 0 | 66.5 | 70-135 | 0 | | | S |
| 1,1,2,2-Tetrachloroethane | 15.36 | 5.0 | 20 | 0 | 76.8 | 55-130 | 0 | | | |
| 1,1,2-Trichloroethane | 14.04 | 5.0 | 20 | 0 | 70.2 | 60-125 | 0 | | | |
| 1,1-Dichloroethane | 13.88 | 5.0 | 20 | 0 | 69.4 | 75-125 | 0 | | | S |
| 1,1-Dichloroethene | 14.42 | 5.0 | 20 | 0 | 72.1 | 65-135 | 0 | | | |
| 1,2,4-Trichlorobenzene | 11.47 | 5.0 | 20 | 0 | 57.4 | 65-130 | 0 | | | S |
| 1,2-Dibromo-3-chloropropane | 16.03 | 5.0 | 20 | 0 | 80.2 | 40-135 | 0 | | | |
| 1,2-Dibromoethane | 14.44 | 5.0 | 20 | 0 | 72.2 | 44-112 | 0 | | | |
| 1,2-Dichlorobenzene | 12.43 | 5.0 | 20 | 0 | 62.2 | 75-120 | 0 | | | S |
| 1,2-Dichloroethane | 14.14 | 5.0 | 20 | 0 | 70.7 | 70-135 | 0 | | | |
| 1,2-Dichloropropane | 13.65 | 5.0 | 20 | 0 | 68.2 | 70-120 | 0 | | | S |
| 1,3-Dichlorobenzene | 12.18 | 5.0 | 20 | 0 | 60.9 | 70-125 | 0 | | | S |
| 1,4-Dichlorobenzene | 12.1 | 5.0 | 20 | 0 | 60.5 | 70-125 | 0 | | | S |
| 2-Butanone | 19.18 | 10 | 20 | 2.074 | 85.5 | 30-160 | 0 | | | |
| 2-Hexanone | 16.18 | 5.0 | 20 | 0 | 80.9 | 45-145 | 0 | | | |
| 4-Methyl-2-pentanone | 23.41 | 5.0 | 20 | 0 | 117 | 52-180 | 0 | | | |
| Acetone | 24.19 | 10 | 20 | 19.35 | 24.2 | 20-160 | 0 | | | |
| Benzene | 13.56 | 5.0 | 20 | 0 | 67.8 | 75-125 | 0 | | | S |
| Bromodichloromethane | 13.33 | 5.0 | 20 | 0 | 66.6 | 70-130 | 0 | | | S |
| Bromoform | 14.25 | 5.0 | 20 | 0 | 71.2 | 55-135 | 0 | | | |
| Bromomethane | 15.95 | 10 | 20 | 0 | 79.8 | 30-160 | 0 | | | |
| Carbon disulfide | 15.28 | 5.0 | 20 | 0 | 76.4 | 45-160 | 0 | | | |
| Carbon tetrachloride | 13.82 | 5.0 | 20 | 0 | 69.1 | 65-135 | 0 | | | |
| Chlorobenzene | 12.73 | 5.0 | 20 | 0 | 63.6 | 75-125 | 0 | | | S |
| Chloroethane | 12.65 | 5.0 | 20 | 0 | 63.2 | 40-155 | 0 | | | |
| Chloroform | 13.57 | 5.0 | 20 | 0 | 67.8 | 70-125 | 0 | | | S |
| Chloromethane | 11.11 | 10 | 20 | 0 | 55.6 | 50-130 | 0 | | | |
| cis-1,2-Dichloroethene | 13.74 | 5.0 | 20 | 0 | 68.7 | 65-125 | 0 | | | |
| cis-1,3-Dichloropropene | 13.93 | 5.0 | 20 | 0 | 69.6 | 70-125 | 0 | | | S |
| Dibromochloromethane | 13.46 | 5.0 | 20 | 0 | 67.3 | 65-135 | 0 | | | |
| Dichlorodifluoromethane | 11.36 | 10 | 20 | 0 | 56.8 | 35-135 | 0 | | | |
| Ethylbenzene | 12.9 | 5.0 | 20 | 0 | 64.5 | 75-125 | 0 | | | S |
| Isopropylbenzene | 12.42 | 5.0 | 20 | 0 | 62.1 | 75-130 | 0 | | | S |
| m,p-Xylene | 25.15 | 2.5 | 40 | 0 | 62.9 | 80-125 | 0 | | | S |
| Methyl tert-butyl ether | 15.53 | 5.0 | 20 | 0 | 77.6 | 75-125 | 0 | | | |
| Methylene chloride | 17.72 | 5.0 | 20 | 1.077 | 83.2 | 55-140 | 0 | | | |
| o-Xylene | 12.44 | 2.5 | 20 | 0 | 62.2 | 75-125 | 0 | | | S |
| Styrene | 12.75 | 5.0 | 20 | 0 | 63.8 | 75-125 | 0 | | | S |
| Tetrachloroethene | 12.41 | 5.0 | 20 | 0 | 62 | 65-140 | 0 | | | S |
| Toluene | 13.13 | 5.0 | 20 | 0.2997 | 64.2 | 70-125 | 0 | | | S |
| trans-1,2-Dichloroethene | 14.51 | 5.0 | 20 | 0 | 72.6 | 65-135 | 0 | | | |
| trans-1,3-Dichloropropene | 13.98 | 10 | 20 | 0 | 69.9 | 65-125 | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **R138585** Instrument ID **VMS7** Method: **SW8260**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Trichloroethene | 13.32 | 5.0 | 20 | 0 | 66.6 | 75-125 | 0 | S |
| Trichlorofluoromethane | 13.27 | 5.0 | 20 | 0 | 66.4 | 25-185 | 0 | |
| Vinyl chloride | 12.58 | 5.0 | 20 | 0 | 62.9 | 60-125 | 0 | |
| Xylenes, Total | 37.59 | 5.0 | 60 | 0 | 62.6 | 75-125 | 0 | S |
| *Surr: 1,2-Dichloroethane-d4* | *21.46* | 0 | *20* | 0 | *107* | *70-120* | 0 | |
| *Surr: 4-Bromofluorobenzene* | *19.17* | 0 | *20* | 0 | *95.8* | *75-120* | 0 | |
| *Surr: Dibromofluoromethane* | *20.14* | 0 | *20* | 0 | *101* | *85-115* | 0 | |
| *Surr: Toluene-d8* | *19.48* | 0 | *20* | 0 | *97.4* | *85-120* | 0 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138585** Instrument ID **VMS7** Method: **SW8260**

**MSD** Sample ID: **1404130-06A MSD** Units: **µg/Kg** Analysis Date: **4/9/2014 07:39 PM**

Client ID: **SO-03-D-12-16** Run ID: **VMS7_140409A** SeqNo: **2705787** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 13.91 | 5.0 | 20 | 0 | 69.6 | 70-135 | 13.3 | 4.48 | 30 | S |
| 1,1,2,2-Tetrachloroethane | 17.01 | 5.0 | 20 | 0 | 85 | 55-130 | 15.36 | 10.2 | 30 | |
| 1,1,2-Trichloroethane | 15.33 | 5.0 | 20 | 0 | 76.6 | 60-125 | 14.04 | 8.78 | 30 | |
| 1,1-Dichloroethane | 14.36 | 5.0 | 20 | 0 | 71.8 | 75-125 | 13.88 | 3.4 | 30 | S |
| 1,1-Dichloroethene | 14.49 | 5.0 | 20 | 0 | 72.4 | 65-135 | 14.42 | 0.484 | 30 | |
| 1,2,4-Trichlorobenzene | 13.07 | 5.0 | 20 | 0 | 65.4 | 65-130 | 11.47 | 13 | 30 | |
| 1,2-Dibromo-3-chloropropane | 17.61 | 5.0 | 20 | 0 | 88 | 40-135 | 16.03 | 9.39 | 30 | |
| 1,2-Dibromoethane | 15.52 | 5.0 | 20 | 0 | 77.6 | 44-112 | 14.44 | 7.21 | 30 | |
| 1,2-Dichlorobenzene | 13.71 | 5.0 | 20 | 0 | 68.6 | 75-120 | 12.43 | 9.79 | 30 | S |
| 1,2-Dichloroethane | 15.4 | 5.0 | 20 | 0 | 77 | 70-135 | 14.14 | 8.53 | 30 | |
| 1,2-Dichloropropane | 14.48 | 5.0 | 20 | 0 | 72.4 | 70-120 | 13.65 | 5.9 | 30 | |
| 1,3-Dichlorobenzene | 13.87 | 5.0 | 20 | 0 | 69.4 | 70-125 | 12.18 | 13 | 30 | S |
| 1,4-Dichlorobenzene | 13.44 | 5.0 | 20 | 0 | 67.2 | 70-125 | 12.1 | 10.5 | 30 | S |
| 2-Butanone | 20.05 | 10 | 20 | 2.074 | 89.9 | 30-160 | 19.18 | 4.44 | 30 | |
| 2-Hexanone | 17.85 | 5.0 | 20 | 0 | 89.2 | 45-145 | 16.18 | 9.81 | 30 | |
| 4-Methyl-2-pentanone | 25.49 | 5.0 | 20 | 0 | 127 | 52-180 | 23.41 | 8.51 | 30 | |
| Acetone | 28.39 | 10 | 20 | 19.35 | 45.2 | 20-160 | 24.19 | 16 | 30 | |
| Benzene | 13.83 | 5.0 | 20 | 0 | 69.2 | 75-125 | 13.56 | 1.97 | 30 | S |
| Bromodichloromethane | 13.84 | 5.0 | 20 | 0 | 69.2 | 70-130 | 13.33 | 3.75 | 30 | S |
| Bromoform | 15.83 | 5.0 | 20 | 0 | 79.2 | 55-135 | 14.25 | 10.5 | 30 | |
| Bromomethane | 17.22 | 10 | 20 | 0 | 86.1 | 30-160 | 15.95 | 7.66 | 30 | |
| Carbon disulfide | 14.86 | 5.0 | 20 | 0 | 74.3 | 45-160 | 15.28 | 2.79 | 30 | |
| Carbon tetrachloride | 13.81 | 5.0 | 20 | 0 | 69 | 65-135 | 13.82 | 0.0724 | 30 | |
| Chlorobenzene | 13.57 | 5.0 | 20 | 0 | 67.8 | 75-125 | 12.73 | 6.39 | 30 | S |
| Chloroethane | 13.15 | 5.0 | 20 | 0 | 65.8 | 40-155 | 12.65 | 3.88 | 30 | |
| Chloroform | 13.96 | 5.0 | 20 | 0 | 69.8 | 70-125 | 13.57 | 2.83 | 30 | S |
| Chloromethane | 11.39 | 10 | 20 | 0 | 57 | 50-130 | 11.11 | 2.49 | 30 | |
| cis-1,2-Dichloroethene | 14.24 | 5.0 | 20 | 0 | 71.2 | 65-125 | 13.74 | 3.57 | 30 | |
| cis-1,3-Dichloropropene | 14.88 | 5.0 | 20 | 0 | 74.4 | 70-125 | 13.93 | 6.59 | 30 | |
| Dibromochloromethane | 14.59 | 5.0 | 20 | 0 | 73 | 65-135 | 13.46 | 8.06 | 30 | |
| Dichlorodifluoromethane | 10.81 | 10 | 20 | 0 | 54 | 35-135 | 11.36 | 4.96 | 30 | |
| Ethylbenzene | 13.39 | 5.0 | 20 | 0 | 67 | 75-125 | 12.9 | 3.73 | 30 | S |
| Isopropylbenzene | 13.11 | 5.0 | 20 | 0 | 65.6 | 75-130 | 12.42 | 5.41 | 30 | S |
| m,p-Xylene | 26.25 | 2.5 | 40 | 0 | 65.6 | 80-125 | 25.15 | 4.28 | 30 | S |
| Methyl tert-butyl ether | 16.55 | 5.0 | 20 | 0 | 82.8 | 75-125 | 15.53 | 6.36 | 30 | |
| Methylene chloride | 16.83 | 5.0 | 20 | 1.077 | 78.8 | 55-140 | 17.72 | 5.15 | 30 | |
| o-Xylene | 13.4 | 2.5 | 20 | 0 | 67 | 75-125 | 12.44 | 7.43 | 30 | S |
| Styrene | 14 | 5.0 | 20 | 0 | 70 | 75-125 | 12.75 | 9.35 | 30 | S |
| Tetrachloroethene | 12.83 | 5.0 | 20 | 0 | 64.2 | 65-140 | 12.41 | 3.33 | 30 | S |
| Toluene | 13.67 | 5.0 | 20 | 0.2997 | 66.9 | 70-125 | 13.13 | 4.03 | 30 | S |
| trans-1,2-Dichloroethene | 14.56 | 5.0 | 20 | 0 | 72.8 | 65-135 | 14.51 | 0.344 | 30 | |
| trans-1,3-Dichloropropene | 14.98 | 10 | 20 | 0 | 74.9 | 65-125 | 13.98 | 6.91 | 30 | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# QC BATCH REPORT

Batch ID: **R138585** Instrument ID **VMS7** Method: **SW8260**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene | 13.6 | 5.0 | 20 | 0 | 68 | 75-125 | 13.32 | 2.08 | 30 | S |
| Trichlorofluoromethane | 13.1 | 5.0 | 20 | 0 | 65.5 | 25-185 | 13.27 | 1.29 | 30 | |
| Vinyl chloride | 12.13 | 5.0 | 20 | 0 | 60.6 | 60-125 | 12.58 | 3.64 | 30 | |
| Xylenes, Total | 39.65 | 5.0 | 60 | 0 | 66.1 | 75-125 | 37.59 | 5.33 | 30 | S |
| *Surr: 1,2-Dichloroethane-d4* | *21.06* | 0 | *20* | 0 | *105* | *70-120* | 21.46 | *1.88* | *30* | |
| *Surr: 4-Bromofluorobenzene* | *20.04* | 0 | *20* | 0 | *100* | *75-120* | 19.17 | *4.44* | *30* | |
| *Surr: Dibromofluoromethane* | *20.07* | 0 | *20* | 0 | *100* | *85-115* | 20.14 | *0.348* | *30* | |
| *Surr: Toluene-d8* | *19.38* | 0 | *20* | 0 | *96.9* | *85-120* | 19.48 | *0.515* | *30* | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 1404130-01A | 1404130-02A | 1404130-03A |
| 1404130-04A | 1404130-05A | 1404130-06A |
| 1404130-07A | 1404130-08A | 1404130-09A |
| 1404130-10A | 1404130-11A | 1404130-12A |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138307** Instrument ID **MOIST** Method: **A2540 G**

**MBLK** Sample ID: **WBLKS-R138307** Units: **% of sample** Analysis Date: **4/2/2014 01:35 PM**
Client ID: Run ID: **MOIST_140402B** SeqNo: **2697810** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | U | 0.050 | | | | | | | | |

**LCS** Sample ID: **LCS-R138307** Units: **% of sample** Analysis Date: **4/2/2014 01:35 PM**
Client ID: Run ID: **MOIST_140402B** SeqNo: **2697808** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 100 | 0.050 | 100 | 0 | 100 | 99.5-100.5 | 0 | | | |

**DUP** Sample ID: **1404034-02B DUP** Units: **% of sample** Analysis Date: **4/2/2014 01:35 PM**
Client ID: Run ID: **MOIST_140402B** SeqNo: **2697784** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 0.5 | 0.050 | 0 | 0 | 0 | 0-0 | 0.54 | 7.69 | 20 | |

**DUP** Sample ID: **1404094-12B DUP** Units: **% of sample** Analysis Date: **4/2/2014 01:35 PM**
Client ID: Run ID: **MOIST_140402B** SeqNo: **2697797** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 23.44 | 0.050 | 0 | 0 | 0 | 0-0 | 24.18 | 3.11 | 20 | |

**The following samples were analyzed in this batch:** 1404130-01B 1404130-02B 1404130-03B

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138313** Instrument ID **MOIST** Method: **A2540 G**

**MBLK** Sample ID: **WBLKS-R138313** Units: **% of sample** Analysis Date: **4/2/2014 05:01 PM**
Client ID: Run ID: **MOIST_140402C** SeqNo: **2697868** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | U | 0.050 | | | | | | | | |

**LCS** Sample ID: **LCS-R138313** Units: **% of sample** Analysis Date: **4/2/2014 05:01 PM**
Client ID: Run ID: **MOIST_140402C** SeqNo: **2697867** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 99.99 | 0.050 | 100 | 0 | 100 | 99.5-100.5 | 0 | | | |

**DUP** Sample ID: **1404130-12B DUP** Units: **% of sample** Analysis Date: **4/2/2014 05:01 PM**
Client ID: **SO-06-D-16-20** Run ID: **MOIST_140402C** SeqNo: **2697866** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 23.91 | 0.050 | 0 | 0 | 0 | 0-0 | 24.25 | 1.41 | 20 | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 1404130-04B | 1404130-05B | 1404130-06B |
| 1404130-07B | 1404130-08B | 1404130-09B |
| 1404130-10B | 1404130-11B | 1404130-12B |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Tetra Tech
**Work Order:** 1404130
**Project:** KCMO Public Works East Garage 3.31-4.1.14

# QC BATCH REPORT

Batch ID: **R138379** Instrument ID **MOIST** Method: **A2540 G**

**MBLK** Sample ID: **WBLKS-R138379** Units: **% of sample** Analysis Date: **4/3/2014 02:05 PM**
Client ID: Run ID: **MOIST_140403A** SeqNo: **2699348** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | U | 0.050 | | | | | | | | |

**LCS** Sample ID: **LCS-R138379** Units: **% of sample** Analysis Date: **4/3/2014 02:05 PM**
Client ID: Run ID: **MOIST_140403A** SeqNo: **2699346** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 100 | 0.050 | 100 | 0 | 100 | 99.5-100.5 | 0 | | | |

**DUP** Sample ID: **1404182-01B DUP** Units: **% of sample** Analysis Date: **4/3/2014 02:05 PM**
Client ID: Run ID: **MOIST_140403A** SeqNo: **2699334** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 21.63 | 0.050 | 0 | 0 | 0 | 0-0 | 22.15 | 2.38 | 20 | |

**DUP** Sample ID: **1404184-01A DUP** Units: **% of sample** Analysis Date: **4/3/2014 02:05 PM**
Client ID: Run ID: **MOIST_140403A** SeqNo: **2699338** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 16.81 | 0.050 | 0 | 0 | 0 | 0-0 | 15.59 | 7.53 | 20 | |

**The following samples were analyzed in this batch:** 1404130-13A 1404130-14A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

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Houston, TX +1 281 530 5656
Middletown, PA +1 717 944 5541
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Salt Lake City, UT +1 801 266 7700
South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

# Chain of Custody Form

Page ____ of ____

COC ID: 105127

ALS Project Manager: | ALS Work Order #: 1404130

| Customer Information | | Project Information | | Parameter/Method Request for Analysis | |
|---|---|---|---|---|---|
| Purchase Order | | Project Name | KCMO Pubplic Works, | A | TCL Volatiles with GRO (C6-C10) by EPA 8260 |
| Work Order | | Project Number | E. Garage | B | TCL Semi-Volatiles with DRO (C10-C28) by EPA 8270 |
| Company Name | Tetra Tech | Bill To Company | Tetra Tech | C | PCBs by EPA 8082 |
| Send Report To | Kumud Pyakuryal | Invoice Attn | Emily Fisher | D | RCRA 8 |
| Address | 415 Oak Street | Address | 415 Oak Street | E | % Moisture |
| | | | | F | Diss. RCRA 8 Metals-Field Filtered |
| City/State/Zip | Kansas City, MO 64106 | City/State/Zip | Kansas City, MO 64108 | G | Pesticides by EPA 8141 |
| Phone | (816) 412-1755 | Phone | (816) 412-1755 | H | Full list Herbicides by EPA 8151 |
| Fax | (816) 410-1748 | Fax | (816) 410-1748 | I | |
| e-Mail Address | | e-Mail Address | | J | |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SO-01-S-0-4 | 4/1/14 | 15:30 | SOIL | | | ✓ | ✓ | ✓ | ✓ | | | | | | | |
| 2 | SO-01-D-16-20 | 4/1/14 | 16:00 | SOIL | | | ✓ | ✓ | ✓ | ✓ | | | | | | | |
| 3 | SO-02-S-0-4 | 4/1/14 | 12:15 | SOIL | | | | | | | | | | | | | |
| 4 | SO-02 D-16-20 | 4/1/14 | 12:40 | SOIL | | | | | | | | | | | | | |
| 5 | SO-03-S-0-4 | 4/1/14 | 11:10 | SOIL | | | | | | | | | | | | | |
| 6 | SO-03-D-12-16 | 4/1/14 | 11:45 | SOIL | | | | | | | | | | | | | |
| 7 | ~~SO-04-S-0-4~~ | 3/31/14 | 1005 | SOIL | | | | | | | | | | | | | |
| 8 | SO-04-S-0-4 | 3/31/14 | 11:10 | SOIL | | | ✓ | ✓ | ✓ | ✓ | | | | | | | |
| 9 | SO-04-D-16-20 | 3/31/14 | 12:00 | SOIL | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

Sampler(s) Please Print & Sign: Kumud Pyakuryal

Shipment Method: Fedex

Required Turnaround Time: (Check Box) ☐ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: Kumud Pyakuryal — Date: 4/1/14 — Time: 18:30 — Received by: FED EX

Relinquished by: FED EX — Date: 4/2/14 — Time: 0930 — Received by (Laboratory): [signature]

Logged by (Laboratory): DCS — Date: 4/2/14 — Time: 1545 — Checked by (Laboratory): [signature]

Notes:

| Cooler ID | Cooler Temp. |
|---|---|
| | 4.4 C |
| | |
| | |

QC Package: (Check One Box Below)

- ☑ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other
- ☐ TRRP CheckList
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-$HNO_3$ 3-$H_2SO_4$ 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

# Chain of Custody Form

Page ____ of ____

COC ID: 105128

ALS Project Manager: | ALS Work Order #: 1404130

| Customer Information | | Project Information | | Parameter/Method Request for Analysis | |
|---|---|---|---|---|---|
| Purchase Order | | Project Name | KCMO Pubplic Works, | A | TCL Volatiles with GRO (C6-C10) by EPA 8260 |
| Work Order | | Project Number | E. Garage | B | TCL Semi-Volatiles with DRO (C10-C28) by EPA 8270 |
| Company Name | Tetra Tech | Bill To Company | Tetra Tech | C | PCBs by EPA 8082 |
| Send Report To | Kumud Pyakuryal | Invoice Attn | Emily Fisher | D | RCRA 8 |
| Address | 415 Oak Street | Address | 415 Oak Street | E | % Moisture |
| | | | | F | Diss. RCRA 8 Metals-Field Filtered |
| City/State/Zip | Kansas City, MO 64106 | City/State/Zip | Kansas City, MO 64106 | G | Pesticides by EPA 8141 |
| Phone | (816) 412-1755 | Phone | (816) 412-1755 | H | Full list Herbicides by EPA 8151 |
| Fax | (816) 410-1748 | Fax | (816) 410-1748 | I | |
| e-Mail Address | | e-Mail Address | | J | |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SD-05 - S - 0-4 | 3/31/2014 | 15:05 | SOIL | | | ✓ | ✓ | ✓ | ✓ | | | | | | | |
| 2 | SD-05 - D - 16-20 | 3/31/14 | 15:45 | SOIL | | | ↓ | ↓ | ↓ | ↓ | | | | | | | |
| 3 | SD-06 - S - 0-4 | 3/31/14 | 16:00 | SOIL | | | | | | | | | | | | | |
| 4 | SD-06 - D - 16-20 | 3/31/14 | 16:30 | SOIL | | | ↓ | ↓ | ↓ | ↓ | | | | | | | |
| 5 | SED - 01 | 3/31/14 | 16:35 | SEDIMENT | | | | | ✓ | ✓ | | | ✓ | ✓ | | | |
| 6 | SED - 02 | 3/31/14 | 16:00 | SEDIMENT | | | | | ✓ | ✓ | | | ✓ | ✓ | | | |
| 7 | GW-04 | 3/31/14 | 12:00 | WATER | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | | |
| 8 | 16 Trip Blank | 3/31/14 | | Soil | | | ✓ | | | | | | | | | | |
| 9 | 17 Trip Blank | 3/31/14 | | Water | | | ✓ | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

Sampler(s) Please Print & Sign: Kumud Pyakuryal 4/1/2014

Shipment Method: FED EX

Required Turnaround Time: (Check Box) ☐ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Notes:

| Relinquished by: | Date: | Time: | Received by: |
|---|---|---|---|
| Kumud | 4/1/14 | 18:30 | FED EX |
| Relinquished by: FED EX | Date: 4/2/14 | Time: 0930 | Received by (Laboratory): |
| Logged by (Laboratory): DES | Date: 4/2/14 | Time: 1545 | Checked by (Laboratory): |

| Cooler ID | Cooler Temp. |
|---|---|
| | 4.4°C |

QC Package: (Check One Box Below)
- ☑ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other
- ☐ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-$HNO_3$ 3-$H_2SO_4$ 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Group USA, Corp

## Sample Receipt Checklist

Client Name: **TETRATECH - MO** Date/Time Received: **02-Apr-14 09:30**

Work Order: **1404130** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 02-Apr-14 (Date) Reviewed by: Ann Preston (eSignature) 03-Apr-14 (Date)

Matrices: Soil, Sediment, Water

Carrier name: FedEx

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Sample(s) received on ice? | Yes ☑ | No ☐ | |
| Temperature(s)/Thermometer(s): | 4.4 c | | |
| Cooler(s)/Kit(s): | | | |
| Date/Time sample(s) sent to storage: | 4/2/2014 4:19:47 PM | | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☑ | No ☐ | N/A ☐ |
| pH adjusted? | Yes ☐ | No ☑ | N/A ☐ |
| pH adjusted by: | - | | |

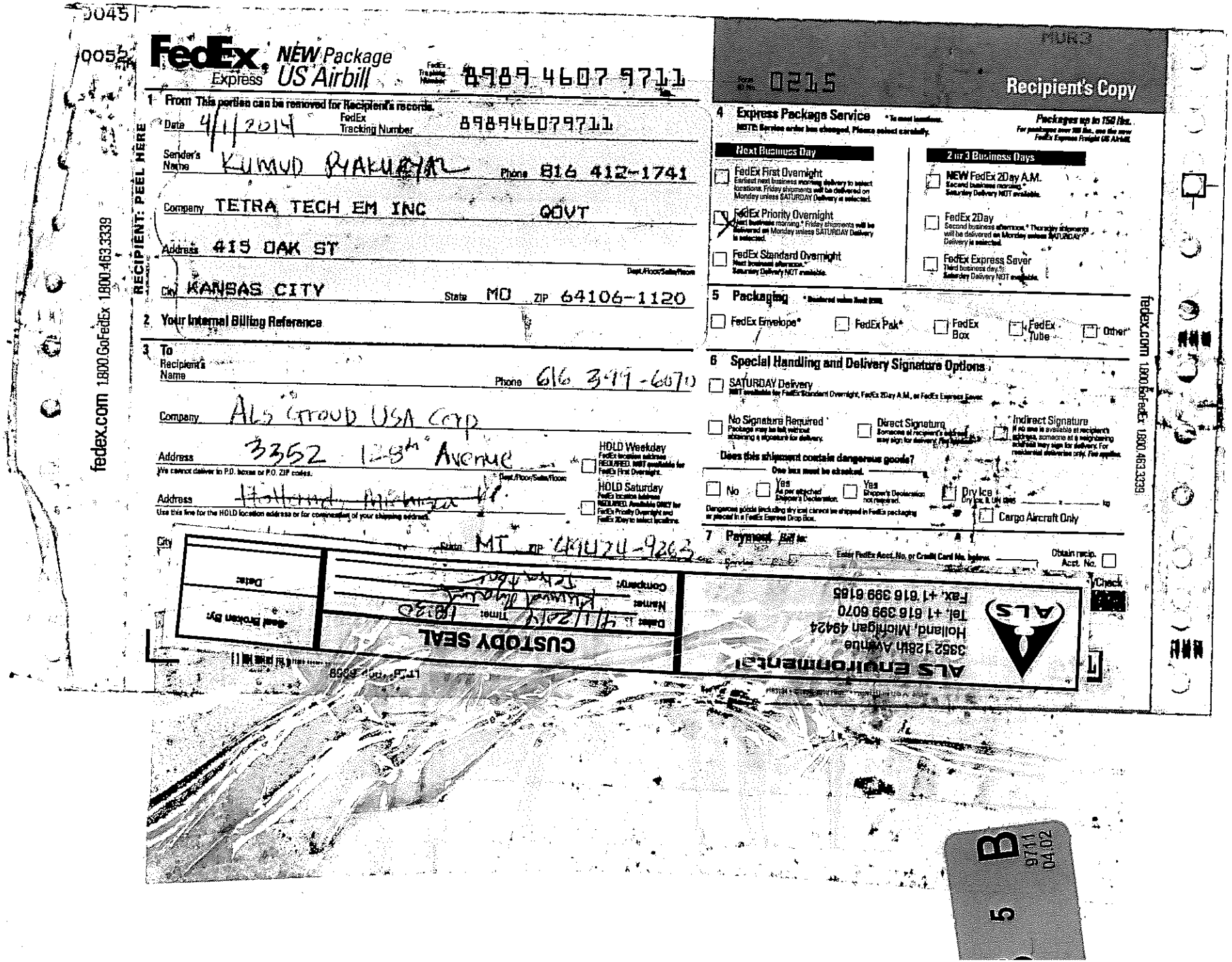
Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:



FedEx Express NEW Package US Airbill

FedEx Tracking Number 8989 4607 9711

Form No. 0215

Recipient's Copy

1 From This portion can be removed for Recipient's records.

Date 4/1/2014

FedEx Tracking Number 898946079711

Sender's Name KUMUD RAKURAR Phone 816 412-1741

Company TETRA TECH EM INC GOVT

Address 415 OAK ST

Dept./Floor/Suite/Room

City KANSAS CITY State MO ZIP 64106-1120

2 Your Internal Billing Reference

3 To

Recipient's Name Phone 616 399-6070

Company ALS GROUP USA CORP

Address 3352 128th Avenue

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address Holland Michigan

Use this line for the HOLD location address or for connection of your shipping address.

City Holland State MI ZIP 49424-9263

HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

4 Express Package Service * To most locations.

NEW Service order has changed. Please select carefully.

Packages up to 150 lbs.

For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

- FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. [X]
- FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- NEW FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

FedEx Envelope* FedEx Pak* FedEx Box FedEx Tube Other*

6 Special Handling and Delivery Signature Options

SATURDAY Delivery NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

No Signature Required — Package may be left without obtaining a signature for delivery.

Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.

Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

One box must be checked.

No Yes As per attached Shipper's Declaration Yes Shipper's Declaration not required

Dry Ice Dry Ice, 9, UN 1845 ____ kg

Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below

Obtain recip. Acct. No.

Express

Check

CUSTODY SEAL

Date: 4/1/2014 Time: 1830

Name: Kumud Rakurar

Company: TETRA TECH

Signature

Dated Received By:

Date:

ALS Environmental

3352 128th Avenue

Holland, Michigan 49424

Tel. +1 616 399 6070

Fax. +1 616 399 6185

RECIPIENT: PEEL HERE

fedex.com 1.800.GoFedEx 1.800.463.3339

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0045

0052

B 9711 0402

# Sample Collection Field Sheet

**US EPA Region 7**
**Kansas City, KS**

**Project Number:** 103X9025.14.0002.019.001 **Matrix:** SOIL **Sample Number:** SO-02-S-0-4 / SO-02-D-16-20

**Project ID:** KCMO East Garage **Project Manager:** Kumud Pyakuryal

**Location:** 4725/4635 E. Coal Mine Road, Kansas City **State:** Missouri

**Superfund Name:** NA **Site ID:** NA

**Location Description:** Brownfields Target Assessment

**External Sample Number:**

**Latitude:** 39.04265 **Sample Collection:** KP **Time:** 12:15 (Shallow) 12:30 (deep)

**Longitude:** 94.50796

**Laboratory Analysis:**

| Container | Preservative | Holding Time | Analysis |
|---|---|---|---|

**Property Owner Information:**

**Sample Comments:**

| Depth | VOCs (ppm) |
|---|---|
| 0 - 4 | 0 |
| 4 - 8 | 0 |
| 8 - 12 | 0 |
| 12 - 16 | 0 |
| 16 - 20 | 0 |

**Sample Location Map:**

Sample core/bore @ 12-16' appeared wet; dark clay/black.

~~No water~~ KP

Sample collected by: KP

# Sample Collection Field Sheet

**US EPA Region 7**
**Kansas City, KS**

**Project Number: 103X9025.14.0002.019.001** **Matrix:** Water **Sample Number:** GW-02 -

**Project ID:** KCMO East Garage **Project Manager:** Kumud Pyakuryal

**Location:** 4725/4635 E. Coal Mine Road, Kansas City **State:** Missouri

**Superfund Name:** NA **Site ID:** NA

**Location Description:** Brownfields Target Assessment

**External Sample Number:**

**Latitude:** **Sample Collection:** **Time:**

**Longitude:**

**Laboratory Analysis:**

| Container | Preservative | Holding Time | Analysis |
|---|---|---|---|
| | | | |

**Property Owner Information:**

**Sample Comments:** **Sample Location Map:**

— Attempted to collect water @ ~~30~~/32' bgs, but no water

— Tried a location right next to the previous hole to 42'

— Found no water / well was dry.

Sample collected by:

# Sample Collection Field Sheet

**US EPA Region 7**
**Kansas City, KS**

**Project Number:** 103X9025.14.0002.019.001 **Matrix:** Soil **Sample Number:** SO-03-S-0-4
SO-03-D-16-20 KP
12-16

**Project ID:** KCMO East Garage **Project Manager:** Kumud Pyakuryal

**Location:** 4725/4635 E. Coal Mine Road, Kansas City **State:** Missouri

**Superfund Name:** NA **Site ID:** NA

**Location Description:** Brownfields Target Assessment

**External Sample Number:**

**Latitude:** 39.04359 **Sample Collection:** KP. **Time:** 11:10 - shallow
**Longitude:** 94.50789 11:45 - Deep

**Laboratory Analysis:**

| Container | Preservative | Holding Time | Analysis |
|---|---|---|---|

**Property Owner Information:**

KCMO East Garage

**Sample Comments:** **Sample Location Map:**

| Depth | VOC ppm |
|---|---|
| 0-4 | 0 |
| 4-8 | 0 |
| 8-12 | 0 |
| 12-16 | 0 |
| ~~16-20~~ | ~~0~~ |

unable collect this interval because of groundwater; lost the content of this interval down the hole. So instead the 12-16' interval was collected!

Sample collected by: _____

Sunny, windy, 60-65° F

# Sample Collection Field Sheet

**US EPA Region 7**
**Kansas City, KS**

**Project Number:** 103X9025.14.0002.019.001 **Matrix:** Soil **Sample Number:** SO-04-S-0-4'

SO-04-S-16-20'

**Project ID:** KCMO East Garage **Project Manager:** Kumud Pyakuryal

**Location:** 4725/4635 E. Coal Mine Road, Kansas City **State:** Missouri

**Superfund Name:** NA **Site ID:** NA

**Location Description:** Brownfields Target Assessment

**External Sample Number:**

**Latitude:** 39.04360 **Sample Collection:** K.P. **Time:** 11:10

**Longitude:** 94.50724 11:30

**Laboratory Analysis:**

| Container | Preservative | Holding Time | Analysis |
|---|---|---|---|
| 40mL 5035 VOAS/GRS 8 oz Jars | Sodium Bisulfate Methanol | | |

**Property Owner Information:** KC MO East Garage

**Sample Comments:**

PID Readings

- 0-4' - No VOCs
- 4'-8' - No VOCs
- 8'-12' - No VOCs
- 12'-16' - No VOCs
- 16-20' - No VOCs.

**Sample Location Map:** See Fig. 2

(No $H_2O$ @ 54' bgs).

Sample collected by: KP.

Sunny 60° - 65° F
Windy.

# Sample Collection Field Sheet

**US EPA Region 7**
**Kansas City, KS**

**Project Number: 103X9025.14.0002.019.001** **Matrix:** ~~Soil~~ Water **Sample Number:** ~~SO-04-D-16'-20'~~ KP SO GW-04-30'

**Project ID:** KCMO East Garage **Project Manager:** Kumud Pyakuryal

**Location:** 4725/4635 E. Coal Mine Road, Kansas City **State:** Missouri

**Superfund Name:** NA **Site ID:** NA

**Location Description:** Brownfields Target Assessment

**External Sample Number:**

**Latitude:** 39.04360 **Sample Collection:** 12:00 **Time:** 12:00

**Longitude:** 94.50724

**Laboratory Analysis:**

| Container | Preservative | Holding Time | Analysis |
|---|---|---|---|

**Property Owner Information:**

KCMO East Garage

**Sample Comments:**

- The sampler was taken to 54' bgs.
- GW was encountered @ 30' bgs > sample collected.

**Sample Location Map:**

Sample collected by: KP

# Sample Collection Field Sheet

**US EPA Region 7**
**Kansas City, KS**

**Project Number: 103X9025.14.0002.019.001** **Matrix:** Soil **Sample Number:** SO-05-0-4
SO-05-16-20

**Project ID:** KCMO East Garage **Project Manager:** Kumud Pyakuryal

**Location:** 4725/4635 E. Coal Mine Road, Kansas City **State:** Missouri

**Superfund Name:** NA **Site ID:** NA

**Location Description:** Brownfields Target Assessment

**External Sample Number:**

**Latitude:** 39.04397 **Sample Collection:** **Time:** 13:05 (0-4)

**Longitude:** -94.50705 15:45 (16-20)

**Laboratory Analysis:**

| Container | Preservative | Holding Time | Analysis |
|---|---|---|---|

**Property Owner Information:**

**Sample Comments:** **Sample Location Map:**

| Depth | VOC |
|---|---|
| 0-4 | 0 |
| 4-8 | 0 |
| 8-12 | 0 |
| 12-16 | 0 |
| 16-20 | 0 |

Sample collected by:

# Sample Collection Field Sheet

**US EPA Region 7**
**Kansas City, KS**

**Project Number: 103X9025.14.0002.019.001** **Matrix:** Soil **Sample Number:** SO-06-0-4
SO-06-16-20

**Project ID:** KCMO East Garage **Project Manager: Kumud Pyakuryal**

**Location:** 4725/4635 E. Coal Mine Road, Kansas City **State:** Missouri

**Superfund Name:** NA **Site ID:** NA

**Location Description:** Brownfields Target Assessment

**External Sample Number:**

**Latitude:** 39.04422 **Sample Collection:** **Time:** 16:00
16:30

**Longitude:** 94.50680

**Laboratory Analysis:**

| Container | Preservative | Holding Time | Analysis |
|---|---|---|---|

**Property Owner Information:**

**Sample Comments:**

| Depth | VOCs |
|---|---|
| 0-4 | 0 |
| 4-8 | 0 |
| 8-12 | 0 |
| 12-16 | 0 |
| 16-20 | 0 |

**Sample Location Map:**

Sample collected by:

# Sample Collection Field Sheet

**US EPA Region 7**
**Kansas City, KS**

**Project Number: 103X9025.14.0002.019.001** **Matrix:** SEDIMENT **Sample Number:** SED 1

**Project ID:** KCMO East Garage **Project Manager: Kumud Pyakuryal**

**Location:** 4725/4635 E. Coal Mine Road, Kansas City **State:** Missouri

**Superfund Name:** NA **Site ID:** NA

**Location Description:** Brownfields Target Assessment

**External Sample Number:**

**Latitude:** 39.04162 **Sample Collection:** CC **Time:** 17:00

**Longitude:** 94.50927

**Laboratory Analysis:**

| Container | Preservative | Holding Time | Analysis |
|---|---|---|---|

**Property Owner Information:**

**Sample Comments:**

**Sample Location Map:**

Sample collected by:_____

# Sample Collection Field Sheet

**US EPA Region 7**
**Kansas City, KS**

**Project Number: 103X9025.14.0002.019.001** **Matrix:** SEDM **Sample Number:** SED-02

**Project ID:** KCMO East Garage **Project Manager: Kumud Pyakuryal**

**Location:** 4725/4635 E. Coal Mine Road, Kansas City **State:** Missouri

**Superfund Name:** NA **Site ID:** NA

**Location Description:** Brownfields Target Assessment

**External Sample Number:**

**Latitude:** 39.04269 **Sample Collection:** CC **Time:** 16:00

**Longitude:** 94.05618

**Laboratory Analysis:**

| Container | Preservative | Holding Time | Analysis |
|---|---|---|---|

**Property Owner Information:**

**Sample Comments:**

**Sample Location Map:**

Sample collected by: CC

# APPENDIX D

# TABLES

**TABLE D-1**

**SUMMARY OF SAMPLES COLLECTED DURING PHASE II TBA ACTIVITIES**
**KCMO PUBLIC WORKS EAST GARAGE, JACKSON COUNTY, MISSOURI**

**MARCH 31 AND APRIL 1, 2014**

| Sample Number (Lab ID No.) | Sample Depth (ft bgs) | Sample Analyses |
|---|---|---|
| **Subsurface Soil Samples** | | |
| SO-01-S-0-4 (1404130-01) | 0-4 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-01-D-16-20 (1404130-02) | 16-20 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-02-S-0-4 (1404130-03) | 0-4 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-02-D-16-20 (1404130-04) | 16-20 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-03-S-0-4 (1404130-05) | 0-4 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-03-D-12-16 (1404130-06) | 12-16 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-04-S-0-4 (1404130-07) | 0-4 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-04-D-16-20 (1404130-08) | 16-20 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-05-S-0-4 (1404130-09) | 0-4 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-05-D-16-20 (1404130-10) | 16-20 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-06-S-0-4 (1404130-11) | 0-4 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| SO-06-D-16-20 (1404130-12) | 16-20 | PCBs, VOC, SVOC, RCRA metals (including mercury), TPH-GRO, and TPH-DRO |
| **Sediment Samples** | | |
| SED-01 (1404130-13) | 1 inch below water surface | Total RCRA metals (including mercury), PCBs, and herbicides/pesticides |
| SED-02 (1404130-14) | 1 inch below water surface | Total RCRA metals (including mercury), PCBs, and herbicides/pesticides |
| **Groundwater Samples** | | |
| GW-04 (1404130-15) | At 30 feet bgs | PCBs, VOCs, SVOCs, TPH-GRO, TPH-DRO, and total and dissolved RCRA metals (including mercury) |
| **Quality Control Samples** | | |
| Trip Blank – Soil (1404130-16) | Trip Blank – Soil | VOCs |
| Trip Blank – Water (1404130-17) | Trip Blank – Water | VOCs |

Notes:

| | | | |
|---|---|---|---|
| DRO | Diesel range organics | SED | Sediment |
| GRO | Gasoline range organics | SVOC | Semivolatile organic compound |
| GW | Groundwater | SO | Soil |
| PCB | Polychlorinated biphenyl | TPH | Total petroleum hydrocarbons |
| RCRA | Resource Conservation and Recovery Act | VOC | Volatile organic compound |

**TABLE D-2**

**SUMMARY OF METALS ANALYSIS OF SOIL SAMPLES**
**KCMO PUBLIC WORKS EAST GARAGE, JACKSON COUNTY, MISSOURI**

| Sample Identification | Analyte and Associated Concentration in Milligrams per Kilogram (mg/kg) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Mercury** | **Arsenic** | **Barium** | **Cadmium** | **Chromium*** | **Lead** | **Selenium** | **Silver** |
| SO-01-S-0-4 | 0.012 J | **5.4** | 180 | 0.67 J | 22 | **79** | 1.4 J | 0.51 J |
| SO-01-D-16-20 | 0/018 J | **6.5** | 170 | 0.37 J | 19 | **20** | 1.3 J | 0.10 J |
| SO-02-S-0-4 | 0.024 | **7.1** | 170 | 1.9 | 42 | **77** | 1.2 J | 0.27 J |
| SO-02-D-16-20 | 0.036 | **3.9** | 140 | 0.15 J | 15 | **8.5** | 0.99 J | 0.072 J |
| SO-03-S-0-4 | 0.015 J | **4.2** | 150 | 0.12 J | 17 | **11** | 1.3 J | 0.12 J |
| SO-03-D-12-16 | 0.019 | **6.7** | 160 | 0.25 J | 17 | **9.5** | 1.2J | 0.059 J |
| SO-04-S-0-4 | 0.11 | **9.3** | 260 | 2.1 | 43 | **130** | 1.5 J | 0.26 J |
| SO-04-D-16-20 | 0.02 | **9.9** | 530 | 0.61 J | 23 | **17** | 1.9 J | 0.087 J |
| SO-05-S-0-4 | 0.012 J | **5.3** | 210 | 0.1 J | 20 | **11** | 1.9 J | 0.058 J |
| SO-05-D-16-20 | 0.017 | **4.9** | 230 | 0.37 J | 16 | **13** | 1.4 J | 0.05 J |
| SO-06-S-0-4 | 0.018 | **5.7** | 150 | 0.13 J | 17 | **12** | 1.3 J | 0.11 J |
| SO-06-D-16-20 | 0.024 | **11** | 430 | 0.74 J | 21 | **16** | 1.9 J | 0.095 J |
| SED-01 | 0.069 | **6.2** | 150 | 1.4 | 31 | **59** | 1.4 | 0.19 |
| SED-02 | 0.075 | **6** | 190 | 1.8 | 27 | **73** | 1.5 | 0.19 |
| **Screening Values in mg/kg** | | | | | | | | |
| Lowest Default Target Level | 2.19 INH | 3.89 SDC | 2,040 GWP | 9.31 GWP | 74,600 SDC<br>0.00159 GWP | 3.74 GWP | 6.27 GWP | 16 GWP |
| Tier 1 RBTL; Soil Type 1, Residential | 2.19 | 3.89 | 15,000 | 16.8 | 74,600 0.147 | 260 | 380 | 374 |
| Tier 1 RBTL; Soil Type 1, Non-residential | 17.6 | 15.9 | 181,000 | 74.8 | 702,000<br>0.639 | 660 | 4,780 | 4,480 |
| Jackson County Missouri | 0.016 | 16.603 | NE | NE | NE | 40.96 | 0.499 | NE |

Notes:

| | |
|---|---|
| **Bold** | Analyte concentration equals or exceeds the Lowest Default Target Level |
| **Shaded** | Analyte concentration equals or exceeds the Tier 1 Residential RBTL |
| GWP | Protection of domestic groundwater use pathway |
| INH | Indoor inhalation pathway |
| J | Analyte detected below the quantitation limit. |
| NE | Not established |
| RBTL | Risk-based target level from Table B-2 and B-5 of the Missouri Risk-Based Corrective Action Technical Guidance, Appendix B |
| SDC | Soil direct contact pathway |
| * | Total chromium; screening values are for chromium (111) and (VI) |

**TABLE D-3**

**SUMMARY OF SEMIVOLATILE ORGANIC COMPOUNDS ANALYSIS OF SOIL SAMPLES**
**KCMO PUBLIC WORKS EAST GARAGE, JACKSON COUNTY, MISSOURI**

| | Analyte and Associated Concentration in Milligrams per Kilogram (mg/kg) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | **DRO** | **ORO** | **1,1'-Biphenyl** | **2,6-Dinitrotoluene** | **4-Chloroaniline** | **Acenaphthene** | **Acenaphthylene** | **2-Methylnaphthalene** | **3-Nitroaniline** | **Acetophenone** | **4-Nitrophenol** | **Anthracene** | **Benzo(a)anthracene** | **Benzo(a)pyrene** | **Benzo(b)fluoranthene** | **Benzo(g,h,i)perylene** | **Benzo(k)fluoranthene** | **Bis(2-chloroethyl)ether** |
| SO-01-S-0-4 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.022 | 0.032 | 0.051 | 0.03 | ND | ND |
| SO-01-D-16-20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-02-S-0-4 | 55 | 110 | ND | **0.12 J** | **0.062** | 0.06 | 0.15 | 0.078 | ND | ND | ND | 0.25 | 0.55 | 0.58 | 0.83 | 0.59 | 0.78 | ND |
| SO-02-D-16-20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-03-S-0-4 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-03-D-12-16 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.035 | 0.043 | 0.046 | 0.033 | ND | ND |
| SO-04-S-0-4 | 48 | 65 | ND | ND | ND | 0.026 | 0.32 | 60 | ND | ND | ND | 0.36 | 0.77 | **0.96** | 1.3 | 0.88 | 0.47 | ND |
| SO-04-D-16-20 | 25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.03 | 0.038 | 0.043 | 0.022 | ND | ND |
| SO-05-S-0-4 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-05-D-16-20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-06-S-0-4 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-06-D-16-20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SED-01 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| SED-02 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Screening Values in mg/kg** | | | | | | | | | | | | | | | | | | |
| Lowest Default Target Levels | 4,150 INH | 124,000 SDC | 30.7 GWP | 0.0112 GWP | 0.0606 DWG | 0.165 DWG | 0.170 DWG | 7.55 GWP | 0.0329 GWP | NE | 0.0539 GWP | 3,060 GWP | 6.12 GWP | 0.62 SDC | 6.19 SDC | 1,720 SDC | 62 SDC | 0.000449 GWP |
| Tier 1 RBTL; Soil Type 1, Residential | 140,000 | 124,000 | 3,420 | 6.85 | 0.677 | 174 | 175 | 273 | 17.8 | NE | 89.7 | 15,700 | 6.2 | 0.62 | 6.19 | 1,720 | 62 | 5.49 |

**TABLE D-3 (Continued)**

**SUMMARY OF SEMIVOLATILE ORGANIC COMPOUNDS ANALYSIS OF SOIL SAMPLES**
**KCMO PUBLIC WORKS EAST GARAGE, JACKSON COUNTY, MISSOURI**

| | Analyte and Associated Concentration in Milligrams per Kilogram (mg/kg) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | **Bis(2-chloroisopropyl)ether** | **Bis(2-ethylhexyl)phthalate** | **Butyl benzyl phthalate** | **Carbazole** | **Chrysene** | **Dibenzo(a,h)anthracene** | **Dimethyl phthalate** | **Di-n-butyl phthalate** | **Di-n-octyl phthalate** | **Fluoranthene** | **Fluorene** | **Indeno(1,2,3-cd)pyrene** | **Naphthalene** | **Phenanthrene** | **Pyrene** |
| SO-01-S-0-4 | ND | ND | ND | ND | 0.026 | ND | ND | ND | ND | 0.032 | ND | 0.053 | ND | 0.026 | 0.04 |
| SO-01-D-16-20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-02-S-0-4 | **0.048 J** | 0.049 J | 0.17 J | 0.11 J | 0.61 | 0.12 | ND | 34 J | ND | 1.2 | 0.087 | 0.52 | 0.2 | 0.95 | 1.1 |
| SO-02-D-16-20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-03-S-0-4 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-03-D-12-16 | ND | ND | ND | ND | 0.024 | ND | ND | ND | ND | 0.063 | ND | 0.053 | 0.024 | 0.055 | 0.058 |
| SO-04-S-0-4 | ND | 0.16 J | 0.45 | 0.078 J | 0.850 | 0.21 | ND | ND | ND | 1.7 | 140 | 0.86 | 0.14 | 0.960 | 1.7 |
| SO-04-D-16-20 | ND | ND | ND | ND | 0.023 | ND | ND | ND | ND | 0.072 | ND | ND | ND | 0.05 | 0.063 |
| SO-05-S-0-4 | ND | ND | ND | ND | 0.021 | ND | ND | ND | ND | 0.037 | ND | ND | ND | 0.027 | 0.04 |
| SO-05-D-16-20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-06-S-0-4 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SO-06-D-16-20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SED-01 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| SED-02 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Screening Values in mg/kg** | | | | | | | | | | | | | | | |
| Lowest Default Target Levels | 0.0318 GWP | 347 SDC | 12,200 SDC | 13.3 GWP | 599 SDC | 0.62 SDC | 1,120 GWP | 5,460 GWP | 75.8 GWP | 2,280 SDC | 211 GWP | 3.77 SDC | 0.325 GWP | 158 GWP | 1,500 GWP |
| Tier 1 RBTL; Soil Type 1, Residential | 88.8 | 347 | 12,200 | 242 | 599 | 0.62 | 585,000 | 6,110 | 2,280 | 2,280 | 2,200 | 3.77 | 36.3 | 2,170 | 1,710 |

Notes:

| | |
|---|---|
| **Bold** | Value in boldface equals or exceeds a screening concentration |
| **Shaded** | Analyte concentration equals or exceeds the Tier 1 Residential RBTL |
| DRO | Diesel range organics (C10-C-21) |
| DWG | Domestic water use of groundwater |
| GWP | Protection of domestic groundwater use pathway |
| INH | Indoor inhalation pathway |
| J | Analyte detected below the quantitation limit. |
| ND | Not detected |
| NE | Not established |
| ORO | Oil range organics (C21-C35) |
| RBTL | Risk-based target level from Table B-2 of the Missouri Risk-Based Corrective Action Technical Guidance, Appendix B |
| SDC | Soil direct contact pathway |
| SED | Sediment |
| SO | Soil |

**TABLE D-4**

**SUMMARY OF VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL SAMPLES**
**KCMO PUBLIC WORKS EAST GARAGE, JACKSON COUNTY, MISSOURI**

| Sample Number | Analyte and Associated Concentration in Milligrams per Kilogram (mg/kg) | | | | |
|---|---|---|---|---|---|
| | Gasoline Range Organics | 2-Butanone | Acetone | Methylene chloride | Toluene |
| SO-01-S-0-4 | ND | 0.0069 J | 0.057 | 0.0014 J | 0.00034 J |
| SO-01-D-16-20 | ND | 0.0022 J | 0.021 | 0.0011 J | 0.00036 J |
| SO-02-S-0-4 | ND | 0.027 | ND | 0.00064 J | ND |
| SO-02-D-16-20 | ND | 0.0025 J | 0.026 | 0.00096 J | 0.0004 J |
| SO-03-S-0-4 | ND | 0.0033 J | 0.035 | 0.00048 J | ND |
| SO-03-D-12-16 | ND | 0.0027 J | 0.025 | 0.0014 J | 0.00038 J |
| SO-04-S-0-4 | ND | 0.014 J | 0.091 | ND | ND |
| SO-04-D-16-20 | ND | 0.0049 J | 0.047 | ND | ND |
| SO-05-S-0-4 | ND | 0.01 J | 0.088 | 0.00049 J | ND |
| SO-05-D-16-20 | ND | 0.0027 J | 0.032 | 0.0012 J | ND |
| SO-06-S-0-4 | ND | 0.0053 J | 0.057 | 0.00083 J | 0.00038 J |
| SO-06-D-16-20 | ND | 0.0077 J | 0.088 | 0.0007 J | ND |
| SED-01 | NA | NA | NA | NA | NA |
| SED-02 | NA | NA | NA | NA | NA |
| **Screening Values in mg/kg** | | | | | |
| Lowest Default Target Levels | 385 INH | 7.3 GWP | 4.2 GWP | 0.0176 GWP | 29.8 GWP |
| Tier 1 RBTL; Soil Type 1, Residential | 385 | 3,880 | 1,830 | 2.86 | 499 |

Notes:

| | |
|---|---|
| GWP | Protection of domestic groundwater use pathway |
| INH | Indoor inhalation pathway |
| J | Analyte detected below the quantitation limit. |
| NA | Not Applicable |
| ND | Not Detected |
| RBTL | Risk-based target level from Table B-2 of the Missouri Risk-Based Corrective Action Technical ( |
| SED | Sediment |
| SO | Soil |

**TABLE D-5**

**SUMMARY OF METALS ANALYSIS OF WATER SAMPLES**
**KCMO PUBLIC WORKS EAST GARAGE, JACKSON COUNTY, MISSOURI**

| Sample Number | Analyte and Associated Concentration in Micrograms per Liter (µg/L) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mercury | | Arsenic | | Barium | | Cadmium | | Chromium | | Lead | | Selenium | | Silver | |
| | total | dissolved | total | dissolved | total | dissolved | total | dissolved | total | dissolved | total | dissolved | total | dissolved | total | dissolved |
| GW-04 | 0.15 J | ND | **45** | **26** | 650 | 290 | **6.4** | 0.087 J | **100** | ND | **110** | ND | 6.1 | 0.66 J | 0.57 J | 0.075 J |
| **Screening Values in µg/L** | | | | | | | | | | | | | | | | |
| Lowest Default Target Levels | 50.7 | | 10 | | 2,000 | | 5 | | 100 Cr III<br>0.00337 Cr VI | | 15 | | 50 | | 78.1 | |
| Tier 1 RBTL; Soil Type 1, Drinking water use | 50.7 | | 10 | | 2,000 | | 5 | | 100 Cr III<br>0.00337 Cr VI | | 15 | | 50 | | 78.2 | |

Notes:

| | |
|---|---|
| **Bold** | Value in boldface equals or exceeds a screening concentration |
| J | Analyte detected below the quantitation limit |
| Cr III | Trivalent chromium |
| Cr VI | Hexavalent chromium |
| GW | Groundwater |
| ND | Analyzed but not detected above the method detection limit |
| RBTL | Risk-based target level from Table B-2 of the Missouri Risk-Based Corrective Action Technical Guidance, Appendix B |

**TABLE D-6**

**SUMMARY OF POLYCHLORINATED BIPHENYLS ANALYSIS OF SEDIMENT SAMPLES**
**KCMO PUBLIC WORKS EAST GARAGE, JACKSON COUNTY, MISSOURI**

| Sample Number | Analyte and Associated Concentration in Micrograms per Kilogram (mg/kg) | |
|---|---|---|
| | Aroclor 1248 | Aroclor 1254 |
| SO-01-S-0-4 | 0.18 | ND |
| SO-01-D-16-20 | ND | ND |
| SO-02-S-0-4 | 0.13 | 0.091 J |
| SO-02-D-16-20 | ND | ND |
| SO-03-S-0-4 | ND | ND |
| SO-03-D-12-16 | ND | ND |
| SO-04-S-0-4 | 0.17 | ND |
| SO-04-D-16-20 | ND | ND |
| SO-05-S-0-4 | ND | ND |
| SO-05-D-16-20 | ND | ND |
| SO-06-S-0-4 | ND | ND |
| SO-06-D-16-20 | ND | ND |
| SED-01 | ND | ND |
| SED-02 | ND | ND |
| **Screening Values in mg/kg** | | |
| Lowest Default Target Levels | 1.08[SDC] | 1.10[SDC] |
| Tier 1 RBTL; Soil Type 1, Residential | 1.08 | 1.10 |

Notes:

ND Analyzed but not detected above the method detection limit

J Analyte detected below the quantitation limit

RBTL Risk-based target level from Table B-2 of the Missouri Risk Based Corrective Action Technical Guidance, Appendix B

SDC Soil direct contact pathway